

SSC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 706 experiments for

(no ligands specified)

Metal : Tb+++

(no references specified)

(no experimental details specified)

e- HL Electron (442)
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	oth	none	25°C	0.0	U			1974JOb (951)	1	
									K(Tb+3e=Tb(s))=-115.6(-2.28V)	
									K(Tb+e=Tb(II))=-59(-3.5V)	

Method: Literature evaluated data

Tb+++	oth	none	25°C	0.0	U			1952LAb (952)	2	
									K(Tb+3e)=-121.2(-2390 mV)	

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	sol	none	25°C	0.0	C			1992FIa (1162)	3	
									Kso(TbAsO4)=-23.07	

Equilibrium monitored by EDTA and iodine titrations.

BrO3- HL Bromate (6017)
Bromate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	dis	NaClO4	20°C	0.10M	U T H			K1=0.54	1972RCa (2432)	4
									DH(K1)=-16.3 kJ mol ⁻¹ ; K1=0.76(2 C), 0.71(10 C), 0.48(30 C), 0.40(40 C)	

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	NaClO4	25°C	0.70M	C			K1=5.76	2004LBb (3390)	5
									K(Tb+HCO3=TbHCO3)=1.41	

Medium: 0.70 m NaClO4. Calculated for I=0, K1=7.46, B2=12.78,
K(Tb+HCO3=TbHCO3)=2.46, K(Tb+HL=TbL+H)=-2.87, K(Tb+2HL=TbL2+2H)=-7.88

Tb+++	dis	NaClO4	25°C	0.70M	C	I		K1=5.73 B2=10.26	1998LBb (3391)	6
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Method: H2O/tributylphosphate distribution and ICP-mass spectrometry.

Values calculated for I=0.0 M, K1=7.71, B2=13.34.

Tb+++	dis	NaClO4	25°C	0.70M	C	K1=5.79	B2=10.25	1993LBa	(3392)	7
						K(Tb+HL)=1.84				

Tb+++	sol	none	25°C	0.0	C				1986FMa	(3393)	8
						Kso(Tb2(CO3)3)=-34.86					

Tb+++	sol	none	25°C	0.0	C				1986HMa	(3394)	9
						Kso(Tb2(CO3)3)=-34.86					

Method: spectrophotometry.

Tb+++	dis	oth/un	20°C	2.5M	C				1979DBb	(3395)	10
						B4=15.03					

Media: 2.5 M (NH4)2NO3/hexane. Analysis by NAA. By competition with edta;
K1(Tb(edta))=17.92 recalculated for I=2.5 from J.Am.Chem.Soc.,75 1953,4196

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	cal	none	25°C	0.00	M	H	K1=3.76	1972SCd (3693)	11
DH(K1)=3.9 kJ mol ⁻¹ , DS=85.4 J K ⁻¹ mol ⁻¹									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	dis	NaCl	25°C	1.0M	C		K1=-0.18	1997HTb (5764)	12
Method: by solvent extraction from 1.0 M NaCl into CHCl3, 0.1 M 1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.									

Tb+++	cal	non-aq	25°C	100%	U	H	K1=2.63	B2=4.80	1991ITa (5765)	13
							K3=1.38			
							K4=1.34			

Medium: DMF, 0.2 M Et4NClO4. DH(K1)=15.5 kJ mol⁻¹, DH(K2)=23.7, DH(K3)=25
DH(K4)=31. DS(K1)=102, DS(K2)=121, DS(K3)=111 J K⁻¹ mol⁻¹

Tb+++	dis	NaClO4	20°C	3.00M	U		K1=0.45	B2=0.26	1982FKb (5766)	14
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Tb+++	sol	NaClO4	25°C	?	U		K1=0.32	1982MAa (5767)	15
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Tb+++	cal	non-aq	25°C	100%	U		K1=2.11	B2=3.69	1980VCa (5768)	16
Medium: diemthylacetamide										

Tb+++	sp	NaClO4	25°C	3.0M	U		K1=-0.01	1971KBf (5769)	17	
Medium: LiClO4										

Tb+++ sol none 25°C 0.0 U 1961AEa (5770) 18
Kso(Tb(OH)2.5Cl0.5)=-21.8

I=0 corr. Unstable, apparant Kso

ClO3- HL Chlorate CAS 7790-93-4 (971)
Chlorate;

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

Tb+++ dis NaCl04 20°C 0.10M U T H K1=0.00 1972RCa (6061) 19
DH(K1)=-17 kJ mol-1; K1=0.15(2 C), 0.18(10 C), -0.10(30 C)

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

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

Tb+++ ix oth/un 25°C 0.02M C T H K1=3.83 B2= 6.24 2004LMa (7217) 20
Medium: 0.025 M HNO3. Applying Pitzer parameters: at I=0, K1=10.12.
Data for 5 to 45 C. DH(K1)=7.2 kJ mol-1, DH(B2)=17.4.

Tb+++ ISE NaCl04 25°C 0.0 C I K1=4.37 2000Lba (7218) 21
Method: Fluoride ISE. Values calc. from data for I=0.015-0.70 M NaCl04.
At I=0.70 M, K1=3.424.

Tb+++ ix KNO3 25°C 0.02M C K1=3.82 B2= 6.31 1999SBc (7219) 22
Medium: 0.025 M HNO3. Additional method: ICP-MS.
Assumed K1(HF) = 3.03, derived from literature values.

Tb+++ dis NaCl04 25°C 0.68M U K1=3.32 B2=5.45 1993LBb (7220) 23

Tb+++ ISE none 25°C 0.0 C H K1=3.24 B2=6.66 1989MJa (7221) 24
Kso=-16.3
Also by conductivity and radiometry. DH(Kso)=27.4 kJ mol-1; DS=-222.8.

Tb+++ ISE R4N.X 25°C 0.50M C K1=3.24 B2=6.66 1989MJb (7222) 25

Tb+++ cal NaCl04 25°C 1.00M C H 1988GBa (7223) 26
DH(K1)=9.30 kJ mol-1; DS(K1)= 96.8 J mol-1 K-1

Tb+++ ISE NaCl 25°C 1.00M C K1=3.227 1985BBb (7224) 27

Tb+++ dis NaCl 25°C 1.00M U 1982BKa (7225) 28
B(TbF(OH))=10.76
B(TbF(OH)2)=17.26

Tb+++ sol none 25°C 0.0 C 1982MEa (7226) 29
Kso(TbF3)=-16.44

Methods: radiometry, conductivity and potentiometry.

DH(Kso)=27.39 kJ mol⁻¹, DS(Kso)=223 J K⁻¹ mol⁻¹.

Tb+++ gl KCl 25°C 1.00M U M 1981KTb (7227) 30
K(TbEDTA+F)=1.79
K(Tb(EDTA)F+F)=0.48

Tb+++ dis NaCl 25°C 1.00M U K1=3.29 B2=5.43 1980BKa (7228) 31

Tb+++ gl NaCl 25°C 1.00M U K1=3.25 B2=5.32 1979BHa (7229) 32

Tb+++ dis NaCl04 25°C 1.00M U T H K1=3.18 1975MHa (7230) 33
DH=-17.2 kJ mol⁻¹ and DS=2.9 J mol⁻¹ K⁻¹.

Tb+++ EMF NaCl04 25°C 1.0M U H K1=3.42 1967WCa (7231) 34
By calorimetry: DH(K1)=31.4 kJ mol⁻¹, DS=170.5 J K⁻¹ mol⁻¹

I03- HL Iodate CAS 7782-68-5 (1257)
Iodate;

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

Tb+++ dis NaCl04 20°C 0.10M U T H K1=0.82 1972RCa (8557) 35
DH(K1)=-9.6 kJ mol⁻¹; K1=0.97(2 C), 0.88(10 C), 0.80(30 C), 0.72(40 C)

Tb+++ sol oth/un 25°C 0.0 U 1966FPb (8558) 36
Kso=-11.11

I04- HL Periodate CAS 13444-71-8 (6063)
Periodate;

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

Tb+++ sol oth/un 25°C dil U 1974LOa (8615) 37
Kso(Tb(H2IO6)(H2O)3))=-10.00

Mo04-- H2L Molybdate (443)
Molybdate;

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

Tb+++ con oth/un 25°C .001M U K1=4.51 1968DKc (8758) 38

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

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

Tb+++ gl oth/un 20°C 0.10M U 1989SBb (8782) 39
B(TbHL)=8.07
B(TbH2L)=10.18

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	cal	NaClO4	25°C	2.0M	C	IH	K1=-0.55	1998BMb (9931)	40
DH(K1)=4.5 kJ mol-1. From Pitzer extrapolation to I=0.0, K1=0.23, DH(K1)=3.4 kJ mol-1									
Tb+++	dis	none	25°C	0.0	U		K1=1.38	1992MSb (9932)	41
Tb+++	dis	NaClO4	25°C	1.00M	U	T	K1=1.18	1975MHa (9933)	42
Tb+++	dis	none	55°C	0.0	U		K1=-0.03	1967KOb (9934)	43
Tb+++	dis	NaClO4	25°C	1.0M	U	I	K1=0.05	1965CSb (9935)	44
Medium: 1 M HClO4. K1=0.13(I=0.3), 0.88(0)									

OH- HL Hydroxide (57)
Hydroxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaClO4	25°C	0.0	C	IH		2000KBa (12218)	45
							*K1=-7.64		
In 0.7 M NaClO4, *K1=-7.95. DH(*K1)=50 kJ mol-1.									
Tb+++	gl	NaCl	25°C	0.10M	U	I		1999FBa (12219)	46
							*B(1,3)=-21.61		
In 0.1 M Me4NCl, *B(1,3)=-22.32.									
Tb+++	dis	NaCl	25°C	1.00M	U		K1=7.41 B2=14.30	1981BKa (12220)	47
Tb+++	dis	NaClO4	?	0.10M	U			1971GDb (12221)	48
							*K1=-5.2		
Medium: LiClO4									
Tb+++	gl	NaClO4	25°C	0.30M	U			1966FKa (12222)	49
							*K1=-8.16		
Tb+++	sol	none	25°C	0.0	U			1961AEa (12223)	50
							Kso=-25.8(50 days)		
							Kso=-26.3(150 days)		

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++ sol none 25°C 0.0 M 1997LBd (13337) 51

Kso(TbPO4)=-25.39

Calculated from data for 0.10 M HClO4 solution.

Tb+++ sol oth/un 25°C 0.0 C I 1993FKb (13338) 52

Kso(TbPO4)=-26.49

In synthetic seawater, Ks(TbPO4)=-23.89.

Tb+++ sol none 25°C 0.0 C 1991FBa (13339) 53

Kso(TbPO4)=-25.07

Tb+++ gl NaClO4 20°C 0.10M U K1=3.58 1974PJa (13340) 54

P207---- H4L Pyrophosphate CAS 2466-09-3 (198)

Diphosphate; from (HO)2PO.O.PO(OH)2

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

Tb+++ gl KCl 25°C 0.50M U 1989APd (13659) 55

K(Tb+H2L)=4.52

Tb+++ kin none 25°C 0.0 U B2=20.50 1967SSo (13660) 56

P3010----- H5L CAS 10380-08-2 (1001)

Tripolyphosphate; from (HO)2PO.O.PO(OH).O.PO(OH)2

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

Tb+++ gl KNO3 25°C 0.10M U T H B2=9.1 1974KRa (13913) 57

K(Tb+2HL)=6.8

K(Tb+2HL)=7.1 and B2=9.3 (35 C), K(Tb+2HL)=6.6 and B2=8.8 (45 C)

DH(Tb+2HL)=-20 kJ mol⁻¹; DH(B2)=-28

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

Thiocyanate;

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

Tb+++ dis oth/un 25°C 1.0M C K1=0.44 1997HTb (15265) 58

Method: by solvent extraction from 1.0 M NaSCN into CHCl3, 0.1 M

1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.

Tb+++ cal non-aq 25°C 100% U H K1=1.8 B2=3.0 1992TIa (15266) 59

K3=0.5

Medium: DMF, 0.2 M R4NX. DH(K1)=7.4 kJ mol⁻¹, DH(B2)=7, DH(B3)=15

Tb+++ dis R4N.X 30°C 1.00M U T K1=0.23 B2=0.34 1974KMa (15267) 60

Medium: NH4ClO4/NH4SCN, pH 2.8

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	sol	oth/un	25°C	0.66M	C			K1=1.92	2004SBb (16573)	61
Method: solubility of BaSO4 in 0.117 m TbCl3 solution. Calculated for I=0, K1=3.59.										
Tb+++	dis	NaCl	25°C	1.00M	U			K1=1.38 B3=3.02	1980BKb (16574)	62
Tb+++	cal	oth/un	25°C	0.0	U	H			1974FPc (16575)	63
DH(K1)=15.5 kJ mol-1, DS=121.3 J K-1 mol-1. In D20: DH(K1)=13.8, DS=115.8										
Tb+++	cal	none	25°C	0.0	U	H			1974POa (16576)	64
DH(K1)=19.7 kJ mol-1										
Tb+++	oth	NaClO4	25°C	2.0M	U			K1=1.59	1973ABe (16577)	65
Method:luminiscence quenching										
Tb+++	oth	none	25°C	0.0	U			K1=3.64 K1in=0.62	1973FPb (16578)	66
Method: ultrasonic absorption										
Tb+++	cal	oth/un	25°C	0.0	U	H			1969FPa (16579)	67
DH(K1)=16.8 kJ mol-1										
Tb+++	cal	oth/un	25°C	0.0	U	H		K1=3.47 B2=5.37	1969IEa (16580)	68
DH(K1)=15.1 kJ mol-1, DH(K2)=3.2; DS(K1)=117.0 J K-1 mol-1, DS(K2)=47.2										
Tb+++	ISE	NaClO4	25°C	2.0M	U	H		K1=1.27 B2=1.89	1967CCd (16581)	69
By calorimetry: DH(K1)=17.7 kJ mol-1, DS=84.0 J K-1 mol-1; DH(K2)=6.7, DS=34										

CH03F3S HL CAS 1493-13-6 (6755)										
Trifluoromethanesulfonic acid; CF3SO3H										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	sp	non-aq	25°C	100%	U			K3=2.58	1993BCc (17469)	70
Medium: MeCN										

CH6O6P2 H4L Medronic acid CAS 1984-15-2 (2384)										
Methanediphosphonic acid; CH2(P03H2)2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	KCl	25°C	0.50M	U			K(Tb+H2L)=5.60	1989APd (18293)	71

C2H2O3 HL Glyoxylic acid CAS 298-12-4 (1142)
 Glyoxylic acid; OHC.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaClO4	20°C	0.10M	U		K1=2.52 B2=4.42 K3=1.7	1964PSd (18430)	72

 C2H2O4 H2L Oxalic acid CAS 144-62-7 (24)
 Ethanedioic acid; (COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	ix	R4N.X	25°C	0.05M	C		K1=5.71 B2=10.08 K(Tb+HL)=2.29	2001SBf (19079)	73
Medium: 0.05 M NH4NO3. At I=0, K1=6.63, B2=11.27.									

Tb+++	gl	KCl	25°C	1.0M	U	M		1988KTa (19080)	74
							K(Tb(edta)+L)=3.07		

Tb+++	oth	oth/un	25°C	0.10M	U		K1=5.50 B2=9.30	1971STe (19081)	75
Method : electrical migration or transference number									

Tb+++	sol	NaClO4	20°C	1.00M	U		K1=5.08 B2=8.86 B3=11.85 B4=13.32	1969GGa (19082)	76
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 C2H3N3S2 HL CAS 2349-67-9 (6245)
 2-Amino-5-mercapto-1,3,4-thiadiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaClO4	25°C	0.10M	U	T H	K1=6.38 B2=11.63 K3=4.20	1983SSb (19258)	77

 C2H4O2 HL Acetic acid CAS 64-19-7 (36)
 Ethanoic acid; CH3.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	sp	NaCl	20°C	1.0M	C		K1=1.0	1985BBf (20190)	78
Method: luminescence lifetime spectroscopy.									
Tb+++	sp	NaNO3	25°C	0.10M	U		K1=1.78	19850Ha (20191)	79
Tb+++	oth	NaClO4	20°C	2.00M	U		K1=1.8 B2=3.2 B3=3.8	1974GEb (20192)	80
Tb+++	oth	NaClO4	25°C	2.00M	U		K1=1.00 B2=1.78 K3=0.60	1973ABe (20193)	81

Method: luminescence quenching

Tb+++ gl NaClO4 20°C 0.10M U K1=2.07 B2=3.66 1962KPa (20194) 82

C2H4O2S H2L Thioglycolic CAS 68-11-1 (596)
Mercaptoethanoic acid; HS.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Tb+++ gl NaClO4 25°C 0.20M U K1=5.51 B2=11.00 1998PJb (20372) 83
Tb+++ gl NaClO4 20°C 0.10M U 1964PKa (20373) 84
K(Tb+HL)=1.96
K(TbHL+HL)=1.26

Tb+++ gl NaClO4 25°C 2.0M U 1962BCa (20374) 85
K(Tb+HL)=1.63
K(TbHL+HL)=0.8

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
Tb+++ gl NaCl 37°C 0.15M U K1=3.80 1995ZWb (21726) 86
Tb+++ gl KNO3 25°C 0.20M U M K1=6.15 1990LSb (21727) 87
K(Tb(phen)+L)=6.03
Tb+++ EMF KCl 25°C 1.0M U M 1977GMa (21728) 88
K(TbA+L)=3.97
K(TbA+HL)=3.03
K(TbA+H2L)=3.11

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

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Tb+++ sp non-aq 25°C 100% U 1992MBb (22125) 89
K8=0.9
K9=0.5

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

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

Tb+++ gl NaClO4 22°C 0.10M U 1972MCd (22156) 90
K(TbH-1L+H)=7.20

C2H6O6P2 H4L (5706)
Ethene-1,1-diphosphonic acid; H2C:C(P03H2)2

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

Tb+++ gl KCl 25°C 0.15M U I 1989AMa (22175) 91
K(Tb+H2L)=5.22

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

Tb+++ ISE non-aq 25°C 100% C H K1=2.25 B2=3.89 1992CBa (23233) 92
B3=5.28

Medium: DMSO, 0.10 M Et4NClO4. By calorimetry, DH(K1)=-16.8, DH(B2)=-35.4,
DH(B3)=-71.6 kJ mol-1.

Tb+++ gl KNO3 25°C 0.10M U TIH K1=5.52 B2=10.60 1986NSa (23234) 93
B(TbAL)=9.06

H2A=phthalic acid. DH(TbAL)=-46.4 kJ mol-1, DS=63.39J K-1 mol-1

Tb+++ cal non-aq 23°C 100% U K1=10.4 B2=18.80 1969FMa (23235) 94
K3=6.2
K4=3.2

Medium: CH3CN

C2H8O7P2 H4L HEDPA CAS 2809-21-4 (436)
1-Hydroxyethane-1,1-diphosphonic acid; CH3.C(OH)(P03H2)2

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

Tb+++ sp oth/un 25°C 0.70M U 1987APa (23399) 95
K(Tb+H2L)=5.69

C3H4O2 HL Acrylic acid CAS 79-10-7 (2044)
Propenoic acid; CH2:CH.COOH

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

Tb+++ gl oth/un 25°C ? U M K1=2.06 1998PAa (23997) 96
K(TbL+acac)=5.77
K(Tb(acac)L+acac)=4.46

Additional method: nmr. Medium not stated.

