

## SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 778 experiments for

(no ligands specified)

Metal : Er+++

(no references specified)

(no experimental details specified)

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e- HL Electron (442)  
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	oth	none	25°C	0.0	U			1974J0b (455) K(Er+3e=Er(s))=-118.7((-2.34V) K(Er+e=Er(II))=-51(-3.0V)		1

Method: literature evaluated data

Er+++	oth	none	25°C	0.0	U			1952LAb (456) K(Er+3e)=-116.4(-2300 mV)		2
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AsO4--- H3L Arsenate CAS 7778-39-4 (1557)  
Arsenate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	sol	none	25°C	0.0	C			1992FIa (1138) Kso(ErAsO4)=-22.47		3

Equilibrium monitored by EDTA and iodine titrations.

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Br- HL Bromide CAS 10035-10-6 (19)  
Bromide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	sp	non-aq	25°C	100%	U			K1=0.7 Medium: propanol, 1 M LiClO4. K1=0.5 to 0.9	1974KBb (1902)	4

Er+++	sp	alc/w	25°C	50%	U	I		K1=-0.15 Medium: 50% w/w MeOH/H2O, 3 M LiClO4. K1=-0.48(0%), 0.52(90%)	1973KPe (1903)	5
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Er+++	sp	oth/un	22°C	var	U			K1=-0.58 B2=-2.97 Medium:LiBr var	1965MSf (1904)	6
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CO3-- H2L Carbonate CAS 465-79-6 (268)  
Carbonate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++ gl NaClO4 25°C 0.70M C K1=5.87 2004LBb (3197) 7  
 $K(\text{Er}+\text{HCO}_3=\text{ErHCO}_3)=1.44$   
 Medium: 0.70 m NaClO4. Calculated for I=0, K1=7.61, B2=13.12,  
 $K(\text{Er}+\text{HCO}_3=\text{ErHCO}_3)=2.49$ ,  $K(\text{Er}+\text{HL}=\text{ErL}+\text{H})=-2.72$ ,  $K(\text{Er}+2\text{HL}=\text{ErL}_2+2\text{H})=-7.54$

Er+++ dis NaClO4 25°C 0.70M C I K1=5.88 B2=10.60 1998LBb (3198) 8  
 Method: H2O/tributylphosphate distribution and ICP-mass spectrometry.  
 Values calculated for I=0.0 M, K1=7.86, B2=13.68.

Er+++ gl KCl 25°C 0.20M M T H K1=8.51 1991BPb (3199) 9  
 $K(\text{Er}+\text{OH}+\text{L})=15.43$   
 $\text{DH}(\text{K}_1)=-101 \text{ kJ mol}^{-1}$ ,  $\text{DS}(\text{K}_1)=-175 \text{ J K}^{-1} \text{ mol}^{-1}$ .  
 Also data for 35, 45 and 55 C.

Er+++ sol none 25°C 0.0 C 1986FMa (3200) 10  
 $\text{Kso}(\text{Er}_2(\text{CO}_3)_3)=-28.25$

Er+++ sol none 25°C 0.0 C 1986HMa (3201) 11  
 $\text{Kso}(\text{Er}_2(\text{CO}_3)_3)=-28.25$   
 Method: spectrophotometry.

Er+++ sp NaNO3 25°C 2.5M C 1979DBa (3202) 12  
 $\text{B}(\text{Er}(\text{CO}_3)_4)=16.92$   
 $\text{B}(\text{Er}(\text{edta})\text{CO}_3)=19.61$   
 Method: by competition with edta

Er+++ dis oth/un 20°C 2.5M C 1979DBb (3203) 13  
 $\text{B}_4=15.69$   
 Media: 2.5 M (NH4)2NO3/hexane. Analysis by NAA. By competition with edta;  
 $\text{K}_1(\text{Er}(\text{edta}))=18.87$  recalculated for I=2.5 from J.Am.Chem.Soc.,75 1953,4196

Er+++ sol oth/un 25°C var U I 1964FDa (3204) 14  
 $\text{Kso}(\text{Er}_2\text{L}_3(\text{H}_2\text{O})_3)=-22.9$   
 $\text{B}_3=10.60$   
 Medium: K2CO3. In 7 M KCl:  $\text{K}(\text{ErL}_3+2\text{F}=\text{ErL}_2\text{F}_2+\text{L})=0.89$

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

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

Er+++ cal none 25°C 0.00 M H K1=3.68 1972SCd (3642) 15  
 $\text{DH}(\text{K}_1)=4.4 \text{ kJ mol}^{-1}$ ,  $\text{DS}=84.9 \text{ J K}^{-1} \text{ mol}^{-1}$

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

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

Er+++ dis NaCl 25°C 1.0M C K1=-0.13 1997HTb (4794) 16

Method: by solvent extraction from 1.0 M NaCl into CHCl<sub>3</sub>, 0.1 M  
1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.

Er+++ cal non-aq 25°C 100% U H K1=2.47 B2=4.89 1991ITa (4795) 17  
K3=1.81  
K4=1.41

Medium: DMF, 0.2 M Et<sub>4</sub>NClO<sub>4</sub>. DH(K1)=22.2 kJ mol<sup>-1</sup>, DH(K2)=24.2, DH(K3)=21  
DH(K4)=35. DS(K1)=122, DS(K2)=127, DS(K3)=106 J K<sup>-1</sup> mol<sup>-1</sup>

Er+++ sol NaClO<sub>4</sub> 25°C ? U K1=0.26 1982MAa (4796) 18

Er+++ cal non-aq 25°C 100% U K1=2.31 B2=4.07 1980VCa (4797) 19  
Medium: dimethylacetamide

Er+++ sp non-aq 25°C 100% U K1=0.04 1974KBb (4798) 20  
Medium: propanol, 1 M LiClO<sub>4</sub>

Er+++ sp alc/w 25°C 95% U I K1=-0.30 1972DLA (4799) 21  
Medium: 95% w/w MeOH/H<sub>2</sub>O, 2 M LiClO<sub>4</sub>. K1=-0.7(90%). 20-25 C

Er+++ sp alc/w 25°C 50% U I K1=0.41 1971KBf (4800) 22  
K1in=-0.96  
Medium: 50% w/w MeOH/H<sub>2</sub>O, 3 M LiClO<sub>4</sub>. K1=-0.08(0%); K1=0.71, K1in=-0.33(100%)

Er+++ sp alc/w 25°C 50% U I K1=0.43 1971KBg (4801) 23  
K1in=-0.82  
Medium: 50% v/v EtOH/H<sub>2</sub>O, 3 M LiClO<sub>4</sub>. K1=0.28(v=25); K1=0.57, K1in=-0.55(75%);  
K1=0.75, K1in=-0.25(90%); K1=0.79, K1in=-0.18(100%)

Er+++ sp oth/un 22°C 0.0 U K1=-1.93 1966MSf (4802) 24

Er+++ sol none 25°C 0.0 U 1960ASd (4803) 25  
Kso(Er(OH)2Cl)=-17.6  
Kso(Er(OH)2.5Cl0.5)=-21.9

I=0 corr. Unstable.

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ClO<sub>4</sub>- HL Perchlorate CAS 7001-90-3 (287)  
Perchlorate;

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

Er+++ sp alc/w 25°C 50% U K1=0.60 1974SIa (6218) 26

Er+++ sp alc/w 25°C 50% U K1=0.6 1974SIa (6219) 27  
K1in=0.5

Medium: 50% w/w MeOH/H<sub>2</sub>O

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	ix	oth/un	25°C	0.02M	C	T H		K1=3.77 B2= 5.94	2004LMa (6834)	28
Medium: 0.025 M HNO3. Applying Pitzer parameters: at I=0, K1=9.83. Data for 5 to 45 C. DH(K1)=10.0 kJ mol-1, DH(B2)=20.8.										
Er+++	ISE	NaClO4	25°C	0.0	C	I		K1=4.27	2000LBa (6835)	29
Method: Fluoride ISE. Values calc. from data for I=0.015-0.70 M NaClO4. At I=0.70 M, K1=3.347.										
Er+++	ix	KNO3	25°C	0.02M	C			K1=3.72 B2= 6.25	1999SBc (6836)	30
Medium: 0.025 M HNO3. Additional method: ICP-MS. Assumed K1(HF) = 3.03, derived from literature values.										
Er+++	ISE	none	25°C	0.0	C	H		K1=3.39 B2=7.03	1989MJa (6837)	31
Kso=-11.10 Also by conductivity and radiometry. DH(Kso)=34.2 kJ mol-1; DS=-217.										
Er+++	ISE	R4N.X	25°C	0.50M	C			K1=3.39 B2=7.03	1989MJb (6838)	32
Er+++	cal	NaClO4	25°C	1.00M	C	H			1988GBa (6839)	33
DH(K1)=10.6 kJ mol-1; DS(K1)= 103 J mol-1 K-1										
Er+++	ISE	NaCl	25°C	1.00M	C			K1=3.146	1985BBb (6840)	34
Er+++	sol	none	25°C	0.0	C	T H		K1=4.52	1985MEc (6841)	35
Kso(ErF3)=-17.5 Method: radiometric determination of 169Er. From conductivity measurements at 25-50 C, DH(Kso)=34 kJ mol-1, DS(Kso)=-217 J K-1 mol-1.										
Er+++	gl	KCl	25°C	1.00M	U	M			1981KTb (6842)	36
K(ErEDTA+F)=1.82 K(Er(EDTA)F+F)=0.30										
Er+++	gl	NaCl	25°C	1.00M	U			K1=3.13 B2=5.35	1979BHa (6843)	37
Er+++	EMF	NaClO4	25°C	0.50M	U			K1=3.54	1968IZa (6844)	38
K(Er+HF=ErF+H)=0.61										
Er+++	EMF	NaClO4	25°C	1.0M	U	H		K1=3.54	1967WCa (6845)	39
By distribution: K1=3.56. By calorimetry: DH(K1)=31.1 kJ mol-1, DS=172.2 *****										
H2PO2- HL Hypophosphite CAS 6303-21-5 (6304)										
Hypophosphite;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	sp	oth/un	?	var	U			K1=1.47	1970PLe (7643)	40
*****										
IO3- HL Iodate CAS 7782-68-5 (1257)										