C3H4O3 HL Pyruvic acid CAS 127-17-3 (1152)

2-Oxopropanoic acid; CH₃.CO.COOH

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

Tb+++ nmr NaClO₄ 25°C 2.00M U H K1=1.19 1980CCa (24074) 97
DH=-4.18 kJ mol⁻¹. Alternative method: Calorimetry.

C₃H₄O₄ H₂L Malonic acid CAS 141-82-2 (79)
Propanedioic acid; CH₂(COOH)₂

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

Tb+++ gl NaClO₄ 25°C 0.10M U K1=4.84 B2=7.95 1972DCc (24561) 98

Tb+++ gl NaClO₄ 25°C 1.00M U K1=3.82 B2=6.38 1971DGa (24562) 99
B(TbHL)=6.37
B(TbHL₂)=10.09

Tb+++ ix NaClO₄ 25°C 0.15M U 1968KKc (24563) 100
K(Tb+HL)=1.95
K(TbHL+HL)=1.04

Tb+++ gl KNO₃ 25°C 0.10M U K1=4.44 B2=7.15 1968PFa (24564) 101

C₃H₄O₆ H₂L CAS 560-27-0 (4233)
Dihydroxypropanedioic acid; HOOC.C(OH)₂.COOH

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

Tb+++ gl KCl 25°C 0.20M U K1=3.56 1973LPb (24633) 102

C₃H₅N₂O₂ HL (4234)
Isonitrosoacetone; CH₃.CO.CH:N.OH, anti-Pyruvic aldehyde oxime

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

Tb+++ gl diox/w 20°C 50% U K1=5.79 1971MAf (24650) 103
Medium: 50% dioxan, 0.1 M NaClO₄

C₃H₆N₂O₂ L Methylglyoxime CAS 2140-03-6 (2981)
Methylglyoxime; CH₃.C(:N.OH).CH:N.OH

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

Tb+++ gl diox/w 20°C 50% U K1=6.79 B2=12.64 1971MAf (24812) 104
Medium: 50% dioxan, 0.1 M NaClO₄

C₃H₆O₂ HL Propionic acid CAS 79-09-4 (35)
Propanoic acid; CH₃.CH₂.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaCl04	25°C	2.0M	U		K1=1.73 B2=3.10	1965CGa (25057)	105
Tb+++	gl	NaCl04	20°C	0.10M	U		K1=2.00 B2=3.59	1964PKa (25058)	106

C3H602S		H2L					Thiolactic acid CAS 79-42-5 (366)		
2-Mercaptopropanoic acid; CH3.CH(SH).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaCl04	25°C	0.20M	U		K1=6.09 B2=11.43	1998PJb (25171)	107
Tb+++	gl	NaCl04	25°C	2.00M	U			1968CMa (25172)	108
							K(Tb+HL)=1.65		
Tb+++	gl	NaCl04	31°C	2.0M	U			1963BCb (25173)	109
							K(Tb+HL)=1.60		
							K(TbHL+HL)=0.9		

C3H602S		H2L					CAS 107-96-0 (437)		
3-Mercaptopropanoic acid; HS.CH2.CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaCl04	25°C	2.00M	U			1968CMa (25227)	110
							K(Tb+HL)=1.62		
Tb+++	gl	NaCl04	31°C	2.0M	U			1963BCb (25228)	111
							K(Tb+HL)=1.79		
							K(TbHL+HL)=1.3		

C3H603		HL					CAS 81598-26-7 (2521)		
3-Hydroxypropanoic acid; HO.CH2.CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaCl04	25°C	2.00M	U		K1=1.54	1969JCC (25280)	112

C3H603		HL					L-Lactic acid CAS 79-33-4 (82)		
L-2-Hydroxypropanoic acid; CH3.CH(OH).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaCl04	25°C	0.20M	U		K1=2.65 B2=4.82	1964DVa (25548)	113
							K3=1.07		
							K4=0.44		
Tb+++	gl	NaCl04	20°C	0.10M	U		K1=2.90 B2=5.20	1964PKb (25549)	114
							B3=6.35		

Tb+++ gl NaClO4 25°C 2.0M U K1=2.61 B2=4.73 1961CCa (25550) 115
K3=1.28

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

Tb+++ gl NaClO4 20°C 0.10M U K1=2.05 B2=3.00 1964PKa (25608) 116

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

Tb+++ gl NaCl 37°C 0.15M U M K1=3.86 1995ZWb (26272) 117
B(TbH2(gly)L)=21.78

Tb+++ gl KNO3 25°C 0.20M U M K1=6.85 1990LSb (26273) 118
K(Tb(phen)+L)=6.77

Tb+++ gl KNO3 25°C 0.10M U K1=4.7 1967EMb (26274) 119

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

Tb+++ gl NaClO4 20°C 0.0 U T K1=7.925 B2=15.52 1980SDc (26839) 120
Extrapolated from data for I=0.10-1.0 M. Data for 35 and 45 C.
DH(K1)=-5.76 kJ mol⁻¹, DS=132 J K⁻¹ mol⁻¹; DH(K2)=-11.5, DS=106.

C3H7NO3 HL Serine CAS 56-45-1 (49)
2-Amino-3-hydroxypropanoic acid; H2N.CH(CH2.OH)COOH

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

Tb+++ gl oth/un 25°C 0.10M U K1=3.77 1965PGe (27181) 121

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

Tb+++ gl NaClO4 22°C 0.10M U 1972MCd (27685) 122
K(TbH-1L+H)=7.15

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
Tb+++	gl	NaClO4	22°C	0.10M	U		K(TbH-1L+H)=6.95	1972Mcd (27750)	123
Tb+++	gl	NaCl	25°C	0.10M	U		K(TbH-1L+H)=6.93	1970PKe (27751)	124

C3H12NO9P3		H6L	NTPA				CAS 6419-19-8	(2920)	
Nitritotris(methylenephosphonic acid); N(CH2PO3H2)3									
Tb+++	gl	NaClO4	25°C	0.10M	U		K1=13.20 B2=22.53	2002KAa (28590)	125
Tb+++	gl	NaClO4	25°C	0.10M	C		K(TbL+H)=7.34 K(TbHL+H)=5.48	1991SKb (28591)	126

C4H2O4		H2L	Squaric acid				CAS 2892-51-5	(439)	
3,4-Dihydroxy-3-cyclobutene-1,2-dione;									
Tb+++	cal	NaClO4	25°C	0.10M	U	H	K1=2.87 B2=4.21	19760Ca (28665)	127
DH(K1)=9.1 kJ mol-1, DS=85 J K-1 mol-1; DH(B2)=14.4, DS=129									
Tb+++	gl	NaClO4	25°C	0.10M	C	H	K1=2.874 B2= 4.20	19760Cb (28666)	128
By calorimetry: DH(K1)=9.12 kJ mol-1, DS(K1)=85.3 J K-1 mol-1; DH(B2)=14.4, DS(B2)=129.									

C4H4N2O5		H2L	Thiobarbituric				CAS 504-17-6	(4279)	
4,6-Dihydroxy-2-mercaptopyrimidine, 2-thiobarbituric acid;									
Tb+++	gl	oth/un	25°C	0.10M	U		K1=2.980	1987TSb (28897)	129

C4H4N2O3		H2L	Barbituric acid				CAS 67-52-7	(2818)	
2,4,6-Trihydroxypyrimidine; C4HN2(OH)3									
Tb+++	gl	oth/un	25°C	0.10M	U T H		K1=4.32	1987TSb (28920)	130
30 C:K=3.77; 35 C: 3.54. DH=-146 kJ mol-1, DS=-393 J K-1 mol-1									

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
Tb+++	gl	oth/un	25°C	?	U	M		K1=3.64 K(TbL+acac)=5.07 K(Tb(acac)L+acac)=4.35	1998PAa (29137)	131
Additional method: nmr. Medium not stated.										
Tb+++	gl	KN03	25°C	0.10M	U	T HM		K1=5.48 B2=8.77 B(TbAL)=9.16	1986NSa (29138)	132
H2A=phthalic acid. DH(TbAL)=-45.1 kJ mol-1, DS=24.0 J K-1 mol-1										
Tb+++	gl	NaCl04	25°C	0.10M	U			K1=3.74	1973CDc (29139)	133
Tb+++	gl	NaCl04	25°C	0.10M	U			K1=3.75 B2=5.83	1970RFa (29140)	134

C4H4O4 H2L Fumaric acid CAS 110-17-8 (289)										
trans-Butenedioic acid; H00C.CH:CH.COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	NaCl04	25°C	0.10M	C			K1=2.57 B(TbHL)=6.03 K(Tb+HL)=1.95	1986LCa (29220)	135
Tb+++	gl	KN03	25°C	0.10M	U	T H		K1=3.10 B(TbAL)=6.24	1986NSa (29221)	136
H2A=phthalic acid. DH(TbAL)=-39.9 kJ mol-1, DS=14.4 J K-1 mol-1										
Tb+++	gl	NaCl04	25°C	0.10M	U			K1=2.77	1973CDc (29222)	137

C4H5NO5 H2L (7375)										
Oxalohydroxamic acid; H00C.CO.CH2.CO.NHOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	KN03	25°C	0.1M	M			K1=11.24 B2=21.71 K3=10.00	1989LWa (29316)	138

C4H6O2 HL Methylacrylic (6992)										
2-Methylpropenoic acid; CH2:C(CH3)COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	KCl	25°C	0.10M	U			K1=2.35	1995PAa (29705)	139

C4H6O4 H2L Succinic acid CAS 110-15-6 (112)										
1,4-Butanedioic acid; H00C.CH2.CH2.COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KCl	25°C	1.0M	U	M	K(Tb(edta)+L)=2.20	1988KTa (30934)	149
Tb+++	EMF	NaClO4	20°C	1.00M	U		K1=5.42 B2=10.08 B3=13.41	1972GOa (30935)	150
Tb+++	cal	NaClO4	25°C	1.0M	C	H	DH(K1)=3.20 kJ mol ⁻¹ , DS(K1)=113 J K ⁻¹ mol ⁻¹ ; DH(B2)=-7.895, DS(B2)=164; DH(B3)=-18.68, DS(B3)=190.	1963GRd (30936)	151
Tb+++	EMF	NaClO4	20°C	1.00M	U		K1=5.23 B2=9.98 B3=13.25	1963GTa (30937)	152

Method: quinhydrone electrode

C4H6O6 H2L L-Tartaric acid CAS 87-69-4 (92)
L-Tartaric acid, L-2,3-Dihydroxybutanedioic acid; HOOCH(OH).CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	alc/w	25°C	50%	U	I	K1=5.57	1972SSj (31367)	153
Medium: 0-50% EtOH, 0.05 M. 50% EtOH, I=0: K1=7.25									

Tb+++	gl	KCl	24°C	0.20M	U		K1=3.33	1966DDa (31368)	154

C4H7NO3		HL					CAS 543-24-8 (3586)		
N-Acetylglycine; CH3.CO.NH.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	dis	NaClO4	25°C	1.00M	U	T H	K1=1.65	1971RCa (31509)	155
K1(5 C)=1.42, K1(15 C)=1.53, K1(35 C)=1.74. DH=18.0 kJ mol ⁻¹ , DS=92									

C4H7NO4		H2L					CAS 56-84-8 (21)		
Aminobutanedioic acid; H2N.CH(CH2.COOH).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaClO4	30°C	0.10M	U	I	K1=5.45 B2=10.12	1984YLa (31949)	156
Tb+++	oth	NaClO4	25°C	0.10M	U	M	K(TbA2+L)=0.75 K(TbB2+L)=1.33 K(TbC2+L)=1.16 K(TbD2+L)=1.62	1983BRb (31950)	157
H2A=Pyridine-2,6-dicarboxylic acid, H2B=Oxydiacetic acid, H2C=Iminodiethanoic acid, H2D=Sulfosalicylic acid. Using polarized luminescence spectroscopy									

Tb+++	gl	KCl	25°C	0.10M	U		K1=5.80 B2=10.28	1968DRb (31951)	158
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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
Tb+++	gl	KCl	25°C	1.0M	U	M			1988KTa (32366)	159
								K(Tb(edta)+L)=4.37		
Tb+++	gl	NaClO4	25°C	0.20M	U	M		K1=7.06 B2=12.74	1988VSc (32367)	160
								K(Tb(HEDTA)+L)=5.86		
								K(Tb(CDTA)+L)=4.84		
								K(Tb(DTPA)+L)=4.50		
Tb+++	gl	NaClO4	25°C	0.20M	U	M		K1=7.06 B2=12.74	1987VSb (32368)	161
								K(Tb(nta)+L)=6.13		
								K(Tb(edta)+L)=4.68		
Tb+++	EMF	KCl	25°C	1.0M	U	M			1977GMa (32369)	162
								K(TbA+L)=5.36		
								K(TbA+H2L)=1.08		
								K(TbA+H3L)=2.47		

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

Tb+++	gl	alc/w	25°C	1.0M	U	I		K1=6.97 B2=12.90	1976TBb (32370)	163
								K(Ce+3L)=17.9		

Medium: 1 M LiCl in 60% MeOH/H2Ov/v; in 100%H2O K1=5.94; B2=10.92; B3=15.50
 Also data for EtOH, Dioxane, Acetone mixed solvents

Tb+++	cal	KNO3	20°C	0.10M	U	HM			1971GKb (32371)	164
								K(TbA+L)=3.98		

DH(TbA+L)=-33.89 kJ mol⁻¹, DS=-39.3 J K⁻¹ mol⁻¹. DH(TbAL)=-38.53, DS=288.
 H4A=EDTA

Tb+++	gl	KNO3	25°C	0.10M	U	M		K1=6.78 B2=12.24	1962THa (32372)	165
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Ternary complexes with N-(2-hydroxyethyl)diaminoethane-triethanoic acid

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
Tb+++	gl	diox/w	20°C	50%	U			K1=8.11 B2=15.29	1971MAf (32551)	166

Medium: 50% v/v dioxan, 0.1 M NaClO4

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
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Tb+++ gl NaClO4 30°C 0.10M U K1=3.92 B2=6.88 1984YLa (32731) 167

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

Tb+++ gl KCl 60°C 0.10M U K1=6.51 B2=11.07 1978NBa (33094) 168
 B3=13.85

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

Tb+++ gl KNO3 30°C 0.10M U M 1984AIa (33114) 169
 K(Tb(EDTA)+L)=2.922

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

Tb+++ gl NaClO4 25°C 2.00M U H K1=1.73 B2=3.12 1965CGa (33248) 170
 By calorimetry: $DH(K1)=18.4 \text{ kJ mol}^{-1}$, $DS=94.5 \text{ J K}^{-1} \text{ mol}^{-1}$; $DH(K2)=6.3$, $DS=47$

Tb+++ gl NaClO4 25°C 0.50M U K1=1.82 B2=2.84 1964SPa (33249) 171

C4H8O2S HL CAS 627-04-3 (3007)
 S-Ethylthioethanoic acid; CH3.CH2.S.CH2.COOH

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

Tb+++ gl NaClO4 31°C 2.0M U K1=1.53 B2=2.53 1963BCb (33414) 172

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

Tb+++ ix NaClO4 25°C 0.10M U I K1=2.85 B2=5.41 1971ALb (33521) 173
 B3=7.00
 B4=7.84

Range of ionic strength 0-0.7. $K1(0.0)=2.83$, $B2=6.32$, $B3=8.64$, $B4=10.05$,
 $K1(0.7)=2.86$, $B2=4.91$, $B3=6.06$, $B4=6.60$

Tb+++ ix alc/w 25°C 83% U I K1=4.90 B2=8.65 1968ALa (33522) 174
 B3=11.25
 B4=13.25

Medium: MeOH/H2O. K1(0%)=2.82, B2=5.33, B3=6.89, B4=8.16. K1(50%)=3.74, B2=6.81, B3=8.86, B4=10.24

Tb+++	gl	NaClO4	25°C	0.20M	U	K1=2.92 K3=1.62 K4=1.23	B2=5.24	1964DVa (33523)	175
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Tb+++	gl	NaClO4	20°C	0.10M	U	K1=3.107 B3=7.43	B2=5.63	1964PKb (33524)	176
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Tb+++	gl	NaClO4	25°C	0.50M	U	K1=2.87 B3=6.19	B2=5.21	1964SPa (33525)	177
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Tb+++	gl	NaClO4	25°C	2.0M	U	K1=2.83 K3=1.78	B2=5.25	1961CCa (33526)	178
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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
Tb+++	gl	KNO3	25°C	0.10M	C		K1=3.04 K3=1.63	B2=5.42	1975PFb (33686) 179

 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
Tb+++	EMF	KNO3	25°C	0.10M	U		K1=3.02 K3=2.00	B2=5.45	1976PKb (33713) 180

Tb+++	gl	NaClO4	25°C	0.50M	U		K1=2.71 B3=6.58	B2=4.88	1964SPa (33714) 181
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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
Tb+++	cal	non-aq	25°C	100%	U	H	K1=4.04 B3=9.39 B4=10.81	B2=7.24	1997CDa (34772) 182

Medium: MeCN. DH(K1)=-33.9 kJ mol⁻¹, DS=36; DH(B2)=-66.9, DS=86;
 DH(B3)=-98, DS=148; DH(B4)=-120, DS=196

 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
Tb+++	EMF	NaClO4	25°C	100%	C H		K1=5.73 B2= 9.70	2000CDa (35816)	183
Medium: DMF, 0.10 M Et4N[CF3SO3]. Method: Ag/Ag+ electrode.									
By calorimetry: DH(K1)=-47.6, DH(B2)=-104.8 kJ mol-1.									

Tb+++	ISE	non-aq	25°C	100%	C H		K1=3.32 B2=6.07	1993CCb (35817)	184
Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-28.3 kJ mol-1, DS=-31; DH(B2)=-71.9, DS=125.									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	cal	NaClO4	25°C	0.10M	U H		K1=2.94 B2=4.93	1978COa (35950)	185
DH(K1)=9.99 kJ mol-1, DS=89.9; DH(K2)=1.84, DS=44.3									

C5H4NO2Cl	H2L		CAS 53223-89-9	(5916)
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5-Chloropyridine-2,3-diol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	diox/w	35°C	50%	U		K1=8.75	1984SSd (36037)	186

C5H4N2O2	HL		CAS 98-97-5	(1879)
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Pyrazine-2-carboxylic acid; cyclo(-CH:CH.N:C(COOH).CH:N-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	EMF	NaClO4	25°C	1.0M	C		K1=2.77 B2= 4.83 B3=6.82	1983KKb (36065)	187

Method: Pt/quinhydrone electrode.