Iodate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	dis	NaClO4	25°C	0.10M	U		K1=1.26	1973CBd (8510)	41
Er+++	sol	oth/un	25°C	0.0	U		Kso=-10.41	1966FPb (8511)	42

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sol	oth/un	25°C	dil	U		Kso(Er(H2IO6)(H2O)3)=-9.27	1974LOa (8602)	43

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Mo04-- H2L Molybdate (443)  
Molybdate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	con	oth/un	25°C	.001M	U		K1=4.26	1968DKc (8728)	44

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	oth/un	20°C	0.10M	U		B(ErHL)=8.06 B(Er2L)=7.25 B(ErH2L)=10.19	1989SBb (8772)	45

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N03- HL Nitrate CAS 7697-37-2 (288)  
Nitrate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	cal	NaClO4	25°C	2.0M	C	IH	K1=-0.96	1998BMb (9650)	46

DH(K1)=10.7 kJ mol<sup>-1</sup>. From Pitzer extrapolation to I=0.0, K1=-0.19,  
DH(K1)=9.6 kJ mol<sup>-1</sup>

Er+++	dis	none	25°C	0.0	U		K1=0.95	1992MSb (9651)	47
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Er+++	sp	alc/w	25°C	0.64M	U	TI	K1=1.91 B2=3.17 K3=0.44	1990SBd (9652)	48
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Medium: MeOH/H2O, MeOH mole fraction 0.64, electrolyte ClO4. Data also at 15, 20, and 37 C, and at several MeOH/H2O ratios.

Er+++ sp non-aq 25°C 100% U K1=0.6 1974KBb (9653) 49  
Medium: PrOH, 1 M LiClO4

Er+++ oth oth/un 25°C 0.0 U K1<0.9 1972SSc (9654) 50

Method:ultrasonic absorption

Er+++ sp non-aq 0°C 100% U B5=7.68 1971PEi (9655) 51

Medium:Me2CO

Er+++ sp NaClO4 20°C 4.10M U K1=-0.27 1970ASa (9656) 52

Er+++ sp KNO3 ? var U K(Er+3L+HL)=-0.76 1970KSf (9657) 53  
K(ErL3HL+2HL)=-0.87

Er+++ dis NaClO4 25°C 1.0M U K1=-0.33 1967KOb (9658) 54  
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N3- HL Azide CAS 7782-79-8 (441)  
Azide;

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

Er+++ sp none 25°C 0.0 U K1=0.08 1983MCb (10204) 55

Er+++ sp NaClO4 25°C 1.0M C K1=0.59 1982GAb (10205) 56  
Method: competition with Co(II).

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OH- HL Hydroxide (57)  
Hydroxide;

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

Er+++ gl NaCl 25°C 1.0M C \*K1=-8.18 2003RSa (11281) 57  
\*Kso(Er(OH)3)=18.06

\*Kso by radiometric titration using 171Er.

Er+++ gl NaClO4 25°C 0.0 C IH \*K1=-7.52 2000KBa (11282) 58  
In 0.7 M NaClO4, \*K1=-7.82. DH(\*K1)=46 kJ mol<sup>-1</sup>.

Er+++ gl NaCl 25°C 0.10M U I \*B(1,3)=-21.33 1999FBa (11283) 59  
In 0.1 M Me4NCl, \*B(1,3)=-22.11.

Er+++ gl NaNO3 25°C 2.0M C \*K1=-9.22 1990LSc (11284) 60  
\*B(2,2)=-13.38

$$*B(2,3)=-20.13$$

Er+++      gl    NaCl04 22°C 1.00M C      1983KDC (11285)    61

\*K1=-6.3

\*B2=-14.5

\*B3=-23.1,      \*B4=-36.8

$$*K_{so}(\text{Er}(\text{OH})_3) = 18.0$$

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Er+++      gl  NaCl04 25°C 3.00M U                                1973AKa (11286) 62
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\*B2=-17.4

$$*B(2,2)=-13.72$$

Medium: LiClO<sub>4</sub>

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Er+++      gl  NaCl04 25°C 3.00M U                               1973AKb (11287) 63
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\*B2=-17.4(-17.2?)

$$*B(2,2)=-14.29$$

Medium: D2O containing LiClO4. \*K2:  $\text{ErOD} + \text{D}_2\text{O} = \text{Er}(\text{OD})_2 + \text{D}$ ;

$$*B(2,2): 2Er+2D2O=Er2(OD)2+2D$$

Er+++	EMF alc/w	20°C	25%	U	1973SPe (11288)	64
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$$*K1(\text{ErA}+\text{H}_2\text{O}=\text{ErAOH}+\text{H})=-6.96$$

Medium: ca.25 to 35% w/w MeOH or EtOH/H<sub>2</sub>O. H<sub>3</sub>A=NTA

Er+++      dis NaClO4      ?      0.10M U      1971GDb (11289)      65

\*K1=-5.5

Medium: LiClO<sub>4</sub>

Er+++	sol oth/un 25°C	U	1970IEb (11290)	66
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$$K(\text{ErL}_3(\text{s}) + \text{L} = \text{ErL}_4) = -5.5$$
$$K(\text{ErL3(s)} + \text{L2} = \text{ErL5}) = -6.3$$
$$K(\text{ErL}_3(\text{s}) + 3\text{L} = \text{ErL}_6) = -7.3$$

Er+++      gl    NaCl04 25°C 0.30M U      1966FKa (11291)    67

\*K1=-7.99

Er+++	sol oth/un 25°C	var	U	1966ISa (11292)	68
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$$K(\text{ErL}_3(\text{s})=\text{ErL}_3)=-2.9$$

Medium: NaOH var.