C5H4N2O3S	H2L	Thioorotic acid	(4335)
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1,2,3,6-Tetrahydro-2-thio-6-oxo-4-pyrimidinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	oth/un	20°C	0.15M	U		K1=4.5	1987DBa (36078)	188

C5H4N2O4	H2L	Orotic acid	CAS 65-86-1	(624)
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1,2,3,6-Tetrahydro-2,6-dioxo-4-pyrimidinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	oth/un	20°C	0.15M	U		K1=6.0	1987DBa (36121)	189

C5H4O3	HL		CAS 488-93-7	(1166)
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Furan-3-carboxylic acid; C4H3O.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	cal	NaClO4	25°C	2.00M	U	H	K1=1.60	1976YCa (36311)	190
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DH=6.32 kJ mol⁻¹ and DS=52.72 J mol⁻¹ K⁻¹.

C5H6O4	H2L	Itaconic acid	CAS 97-65-4	(398)
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Methylenesuccinic acid; H₂OC.CH₂.C(:CH₂).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	KCl	25°C	0.20M	U		K1=3.05 K(Tb+HL)=1.87	1989MFa (37452)	191
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C5H7NO3	HL		(4313)
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Isonitrosoacetylacetone; HO.N:CH.CO.CH₂.CO.CH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	diox/w	20°C	50%	U		K1=4.78 B2=8.18	1971MAf (37533)	192
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Medium: 50% v/v dioxan, 0.1 M NaClO₄

C5H8N2O3	H2L		(4317)
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Methylacetylglyoxime; CH₃.C(:N.OH).C(:N.OH).CO.CH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	diox/w	20°C	50%	U		K1=5.76 B2=10.65	1971MAf (37710)	193
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C5H8O2	HL	Acetylacetone	CAS 123-54-6	(164)
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Pentane-2,4-dione; CH₃.CO.CH₂.CO.CH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	KCl	25°C	0.10M	U		K1=5.79 B2=10.30 K3=3.44	1995PAa (38091)	194
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Tb+++	dis	NaClO4	25°C	1.0M	C		B2=10.00 B3=13.34 B4=15.26	1989ALa (38092)	195
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Method: extraction of 160Tb from 1.0 M NaClO₄ into benzene/HL.

Tb+++	gl	NaClO4	20°C	0.10M	U	M		1973TZa (38093)	196
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K(Tb(EDTA)+L)=3.60

Tb+++	gl	R4N.X	25°C	0.10M	U	M		1972FGa (38094)	197
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K(Tb(EDTA)+L)=2.62

Medium: NH₄Cl

Tb+++	gl	alc/w	?	50%	U	I	K1=7.20	1971K0a (38095)	198
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Medium: 5-80% MeOH, 0.005 TbCl₃, 0.005 HL. K₁(5%)=6.13; K₁(80%)=8.29

Tb+++ gl oth/un 30°C 0.10M U K₁=6.02 B₂=10.63 1960GFa (38096) 199
K₃=3.41

C₅H₈O₄ H₂L CAS 601-75-2 (479)

Ethylpropanedioic acid; H₃COO.C₂H₅.COOH

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

Tb+++ gl KCl 25°C 0.20M U K₁=4.87 1989ZPa (38251) 200

In 70.4% v/v EtOH/H₂O: K₁ = 6.31

C₅H₈O₄ H₂L CAS 498-21-5 (2234)

Methylsuccinic acid; H₃COO.CH₂.CH(CH₃).COOH

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

Tb+++ gl NaClO₄ 25°C 0.10M U K₁=3.22 B₂=5.05 1970RFa (38269) 201

C₅H₈O₇ H₂L CAS 40120-71-6 (3022)

2,3,4-Trihydroxypentanedioic acid, Trihydroxyglutaric acid; H₃COO.(CH(OH))₃.COOH

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

Tb+++ gl KCl 24°C 0.20M U K₁=3.68 1966DDa (38441) 202

C₅H₉N₂ HL Proline CAS 147-85-3 (44)

Pyrrolidine-2-carboxylic acid; C₄H₈N.COOH

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

Tb+++ gl NaClO₄ 25°C 0.10M U B₂=5.62 1981ZLa (38645) 203

C₅H₉N₃ HL Hydroxyproline 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

Tb+++ gl NaCl 37°C 0.15M U K₁=3.58 1997GMa (38753) 204

Tb+++ gl NaClO₄ 25°C 0.10M U B₂=5.20 1981ZLa (38754) 205

C₅H₉N₄ H₂L MIDA 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

Tb+++ gl KCl 25°C 0.10M U K₁=6.99 B₂=12.58 1980MGc (39287) 206

B₃=15.38

$$B(Tb+20H+L)=17.91$$

C5H10N2O3 HL Glutamine CAS 56-85-9 (18)
2-Aminopentanedioic acid 5-amide; H₂N.CH(CH₂.CH₂.CO.NH₂)COOH

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

Tb+++ gl NaCl 37°C 0.15M U M K1=3.67 1997NZa (39838) 207
B(TbH₂(glu)L)=22.87

C5H10O3 HL CAS 3739-30-8 (3612)
2-Hydroxy-2-methylbutanoic acid, Methylene glycolic acid; CH₃.CH₂.C(OH)(CH₃)COOH

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

Tb+++ gl KNO₃ 25°C 0.10M U K1=3.10 B2=5.58 1969PCa (40264) 208
K3=1.73

C5H10O3 HL CAS 617-31-2 (474)
2-Hydroxypentanoic acid; CH₃.CH₂.CH₂.CH(OH).COOH

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

Tb+++ gl NaClO₄ 25°C 1.0M U K1=2.53 1968GCa (40287) 209

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

Tb+++ gl NaClO₄ 25°C 0.10M U K1=2.30 B2=3.90 1970RDa (40304) 210
K3<1

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

Tb+++ gl KNO₃ 25°C 0.10M C K1=3.04 B2=5.39 1975PFb (40319) 211
K3=1.56

C5H10O5 L D-Ribose CAS 50-69-1 (512)
D-Ribose;

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

Tb+++ cal none 25°C 0.0 U H K1=0.49 1993MLa (40357) 212
DH(K1)=-11.5 kJ mol⁻¹, TDS=-8.7

C5H11NO2 HL Valine CAS 72-18-4 (43)

2-Amino-3-methylbutanoic acid; H₂N.CH(CH(CH₃)₂).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KN03	25°C	0.20M	U	M	K1=6.50 K(Tb(phen)+L)=6.25	1990LSb (40760)	213

Tb+++	gl	KCl	25°C	0.10M	U	T	K1=4.00	1974BFa (40761)	214

C5H11NO2		HL		Nor-Valine			CAS 760-78-1	(689)	
2-Aminopentanoic acid; CH ₃ .CH ₂ .CH ₂ .CH(NH ₂).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KN03	27°C	0.10M	M	TI	K1=6.36	1996ALa (40848)	215
For I = 0.05, K1=6.41; I=0.15, K1=6.14. Also data for 32 and 37 C.									

C6H5NO2		HL		Picolinic acid			CAS 98-98-6	(391)	
2-Pyridine-carboxylic acid; C ₅ H ₄ N.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KN03	25°C	0.20M	U	M	K1=4.88	1987LSc (42602)	216
K(Tb(nta)+L)=4.32, K(Tb(edta)+L)=4.22.									

Tb+++	gl	NaCl04	25°C	0.50M	U		K1=3.79 B2=7.11 B3=9.67	1977GGb (42603)	217

Tb+++	gl	KN03	25°C	0.10M	U		K1=4.08 B2=7.56 K3=2.76 K4=2.18	1968PIa (42604)	218

Tb+++	gl	KN03	25°C	0.10M	U		K1=4.15 B2=7.62 B3=10.6	1964THb (42605)	219

C6H5NO2		HL		Nicotinic acid			CAS 59-67-6	(419)	
3-Pyridine-carboxylic acid; C ₅ H ₄ N.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaCl04	25°C	0.20M	U		K1=2.09	1973FDa (42688)	220

C6H5NO4		H2L		4-Nitrocatechol			CAS 3316-09-4	(890)	
1,2-Dihydroxy-4-nitrobenzene; O ₂ N.C ₆ H ₃ (OH) ₂									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KN03	25°C	0.10M	U		K1=9.51 B2=16.66	1981BDa (42944)	221

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
Tb+++	sp	KCl	25°C	0.10M	M	I	K1=6.19	1989PEa (42960)	222

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
Tb+++	sp	KCl	25°C	0.10M	U		K1=5.40	1987PLa (43116)	223

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
Tb+++	sp	KCl	25°C	0.10M	U		K1=5.51	1987PLa (43158)	224

C6H6N2O4		HL				Methylorotic	CAS 706-36-2	(2611)	
3N-Methyl-2,4-dihydroxypyrimidine-6-carboxylic acid, methylorotic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	oth/un	20°C	0.15M	U		K1=6.2	1987DBa (43475)	225

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
Tb+++	gl	NaCl04	25°C	0.20M	U		K1=9.78	1998PJb (43838)	226

Tb+++	gl	KNO3	25°C	0.10M	U	TIH	K1=8.82 B2=14.85 B(TbAL)=11.81	1986NSa (43839)	227
H2A=phthalic acid. DH(TbAL)=-46.3 kJ mol ⁻¹ , DS=70.9 J K ⁻¹ mol ⁻¹									

Tb+++	gl	KNO3	25°C	0.05M	M	I	K1=10.50 B2=20.28	1981BDc (43840)	228
Also data for I=0.2 and 0.35 M. At I=0, K1=11.11, K2=10.20.									

Tb+++	gl	NaCl04	25°C	0.10M	U	T	K1=10.83 B2=20.43	1979NDa (43841)	229
At 45 C, K1=10.13, K2=9.27. Medium ionic strength not stated.									

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
Tb+++	gl	NaCl04	25°C	0.20M	U		K1=10.58	1998PJb (43983)	230

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

Tb+++ sp KCl 25°C 0.10M C I K1=6.153 1987PEa (44245) 231
In 0.087 M KCl, K1=6.187.

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

Tb+++ gl KNO3 25°C 0.10M U TIH K1=14.56 B2=28.21 1980BDd (44496) 232
Data for I=0.05-0.2 M and for I=0.10 M (35 C). Also DH and DS values.

Tb+++ gl NaClO4 25°C 0.50M C K1=12.69 B2=21.69 1976LAb (44497) 233
B(TbHL2)=29.44

Tb+++ gl NaClO4 25°C 0.10M U K1=14.14 1970SSi (44498) 234
K(Tb+HL)=5.71

C6H7N L Aniline CAS 62-53-3 (583)
Aminobenzene, aniline; C6H5.NH2

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

Tb+++ sp non-aq 25°C 100% U HM 1982KNa (44881) 235
K(TbA3+L)=2.42

Medium: CCl4. HA=dipivaloylmethane

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

Tb+++ gl KNO3 25°C 0.10M U TIH K1=6.28 B2=10.98 1986NSa (44937) 236
B(TbAL)=13.44

H2A=phthalic acid. DH(TbAL)=-67.2 kJ mol⁻¹, DS=31.8 J K⁻¹ mol⁻¹

Tb+++ gl mixed 25°C 50% U I K1=3.82 B2=6.66 1969BCa (44938) 237
Medium: 50% DMSO, 0.12 M NaClO4. In 0.12 M NaClO4, 50% dioxan: K1=5.14,
K2=4.24. Medium: 0.12 NaClO4, 50% EtOH: K1=4.65, K2=3.61

C6H7N3O L Isonicotinic hy CAS 54-85-3 (1267)
Pyridine-4-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

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

Tb+++ gl NaClO4 15°C 0.10M U K1=8.40 1980ZMa (45132) 238

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

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

Tb+++ gl KCl 25°C 0.20M U K1=4.07 1989ZPa (45475) 239
 In 70.4% v/v EtOH/H2O: K1 = 6.00

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

Tb+++ gl NaClO4 25°C 2.00M U IH K(Tb+HL)=1.52 1988HSa (45661) 240

DH=6.0 kJ mol⁻¹, DS=49.2 J K⁻¹ mol⁻¹

In 0.1 M NaClO4: K=1.7, DH=3.8 kJ mol⁻¹, DS=45 J K⁻¹ mol⁻¹

C6H8O6S H3L CAS 99-68-3 (3692)
 (Carboxymethylthio)butanedioic acid; HOOC.CH(S.CH2.COOH).CH2.COOH

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

Tb+++ gl NaClO4 25°C 0.10M U TIH K1=4.01 B2=7.26 1986AJc (45715) 241
 DH(K1)=-5.7 kJ mol⁻¹, DS=54.7 J K⁻¹ mol⁻¹; DH(K2)=-6.3, DS=41.4

Tb+++ gl NaClO4 30°C 0.10M U IH K1=3.88 B2=7.13 1983ASa (45716) 242
 DH(K1)=-4.9 kJ mol⁻¹, DH(K2)=-6.3

C6H8O7 H3L Citric acid CAS 77-92-9 (95)
 2-Hydroxypropane-1,2,3-tricarboxylic acid; HOOCCH2.CH(OH)(COOH).CH2COOH

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

Tb+++ gl KNO3 25°C 1.0M M 1986SZb (46269) 243
 K(Tb+H3L=TbHL+2H)=-2.86
 K(Tb+H3L=TbL+3H)=-6.21
 K(Tb+H3L=TbH-1L+4H)=-11.94
 K(Tb+2H3L=TbH2L2+4H)=-7.07

K(Tb+2H3L=TbL2+6H)=-14.54, K(Tb+2H3L=TbH-2L2+8H)=-29.2,
 K(Tb+2H3L=TbH-3L2+9H)=-28.3, K(Tb+2H3L=TbH-4L2+10H)=-38.2.

 Tb+++ gl KNO3 25°C 0.10M U M 1975TDa (46270) 244
 B(Tb(IDA)L)=10.2

 Tb+++ dis NaClO4 25°C 0.15M U 1973HHc (46271) 245
 K(Tb+HL+L)=11.19

Tb+++ gl alc/w 25°C 25% U I K1=8.62 1972BKd (46272) 246
 Medium: EtOH/H2O, 0.05 M (NaCl,NaClO4). 0%, K1=7.75; 50%, K1=9.75

Tb+++ ix NaCl 25°C 0.10M U K1=7.15 B2=12.18 197200a (46273) 247
 K(Tb+HL)=5.54
 K(Tb+2HL)=8.69

Tb+++ dis oth/un 25°C 0.10M U K1=7.88 B2=11.86 1971GBa (46274) 248
 K(Tb+2H3L=Tb(HL)2+4H)=-6.4
 K(Tb+2H3L=TbHL2+5H)=-10.75

Tb+++ oth oth/un 25°C 0.10M U K1=7.80 B2=11.00 1971STe (46275) 249
 K(TbL+HL)=2.50

Constants obtained by survey of literature data

Tb+++ sol NaClO4 25°C 0.10M U K1=8.1 1966SSg (46276) 250
 Kso=-11.82

C6H8O7 H3L (6770)
 Carboxymethoxysuccinic acid; HOOC.CH2.O.CH(COOH)CH2.COOH

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

Tb+++ EMF NaClO4 25°C 1.00M U K1=6.20 B2=10.64 1991WPb (46336) 251

C6H9NO6 H3L NTA CAS 139-13-9 (191)
 Nitritotriethanoic acid; N(CH2.COOH)3

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

Tb+++ ISE NaClO4 25°C 0.10M C I K1=11.43 1997LBb (47036) 252
 Method: Cu ISE and competitive complexation by Cu. Data for 0.1-5.0 M.
 At I=0.0 M, K1=13.34.

Tb+++ ISE KNO3 25°C 0.10M C K1=11.53 1980NSf (47037) 253
 Competitive method using Cd ion-selective electrode.

Tb+++ gl KNO3 20°C 1.0M C K2=8.28 1978GHb (47038) 254

Tb+++ gl NaClO4 25°C 0.50M U K1=11.25 1977GGb (47039) 255

Tb+++ EMF KCl 25°C 1.0M U M 1977GMa (47040) 256
 K(TbA+L)=6.12
 K(TbA+H2L)=1.60
 K(TbA+H3L)=2.02
 K(TbA+H4L)=3.47

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

Tb+++ cal KNO3 20°C 0.10M U HM 1971GKb (47041) 257

K(TbA+L)=4.65
H4A=EDTA. DH(TbA+L)=-35.52 kJ mol⁻¹, DS=-32.2 J K⁻¹ mol⁻¹.

Tb+++ gl oth/un 20°C 0.20M U 1970VMa (47042) 258
B(Tb(OH)L)=6.35

Tb+++ gl KNO3 25°C 0.10M U T H T K1=11.59 B2=20.97 1962MFb (47043) 259
15 C: K1=11.60, K2=9.53; 20 C: 11.58, 9.45; 30 C: 11.64, 9.32; 35 C: 11.65;
9.25; 40 C: 11.67, 9.20. DH(K1)=7.2 kJ mol⁻¹, DS=246; DH(K2)=-21.8, DS=106

Tb+++ vlt KNO3 20°C 0.10M U 1957N0a (47044) 260
K(Tb2L3)=37.20

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
Tb+++ gl NaClO4 25°C 0.10M U K1=2.898 B2=5.26 1966PRb (47997) 261
K3=1.73
K4=1.23

C6H10O6 H2L CAS 23243-68-7 (242)
1,2-Bis(carboxymethoxy)ethane; HOO.CCH2.O.CH2.CH2.O.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Tb+++ oth NaClO4 25°C 0.10M U K1=4.77 1984AFa (48354) 262
Laser excitation spectroscopy, competition method.
Tb+++ gl NaClO4 25°C 1.00M C H K1=4.75 B2=7.90 1974GGa (48355) 263
B3=8.69
B(TbHL2)=9.74

C6H10O8 H2L Saccharic acid CAS 87-73-0 (1191)
D-2,3,4,5-Tetrahydroxy-1,6-hexanedioic acid, Glucaric acid; HOO.C.(CHOH)4.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Tb+++ gl NaClO4 25°C 0.10M U M K1=4.54 1997PPb (48488) 264
K(Tb(edta)+L)=4.08

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
Tb+++ gl KNO3 20°C 1.00M U K1=8.22 B2=16.17 1974CMd (48794) 265
K(TbL2(OH)+H)=10.48

Tb+++ oth NaNO3 20°C 0.10M U M K1=9.0 B2=17.05 1966JMc (48795) 266
Method: paper electrophoresis. Ternary complexes with HEDTA

Tb+++ vlt KCl 25°C 0.10M U B2=16.42 1965DTa (48796) 267

Tb+++ ISE KNO3 25°C 0.10M U K1=9.08 B2=17.27 1963TLa (48797) 268

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

Tb+++ gl NaClO4 25°C 1.00M C H K1=8.26 B2=15.05 1974GGa (49272) 269
B(TbH2L)=17.65

Tb+++ gl KNO3 25°C 0.10M U K1=8.18 B2=14.70 1962THb (49273) 270

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

Tb+++ gl NaCl 20°C 0.10M U K1=3.03 1986GKb (49428) 271

C6H12O3 HL DiEtGlycolic CAS 3639-21-2 (421)
2-Ethyl-2-hydroxybutanoic acid; (C2H5)2.C(OH).COOH

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

Tb+++ EMF NaClO4 25°C 1.0M U K1=3.01 B2=5.08 1965TVa (49466) 272
K3=1.37
K4=0.53

Method: quinhydrone electrode

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

Tb+++ gl KNO3 25°C 0.10M U K1=3.31 B2=5.88 1979PPa (49500) 273
K3=1.54

C6H12O7 HL Gluconic acid CAS 526-95-4 (904)
D-Gluconic acid, 2,3,4,5,6-Pentahydroxyhexanoic acid; HO.CH2(CHOH)4.COOH

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

Tb+++ EMF alc/w 25°C 50% U K1=4.68 1966KRb (49763) 274
Medium: 50% MeOH

Tb+++ gl KCl 25°C 0.20M U K1=2.34 B2=4.67 1963K0c (49764) 275

C6H13NO2 HL Leucine CAS 61-90-5 (47)
2-Amino-4-methylpentanoic acid; H2N.CH(CH2.CH(CH3)2)COOH

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

Tb+++ gl KNO3 25°C 0.20M U M K1=6.15 1990LSb (50109) 276
K(Tb(phen)+L)=5.99

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

Tb+++ gl NaClO4 22°C 0.10M M K1=4.84 B2=9.38 1991DTa (50194) 277

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

Tb+++ gl KNO3 20°C 0.10M U K1=5.43 B2=10.49 1982RFa (50409) 278

Tb+++ gl KCl 30°C 0.10M U K1=5.48 B2=9.20 1973MSe (50410) 279

Tb+++ gl alc/w 20°C 50% U I K1=6.69 1970KRa (50411) 280
Medium: 0-80% MeOH, 0.03 M KCl. K1(0%)=5.53, K1(20%)=6.1, K1(80%)=7.8

Tb+++ oth NaNO3 20°C 0.10M U K1=8.0 B2=14.30 1966JMc (50412) 281
Method: paper electrophoresis

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

Tb+++ gl NaCl 37°C 0.15M U M K1=2.89 1997GMa (50588) 282
B(TbHL)=11.15
B(TbH2AL)=24.59

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

Tb+++ ISE non-aq 25°C 100% C H K1=4.75 B2=5.95 1993CCb (52210) 283
Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-45.2
kJ mol⁻¹, DS=-61; DH(B2)=-69.0, DS=-118.