Er+++      sol none      25°C    0.0    M      1966KSf (11293)    69

$K_{SO} = -26.71$

Er+++	oth	oth/un	20°C	dil	U	19660Pa (11294)	70
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$$K_{SO} = -23.9$$

Er+++	sol	none	25°C	0.0	U	1960AKb (11295)	71
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$$K_{so}(\text{Er}(\text{OH})_3) = -26.57$$

Er+++ gl oth/un 25°C var U 1951MFb (11296) 72

$$K_{so}(\text{Er}(\text{OH})_3) = -23.39$$

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Er+++ gl oth/un 25°C var U 1944MKa (11297) 73  
Kso(Er(OH)3)=-22.9

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P04--- H3L Phosphate CAS 7664-38-2 (176)  
Phosphate;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	sol	none	25°C	0.0	M			1997LBd (13163)	74
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Kso(ErP04)=-25.13

Calculated from data for 0.10 M HClO4 solution.

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Er+++ sol oth/un 25°C 0.0 C I 1993FKb (13164) 75  
Kso(ErP04)=-27.07

In synthetic seawater, Ks(ErP04)=-24.47.

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Er+++ sol none 25°C 0.0 C 1991FBa (13165) 76  
Kso(ErP04)=-25.78

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Er+++ sol NaClO4 25°C 0.0 C T 1985JBa (13166) 77  
Kso(ErP04.xH2O)=ca.-24.2

Disolution of ErP04.xH2O in 0.02-0.004 M HNO3. Calculated for I=0 M.  
At 100 C, Kso=ca.-25.5.

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P207---- H4L Pyrophosphate CAS 2466-09-3 (198)  
Diphosphate; from (HO)2PO.O.PO(OH)2  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	kin	none	25°C	0.0	U		B2=21.29	1967SSo (13582)	78
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P2W17061----- Polytungstate (2102)  
alpha-Heterodiphospho-polytungstate (usually alpha1 isomer)  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	sp	NaClO4	25°C	1.0M	C		K1=7.00	2003VCa (13713)	79
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Method: laser-induced fluorescence spectroscopy for Eu+++ as competing ion  
For P2W18062, K1=3.30.

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Er+++ cal NaClO4 25°C 1.0M C H 2002VCa (13714) 80  
DH(K1)=0.96 kJ mol-1, DS(K1)=137.2 J K-1 mol-1.

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Er+++ cal NaClO4 25°C 1.0M C H K1=3.15 2002VCa (13715) 81  
DH(K1)=-1.28 kJ mol-1, DS(K1)=58.9 J K-1 mol-1.

By entropy titration: DH(K1)=-1.36 kJ mol-1, DS(K1)=60.85 J K-1 mol-1.

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



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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Er+++      gl  KNO3    25°C 0.10M U T H      B2=9.5          1974KRa (13852) 82
                                         K(Er+2HL)=7.2
K(Er+2HL)=7.4 and B2=9.7 (35 C), K(Er+2HL)=7.0 and B2=9.2 (45 C)
DH(Er+2HL)=-19 kJ mol-1; DH(B2)=-28
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Er+++      gl  NaClO4  ?  0.10M U      B2=17.41        1962RKa (13853) 83
                                         K(Er+HL)=5.00
                                         K(Er+2HL)=9.05
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ReO4-      HL      Perrhenate      (2581)
Rhenate(VII), Perrhenate;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Er+++      sp  oth/un  rt  1.00M U      K1=-0.82        1970POa (14097) 84
Medium: HReO4
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SCN-      HL      Thiocyanate      CAS 463-56-9 (106)
Thiocyanate;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Er+++      dis oth/un 25°C 1.0M C      K1=0.45          1997HTb (14931) 85
Method: by solvent extraction from 1.0 M NaSCN into CHCl3, 0.1 M
1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.
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Er+++      sp  NaClO4  ?  0.60M U      T K1=0.16        1964KSe (14932) 86
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S04--      H2L      Sulfate      CAS 7664-93-9 (15)
Sulfate;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Er+++      sol oth/un 25°C 0.66M C      K1=1.84          2004SBb (16148) 87
Method: solubility of BaSO4 in 0.117 m ErCl3 solution.
Calculated for I=0, K1=3.51.
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Er+++      cal none 25°C 0.0 U T H      1974FPc (16149) 88
DH(K1)=14.1 kJ mol-1, DS=115.5 J K-1 mol-1. In D2O: DH(K1)=14.7, DS=117.5
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Er+++      cal none 25°C 0.0 U H      1974POa (16150) 89
DH(K1)=20.3 kJ mol-1
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Er+++      con oth/un 25°C 0.0 U      K1=3.58          1973FPb (16151) 90
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Er+++      cal oth/un 25°C 0.0 U H      1969FPa (16152) 91
DH(K1)=14.2 kJ mol-1
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 Er+++ cal oth/un 25°C 0.0 U H K1=3.41 B2=5.19 1969IEa (16153) 92  
 DH(K1)=15.1 kJ mol<sup>-1</sup>, DH(K2)=5.7; DS(K1)=115.8 J K<sup>-1</sup> mol<sup>-1</sup>, DS(K2)=53.1  
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Er+++ ISE NaClO4 25°C 2.0M U H K1=1.23 B2=1.71 1967CCd (16154) 93  
 By calorimetry: DH(K1)=17.6 kJ mol<sup>-1</sup>, DS=82.3 J K<sup>-1</sup> m<sup>-1</sup>; DH(K2)=6.3, DS=30.1  
 -----