 C6H20N2012P4 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
Tb+++	gl	KN03	25°C	0.10M	C			1991SKb (52365)	284
							K(TbL+H)=7.41 K(TbHL+H)=6.14		

 C7H4N207 H2L CAS 609-99-4 (400)
 3,5-Dinitrosalicylic acid; (O2N)2.C6H2(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	oth/un	24°C	0.20M	U		K1=5.46	1972PSd (52502)	285
		Medium: LiCl							

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	sp	NaCl04	RT	0.50M	C		K1=8.09 B2=16.76 K3=4.72	19920Ka (52810)	286
		Method: fluorescence spectroscopy. Medium pH: 5.8							
Tb+++	cal	NaCl04	25°C	0.50M	C	H		1963GRd (52811)	287
		DH(K1)=-11.25 kJ mol-1, DS(K1)=128 J K-1 mol-1; DH(B2)=-33.50, DS(B2)=194; DH(B3)=-57.79, DS(B3)=225.							

Tb+++	EMF	oth/un	20°C	0.50M	U		K1=8.68 B2=16.11 K3=5.92	1961GRa (52812)	288
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 C7H5N04 HL CAS 121-92-6 (490)
 3-Nitrobenzoic acid; O2N.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaCl04	25°C	0.10M	C	H	K1=1.61	1986CLc (52873)	289
		DH=7.9 kJ mol-1, DS=57 J K-1 mol-1							

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaCl04	25°C	0.10M	C	H	K1=1.76	1986CLc (53242)	290
		DH=8.3 kJ mol-1, DS=61 J K-1 mol-1							

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
Tb+++	gl	NaCl04	25°C	0.10M	C	H	K1=1.89	1986CLc (53262)	291

DH=9.6 kJ mol⁻¹, DS=68 J K⁻¹ mol⁻¹

 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
Tb+++	gl	NaCl04	25°C	0.10M	C	T	B(1,1,1)=12.42 B(1,0,1)=7.47 B(1,0,2)=12.61 B(1,-2,1)=-8.25	1993ALa (53376)	292

B(p,q,r); pTb+qH+rL=(Tb)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
Tb+++	gl	KN03	25°C	0.10M	U		K1=7.15 B2=13.18 K3=4.82 K4=3.38	1969CMb (53693)	293

 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
Tb+++	cal	NaCl04	25°C	0.10M	U	H	K1=1.95 B2=3.65	1982CBc (53857)	294
DH1= 9.3 kJ mol ⁻¹ , DS1= 68 J K ⁻¹ mol ⁻¹									
Tb+++	gl	alc/w	25°C	99%	U		K1=6.70 B2=11.36 K3=2.76	1974BPb (53858)	295

 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
Tb+++	gl	NaCl04	25°C	0.1M	C	H		1996HYa (54301)	296
By calorimetry: DH(K1)=3.02 kJ mol ⁻¹ , DH(B2)=4.43 J K ⁻¹ mol ⁻¹									
Tb+++	gl	NaCl04	25°C	0.10M	C	T	K(Tb+HL)=1.95	1989HMa (54302)	297

$$K(\text{TbHL}+\text{HL})=1.91$$

Tb+++ gl KNO3 25°C 0.10M U TIH T K1=10.11 1986NSa (54303) 298
B(TbAL)=15.69

H2A=phthalic acid. DH(TbAL)=-40.8 kJ mol⁻¹, DS=163.4 J K⁻¹ mol⁻¹

Tb+++ gl alc/w 25°C 100% U K1=6.15 B2=10.92 1973BPd (54304) 299
K3=3.42

Medium: 99.9% MeOH, 0.1 M NaCl

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

Tb+++ gl NaCl04 25°C 0.10M C 1988LLa (54389) 300
K(Tb+HL)=1.95

Tb+++ gl alc/w 25°C 99% U K1=6.78 B2=11.76 1974BPb (54390) 301
K3=3.55

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

Tb+++ gl NaCl04 25°C 0.10M C 1988LLa (54433) 302
K(Tb+HL)=2.15

Tb+++ gl alc/w 25°C 99% U K1=6.90 B2=12.04 1974BPb (54434) 303
K3=3.24

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

Tb+++ gl NaCl04 25°C 0.20M U K1=10.36 1998PJb (54702) 304

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

Tb+++ gl KNO3 20°C 0.10M U T K1=7.80 1982DBa (55049) 305

Tb+++ gl NaCl04 20°C 1.0M U K1=6.95 B2=12.86 1972CBb (55050) 306

Tb+++ sp NaCl04 20°C 0.10M U K1=8.42 B2=14.61 1968KTb (55051) 307
K(Tb+HL)=2.47

C7H6O9S2 H3L CAS 56507-30-3 (2659)
3,5-Disulfosalicylic acid; (HO3S)2.C6H2(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaClO4	25°C	0.50M	C	T	K1=8.74 B2=14.42	1976LAc (55102)	308

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
Tb+++	gl	NaClO4	25°C	0.10M	C		K1=2.28 B2=4.40	1989HMa (55263)	309
Tb+++	gl	alc/w	25°C	100%	U		K1=7.25 B2=13.10 K3=3.06 K4=2.82	1973PBb (55264)	310

Medium: 99.9% MeOH, 0.1 M NaCl

Tb+++	gl	non-aq	25°C	100%	U		K1=7.25 B2=13.10 K3=3.06 K4=2.82	1970BBh (55265)	311
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Medium: MeOH, 0.1 M NaCl

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
Tb+++	gl	KCl	25°C	0.20M	U		K1=2.39	1977EBa (55394)	312

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
Tb+++	gl	KNO3	25°C	0.1M	M		K1=11.49 B2=22.09 K3=10.02	1989LWa (55611)	313

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KCl	25°C	0.20M	M	T H	K1=8.27 K(Tb+OH+L)=15.75	1991BPb (55695)	314

DH(K1)=-97 kJ mol⁻¹, DS(K1)=-163 J K⁻¹ mol⁻¹. DH(Tb(OH)L)=-250,
DS(Tb(OH)L)=-533. 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
Tb+++	gl	mixed	25°C	50%	U	I	K1=4.25 B2=8.22	1969BCb (56078)	315
Medium: 50% DMSO, 0.12 M NaClO4. In 50% dioxan, 0.12 M NaClO4: K1=5.51, K2=4.49; 50% EtOH, 0.12 M NaClO4: K1=5.00, K2=3.78									

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
Tb+++	sp	KCl	25°C	0.10M	M	I	K1=6.55	1986PLb (56134)	316

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
Tb+++	sp	KCl	25°C	0.10M	M	I	K1=6.19	1986PLb (56153)	317

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
Tb+++	gl	KNO3	25°C	0.10M	U		K1=4.26 B2=6.78	1971PJb (56736)	318

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
Tb+++	gl	KNO3	25°C	0.10M	U		K1=6.16 B2=11.59	1963THb (56813)	319

C7H11NO6 H3L MNTA (1026)
Nitrilo(2-propanoic)-diethanoic acid; HOOC.CH(CH3).N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KNO3	20°C	0.10M	U		K1=12.26 B2=21.89	1974RMg (56919)	320

C7H12O3 HL CAS 609-69-8 (3731)
2-Hydroxycyclohexanecarboxylic acid; HO.C6H10.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaClO4	25°C	1.0M	U		K1=2.25 B2=4.26	1967STd (57268)	321

C7H12O4 H2L CAS 510-20-3 (482)
Diethylpropanedioic acid (Diethylmalonic acid); HOOC.C(C2H5)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	KNO3	25°C	0.10M	U			K1=4.63 B2=7.24	1968PFa (57372)	322

C7H12O6 HL Quinic acid CAS 77-95-2 (2578)
1,3,4,5-Tetrahydroxycyclohexane-1-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	EMF	NaClO4	25°C	1.0M	U			K1=2.68 B2=4.73 K3=1.50 K4=0.84	19670Ta (57412)	323

Method: quinhydrone electrode

C7H13NO6 H2L CAS 32013-58-4 (6079)
N-(2,3-Dihydroxypropyl)iminodiethanoic acid; HO.CH2.CH(OH).CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	KNO3	20°C	0.10M	U			K1=8.70 B2=16.63	1980RPa (57620)	324

C7H14O3 HL CAS 65311-45-1 (6266)
3-Hydroxy-3,4-dimethyl-pentanoic acid; CH3.CH2.C(OH)(CH3).CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	NaClO4	25°C	0.10M	C			K1=2.81 B2=4.60	1976SPa (57880)	325

C7H15NO4 HL CAS 41244-51-3 (4459)
N,N-Bis(2'-hydroxyethyl)alanine; (HO.CH2.CH2)2.N.CH(CH3)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	KNO3	20°C	0.10M	U			K1=5.28 B2=10.04	1982RFa (57943)	326

C8H5N5O6 H3L Murexide (453)
Purpuric acid (Murexide is ammonium salt);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	sp	NaNO3	25°C	0.10M	U			K1=3.87	19850Ha (58538)	327
Tb+++	sp	NaClO4	30°C	0.10M	C			K1eff=5.016	1978BKd (58539)	328

Medium pH 5.4 (acetate).

Tb+++ sp alc/w 12°C 50% U 1972BLa (58540) 329
K(Tb+H2L)=4.68

Medium: 50% EtOH, 0.1 M NaClO4

Tb+++ sp KNO3 12°C 0.10M U 1965GEa (58541) 330
K(Tb+H2L)=3.95

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

Tb+++ cal non-aq 25°C 100% C H 2004MIa (58680) 331
Method: calorimetric titration. Medium: chloroform. DH(TbL3+A)=8.0 kJ
mol-1, DS=84 J K-1 mol-1; DH(TbL3+2A)=5.5, DS=124. HA is benzoic acid.

Tb+++ gl alc/w 22°C 80% U K1=6.43 B2=12.08 1995MTa (58681) 332
K3=4.71

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

Tb+++ gl mixed 25°C 50% U K1=5.85 1980SBc (58682) 333
Medium: 50% MeCN

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

Tb+++ gl KNO3 25°C 0.10M U K1=4.17 B2=7.42 1986NSa (59017) 334

Tb+++ gl NaClO4 30°C 0.10M U K1=4.06 B2=7.15 1966KPb (59018) 335

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

Tb+++ cal NaClO4 25°C 0.10M U H K1=2.64 1982CBc (59061) 336
DH= 12.77 kJ mol-1, DS= 93 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

Tb+++ gl diox/w 20°C 50% U K1=6.14 B2=11.65 1971MAf (59108) 337

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
Tb+++	gl	KN03	25°C	0.1M	M		K1=10.25 B2=19.67 K3=9.50	1989LWa (59129)	338

C8H7O2Cl		HL					CAS 1450-74-4	(6325)	
2-Hydroxy-5-chloro-acetophenone; Cl(HO)C6H3.CO.CH3									
Tb+++	gl	alc/w	25°C	20%	M	TIH	K1=6.275 K(Tb(egta)+L)=3.485	2000KDa (59223)	339
Medium contains 0.1 M NaNO3. Data for 0.05, 0.15 M NaNO3 and 35 and 45 C. At I=0, K1=6.492, K(Tb(egta)+L)=3.652. DH(Tb(egta)L)=-15.9 kJ mol-1.									

C8H8N2O2		HL					Phenylglyoxime	(3222)	
Phenylglyoxime; C6H5.C(:N.OH).CH:N.OH									
Tb+++	gl	diox/w	20°C	50%	U		K1=7.12 B2=13.35	1971MAf (59343)	340
Medium: 50% dioxan, 0.1 M NaClO4									

C8H8N4O5		L					(6097)		
2-Acetylpyridinethiosemicarbazone; C5H4N.CO.CH:N.NH.CS.NH2									
Tb+++	gl	alc/w	25°C	75%	C	I	K1=7.81 B2=15.20	1988GSa (59413)	341
In 75%(v/v) ethanol/water; 0.1 M NaClO4. I=0.2 M: K1=7.86, K2=7.25; I=0.05 M: K1=8.06, K2=7.43; I=0.02 M: K1=8.06, K2=7.67									

C8H8O2		HL					2-Acetylphenol	CAS 118-93-4	(1888)
2-Hydroxyacetophenone; HO.C6H4.CO.CH3									
Tb+++	gl	alc/w	25°C	20%	M	TIH	K1=6.615 K(Tb(egta)+L)=4.484	2000KDa (59471)	342
Medium contains 0.1 M NaNO3. Data for 0.05, 0.15 M NaNO3 and 35 and 45 C. At I=0, K1=6.840, K(Tb(egta)+L)=4.688. DH(Tb(egta)L)=-19.4 kJ mol-1.									

C8H8O2		HL					Phenylacetic	CAS 103-82-2	(1361)
Phenylethanoic acid; C6H5.CH2.COOH									
Tb+++	gl	NaClO4	25°C	0.1M	C	H	K1=1.82	1996HYa (59564)	343
By calorimetry: DH(K1)=14.86 kJ mol-1									

Tb+++ gl NaClO4 25°C 0.10M C H K1=1.82 1990HYa (59565) 344
By calorimetry: DH(K1)=14.8 J K-1 mol-1

C8H8O3 H2L CAS 490-78-8 (6324)
2,5-Dihydroxyacetophenone; (HO)2C6H3.CO.CH3

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

Tb+++ gl alc/w 25°C 20% M TIH K1=6.429 2000KDa (59684) 345
K(Tb(egta)+L)=4.661

Medium contains 0.1 M NaNO3. Data for 0.05, 0.15 M NaNO3 and 35 and 45 C.

At I=0, K1=6.632, K(Tb(egta)+L)=4.885. DH(Tb(egta)L)=-18.9 kJ 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

Tb+++ gl NaClO4 25°C 0.10M M H K1=1.93 1988CLb (59753) 346
DH=9.03 kJ mol-1, DS=67 J K-1 mol-1

Tb+++ gl alc/w 25°C 42% U K1=3.0 1983PMa (59754) 347

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

Tb+++ gl NaClO4 25°C 0.10M C K1=3.01 B2=5.25 1989HMa (59876) 348

Tb+++ gl NaClO4 25°C 2.0M U T K1=2.52 1972DCb (59877) 349

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

Tb+++ gl NaClO4 25°C 0.10M M H K1=2.02 1988CLb (59919) 350
DH=11.2 kJ mol-1, DS=76 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

Tb+++ gl NaClO4 25°C 0.10M M H K1=2.00 1988CLb (59964) 351
DH=11.2 kJ mol-1, DS=76 J K-1 mol-1

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
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Tb+++	gl	diox/w	35°C	50%	U			K1=4.63 B2=8.45	1971MAa (60098)	352
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Medium: 50% dioxan, 0.1 M NaClO4

C8H9NO4		H2L						(4520)		
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Dehydroethanoic acid oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tb+++	gl	diox/w	35°C	50%	U				1971MAa (60504)	353
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K(Tb+HL)=4.45

K(Tb+2HL)=8.08

Medium: 50% dioxan, 0.1 M NaClO4

C8H9N3O2		L						CAS 7254-31-4 (1266)		
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Acylnicotinoyl hydrazide; C5H4N.CO.NH.NH.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tb+++	gl	NaClO4	25°C	0.10M	U			K1=13.85 B2=24.95	1980ZMa (60573)	354
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C8H10N6O2S2		H2L						(2746)		
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2,5-Dihydroxybenzoquinone bis-thiosemicarbazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tb+++	gl	diox/w	30°C	50%	C	TIH		K1=5.89 B2=11.53	1989GDa (60820)	355
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DH(K1)=-147.28 kJ mol⁻¹

C8H10O4		L						CAS 34241-51-5 (5701)		
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3-Acetyl-6-methylhydropyrane-2,4-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tb+++	gl	alc/w	22°C	20%	U			K1=4.61 B2=8.10	1988ZTa (60855)	356
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K3=3.12

C8H10O5		H2L						CAS 145-73-7 (138)		
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7-Oxa-bicyclo[2.2.1]-heptan-2,3-dicarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tb+++	gl	KCl	30°C	0.10M	C			K1=5.90 B2=10.05	1996SZa (60876)	357
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For the -5-en-2-exo isomer, K1=6.23, B2=11.01.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KCl	25°C	0.10M	U		K1=11.95 B2=18.34 B(TbHL)=15.98	1979BEb (61218)	358

C8H12N2O3		H2L		Barbital			CAS 57-44-3	(2744)	
5,5-Diethylbarbituric acid, Veronal, Barbitone;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	oth/un	25°C	0.10M	U		K1=2.929	1987TSb (61443)	359

C8H12N2O8		H4L					CAS 35039-85-1	(4537)	
1,2-Diaminoethane-N,N'-dimalonic acid; (HOOC)2.CH.NH.CH2.CH2.NH.CH(COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KNO3	20°C	0.10M	U		K1=12.53 B2=17.37	1975DPa (61525)	360
Tb+++	gl	KNO3	25°C	0.10M	U		K1=11.44	1972GBd (61526)	361
By polarography K1=11.33									

C8H12O4		H2L					CAS 1076-97-9	(2224)	
Cyclohexane-1,4-dicarboxylic acid; C6H10.(COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaClO4	25°C	0.10M	M	H	K1=4.34	1986CDb (61716)	362
DH=17.1 kJ mol ⁻¹ , DS=141 J K ⁻¹ mol ⁻¹									