Er+++ con oth/un 25°C 0.0 U K1=3.59 1954SJa (16155) 94  
 \*\*\*\*\*  
 CHO3F3S HL CAS 1493-13-6 (6755)  
 Trifluoromethanesulfonic acid; CF3SO3H  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	non-aq	25°C	100%	U		K3=2.45	1993BCc (17461)	95

Medium: MeCN  
 \*\*\*\*\*  
 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
Er+++	gl	NaClO4	20°C	0.10M	U		K1=2.60 B2=4.60 K3=1.6	1964PSd (18419)	96

\*\*\*\*\*  
 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
Er+++	ix	R4N.X	25°C	0.05M	C		K1=5.91 B2=10.32 K(Er+HL)=2.09	2001SBf (18862)	97

Medium: 0.05 M NH4NO3. At I=0, K1=6.83, B2=11.51.  
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Er+++	gl	KCl	25°C	1.0M	U	M		1988KTa (18863)	98
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K(Er(edta)+L)=3.05  
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Er+++	gl	KNO3	35°C	0.10M	U	M	K1=6.85 B(ErL(cytidine))=10.22	1986RMb (18864)	99
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Er+++	sp	NaNO3	20°C	2.50M	U	M		1981DFa (18865)	100
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K(Er(CO3)4+L)=1.37  
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Er+++	sol	oth/un	30°C	0.10M	U	T	K1=3.78 B3=8.43	1969KAe (18866)	101
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K1(18C)=2.92, B2(18C)=5.70, B3(18C)=8.64  
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Er+++	sol	NaClO4	?	0.10M	U		K1=4.82 B2=8.21 B3=10.03	1962AKa (18867)	102
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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
Er+++	sp	NaClO4	21°C	2.00M	U		K1=1.68 B3=3.46 B4=3.92	1981BMc (19942)	103

Er+++	gl	alc/w	25°C	95%	U	H	K1=5.15 B3=11.88 B4=13.06	1967Gwa (19943)	104
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Medium:95% MeOH,0.5 M NaClO4. By Calorimetry:DH(K1)=19.1 kJ mol<sup>-1</sup>,DS=162.6 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=12.2,DS=116.2; DH(K3)=7.9,DS=79.2; DH(K4)=-16.7,DS=-25.1

Er+++	cal	NaClO4	25°C	2.0M	C	H		1964GRa (19944)	105
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DH(K1)=13.71 kJ mol<sup>-1</sup>, DS(K1)=77.4 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=23.05, DS(B2)=133; DH(B3)=21.62, DS(B3)=144.

Er+++	gl	NaClO4	20°C	0.10M	U		K1=2.01 B2=3.60	1962KPa (19945)	106
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Er+++	EMF	NaClO4	20°C	2.0M	U		K1=1.60 B3=3.65 B4=3.6	1958SOa (19946)	107
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Method: quinhydrone electrode. By spectrophotometry: K1=1.65,B2=2.88,B3=3.7

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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
Er+++	gl	NaClO4	25°C	0.20M	U		K1=5.80 B2=11.02	1995PJb (20310)	108

Er+++	cal	NaClO4	25°C	2.0M	C	H		1964GRa (20311)	109
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DH(K1)=9.958 kJ mol<sup>-1</sup>, DS(K1)=57.7 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=22.8, DS(B2)=118.

Er+++	gl	NaClO4	20°C	0.10M	U		K(Er+HL)=1.94 K(ErHL+HL)=1.32	1964PKa (20312)	110
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Er+++	gl	NaClO4	25°C	2.0M	U		K(Er+HL)=1.28 K(ErHL+HL)=0.9	1962BCa (20313)	111
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C2H4O3 HL Glycolic acid CAS 79-14-1 (33)  
2-Hydroxyethanoic acid; HO.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	gl	NaClO4	25°C	3.0M	C			2002TFa (20524)	112
								B(Er2H-2L6)=0.53	
								B(Er4H-6L8)=-13.8	
								B(Er4H-7L8)=-22.6	
								B(Er4H-8L8)=-32.3	
-----									
Er+++	EMF	NaClO4	25°C	1.00M	U	M	K1=2.52	B2=4.92	1991WPb (20525) 113
									B(ErLA)=4.94
H2A=maleic acid									
-----									
Er+++	sp	NaClO4	21°C	2.00M	U		K1=2.56	B2=4.62	1981BMc (20526) 114
									B3=5.87
									B4=6.63
-----									
Er+++	gl	KNO3	32°C	0.10M	U				1980PPf (20527) 115
									K(Er+HL=ErL+H)=-0.63
									*K(ErL)=-5.70
									K(Er+2HL=ErL2+2H)=-1.90
									*K(ErL2)=-5.61
-----									
Er+++	gl	NaClO4	25°C	0.50M	C	T	K1=2.61	B2=4.69	1977Cma (20528) 116
									B3=6.07
-----									
Er+++	cal	NaClO4	25°C	2.0M	C	H			1964GRa (20529) 117
DH(K1)=-0.80 kJ mol <sup>-1</sup> , DS(K1)=47.3 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=-2.5, DS(B2)=79.1;									
DH(B3)=-5.36, DS(B3)=96.7; DH(B4)=-5.98, DS(B4)=105.									
-----									
Er+++	gl	NaClO4	20°C	0.10M	U		K1=3.004	B2=5.19	1964PKb (20530) 118
									B3=6.85
-----									
Er+++	EMF	NaClO4	20°C	2.0M	U		K1=2.60	B2=4.58	1959SOb (20531) 119
									B3=6.0
									B4=6.5
									B5=6.5

Method: quinhydrone electrode

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
-----									
Er+++	gl	NaClO4	25°C	0.20M	U		K1=4.96    B2= 8.85	1995PJb (21533)	120
-----									
Er+++	gl	KNO3	25°C	0.20M	U	M	K1=6.20	1990LSb (21534)	121
							K(Er(phen)+L)=6.02		
-----									
Er+++	gl	KNO3	35°C	0.10M	U			1987RRc (21535)	122
							K(Er+HL)=3.93		
-----									
Er+++	gl	KNO3	35°C	0.10M	U	M		1986RMb (21536)	123

K(Er+HL)=3.93

K(Er+HL+cytidine)=8.64

-----  
Er+++ cal oth/un 25°C 0.03M U H K1=4.45 1981PBa (21537) 124  
-----

Er+++ EMF KCl 25°C 1.0M U M 1977GMA (21538) 125

K(ErA+L)=4.32

K(ErA+HL)=3.13

K(ErA+H2L)=3.20

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

\*\*\*\*\*

C2H6O5 L DMSO CAS 67-68-5 (329)

Dimethylsulfoxide; (CH3)2S

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

Er+++ sp non-aq 25°C 100% U 1992MBb (22096) 126

K8=1.0

K9=0.5

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

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C2H6O2 L Ethyleneglycol CAS 107-21-1 (924)

1,2-Dihydroxyethane (Ethane-1,2-diol); HO.CH2.CH2.OH

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

Er+++ gl NaClO4 22°C 0.10M U 1972MCd (22144) 127

K(ErH-1L+H)=6.95

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C2H8N2 L Ethylenediamine CAS 107-15-7 (23)

1,2-Diaminoethane; H2N.CH2.CH2.NH2

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

Er+++ ISE non-aq 25°C 100% C H K1=2.71 B2=5.16 1992CBa (23149) 128

B3=6.76

Medium: DMSO, 0.10 M Et4NClO4. By calorimetry, DH(K1)=-21.1, DH(B2)=-40.8, DH(B3)=-81.4 kJ mol<sup>-1</sup>.

\*\*\*\*\*

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  
-----

Er+++ gl oth/un 25°C ? U M K1=1.96 1998PAa (23985) 129

K(ErL+acac)=5.89

K(Er(acac)L+acac)=4.42

Additional method: nmr. Medium not stated.

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C3H4O3 HL Pyruvic acid CAS 127-17-3 (1152)  
2-Oxopropoic acid; CH3.CO.COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	nmr	NaClO4	25°C	2.00M	U	H	K1=1.72	1980CCa (24047)	130
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DH=-4.68 kJ mol<sup>-1</sup>. Alternative method: Calorimetry.

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	gl	NaClO4	25°C	1.00M	U		K1=3.814 B2=6.369 B(ErHL)=6.54	1987MOa (24427)	131
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Er+++	gl	NaClO4	25°C	0.10M	U		K1=4.89 B2=8.01	1972DCc (24428)	132
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Er+++	gl	NaClO4	25°C	1.00M	U		K1=3.85 B2=6.39 B3=7.61 B(ErHL)=6.35 B(ErHL2)=9.93	1971DGa (24429)	133
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Er+++	ix	NaClO4	25°C	0.15M	U		K(Er+HL)=2.1 K(ErHL+HL)=0.90	1968KKc (24430)	134
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Er+++	gl	KNO3	25°C	0.10M	U		K1=4.42 B2=7.04	1968PFa (24431)	135
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C3H4O6 H2L CAS 560-27-0 (4233)  
Dihydroxypropanedioic acid; HOOC.C(OH)2.COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	gl	KCl	25°C	0.20M	U		K1=3.67	1973LPb (24624)	136
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C3H5NO2 HL (4234)  
Isonitrosoacetone; CH3.CO.CH:N.OH, anti-Pyruvic aldehyde oxime

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	gl	diox/w	20°C	50%	U		K1=5.99	1971MAf (24641)	137
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Medium: 50% dioxan, 0.1 M NaClO4

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	gl	diox/w	20°C	50%	U		K1=7.19 B2=13.27	1971MAf (24803)	138
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Medium: 50% dioxan, 0.1 M NaClO4

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C3H6O2 HL Propionic acid CAS 79-09-4 (35)