C8H13NO6		H3L					(3835)		
2-Amino-2-carboxypropane-N,N-diethanoic acid; HOOCC(CH3)2N(CH2COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KNO3	20°C	0.10M	U		K1=9.62 B2=17.02	1974RMg (61771)	363

C8H13NO6		H3L					(5681)		
2-Aminobutanoic-N,N-diethanoic acid; CH3CH2CH(COOH)N(CH2COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KNO3	20°C	0.10M	U		K1=11.29 B2=19.95	1974RMg (61796)	364

C8H16O4		L		12-Crown-4			CAS 294-93-9	(174)	
1,4,7,10-Tetraoxacyclododecane; cyclo(-O.(CH2.CH2.O)3.CH2.CH2-)									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

Tb+++ ISE non-aq 25°C 100% U K1=5.15 B2=6.09 1982MDa (62729) 365
Medium: propylene carbonate

C8H18N2O10P2 H6L CAS 2310-83-0 (5667)
1,2-Diaminoethane-N,N-diethanoic-N',N'-dimethylphosphonic acid;
(HOOC.CH2)2NCH2CH2N(CH2.PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	KNO3	25°C	0.10M	U		K(Tb+H2L)=7.50	1976Tia (62921)	366
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C8H18O4 L Triglyme CAS 112-49-2 (2358)
1,2-Bis(methoxyethoxy)ethane; CH3O.C2H4O.CH2.CH2.OC2H4.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	non-aq	25°C	100%	C		K1=3.90	1989BP a (62998)	367
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Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

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
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Tb+++	gl	diox/w	35°C	75%	U		K1=7.10 B2=13.05 K3=5.35	1971MAb (63571)	368
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Medium: 75% v/v dioxan, 0.1 M NaClO4

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
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Tb+++	gl	NaClO4	25°C	0.10M	U		K1=5.32 B2=10.09 K3=4.1	1973MAa (63704)	369
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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
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Tb+++	gl	NaClO4	25°C	0.10M	U	I	K1=5.67 B2=10.72 B3=15.30	1987BCd (63829)	370
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Data also in 42% MeOH, 51.1% EtOH, 61.4% dioxan

Tb+++ gl oth/un 20°C 0.10M U K1=6.29 1977SKd (63830) 371

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

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      gl  NaClO4 25°C 0.10M U   H      K1=4.92          1994CRa (63977) 372
                        K(Tb+HL)=2.77
DH(K1)=20.3 kJ mol-1; DS=162 J K-1 mol-1
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C9H7NO              HL      Oxine              CAS 148-24-3 (504)
8-Hydroxyquinoline (8-quinolinol);
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      gl  KNO3   25°C 0.10M U TIH      K1=7.48   B2=13.92  1986NSa (64352) 373
                        B(TbAL)=15.96
H2A=phthalic acid. DH(TbAL)=-60.4 kJ mol-1, DS=103.0 J K-1 mol-1
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Tb+++      sol none   RT    0.0 U              1981FCa (64353) 374
                        Kso(TbL3)=-32.09
Method: spectrophotometry.
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Tb+++      gl  oth/un 20°C 0.10M U          K1=7.25          1977SKd (64354) 375
*****
C9H7NO4S          H2L      Sulfoxine          CAS 84-88-8 (448)
8-Hydroxyquinoline-5-sulfonic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      cal KNO3   20°C 0.10M U   HM              1971GKb (64581) 376
                        K(TbA+L)=4.50
DH(TbA+L)=-23.03 kJ mol-1, DS=7.52 J K-1 mol-1
DH(TbAL): DH=-27.67, DS=334.4. H4A=EDTA
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C9H7N3O2S          H2L      TAR              CAS 2246-46-0 (707)
4-(2'-Thiazolylazo)-resorcinol; C3H2NS.N:N.C6H3(OH)2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      sp  NaNO3   25°C 0.10M C          K1=8.10          1985OHb (64728) 377
                        K(Tb+HL)=4.71
                        K(TbL+H)=6.05
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C9H8N2O4              HL              (6786)
4-Oxo-5-hydroxylamino-7-methyl-4H-pyrano(2,3-b)pyridine-8-oxide;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      gl  mixed  25°C 50% M          K1=3.76   B2=6.75  1991CCc (64819) 378
Medium:1:1 DMF-water;0.1 M NaClO4
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C9H8O4              H2L              CAS 15872-28-3 (8407)

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Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KCl	30°C	0.10M	U		K1=4.35 B2= 8.02	1996SZa (64982)	379

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
Tb+++	gl	NaClO4	25°C	0.10M	C		K1=2.19 B2=3.97	1989HMa (65467)	380

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
Tb+++	gl	NaClO4	25°C	0.10M	C		K1=2.07 B2=4.00	1989HMa (65481)	381

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
Tb+++	gl	KCl	30°C	0.10M	C		K1=4.16 B2=7.09	1996SZa (65578)	382
For the -2,5-dien-2-exo isomer, K1=4.35, B2=8.02.									

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
Tb+++	gl	NaClO4	24°C	0.10M	U		K1=4.39 K(Tb+HL)=1.48	1986ZBa (65593)	383

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
Tb+++	gl	KCl	30°C	0.10M	U		K1=5.02 B2= 8.02	1996SZa (65610)	384

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
Tb+++	gl	KCl	30°C	0.10M	C		K1=5.02 B2=8.02	1996SZa (65625)	385

C9H10O8 H4L CAS 3724-52-5 (1264)
cis-1,2,3,4-Cyclopentanetetracarboxylic acid; C5H6.(COOH)4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	NaCl04	30°C	0.20M	U	T	K1=10.55 K1=10.67 when T=40. K1=10.85 when T=50.	1979NSb (65651)	386
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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
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Tb+++	gl	NaCl	25°C	0.15M	U	H	K1=3.61	1992ZNa (65976)	387
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By calorimetry: DH(K1)=3.35 kJ mol⁻¹, DS(K1)=80.37 J K⁻¹ mol⁻¹.

Tb+++	gl	KCl	25°C	0.10M	U		K1=4.3 B2=7.80	1972BFe (65977)	388
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C9H11NO3 H2L Tyrosine CAS 60-18-4 (4)
2-Amino-3-(4-hydroxyphenyl)propanoic acid; HO.C6H4.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	KCl	25°C	0.10M	U			1972BFe (66242)	389
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K(Tb+HL)=4.35
K(TbHL+HL)=4.3

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	ISE	KN03	25°C	0.10M	U		K1=12.52	1983KBd (66747)	390
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Hg-electrode.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	KN03	25°C	0.10M	U		K1=10.85 B2=18.89	1968TKe (66895)	391
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C9H15NO6 H3L (7177)
2-Aminopentanoic-N,N-diethanoic acid; C3H7C(COOH)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	KN03	20°C	0.10M	U		K1=11.05 B2=19.54	1974RMg (67415)	392
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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

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

Tb+++ cal NaClO4 25°C 0.50M M IH K1=12.93 1986RCa (67645) 393
DH=-10.1 kJ mol⁻¹, DS=214 J K⁻¹ mol⁻¹

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

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

Tb+++ gl KNO3 25°C 0.10M U K1=4.73 B2=7.48 1968PFa (67779) 394

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

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

Tb+++ gl alc/w 22°C 80% U K1=6.22 B2=11.73 1995MTa (68434) 395
K3=5.13

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

Tb+++ gl NaClO4 25°C 0.10M U H K1=4.75 1994CRa (68530) 396
K(Tb+HL)=3.77

DH(K1)=24.2 kJ mol⁻¹, DS=172 J K⁻¹ mol⁻¹; DH(Tb+HL)=9.1, DS=103

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

Tb+++ sp KCl 25°C 0.10M M I K1=4.34 1976PEa (68593) 397

C10H7NO2 HL CAS 132-53-6 (2524)
2-Nitroso-1-naphthol;

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

Tb+++ gl KNO3 25°C 0.10M U K1=5.81 B2=11.08 1982LPc (68661) 398

C10H7NO5S H2L CAS 14090-74-5 (2676)
1-Nitroso-2-hydroxynaphthalene-7-sulfonic acid;


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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      gl  KCl      25°C 0.10M M      K1=4.42      1979LSb (68819) 399
*****
C10H7N05S      H2L      (4766)
1-Nitroso-2-hydroxynaphthalene-6-sulfonic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      sp  KCl      25°C 0.10M C      K1=4.42      1973PMb (68855) 400
*****
C10H7N05S      H2L      CAS 31005-79-9 (1814)
2-Nitroso-1-hydroxynaphthalene-8-sulfonic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      sp  KCl      25°C 0.10M M      K1=5.33      1978PPb (68952) 401
*****
C10H7N08S2      H3L      CAS 52664-45-6 (1627)
2-Nitroso-1-hydroxynaphthalene-4,6-disulfonic acid;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      gl  NaCl      25°C 0.10M U      K1=3.480 B2=6.135 1974SAa (69055) 402
*****
C10H7N08S2      H3L      CAS 50332-99-3 (1628)
2-Nitroso-1-hydroxynaphthalene-4,7-disulfonic acid;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      gl  NaCl      25°C 0.10M U      K1=3.651 B2=6.194 1974SAa (69065) 403
*****
C10H7N5O5      HL      CAS 102964-51-2 (6212)
5-(2'-Nitrophenylazo)barbituric acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      gl  diox/w 25°C 75% U      K1=5.25 B2=10.24 1986MIa (69102) 404
*****
C10H7O2F3      HL      CAS 326-06-7 (196)
3-Benzoyl-1,1,1-trifluoroacetone; CF3.CO.CH2.CO.C6H5
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Tb+++      gl  alc/w 22°C 80% U      K1=6.93 B2=12.61 1995MTa (69163) 405
K3=5.56
Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.
*****
C10H8N2      L      2,2'-Bipyridyl CAS 366-18-7 (25)

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2,2'-Bipyridine; (C5H4N)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	sp	non-aq	25°C	100%	C T			K1=2.70	2005SYa (69649)	406
In ethylacetate; At 50 C K1=2.36										
Tb+++	gl	KNO3	25°C	0.10M	U	TIH		K1=4.29 B2=7.26 B(TbAL)=11.44	1986NSa (69650)	407

H2A=phthalic acid. DH(TbAL)=-46.4 kJ mol⁻¹, DS=63.4 J K⁻¹ mol⁻¹

C10H8N4O3 HL CAS 43168-60-1 (6209)

5-Phenylazobarbituric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	diox/w	25°C	75%	U			K1=5.74 B2=11.10	1986MIa (69736)	408
C10H8O2 H2L CAS 92-44-4 (1658)										

2,3-Dihydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	NaClO4	20°C	0.10M	U	M		K(TbA+L)=7.71, H4A=EDTA	1973PAc (69779)	409
C10H8O5S H3L DHNSA (877)										

2,3-Dihydroxynaphthalene-6-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	NaClO4	25°C	0.50M	C			K1=10.20 B2=18.10 B(TbHL2)=25.04	1976LAd (69863)	410

C10H8O8S2 H4L Chromotropic ac CAS 148-25-4 (1875)

1,8-Dihydroxynaphthalene-3,6-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	KCl	25°C	0.10M	M	I		K(Tb+HL)=2.41	1974MLa (69968)	411
C10H9NO4S H2L CAS 29021-67-8 (3926)										

2-Methyl-8-hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	NaClO4	30°C	0.10M	U	TI		K1=5.46 B2=10.52 B3=14.50	1988BCd (70203)	412

in 42.5% MeOH-water: K1=6.41, B2=12.33, B3=16.93

51.8% EtOH-water: K1=6.83, B2=12.91, B3=17.70

C10H9N3OS HL CAS 60321-26-8 (4671)

2-(2-Thiazolylazo)methylphenol; C3H2NS.N:N.C6H3(CH3)OH

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

Tb+++ sp diox/w 25°C 10% U K1=9.65 1973KSd (70367) 413

Medium: 10% dioxan, 0.1 M KNO3

C10H10O2 HL Benzoylacetone CAS 93-91-4 (197)

1-Phenylbutane-1,3-dione; C6H5.CO.CH2.CO.CH3

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

Tb+++ gl alc/w 25°C 80% U K1=8.27 B2=14.71 1967DZa (70776) 414
K3=4.41

Medium: 80% MeOH, 0.1 M NaCl

Tb+++ gl alc/w 24°C 80% U K1=8.27 B2=14.71 1967DZb (70777) 415
K3 = 4.41

Medium: 80% v/v MeOH/H2O, 0.1 M NaCl

C10H10O6 H2L CAS 5411-14-3 (2394)

1,2-Phenylenedioxodiethanoic acid; C6H4(O.CH2.CO.OH)2

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

Tb+++ gl NaClO4 25°C 0.10M M K1=4.30 B2=6.65 1977HCb (70861) 416

C10H11NO3 HL (1960)

N-Hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H5

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

Tb+++ gl diox/w 20°C 82% U K1=7.14 B2=13.28 1979KSb (70945) 417
K3=5.97

C10H11N5O L CAS 105507-56-0 (8131)

N-Methylisatin-beta-amidinohydrazone;

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

Tb+++ gl diox/w 30°C 50% C TIH K1=5.89 B2=10.28 1986SGc (71096) 418

Medium: 50% v/v dioxan/H2O, 0.10 M NaClO4. Data for 0.02-0.20 M NaClO4

and 30-50 C. DH(K1)=55.5 kJ mol⁻¹, DS=296 J K⁻¹ mol⁻¹; DH(K2)=58.4, DS=277

C10H11O2F7 HL CAS 17587-22-3 (1252)

1,1,1,2,2,3,3-Heptafluoro-7,7-dimethyl-4,6-octanedione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	dis	R4N.X	25°C	0.10M	U		B2=13.4 B3=19.4 B(TbL3(OH))=24.9	1970SBa (71116)	419

Medium: Et4NC104

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KNO3	25°C	0.10M	U		K1=8.87 B2=17.04	1964THa (71276)	420

C10H12O2	HL	CAS 1946-74-3	(202)
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3-Isopropyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	alc/w	24°C	80%	U		K1=9.1 B2=16.70 K3=6.3 K4=4.9	1968DZb (71607)	421

Medium: 80% MeOH, 0.1 M NaCl

C10H12O4	HL	CAS 5936-18-9	(2743)
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2-Hydroxy-3,4-dimethoxyacetophenone; (HO)(CH3O)2C6H2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	diox/w	15°C	50%	C T H		K1=9.21 B2=16.85	1987GBa (71658)	422

K1(35, 40, 50 C) = 7.86, 7.80, 7.68 respectively. DH(K1)=-29.41 kJ mol⁻¹

C10H16N2O8	H4L	EDDS	CAS 52759-67-8	(1100)
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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
Tb+++	gl	KCl	25°C	0.10M	U		K1=13.04 K(Tb+HL)=6.67	1980MMe (73185)	423

Tb+++	gl	KNO3	20°C	0.10M	U		K1=13.72	1975DPa (73186)	424
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Tb+++	vlt	KNO3	25°C	0.10M	U		K1=13.51	1971BGb (73187)	425
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C10H16N2O8	H4L	EDTA	CAS 60-00-4	(120)
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1,2-Diaminoethane-N,N,N',N'-tetraethanoic acid, Sequestic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KCl	25°C	1.0M	U			1984BKc (74192)	426

K(TbL+H)=0.90						
Tb+++	gl	NaClO4	20°C	0.02M	U M	1982MPd (74193) 427 K(TbL+PO4)=3.52
Tb+++	vlt	KNO3	20°C	0.10M	U	K1=18.09 1978NLb (74194) 428
Tb+++	gl	NaClO4	25°C	0.50M	U	K1=16.59 1977GGb (74195) 429
Tb+++	gl	KCl	25°C	1.00M	U	K2=3.35 1976BKa (74196) 430 K(TbL+HL)=2.30 K(2TbL+L)=6.23
Tb+++	sp	KCl	25°C	0.10M	U	K2=3.35 1975BKa (74197) 431 K(2TbL+L)=6.23 K(TbL+HL)=2.30
Tb+++	EMF	KCl	25°C	0.10M	U T	1974BKb (74198) 432 K(TbL+H)=1.2
Tb+++	gl	KCl	25°C	1.0M	C	K2=3.35 1974BKe (74199) 433 K(TbL+HL)=2.30 K(2TbL+L=Tb2L3)=6.23
Tb+++	gl	KNO3	25°C	0.10M	U T M	1973TRb (74200) 434 K(TbL+HA)=3.95 K(TbL+A)=5.54 K(TbL+HA)(2 C)=4.20, K(35 C)=4.01, K(45 C)=3.82, K(TbL+A)(2 C)=5.85, K(35 C)=5.41, K(45 C)=5.32, H5A=tripolyphosphoric acid
Tb+++	gl	KNO3	25°C	0.10M	U T M	1973TRb (74201) 435 K(TbL+A)=5.4 K(2 C)=5.5, K(35 C)=5.3, K(45 C)=5.2, H4A=adenosine triphosphate
Tb+++	sp	KCl	25°C	0.10M	U	1972BKb (74202) 436 K(TbL+H)=1.78
Tb+++	cal	KNO3	20°C	0.10M	U	1971GKb (74203) 437 K(TbL(H2O)x=TbL(H2O)x-1+H2O)=1.0
Tb+++	gl	NaClO4	25°C	0.10M	U M	1969AIb (74204) 438 K(TbL+A)=7.18, H4A=tiron
Tb+++	dis	oth/un	25°C	?	U	K1=17.29 1969PJb (74205) 439 Method: paper electrophoresis. Medium: pH=1.86
Tb+++	ix	KCl	25°C	0.10M	U H	K1=17.32 1959BDb (74206) 440 DH(K1)=6.3 kJ mol ⁻¹ , DS=353 J K ⁻¹ mol ⁻¹
Tb+++	gl	oth/un	20°C	0.01M	U	K1=17.67 1955WSa (74207) 441

Polarography also used

Tb+++ gl KCl 20°C 0.10M U I T K1=17.6 1954SGa (74208) 442
By polarography, 0.1 M KNO₃, K1=17.81 or 17.93

Tb+++ gl KCl 20°C 0.10M U I T K1=17.25 1953WSa (74209) 443
By polarography K1=17.4. In 0.1 M KNO₃ K1=17.38

C10H16N5O13P3 H4L ATP CAS 56-65-5 (403)
Adenosine-5'-triphosphoric acid;

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

Tb+++ gl NaClO₄ 20°C 0.20M U T H K1=7.34 B2=11.27 1993VL a (74829) 444
K(Tb(NTA)+L)=4.50
K(Tb(EDTA)+L)=4.22

Data for 30, 40 C. DH(K1)=18.2 kJ mol⁻¹, DS(K1)=203 J K⁻¹ mol⁻¹. DH(K2)=
25.9, DS(K2)=164; DH(Tb(NTA)+L)=18.2, DS=144; DH(Tb(EDTA)+L)=19.1, DS=146.

Tb+++ kin oth/un 25°C 0.05M C K1=7.03 1983MCc (74830) 445
Method: inhibition of the hexokinase reaction, pH 8.0 (0.05 M TAPS).