Propanoic acid; CH3.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	NaClO4	21°C	2.00M	U		K1=1.78 B3=3.58 B4=3.94	1981BMc (24998)	139

Er+++	gl	NaClO4	25°C	2.0M	U		K1=1.60 B2=2.72	1965CGa (24999)	140
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Er+++	gl	NaClO4	20°C	0.10M	U		K1=1.94 B2=3.48	1964PKa (25000)	141
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C3H6O2S 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
Er+++	gl	NaClO4	25°C	0.20M	U		K1=5.78 B2=11.42	1995PJb (25136)	142
Er+++	gl	NaClO4	25°C	2.00M	U		K(Er+HL)=1.53	1968CMa (25137)	143

Er+++	gl	NaClO4	31°C	2.0M	U		K(Er+HL)=1.38 K(ErHL+HL)=1.0	1963BCb (25138)	144
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C3H6O2S 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
Er+++	gl	NaClO4	25°C	2.00M	U		K(Er+HL)=1.41	1968CMa (25204)	145

Er+++	gl	NaClO4	31°C	2.0M	U		K(Er+HL)=1.70 K(ErHL+HL)=1.4	1963BCb (25205)	146
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C3H6O3 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
Er+++	gl	NaClO4	25°C	2.00M	U		K1=1.32	1969JCC (25263)	147

\*\*\*\*\*

C3H6O3 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
Er+++	gl	KNO3	30°C	0.10M	U		K(Er+HL=ErL+H)=0.41 *K(ErL)=-4.60 K(Er+2HL=ErL2+2H)=-0.66 *K(ErL2)=-3.87	1983MPc (25431)	148
Er+++	gl	NaCl04	25°C	0.10M	U		K1=3.21 B2=5.57 B3=7.2	1966GGb (25432)	149
Er+++	gl	NaCl04	25°C	0.20M	U		K1=2.86 B2=5.19 K3=1.33 K4=0.66	1964DVa (25433)	150
Er+++	gl	NaCl04	20°C	0.10M	U		K1=3.164 B2=5.62 B3=7.20	1964PKb (25434)	151
Er+++	gl	NaCl04	25°C	2.0M	U		K1=2.77 B2=5.11 K3=1.59	1961CCa (25435)	152
*****									
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
Er+++	gl	NaCl04	20°C	0.10M	U		K1=2.08 B2=3.23	1964PKa (25596)	153
*****									
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
Er+++	gl	NaCl04	25°C	0.20M	U		K1=5.07 B2= 8.87	1995PJb (26162)	154
Er+++	gl	KNO3	25°C	0.20M	U	M	K1=6.67 K(Er(phen)+L)=6.46	1990LSb (26163)	155
Er+++	gl	KNO3	25°C	0.10M	U		K1=4.7	1967EMb (26164)	156
*****									
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
Er+++	gl	NaCl04	20°C	0.0	U T H		K1=8.000 B2=15.79	1980SDc (26771)	157
Extrapolated from data for I=0.10-1.0 M. Data for 35 and 45 C. DH(K1)=-13.3 kJ mol <sup>-1</sup> , DS=108 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-24.3, DS(K2)=66.19.									
*****									



C3H7NO3                      HL            Serine                      CAS 56-45-1    (49)  
2-Amino-3-hydroxypropanoic acid;  $\text{H}_2\text{N}.\text{CH}(\text{CH}_2.\text{OH})\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	gl	oth/un	25°C	0.10M	U			K1=3.89	1965PGe (27126)	158
*****										

C3H8O2 L Propyleneglycol CAS 57-55-6 (2025)  
Propan-1,2-diol; CH<sub>3</sub>.CH(OH).CH<sub>2</sub>(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	gl	NaClO4	22°C	0.10M	U			K(ErH-1L+H)=6.85	1972Mcd (27674)	159

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
Er+++	gl	NaClO4	22°C	0.10M	U			K(ErH-1L+H)=6.75	1972Mcd (27729)	160

[illegible]

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	gl	KN03	25°C	0.10M	U			K1=12.48 K(Er+HL)=6.13 K(Er+2HL)=8.49	B2=22.80 2002KAa	(28558) 162

Er+++      gl    KNO<sub>3</sub>    25°C 0.10M C                          1991SKb (28559) 163  
K(ErL+H)=6.98  
K(ErHL+H)=5.15

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	cal	NaClO4	25°C	0.10M	U	H		K1=2.81 B2=4.25	19760Ca	(28644) 164
DH(K1)=10.1 kJ mol-1, DS=88 J K-1 mol-1; DH(B2)=19.1, DS=146										

Er+++      gl   NaClO4 25°C 0.10M C   H      K1=2.815   B2= 4.32   19760Cb (28645) 165  
By calorimetry: DH(K1)=10.1 kJ mol<sup>-1</sup>, DS(K1)=87.9 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(B2)=19.1, DS(B2)=146.