Tb+++ gl KNO₃ 35°C 0.10M U M 1972TRc (74831) 446
K(Tb(EDTA)+L)=5.3

C10H17N3O6S H3L Glutathione CAS 70-18-8 (333)
Glutamyl-cysteinyl-glycine;

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

Tb+++ gl NaClO₄ 25°C 0.10M U TIH K1=7.391 2003GSb (75146) 447
Values for 0.05-0.2 M NaClO₄, 15-45 C and 10-30% MeOH/H₂O, 20% EtOH/H₂O,
20% DMF/H₂O. At I=0, K1=8.300. DH(K1)=-37.1 kJ mol⁻¹, DS(K1)=-34.

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

Tb+++ gl NaClO₄ 25°C 0.50M U K1=14.82 1977GGb (75505) 448

Tb+++ EMF KCl 25°C 1.0M U K2=4.06 1977GMA (75506) 449
K(TbL+HL)=2.42
K(TbL+H4L)=1.96

Method: Pt/H₂ electrode.

Tb+++ EMF KCl 25°C 1.0M U M 1977GMA (75507) 450
K(Tb(EDTA)+L)=3.28
K(Tb(EDTA)+HL)=2.02
K(Tb(EDTA)+H2L)=1.29

Method: Pt/H2 electrode.

Tb+++ gl NaClO4 20°C 0.10M U 1974PJa (75508) 451

K(TbL+A)=3.58

K(TbL+B)=3.72

HA=pentane-2,4-dione, B=1-phenylbutane-1,3-dione

Tb+++ gl NaClO4 25°C 1.0M U K2=3.27 1973NMa (75509) 452

K(TbL+HL)=2.43

K(TbL+H3L)=0.97

Tb+++ gl oth/un 20°C ? U 1971MNa (75510) 453

K(TbL+H3L)=0.31

K(TbL+H2L)=0.41

K(TbL+HL)=2.16

K(TbL+L)=3.46

Tb+++ gl KNO3 25°C 0.10M U M 1963TLb (75511) 454

K(TbL+A)=5.18

K(TbL+B)=4.73

H2L=iminodiethanoic acid, H2B=hydroxyiminodiethanoic acid

Tb+++ EMF oth/un 20°C 0.10M U K1=15.55 1962PMa (75512) 455

Tb+++ gl KNO3 15°C 0.10M U T H K1=15.47 1961MFb (75513) 456

K1=15.41(20 C), 15.32(25 C), 15.28(30 C), 15.34(35 C), 15.23(40 C)

DH(K1)=-14.2 kJ mol⁻¹(25 C), DS=246 J K⁻¹ mol⁻¹

Tb+++ gl KNO3 25°C 0.10M U K1=15.1 1956SPa (75514) 457

C10H20N2O4 H2L (4753)

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

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

Tb+++ gl KNO3 25°C 0.10M U K1=7.0 1973PSb (75785) 458

C10H20O5 L 15-Crown-5 CAS 33100-27-5 (576)

1,4,7,10,13-Pentaoxacyclopentadecane; cyclo(-(O.CH2.CH2)5-)

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

Tb+++ dis non-aq 25°C 100% U B2=7.91 1990NIa (76135) 459

B2=extraction eq.constant: M+3P+2(S)=ML2P3(S); solvent(S)=CH2Cl2, P=picrate

Tb+++ gl non-aq 25°C 100% C K1=7.10 1989BPa (76136) 460

Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

Tb+++ ISE non-aq 25°C 100% U K1=5.96 B2=7.66 1982MDa (76137) 461

Medium: propylene carbonate

C10H22O5 L Tetraglyme CAS 143-24-8 (121)
2,5,8,11,14-Pentaoxapentadecane; (CH3.O.CH2.CH2.O.CH2.CH2.)20

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

Tb+++ ISE non-aq 25°C 100% C K1=3.80 1986BDa (76475) 462
Medium: propylene carbonate, 0.1 M Et4NClO4

C11H8O3 L CAS 1133-72-8 (2614)
2-Aceto-1,3-indandione;

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

Tb+++ gl diox/w 30°C 75% U T K1=3.95 B2=7.76 1984APa (77045) 463

Tb+++ gl mixed 22°C 60% U K1=3.93 B2=7.48 1979JMa (77046) 464
K3=3.17

Medium: 60% acetone/H2O

C11H8O3 HL CAS 483-35-6 (3347)
2-Hydroxy-3-methyl-1,4-naphthoquinone;

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

Tb+++ gl diox/w 35°C 75% M K1=5.39 B2=9.42 1986SSc (77079) 465

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

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

Tb+++ gl diox/w 35°C 50% U K1=3.88 B2=6.81 1971MAa (77186) 466

Medium: 50% dioxan, 0.01 M NaClO4

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

Tb+++ gl NaClO4 25°C 0.10M C K1=8.81 B2=14.96 1979LAb (77234) 467
K(Tb+HL)=2.34

C11H8O6S H3L CAS 15509-36-1 (2658)
3-Hydroxy-7-sulfo-2-naphthoic acid;

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

Tb+++ gl NaClO4 25°C 0.10M C K1=7.71 1976MLb (77256) 468
K(Tb+HL)=2.44

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

C11H10N4O4 HL CAS 92265-26-4 (6210)

5-(2'-Methoxyphenylazo)barbituric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	diox/w	25°C	75%	U		K1=5.83 B2=11.39	1986MIa (77749)	475

C11H12N2O2		HL					CAS 103314-23-4	(6182)	
2-(N-2-Pyrrolidimino)benzoic acid; C4H7N:N.C6H4.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaCl04	25°C	0.10M	U	TIH	B2=13.78	1986GSb (78023)	476
35 C: B2=13.95; 45 C:B2=14.00. DH(B2)=-20.0 kJ mol-1, DS=202 J K-1 mol-1									

C11H12N2O2		HL				Tryptophan	CAS 73-22-3	(3)	
2-Amino-3-(3-indolyl)propanoic acid; H2N.CH(CH2.C8H6N)COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KCl	25°C	0.10M	U	T H	K1=4.8	1976BFc (78235)	477
For 55C K1= 4.30									

Tb+++	gl	KCl	25°C	0.10M	U		K1=5.0 B2=9.70	1972BFe (78236)	478

C11H12N2O5S		HL					CAS 56475-09-3	(8410)	
3-(4'-Sulfophenylhydrazo)-pentane-2,4-dione;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	oth/un	30°C	0.10M	U		B2=21.94	1985EEb (78328)	479
Medium: not stated. For 3'-sulfophenylhydrazo-, B2=21.99; for 2'-sulfo-phenylhydrazo-, B2=24.19; for 4'-methyl-2'-sulfophenylhydrazo-, B2=23.26.									

C11H13NO3		H2L					CAS 63467-38-9	(1961)	
4-Methyl-N-hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H4.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	diox/w	20°C	82%	U		K1=7.26 B2=13.57	1979KSb (78502)	480
K3=6.14									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	sp	non-aq	20°C	100%	C		K1=6.9 B2=13.50	1997RPa (78538)	481
B3=17.3									

Medium: acetonitrile.

C11H13NO4S HL CAS 58943-48-9 (1411)
N-Acetylacetonylidene-orthanilic acid; H03S.C6H4.N:C(CH3).CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	EMF	NaCl04	25°C	0.10M	U			K1=19.30	1982MSc (78597)	482

C11H13NO5 H3L HBIDA CAS 7372-13-6 (1603)
N-(2-Hydroxybenzyl)iminodiethanoic acid; H0.C6H4.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	KNO3	25°C	0.10M	C			K1=13.88 B2=24.73 K(Tb+HL)=5.87 K(Tb+2HL)=12.45	1989YSa (78641)	483

Tb+++	gl	KNO3	20°C	0.10M	U			K1=14.04 B2=24.70	1983MSc (78642)	484
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C11H14N2O4 H2L (1880)
N-(6-Methyl-2-pyridylmethyl)iminodiethanoic acid; CH3C5H3NCH2N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	KNO3	25°C	0.10M	U			K1=7.16 B2=12.10	1964THa (78893)	485

C11H18N2O8 H4L PDTA CAS 4408-81-5 (1655)
1,2-Diaminopropane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	vlt	KNO3	20°C	0.10M	U			K1=14.22	1981NSc (79340)	486
Tb+++	EMF	KNO3	25°C	0.10M	U			K1=16.20	1980KBc (79341)	487
Tb+++	vlt	KNO3	20°C	0.10M	U			K1=18.66	1978NLb (79342)	488
Tb+++	vlt	KNO3	20°C	0.10M	U			K1=18.64	1964ICb (79343)	489

C11H18N2O8 H4L CAS 38539-29-0 (2573)
1,3-Diaminopropane-N,N'-di(1,4-butanedioic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	KNO3	25°C	0.10M	U			K1=10.46	1976GKd (79373)	490

C11H18N2O9 H4L HDPTA CAS 3148-72-9 (431)
1,3-Diamino-2-hydroxypropane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tb+++ gl KNO3 25°C 0.10M M K1=14.55 1986PLc (79578) 491

C11H18N2O9 H4L CAS 668-21-1 (2562)
2-Hydroxy-1,3-diaminopropane-N,N'-di(1,4-butanedioic) acid

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

Tb+++ gl KNO3 25°C 0.10M U K1=11.58 1976GKd (79605) 492

C11H18O9 H3L CAS 64020-00-4 (8225)
1,1,1-Tris(carboxymethoxymethyl)ethane;

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

Tb+++ gl R4N.X 25°C 0.10M C K1=7.0 2001VSA (79677) 493
Medium: 0.10 M Me4NCl. Also data for N-ethyl-, N-phenyl-, N-NH2-,
N,N-dibenzyl- and N-CH2OCH2COOH- derivatives.

C11H20O4 H2L CAS 2283-16-1 (2854)
2,2-Dibutylpropanedioic acid; HOOC.C(C4H9)2.CO2H

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

Tb+++ gl KNO3 25°C 0.10M U K1=4.70 B2=7.45 1968PFa (79772) 494

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

Tb+++ gl alc/w 22°C 80% U K1=6.24 B2=11.65 1995MTa (80191) 495
K3=4.85

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

Tb+++ dis non-aq 25°C 100% C HM 1998YHa (80519) 496
K(TbA3+L)=7.84

Method: solvent extraction from 0.10 M NaClO4 into CHCl3. HA is
1-(2-thienyl)-4,4,4-trifluoro-1,3-butanedione. DH(TbA3+L)=3.6 kJ mol⁻¹.

C12H10N6O4S H2L CAS 77327-19-6 (8343)
2-[4-Amino-3-(1,2,4-triazolylazo)]naphthol-4-sulphonic acid;

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

Tb+++ gl NaClO4 30°C 0.10M U T H B2=13.15 1982GMb (80788) 497

B3=18.96

Data for 40 and 50 C. Also DH and DS values.

C12H11N3O5 HL (6787)

2-Hydroxy-1-naphthaldehyde thiosemicarbazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	diox/w	20°C	75%	U	I	K1=7.79 B2=14.83	1992SSc (80896)	498
Medium: 75% v/v dioxan/H2O; 0.1 M NaClO4									

C12H11N3O2 HL CAS 50536-09-5 (6323)

2-Hydroxy-1-naphthaldehyde-semicarbazone; HO.C10H6.CH:N.NH.CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	diox/w	20°C	75%	U	I	K1=9.315 B2=16.915	1992SSc (80925)	499
Medium: 75% v/v dioxan/H2O; 0.1 M NaClO4									

C12H12N03Cl 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
Tb+++	sp	NaClO4	25°C	0.50M	U		K1=2.014	1987MSa (80975)	500

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
Tb+++	gl	alc/w	22°C	0.1M	U		K1=6.80 B2=12.73 K3=4.75	2000TBb (81082)	501

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

C12H13N03 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
Tb+++	sp	NaClO4	25°C	0.50M	U		K1=2.173	1987MSa (81205)	502

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
Tb+++	gl	KNO3	25°C	0.10M	C		K1=5.81	1988YSa (81820)	503

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
Tb+++	EMF	KNO3	25°C	0.10M	U		K1=14.09	1985SGa (81879)	504
Tb+++	EMF	KNO3	25°C	0.10M	U		K1=15.38 B2=20.78	1980SGb (81880)	505

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
Tb+++	vlt	KNO3	20°C	0.10M	U		K1=19.03	1968NLa (82035)	506

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
Tb+++	gl	KNO3	20°C	0.10M	U		K1=8.88 B2=12.88	1975DPa (82100)	507
Tb+++	gl	KNO3	25°C	0.10M	U		K1=8.62	1973GBd (82101)	508

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
Tb+++	vlt	KNO3	20°C	0.10M	U		K1=15.57	1976NKa (82146)	509

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
Tb+++	gl	NaClO4	25°C	0.10M	U	IH	K1=13.50 B(Tb+HL)=6.32	1988RNa (82179)	510
DH(K1)=2.37 kJ mol ⁻¹ , DH(Tb+HL)=31.9, DS(K1)=266 J K ⁻¹ mol ⁻¹									

Tb+++	vlt	R4N.X	30°C	0.01M	C		K1=15.66	1981GMh (82180)	511
Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr. *****									
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
Tb+++	gl	NaClO4	25°C	0.50M	M	H	K1=10.41	1985CBa (82237)	512

K(TbL+H)=6.47

K(TbHL+H)=5.24

DH(K1)=28.6 kJ mol⁻¹, DS=295 J K⁻¹ mol⁻¹ (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
Tb+++	sp	NaClO4	20°C	0.10M	U		K1=19.15	1971ISa (82337)	513
Tb+++	vlt	oth/un	20°C	0.10M	U		K1=19.45	1966DMa (82338)	514
Tb+++	vlt	KNO3	20°C	0.10M	U		K1=19.45	1966NSb (82339)	515

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
Tb+++	sp	NaClO4	20°C	0.10M	U		K1=17.02	1971ISa (82422)	516
Tb+++	vlt	oth/un	20°C	0.10M	U		K1=16.72	1966DMa (82423)	517

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
Tb+++	gl	KNO3	25°C	0.10M	C		K1=14.83	1985TPa (82475)	518

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
Tb+++	EMF	KNO3	20°C	0.10M	U		K1=18.31	1962MMc (82566)	519

C12H20O8N2 H4L (6908)

2-Methyl-1,2-diaminopropane-N,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
Tb+++	vlt	KNO3	20°C	0.10M	C		K1=17.18	1978NLa (82682)	520

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
Tb+++	gl	alc/w	20°C	40%	U		K1=11.19	1985LBc (82706)	521
Medium: 40% v/v MeOH/H2O, 0.1 M KNO3									

C12H24N4O4		H2L					(7343)		
1,4,7,10-Tetraazacyclododecane-1,7-bis(ethanoic acid);									
Tb+++	gl	R4N.X	25°C	0.10M	C		K1=12.93	1998CCb (83093)	522

C12H24O6		L		18-Crown-6			CAS 17455-13-9	(577)	
1,4,7,10,13,16-Hexaoxacyclooctadecane;									
Tb+++	dis	non-aq	25°C	100%	U		B2=8.16	1990NIa (83649)	523
B2=extraction eq.constant: M+3P+2(S)=ML2P3(S); solvent(S)=CH2Cl2, P=picrate									
Tb+++	gl	non-aq	25°C	100%	C		K1=7.99	1989BP a (83650)	524
Medium: anhydrous propylene carbonate, 0.1 M Et4NC104									

C12H26N2O4		L		Cryptand 2,2			CAS 23978-55-4	(925)	
4,7,13,16-Tetraoxa-1,10-diazacyclooctadecane;									
Tb+++	gl	alc/w	25°C	100%	C		K1=8.29	1983ANb (83904)	525
The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NC104									

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									
Tb+++	gl	non-aq	25°C	100%	C		K1=5.14	1989BP a (84024)	526
Medium: anhydrous propylene carbonate, 0.1 M Et4NC104									

C12H28N2O9P2		H4L					(7242)		
1,4,10-Trioxa-7,13-diazacyclopentadecane-7,13-diylldimethylenediphosphonic acid;									
Tb+++	gl	R4N.X	25°C	0.10M	U		K1=13.14	1996BJa (84166)	527
K(Tb+HL)=10.00									
K(Tb+H2L)=5.60									
Medium: 0.1 M Me4NC1									

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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Tb+++	gl	NaNO3	25°C	0.20M	C		K1=8.50	1991KKa (84356)	528
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Tb+++	gl	NaCl	20°C	0.10M	C		K1=10.0	1988SJb (84357)	529
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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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Tb+++	gl	alc/w	22°C	80%	U		K1=5.52 B2=10.87 K3=4.64	1995MTa (84462)	530
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Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

C13H9F02S HL CAS 43191-66-8 (6154)

1-(2'-Thienyl)-3''-fluoro-2''-hydroxyphenyl)-prop-1-one-2-ene;

C4H3S.CH:CH.CO.C6H3(OH)F

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	NaClO4	30°C	0.10M	U		K1=5.12	1989SHa (84519)	531
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C13H9N3OS L (6217)

Acenaphthenequinone Monothiosemicarbazone; C12H6O:N.NH.CS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	diox/w	25°C	75%	U TI		K1=9.11 B2=17.41	1986SSd (84626)	532
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Medium: 0.1 M NaClO4. 30 C: K1=9.16, K2=8.54; 40 C: K1=9.02, K2=8.44; 50 C:

K1=8.64, K2=7.71; I=0.01 M: K1= 9.85, K2=9.31; I=0.05: K1=9.44, K2=8.96

C13H11N2O3F3 HL (5563)

3-(2-Acetylphenylhydrazone)-1,1,1-trifluoropentane-2,4-dione;

CF3.CO.C(CO.CH3):N.HN.C6H4.COCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	diox/w	30°C	75%	U		K1=8.75 B2=16.20	1988ESb (85254)	533
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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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Tb+++	gl	oth/un	25°C	0.10M	U		K1=12.289	1987KSc (85366)	534
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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

Tb+++ EMF alc/w 20°C 50% U K1=3.55 1971MAc (85419) 535
Medium: 50% EtOH, 0.1 M NaClO4

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

Tb+++ EMF alc/w 20°C 50% U K1=1.95 1971MAc (85475) 536
Medium: 50% EtOH, 0.1 M NaClO4

C13H14N2O3 HL (4940)
3-(2-Acetylphenylhydrazone)pentane-2,4-dione; (CH3.CO)2C:N.NH.C6H4(CO.CH3)

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

Tb+++ gl diox/w 30°C 75% U K1=10.97 B2=20.75 1988ESb (85617) 537

C13H15N06 H3L (4999)
2-Benzylnitritotriethanoic acid;

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

Tb+++ oth oth/un 25°C 0.10M U K2=9.01 1962HKA (85745) 538

C13H19N03 H2L (2031)
2-(1-(2-Hydroxyphenyl)-ethylimine)-3-methylbutanoic acid;

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

Tb+++ gl NaClO4 25°C 0.10M U TIH K1=11.75 B2=21.60 1980SSc (86060) 539

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

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

Tb+++ gl KCl 25°C 1.0M U K1=13.38 1989CMb (86128) 540
K(TbHL+H)=3.54
K(TbL+H)=4.00

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
Tb+++	gl	KNO3	25°C	0.10M	C		K1=10.53 K(Tb+HL)=6.89	1982PPd (86207)	541

C13H22N2O8		H4L					CAS 1198-14-7 (5004)		
1,2-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCCH2)2NCH2CH(C3H7)N(CH2COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	vlt	KNO3	20°C	0.10M	U		K1=19.02	1974NLa (86237)	542

C13H22N2O8		H4L					(7164)		
2,4-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCCH2)2NCH(CH3)CH2CH(CH3)N(CH2COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KNO3	20°C	0.10M	U		K1=12.47	1981NSc (86265)	543
By polarography K1=12.53									

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
Tb+++	vlt	KNO3	20°C	0.10M	U		K1=18.97	1968NLb (86292)	544

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
Tb+++	gl	KNO3	25°C	0.10M	C		K1=15.16 K(Tb+HL)=9.43	1985PLa (86311)	545

C14H8O4		H2L			Alizarin		CAS 72-48-0 (1058)		
1,2-Dihydroxyanthraquinone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	oth/un	25°C	0.10M	U		K1=12.23	1981EIa (86650)	546

C14H8O4		H2L			Quinizarin		CAS 81-64-1 (1060)		
1,4-Dihydroxyanthraquinone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	sp	alc/w	20°C	50%	U		K(Tb+HL)=7.1	1982Kmd (86666)	547

Medium: 50% v/v EtOH/H2O

C14H8O7S H3L DASA CAS 83-61-4 (950)

1,2-Dihydroxyanthraquinone-3-sulfonic acid, Alizarin Red S;

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

Tb+++ gl KCl 25°C 0.05M U B2=16.26 1994HFa (86758) 548
B(TbH-1L)=7.5

Tb+++ gl NaClO4 25°C 0.20M U M K1=10.34 1987Vsa (86759) 549
K(Tb(cdtA)+L)=6.74, K(Tb(dtpA)+L)=5.12.

Tb+++ sp oth/un 25°C ? U K(?)=9.1 1967SAa (86760) 550

C14H10N2F HL CAS 87221-43-0 (6155)

1-(2'-Pyridyl)-3-(3-fluoro-2-hydroxyphenyl)-prop-1-one-2-ene;

C5H4N.CH:CH.CO.C6H3(OH)F

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

Tb+++ gl NaClO4 30°C 0.10M U K1=5.27 1989SHa (86889) 551

C14H12N2O3 H2L CAS 4870-46-6 (3432)

2-Hydroxy-5-methyl-2'-carboxy-azobenzene; HO.C6H3(CH3).N:N.C6H4.CO2H

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

Tb+++ gl diox/w 25°C 50% U I K1=3.80 B2=7.37 1985ANa (87223) 552

C14H13N2O4S H2L (3660)

2-Aminobenzenesulfonic acid 2-hydroxyacetophenone Schiff base;

HSO3.C6H4.N:C(CH3).C6H4.OH

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

Tb+++ gl NaClO4 25°C 0.10M U T H K1=6.45 B2=11.13 1978GKb (87581) 553

Data for 25-35 C and I=0.01-0.10 M. At I=0.0 M, DH(K1)=42.2 kJ mol⁻¹,

DS(K1)=355 J K⁻¹ mol⁻¹.

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

Tb+++ gl mixed 30°C 0.10M U T H K1=11.98 B2=22.31 1988TRb (87726) 554

Medium: 0.1 M KNO3 in 75% v/v isopropanol/water

C14H15O4P HL CAS 843-24-3 (2134)

Di(4-methylphenyl)phosphoric acid; (CH₃C₆H₅O)₂P(O)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	kin	oth/un	25°C	0.02M	U			K1=3.47	1974GMc (87797)	555

C14H16N2O2S		HL						CAS 189231-67-2	(8475)	
2-Thiophenylhydrazodimedone;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	diox/w	25°C	75%	C T H			K1=13.42 B2=25.22	1997Eia (87875)	556
Medium: 75% v/v dioxane/H ₂ O, 0.10 M KNO ₃ . Data for 10-40 C. DH(K1)=-6.83										
kJ mol ⁻¹ , DS(K1)=-8.39 J K ⁻¹ mol ⁻¹ ; DH(K2)=-6.61, DS(K2)=-9.45.										

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
Tb+++	gl	mixed	30°C	0.10M	U T H			K1=12.16 B2=22.70	1988TRb (87893)	557
Medium: 0.1 M KNO ₃ in 75% v/v isopropanol/water										

C14H16N2O8		H4L						CAS 40774-59-2	(1901)	
1,2-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C ₆ H ₄ (N(CH ₂ .COOH) ₂) ₂										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	NaClO ₄	25°C	1.00M	C H			K1=14.46	1992YNa (87970)	558
By calorimetry: DH(K1)=12.3 kJ mol ⁻¹ , DS=318 J K ⁻¹ mol ⁻¹										

C14H19NO7		HL						(6775)		
16-Nitro-3,6,9,12-tetraoxabicyclo[12.3.1]octadeca-1(18),14,16-trien-18-ol;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	R4N.X	25°C	0.10M	C			K1=3.25	1990CBe (88154)	559

C14H20O5		L						Benzo15-crown-5 CAS 14098-44-3	(608)	
2,3-Benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	dis	non-aq	25°C	100%	U			B2=7.77	1990NIa (88379)	560
B2=extraction eq.constant: M+3P+2(S)=ML2P3(S); solvent(S)=CH ₂ Cl ₂ , P=picrate										

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
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Tb+++      gl  KCl      25°C  1.0M U      K1=7.82      1987CMe (88449) 561
                        K(TbHL+H)=5.18
                        K(TbL+H)=7.19

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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;

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

Tb+++      gl  KCl      25°C  1.0M U      K1=8.80      1987CMe (88463) 562
                        K(TbHL+H)=5.75
                        K(TbL+H)=6.28

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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
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Tb+++      gl  KCl      25°C  1.0M U      K1=19.62     1987CMe (88785) 563
                        K(TbL+H)=1.38

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Tb+++      gl  KCl      25°C  1.00M U     K1=19.62     1984MFa (88786) 564

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Tb+++      gl  NaClO4  25°C  0.50M U     K1=18.52     1977GGb (88787) 565

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```

Tb+++      EMF KNO3    25°C  0.10M U T H    K1=19.30     1962MHa (88788) 566
DH(K1)=20.9 kJ mol-1, DS=439 J K-1 mol-1. At 20 C: K(TbL+H)=2.11

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```

Tb+++      vlt KNO3    20°C  0.10M U     K1=19.50     1954SGa (88789) 567

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```

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
-----

```

```

Tb+++      gl  KCl      25°C  1.0M U      K1=8.22      1987CMe (88842) 568
                        K(TbHL+H)=5.06
                        K(TbL+H)=7.43

```

```

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
-----

```

```

Tb+++      gl  KCl      25°C  1.0M U      K1=8.79      1987CMe (88869) 569
                        K(TbHL+H)=5.82
                        K(TbL+H)=6.28

```

```

Tb+++      gl  KCl      25°C  1.00M U     K1=8.79      1984MFb (88870) 570

```

C14H23N3O10 H5L DTPA CAS 67-43-6 (238)
Diethylenetriamine-pentaethanoic acid; $\text{HOOC.CH}_2.\text{N}(\text{CH}_2.\text{CH}_2.\text{N}(\text{CH}_2.\text{COOH})_2)_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	NaNO3	25°C	0.10M	U	I		2003ADb (89395)	571
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K(TbL+val)=3.709

K(TbL+leu)=3.605

Data for 0.15 and 0.05 M NaNO3. At I=0, K(TbL+val)=3.900, K(TbL+leu)=3.715

Tb+++	gl	NaNO3	25°C	0.10M	M	I M		2002ADa (89396)	572
-------	----	-------	------	-------	---	-----	--	-----------------	-----

K(TbL+ser)=3.530

K(TbL+thr)=3.352

Data for 0.05 and 0.15 M NaNO3. At I=0, K(TbL+ser)=3.640, K(TbL+thr)=3.46.

Tb+++	cal	KNO3	25°C	0.10M	C T			1988MIa (89397)	573
-------	-----	------	------	-------	-----	--	--	-----------------	-----

DH(K1)=-31.22 kJ mol⁻¹, DS=330.7 J mol⁻¹ K⁻¹. Also data for 283 and 313 K

Tb+++	cal	NaClO4	25°C	0.50M	U	H		1977CGc (89398)	574
-------	-----	--------	------	-------	---	---	--	-----------------	-----

DH(K1)=-44.1 kJ mol⁻¹

Tb+++	gl	NaClO4	25°C	0.50M	U		K1=21.02	1977GGb (89399)	575
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Tb+++	cal	KNO3	27°C	0.10M	U	H		1968CLd (89400)	576
-------	-----	------	------	-------	---	---	--	-----------------	-----

DH(K1)=-32.2 kJ mol⁻¹, DS=326 J K⁻¹ mol⁻¹

Tb+++	EMF	KNO3	25°C	0.10M	U	H	K1=22.71	1962MTc (89401)	577
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DH(K1)=-32.2 kJ mol⁻¹, DS=327 J K⁻¹ mol⁻¹

Tb+++	gl	oth/un	25°C	0.10M	U		K1=23.21	1959HCa (89402)	578
-------	----	--------	------	-------	---	--	----------	-----------------	-----

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
-------	-----	--------	------	------	-----	-------	-------------	-----------	--------

Tb+++	vlt	KNO3	20°C	0.10M	U		K1=17.13	1969NDc (89520)	579
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C14H24N2O8 H4L (7165)

1,2-Diaminohexane-N,N,N',N'-tetraethanoic acid; $(\text{HOOCCH}_2)\text{NCH}_2\text{CH}(\text{C}_4\text{H}_9)\text{N}(\text{CH}_2\text{COOH})_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	vlt	KNO3	20°C	0.10M	U		K1=18.98	1974NLa (89539)	580
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C14H24N2O8 H4L HMDTA CAS 1633-00-7 (920)

1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; $((\text{HOOC.CH}_2)_2\text{N.CH}_2.\text{CH}_2.\text{CH}_2)_2$

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

Tb+++ gl KCl 25°C 1.00M U M 1976BKa (89607) 581
 K(TbEDTA+L)=3.9
 K(TbEDTA+HL)=3.6
 K(2TbEDTA+L)=7.1

C14H24N2O8 H4L CAS 1633-00-7 (5076)
 4-Methyl-1,2-diaminopentane-N,N,N',N'-tetraethanoic acid;
 (HOOCCH2)2NCH2CH(N(CH2COOH)2CH2CH(CH3)2

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

Tb+++ vlt KNO3 20°C 0.10M U K1=18.99 1968NLb (89643) 582

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

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

Tb+++ gl NaClO4 25°C 0.10M U 1995HAa (89691) 583

K(Tb+HL)=4.58
 K(Tb+H2L)=3.85
 K(Tb+H3L)=2.90
 B(TbHL)=14.01

B(TbH2L)=19.40, B(TbH3L)=22.69

C14H24N2O9 H4L BPETA CAS 87720-52-3 (5077)
 Bis-(3-di(carboxymethyl)aminopropyl)ether;

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

Tb+++ gl KNO3 25°C 0.10M U K1=11.70 1984TPa (89738) 584

K(Tb+HL)=7.56

C14H24N2O10 EGTA CAS 67-42-5 (349)
 Ethyleneglycol-0,0'-bis(2-aminoethyl ether)-N,N,N',N'-tetraethanoic acid; H4L

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

Tb+++ gl alc/w 25°C 20% M TI K1=16.972 2000KDa (89944) 585

Medium: 20% v/v EtOH/H2O, 0.10 M NaNO3. Data for 0.05 and 0.15 M NaNO3.

At I=0, K1=17.185. Data for 35 and 45 C and I=0.10 M NaNO3.

Tb+++ gl KCl 25°C 1.0M U M K2=1.49 1985KBb (89945) 586

K(TbL+ida)=1.5

Tb+++ EMF KNO3 20°C 0.10M U K1=17.27 1962MMc (89946) 587

C14H24O9 H3L CAS 64020-01-5 (8224)
 1,1,1-Tris[(2-carboxyethoxy)methyl]ethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	sp	alc/w	21°C	50%	U		K1=9.21	1988CMd (91242)	594
Tb+++	sp	alc/w	21°C	50%	U I		K1=8.79	1981MCb (91243)	595

Medium: 50% MeOH, 0.1 M NaClO4. In 75% MeOH K1=10.43

 C15H11N3O2 L CAS 74378-23-7 (2745)
 Phenanthrenequinone monosemicarbazone; C14H8(:O)(:N.NH.CO.NH2)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	diox/w	25°C	75%	C TIH		K1=7.00 B2=13.35	1989SVa (91311)	596

Medium: 50%CH3CN in H2O

 C15H12O2 HL Diphenylacac CAS 120-46-7 (362)
 1,3-Diphenylpropane-1,3-dione, Dibenzoylmethane; C6H5.CO.CH2.CO.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	mixed	15°C	50%	U T H		K1=8.70	1982BSb (91565)	597

Medium: 50%CH3CN in H2O

 C15H13NO2 HL CAS 7369-44-0 (4066)
 N-3-Diphenylpropenohydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	dis	oth/un	RT	0.05M	C			1993ATa (91643)	598

Method: extraction from 0.05 M triethanolamine buffer into chloroform.
 Analysis by spectrophotometry. K(Tb+3HL(org)=TbL3(org)+3H)=-18.03

 C15H14NOCl HL CAS 268214-29-5 (8398)
 4-Chloro-3,5-dimethyl-2-[(phenylimino)methyl]phenol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	diox/w	30°C	75%	M		K1=7.62 B2=14.73	2000ANa (91696)	599

Medium: 75% v/v dioxan/H2O, 0.10 M NaClO4. Data for an extensive series of 4'-substituted phenylimino derivatives.

 C15H14O3S H2L (6191)
 1-(2-Hydroxy-3,5-dimethylphenyl)-3-(2-thiophene)-propan-1,3-dione;
 C4H3S.CO.CH2.CO.C6H2(OH)(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	diox/w	30°C	50%	U			1987DDc (91787)	600

K(Tb+HL)=7.84
 K(TbHL+HL)=6.62

C15H14O3S H2L CAS 57051-65-7 (6190)
1-(2-Hydroxy-4,5-dimethylphenyl)-3-(2-thiophene)-propan-1,3-dione;
C4H3S.CO.CH2.CO.C6H2(OH)(CH3)2

C15H14O4 H2L CAS 60403-51-2 (2361)
1-(2-Furyl)-3-(2-hydroxy-3,4-dimethylphenyl)-propan-1,3-dione;
C4H3O.CO.CH2.CO.C6H2(OH)(CH3)2

C15H14O4 H2L CAS 60403-52-3 (6186)
1-(2-Furyl)-3-(2-hydroxy-3,5-dimethylphenyl)-propan-1,3-dione;
C4H3O.CO.CH2.CH2.C6H2(OH)(CH3)2

C15H14O4 H2L CAS 60403-54-5 (6187)
1-(2-Furyl)-3-(2-hydroxy-3,6-dimethylphenyl)-propan-1,3-dione;
C4H3O.CO.CH2.CH2.C6H2(OH)(CH3)2

C15H18N2O3 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
Tb+++	gl	alc/w	20°C	75%	U	T H		K1=11.25 B2=19.46	1993RAa (92038)	605
Medium: 75% v/v MeOH/H2O; 0.10 M KNO3										
Tb+++	gl	mixed	30°C	0.10M	U	T H		K1=12.33 B2=23.23	1988TRb (92039)	606
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water										

C15H20N2O6 H3L BEDTA CAS 65311-06-0 (2944)
N-Benzylldiaminoethane-N,N',N'-triethanoic acid;

Tb+++ g1 KNO3 25°C 0.10M C K1=12.79 1978MPb (92158) 607

C15H23N3O2 L CAS 36763-33-4 (5176)
N,N,N',N'-Tetraethyl-2,6-pyridinedicarboxamide;

Tb+++ sp non-aq 25°C 100% M K1=8.2 B2=14.50 1997RPb (92290) 608
B3=22.9

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

Tb+++	EMF	KCl	?	0.10M U	K1=16.71	1966VL a (92384)	609
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C15H25N3O10 H5L (6100)
Diethylenetriamine-N,N,N',N''-tetraethanoic acid-N''-propanoic acid;

Tb+++ gl KN03 25°C 0.10M C K1=19.52 1989SPa (92400) 610
K(Tb+HL)=13.55

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

Tb+++ g1 KCl 25°C 0.10M C K1=20.90 2000SBb (92438) 611

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

Tb+++ g1 KCl 25°C 0.10M C K1=19.7 2000SBb (92453) 612

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
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Tb+++ kin oth/un 25°C 0.02M U K1=5.12 1972GSe (92665) 613

C16H12N3O4ClS H2L CAS 133131-00-7 (8468)
 7-Amino-8-[(4-chlorophenyl)azo]-4-hydroxy-2-naphthalenesulfonic acid;

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

Tb+++ gl NaCl 25°C 0.10M U K1=10.42 B2=19.03 1997IHa (93120) 614
 B3=27.15

Also data for the 4'-bromo-, 4'-fluoro-, 4'-nitro-, 4'-methoxy-, 4'-di-
 methylamino-, 4'-hydroxy-, 4'-carboxy-, 4'-AsO(OH)2-, 2'-hydroxy- analogue

C16H12N5O3 L CAS 77251-11-7 (5928)
 1-Phenyl-3-methyl-4(2'-nitrophenylhydrazo)-5-pyrazolone;

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

Tb+++ gl diox/w 30°C 75% M K1=7.43 1987ESa (93136) 615

C16H13N2O10AsS2 H5L 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

Tb+++ gl NaCl04 30°C 0.10M U 1976NDa (93211) 616
 K(Tb+H2L=TbH2L)=5.74
 K(TbHL+H)=7.10
 K(TbL+H)=9.40
 K(TbL+OH)=2.85

Tb+++ sp oth/un 25°C ? U 1967SAa (93212) 617
 K(?)=8.9

 C16H13N2O11AsS2 H6L Arsenazo I CAS 520-10-5 (277)
 2-(2'-Arsonophenylazo)chromotropic acid;

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

Tb+++ sp oth/un 20°C 0.10M U 1971SSd (93268) 618
 K(Tb+H2L)=8.28

 C16H14N2O5 H2L (7017)
 4-Hydroxy-1-carboxy-7-dimethylaminophenoxaz-3-one methyl ester;

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

Tb+++ sp alc/w 25°C 10% U I 1979KRb (93444) 619
 B3=19.54

Medium: 10% w/w EtOH/H2O, 0.1 M NaCl04. In 30%: B3=19.45

C16H1404 HL BHMMA (5929)
omega-Benzoyl-2-hydroxy-4-methoxy-3-methylacetophenone;

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

Tb+++ gl alc/w 30°C 25% M K1=6.72 B2=13.28 1987DGB (93586) 620
Medium: 25% v/v EtOH/H2O

C16H18N2O3 HL (5564)
2-(2-Acetylphenylhydrazon)-5,5-dimethyl-1,3-cyclohexanedione;

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

Tb+++ gl diox/w 30°C 75% U K1=10.58 B2=19.67 1988ESb (93787) 621

C16H18N3O3F HL Norfloxacin CAS 70458-96-7 (7141)
1-Ethyl-6-fluoro-1,4-dihydro-4-oxo-7[1-piperazinyl]-3-quinoline carboxylic acid;

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

Tb+++ gl alc/w 22°C 0.1M U K1=3.27 2000TBb (93828) 622
Medium: 0.1 M NaClO4 in 70% v/v EtOH/H2O

C16H18N4 L CAS 172665-46-2 (7699)
N,N'-Dimethyl-1,10-phenanthroline-2,9-dimethanamine;

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

Tb+++ gl NaClO4 25°C 0.10M U K1=7.83 2001WZa (93848) 623
B(TbHL)=14.86

Also data for the N,N'-diethyl, isopropyl, butyl and isobutyl derivatives.

C16H20N2O8 H4L 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

Tb+++ vlt KNO3 20°C 0.10M U K1=17.96 1969NDb (94053) 624

C16H27N5O8 H3L (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

Tb+++ sp KCl 25°C 0.08M U K1=11.4 1994FCa (94677) 625

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
Tb+++	sp	KCl	25°C	0.08M	U		K1=15.1	1994FCa (94691)	626

C16H28N2O8		H4L					(5167)		
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-(3-methyl)butanoic acid;									
Tb+++	gl	KNO3	20°C	0.10M	U		K1=14.07	1969NDc (94722)	627
By polarography: K1=14.00									

C16H28N2O8		H4L					(5168)		
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-pentanoic acid;									
Tb+++	vlt	KNO3	20°C	0.10M	U		K1=17.16	1969NDc (94748)	628

C16H28N2O8		H4L					(5138)		
1,2-Diaminooctane-N,N,N',N'-tetraethanoic acid;									
(HOOCCH2)2N.CH2.CH(C6H13)N(CH2COOH)2									
Tb+++	vlt	KNO3	20°C	0.10M	U		K1=19.00	1979MBd (94774)	629

C16H28N4O8		H4L		DOTA			CAS 60239-18-1	(1017)	
1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraethanoic acid;									
Tb+++	gl	NaCl	37°C	1.0M	C		K1=23.6	1994TBb (94933)	630
Method: Competitive reaction with Eu3+ ion.									
Tb+++	EMF	NaCl	20°C	1.00M	C		K1=28.6	1986LDb (94934)	631

C16H30N2O8		H2L					CAS 72912-01-7	(1568)	
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-N,N'-diethanoic acid;									
Tb+++	gl	R4N.X	25°C	0.10M	U		K1=11.70	1983CRb (95059)	632

C17H12O4		H2L					CAS 60430-57-8	(6189)	
1-(2-Furyl)-3-(2-naphthol)-propan-1,3-dione; C4H3O.CO.CH2.CO.C10H6.OH									
Tb+++	gl	diox/w	30°C	50%	U			1987DDc (95735)	633

K(Tb+HL)=7.32
K(TbHL+HL)=6.95

C17H13N4O3 HL (5927)
1-Phenyl-3-methyl-4-(2'-carboxyphenylhydrazo)-5-pyrazolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	diox/w	30°C	75%	M			K1=15.80 B2=28.50	1987ESa (95773)	634

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
Tb+++	gl	NaNO3	20°C	0.10M	U	M			1981GCa (95900)	635
								B(Tb+3L+2TBP)=23.54 B(Tb+3L+4TBPOxide)=32.8		

C17H15N4O2 L CAS 97671-53-9 (5926)
1-Phenyl-3-methyl-4-(2'-methoxyphenylhydrazo)-5-pyrazolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	diox/w	30°C	75%	M			K1=8.51 B2=16.70	1987ESa (96014)	636

C17H16O4 H2L CAS 58134-82-0 (6193)
Benzoyl-2-hydroxy-4-methoxy-3-methylacetophenone;
C6H5.CO.CH2.CO.C6H2(OH)(OCH3)(CH3)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	alc/w	30°C	75%	U	T H		K1=7.57 B2=14.54	1987DGd (96164)	637
								20 C:K1=7.64, K2=7.14; 40 C:K1=8.09, K2=7.48; 50 C:K1=8.49, K2=8.16		
								DH(K1)=-42.2 kJ mol ⁻¹ , DS=5 J K ⁻¹ mol ⁻¹		

C17H18N3O3F HL Ciprofloxacin CAS 189257-90-7 (7142)
1-Cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-7[1-piperazinyl]-3-quinoline carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	alc/w	22°C	0.1M	U			K1=6.78 B2=12.63	2000TBb (96225)	638
								Medium: 0.1 M NaClO4 in 70% v/v EtOH/H2O		

C17H18O4 H2L (6188)
1-(2-Furyl)-3-(2-hydroxy-3,4-diethylphenyl)-propan-1,3-dione;
C4H3O.CO.CH2.CO.C6H2(OH)(C2H5)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tb+++      gl  diox/w 30°C  50%  U                      1987DDc (96246) 639
                                     K(Tb+HL)=7.32
*****
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
-----
Tb+++      gl  alc/w  22°C  0.1M U          K1=6.14   B2=11.39  2000TBb (96291) 640
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
-----
Tb+++      sp  NaNO3  25°C  0.10M C          K1=8.46                      19880Ha (96426) 641
                                     K(Tb+HL)=2.79
*****
C17H27N04            L                      CAS 71089-11-7 (7945)
13-Phenylmethyl-1,4,7,10-tetraoxa-13-azacyclopentadecane;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
Tb+++      cal non-aq 25°C 100% C   H          1993LLb (96539) 642
                                     K(TbNO3+L)=3.07
Medium: acetonitrile. DH(TbNO3+L)=-80.88 kJ mol-1.
*****
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
-----
Tb+++      gl  KNO3   25°C  0.10M U          K1=8.87                      1984TPa (96578) 643
                                     K(Tb+HL)=5.78
*****
C18H16N2O3           HL                      (5560)
2-(2-Acetylphenylhydrazone)-1-phenyl-but-1,3-dione;
C6H5.CO.C(CO.CH3):N.NH.C6H4.COCH3
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
Tb+++      gl  diox/w 30°C  75%  U          K1=10.50  B2=19.66  1988ESb (97180) 644
*****
C18H18N4            L                      CAS 16858-01-8 (1528)
Tris(2-pyridylmethyl)amine; (C5H4NCH2)3N
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo

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Tb+++ nmr KCl 25°C 1.0M C K1=2.00 2004BRa (97273) 645
Method: 1H nmr measurements in D2O.

C18H20N2O6 H4L CAS 10328-28-6 (3501)
Ethylenedinitrilo-N,N'-bis(2'-hydroxyphenyl)-N,N'-diethanoic acid;

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

Tb+++ EMF oth/un ? ? U 1968TRc (97410) 646
K(Tb+HL)=9.05

C18H20N2O6 H4L EHPG CAS 10328-28-6 (429)
N,N'-Ethylene-bis-(2-(2'-hydroxyphenyl))glycine; (H00CCH(C6H4OH)NHCH2.)2

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

Tb+++ EMF KNO3 25°C 0.10M C T H K1=20.10 1985HWb (97441) 647
K(TbL+H)=6.95

Method: Hg (and glass) electrode, using Hg(II) as competitive indicator ion. Data for 10-35 C. DH(K1)=-62.0 kJ mol⁻¹, DS(K1)=184 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

Tb+++ gl KNO3 25°C 0.10M C K1=15.48 1985TPa (97660) 648

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

Tb+++ gl non-aq 25°C 100% U K1=2.85 1982MDa (97814) 649
Medium: propylene carbonate

C18H30N4O12 H6L TTHA CAS 869-52-3 (694)
Triethylenetetraaminehexaethanoic acid;((H00C.CH2)2N.CH2.CH2.N(CH2.COOH).CH2)2

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

Tb+++ EMF KNO3 25°C 0.10M C T H K1=23.08 1987HCa (98092) 650
K(TbL+H)=4.90
K(TbHL+H)=2.89

Method: Hg electrode; competitive reaction with Hg(II).
Data for 15-35 C. At 25 C, DH(K1)=118 kJ mol⁻¹, DS(K1)=837 J K⁻¹ mol⁻¹.

Tb+++ vlt R4N.X 30°C 0.01M C K1=19.62 1981GMh (98093) 651
Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.

Tb+++ vlt NaClO4 25°C 0.40M C K1=23.61 1978MNB (98094) 652
 Medium: 0.40 M NaClO4, pH 4.80. Method: polarography, using Cd as
 indicator ion.

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

Tb+++ gl NaNO3 25°C 0.20M C T H K1=14.81 1991KKA (98231) 653
 At 15 C K1=14.68;at 35 C K1=14.94. DH=22.2 kJ mol⁻¹, DS=359.7 J K⁻¹ mol⁻¹

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

Tb+++ gl R4N.X 25°C 0.10M C K1=7.10 1988CCc (98346) 654

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

Tb+++ cal non-aq 25°C 100% C H K1=13.70 2003DCa (98748) 655
 Method: competitive titration calorimetry of AgL+. Medium: acetonitrile.
 DH(K1)=-148.6 kJ mol⁻¹, DS(K1)=-236 J K⁻¹ mol⁻¹.

Tb+++ ISE non-aq 25°C 100% U H K1=16.58 1984GBa (98749) 656
 0.1 M tetraethylammonium perchlorate.DH=-104.3 kJ mol⁻¹; DS=-31 J K⁻¹ mol⁻¹
 In propylene carbonate.

 Tb+++ gl alc/w 25°C 100% C K1=10.26 1983ANb (98750) 657
 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

Tb+++ gl R4N.X 25°C 0.10M U K1=7.12 1996BJa (98900) 658
 Medium: 0.1 M Me4NCl

C19H16N4O L LAMI (5930)
 2-(2'-Lepidylazo)-N-methylisatin

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

Tb+++ gl diox/w 30°C 75% M I K1=10.26 B2=19.22 1987DGc (99169) 659
Medium: 75% v/v dioxan/H2O, 0.15 M NaClO4

C20H14N2O5S H3L Solochrome 6B CAS 3564-14-5 (3507)
1-(1-Hydroxy-2-naphthylazo)-2-naphthol-4-sulfonic acid, Mordant Black3, Eriochrome
blue-black B;

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

Tb+++ gl NaClO4 30°C 0.10M U T H K1=13.80 1991NNb (99663) 660
Also data for 40 and 50 C. DH and DS values.

C20H14N2O5S H3L EriochrBluBlk R CAS 2538-85-4 (3508)
3-Hydroxy-4-(2-hydroxy-1-naphthylazo)naphthalene-1-sulfonic acid;

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

Tb+++ gl diox/w 30°C 50% U K1=12.05 1976NNa (99701) 661

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

Tb+++ sp NaClO4 25°C 0.10M C K1=6.27 1979PLb (99716) 662

C20H14N2O11S3 H2L Hydroxynaphthol CAS 63451-35-4 (2835)
Hydroxynaphthol blue, 1-(2-Hydroxy-4-sulfo-1-naphthylazo)-2-naphthol-3,

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

Tb+++ sp none 25°C 0.0 U 1978BRb (99737) 663

K1eff=3.77

Keff at pH 10

C20H18N4O2 HL (5917)
Pyruvic monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

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

Tb+++ gl diox/w 30°C 75% U 1985RSb (99841) 664

K(Tb+HL)=5.32

K(Tb+2HL)=10.97

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

Tb+++ gl KNO3 20°C 0.10M U K1=19.61 1985SNb (100016) 665

K(TbL+H)=5.33
K(TbHL+H)=4.87

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

Tb+++ gl oth/un 25°C 0.0 U H K1=2.58 1991HJa (100245) 666

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

Tb+++ gl NaNO3 25°C 0.20M C K1=15.91 1991KKa (100547) 667

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

Tb+++ sp KCl 25°C 0.08M U K1=17.4 1994FCa (100564) 668

C20H43O4P HL CAS 7785-87-1 (2132)
Didecylphosphoric acid; (C10H21O)2P(O)OH

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

Tb+++ kin oth/un 25°C 0.02M U K1=4.33 1974GMc (100912) 669

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

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

Tb+++ sp non-aq 20°C 100% U K1=9.3 B2=16.40 1997PBa (101093) 670
K3=7.6

Medium: CH3CN

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

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

Tb+++ sp oth/un 25°C ? U 1967SAa (101508) 671

K(Tb+HL)=4.8(?)

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
Tb+++	sp	oth/un	?	?	U		K1=15.15	1971SSi (101553)	672

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
Tb+++	sp	oth/un	rt	0.10M	C			2004LLa (101649)	673
							K1eff=5.53		
							B2eff=9.78		
							B(2,2)eff=15.52		

Method: spectral deconvolution. Medium: 0.1 M chloroacetate buffer, pH 3.5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	sp	oth/un	20°C	?	U			1972SSi (101650)	674
							K(Tb+H4L)=16.29		

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
Tb+++	EMF	KN03	25°C	0.10M	C T H		K1=11.07	1990HLA (101904)	675
							K(TbL+H)=3.48		

Method: Competitive reaction with Hg++, using Hg indicator electrode.

Data for 15-35 C. DH(K1)=-36.4 kJ mol⁻¹, DS(K1)=89.7 J K⁻¹ mol⁻¹.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	R4N.X	25°C	0.10M	C		K1=10.78	1993YTa (101987)	676

C22H30N4		L				CAS 250790-21-7		(7943)	
N,N'-Bis(1,1-dimethylethyl)-1,10-phenanthroline-2,9-dimethanamine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaClO4	25°C	0.10M	U		K1=8.51	2001WZa (102119)	677
							B(TbHL)=15.41		

Also data for the N,N'-diethyl, isopropyl, butyl and isobutyl derivatives.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	NaClO4	25°C	0.10M	U		K1=8.51	2001WZa (102119)	677
							B(TbHL)=15.41		

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	vlt	R4N.X	30°C	0.01M	C		K1=20.67	1981GMh (102344)	678
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Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.

Tb+++	gl	KNO3	25°C	0.10M	U		K1=20.68 K(Tb+HL)=14.47 B(TbH-1L)=5.25	1968MIc (102345)	679
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C23H16O9Cl2S H4L Chrome azuro1 S CAS 1667-99-8 (711)

Chromazuro1 S;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	sp	oth/un	25°C	?	U		K(?)=4.7	1967SAa (102573)	680
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C23H18N2O3 HL (5561)

2-(2-Acetylphenylhydrazone)-1,3-diphenyl-prop-1,3-dione;

C6H5.CO.C(CO.C6H5):N.NH.C6H4.COCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	diox/w	30°C	75%	U		K1=10.92 B2=19.62	1988ESb (102602)	681
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C24H16O16S8 H8L CAS 237770-97-7 (8854)

25,26,27,28-Tetrahydroxy-2,8,14,20-tetrathiacalix[4]arene-5,11,17,23-tetrasulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	cal	oth/un	25°C	0.01M	C	H	K1=3.33	2004LWa (102872)	682
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Medium: 0.01 M HCl. DH(K1)=7.7 kJ mol⁻¹, DS(K1)=89.6 J K⁻¹ mol⁻¹.

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
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Tb+++	gl	NaNO3	25°C	0.20M	C		K1=23.15 K(Tb+H2L)=17.30	1991KKa (103388)	683
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C26H23N5O2 HL (5918)

Hippuric monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Tb+++	gl	diox/w	30°C	75%	U		K1=11.87 B2=22.28	1985RSb (103888)	684
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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
Tb+++	gl	R4N.X	25°C	0.10M	C			K1=14.04	1993YTa (103973)	685

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Tb+++	gl	diox/w	30°C	75.0M	U			K1=8.43	1983RSa (104391)	686

C27H29NO10	H2L	Daunorubicine	CAS 23541-50-6 (5660)
Daunomycin;			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	gl	KCl	25°C	0.05M	U		B2=17.2 B(TbHL)=16.0 B(TbH2L2)=32.4 B(TbHL2)=24.8	1994HFa (104442)	687

Tb+++ sp oth/un 20°C 0.15M U K(Tb+HL)=7.2 1982Kmd (104443) 688

C27H29NO11	L	Adriamycin	CAS 25316-40-9	(2407)
Doxorubicin;				

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Tb+++	sp	oth/un	25°C	0.02M	U	T H	K1=4.96	1985LSa (104463)	689
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
Tb+++	gl	non-aq	25°C	100%	U			K1=3.50 Medium: Propylene carbonate.	1980MDb (104852)	690

Medium: propylene carbonate

C28H40O10 L DiBz-30-crown10 CAS 104946-67-0 (1776)
2,3:17,18-Dibenzo-1,4,7,10,13,16,19,22,25,28-decaoxacyclotriaconta-2,17-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tb+++ ISE non-aq 25°C 100% U K1=4.07 1982MDa (104913) 691
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

Tb+++ gl diox/w 30°C 75% U I K1=9.08 1983RRa (105410) 692
In 75% MeOH: K1=7.59; 75% DMD: 6.29

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

Tb+++ nmr KCl 25°C 1.0M C K1=2.37 2004BRa (105975) 693
Method: 1H nmr measurements in D2O.

C36H32O24S4 H8L CAS 171798-10-0 (9139)
25,26,27,28-Tetrakis(hydroxycarbonylmethoxy)calix[4]arene-5,11,17,23-tetrasulfonic acid;

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

Tb+++ cal oth/un 25°C 0.01M C H K1=3.63 2004LWa (106232) 694
Medium: 0.01 M HCl. DH(K1)=6.8 kJ mol⁻¹, DS(K1)=92.9 J K⁻¹ mol⁻¹.

C36H60O30 L a-Cyclodextrin CAS 10016-20-3 (6946)
alpha-Cyclodextrin, Cyclohexaamylose;

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

Tb+++ gl NaCl 25°C 0.10M U I K1=2.78 1999FBa (106473) 695
In 0.1 M Me4NCl, K1=3.20.

C37H33N5O4 L (7366)
2,6-Bis(1-(3,5-dimethoxybenzyl)benzimidazol-2-yl)pyridine

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

Tb+++ gl non-aq 25°C 100% C K2=4.9 1997PBa (106554) 696
K3=3.1

Medium: CH3CN; 0.1 M Et4NClO4

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Tb+++ sp alc/w 22°C 95% C K1=3.87 2000FSa (107758) 702
 Medium: 95% MeOH/H2O, 0.001 M Et4NC104.
 For the crown-5 analogue, K1=3.74.

C76H116N4O8 L (8156)
 p-tert-Butylcalix(4)arene tetradiisopropylethanoamide;

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

Tb+++ cal non-aq 25°C 100% U H K1=4.66 2001NJa (107886) 703
 Method: microcalorimetry. Medium: MeCN.. DH(K1)=-101.8 kJ mol-1

Polymer HL Bleomycin (2324)
 Bleomycin A2, B2 etc.

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

Tb+++ sp oth/un 25°C ? U 1980LPb (108094) 704
 K1eff=4.40 pH 6.8

Method: fluorescence

 Tb+++ ISE oth/un 25°C ? U K1=4.40 1980LPb (108095) 705

Polymer Elastase CAS 39445-21-1 (7314)
 Porcine pancreatic elastase;

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

Tb+++ oth oth/un 25°C 0.15M U 1980JMb (108387) 706
 K1eff=5.48

Medium: 0.1 M KCl, 0.05 M MOPS, pH 6.85. Method: enhancement of Tb luminescence

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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

END