\*\*\*\*\*  
 C4H4N2O2S                      H2L      Thiobarbituric      CAS 504-17-6      (4279)  
 4,6-Dihydroxy-2-mercaptopyrimidine, 2-thiobarbituric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	oth/un	25°C	0.10M	U		K1=2.620	1987TSb (28886)	166

\*\*\*\*\*

C4H4N2O3                      H2L      Barbituric acid      CAS 67-52-7      (2818)  
 2,4,6-Trihydroxypyrimidine; C4HN2(OH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	oth/un	25°C	0.10M	U T H		K1=4.15	1987TSb (28910)	167

30 C:K=3.76; 35 C: 3.27. DH=-147 kJ mol<sup>-1</sup>, DS=-414 J K<sup>-1</sup> mol<sup>-1</sup>  
 \*\*\*\*\*

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
Er+++	gl	oth/un	25°C	?	U M		K1=3.51 K(ErL+acac)=5.11 K(Er(acac)L+acac)=4.46	1998PAa (29069)	168

Additional method: nmr. Medium not stated.

Er+++	EMF	NaClO4	25°C	1.00M	U M		K1=2.81      B2=4.31 B(ErLA)=4.94	1991WPb (29070)	169
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HA=glycolic acid

Er+++	gl	NaClO4	25°C	0.10M	U		K1=3.64	1973CDc (29071)	170
Er+++	gl	NaClO4	25°C	0.10M	U		K1=3.65      B2=5.71	1970RFa (29072)	171

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	0.10M	C		K1=2.46 B(ErHL)=5.95 K(Er+HL)=1.87	1986LCa (29194)	172

Er+++	gl	NaClO4	25°C	0.10M	U		K1=2.80	1973CDc (29195)	173
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C4H4O5                      H2L      Oxobutanedioic      CAS 328-42-7      (1733)  
 2-Oxosuccinic acid, Oxalacetic acid; HOOC.CH2.CO.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++ gl NaClO4 25°C 0.50M M K1=4.029 B2=7.66 1991MOa (29265) 174  
\*\*\*\*\*

C4H6O2 HL Methylacrylic (6992)  
2-Methylpropenoic acid; CH2:C(CH3)COOH

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

Er+++ gl KCl 25°C 0.10M U K1=2.29 1995PAa (29696) 175  
\*\*\*\*\*

C4H6O4 H2L Succinic acid CAS 110-15-6 (112)  
1,4-Butanedioic acid; HOOC.CH2.CH2.COOH

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

Er+++ gl NaClO4 25°C 0.10M M H K1=3.32 1986CDb (29964) 176  
DH=18.2 kJ mol<sup>-1</sup>, DS=123 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Er+++ sol oth/un 25°C 0.50M U K1=4.54 1970MKe (29965) 177  
-----

Er+++ ix NaClO4 25°C 0.15M U 1968KKc (29966) 178  
K(Er+HL)=1.71  
K(ErHL+HL)=1.3  
\*\*\*\*\*

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

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

Er+++ gl KCl 25°C 0.20M U K1=4.39 B2=6.92 1975PLa (30121) 179  
\*\*\*\*\*

C4H6O4S H2L Thiodiacetic CAS 123-93-3 (140)  
2,2'-Thiodiglycolic acid, Thiodiethanoic acid; HOOC.CH2.S.CH2.COOH

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

Er+++ gl NaClO4 25°C 1.00M U K1=2.36 B2=3.85 1973DGa (30214) 180  
B(ErHL)=5.14  
B(ErHL2)=7.21  
\*\*\*\*\*

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

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

Er+++ gl NaClO4 25°C 0.20M U K1=6.19 B2=11.97 1995PJb (30328) 181  
\*\*\*\*\*

C4H6O5 H2L Malic acid CAS 617-48-1 (393)  
2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; HOOC.CH2.CH(OH).COOH

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

-----  
 Er+++ gl NaClO4 25°C 1.00M U K1=4.334 B2=5.356 1987MOa (30616) 182  
 B(ErHL)=5.48  
 -----

Er+++ gl KNO3 30°C 0.10M U M 1984AIa (30617) 183  
 K(Er(EDTA)+L)=2.140  
 -----

Er+++ gl KNO3 20°C 0.10M U 1980SDa (30618) 184  
 B(ErHL)=5.39  
 -----

Er+++ gl KNO3 20°C 0.10M U K1=4.66 B2=7.76 1980SDB (30619) 185  
 K(Er+HL)=0.97  
 -----

Er+++ gl NaClO4 25°C 0.10M U K1=4.96 B2=8.35 1970RFa (30620) 186  
 -----

Er+++ EMF NaClO4 25°C 2.00M U K1=3.95 B2=6.64 1969JPa (30621) 187  
 \*\*\*\*\*  
 C4H6O5 H2L Diglycolic acid CAS 110-99-6 (243)  
 Di(carboxy)methyl ether, 2,2'-Oxydiethanoic acid; HOOC.CH2.O.CH2.COOH  
 -----

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

Er+++ gl KCl 25°C 1.0M U M 1988Kta (30865) 188  
 K(Er(edta)+L)=1.10  
 -----

Er+++ EMF NaClO4 20°C 1.00M U K1=5.47 B2=10.16 1972GOa (30866) 189  
 B3=13.41  
 -----

Er+++ cal NaClO4 25°C 1.0M C H 1963GRd (30867) 190  
 DH(K1)=6.945 kJ mol<sup>-1</sup>, DS(K1)=126 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=2.93,  
 DS(B2)=202; DH(B3)=-17.58, DS(B3)=193.  
 -----

Er+++ EMF NaClO4 20°C 1.00M U K1=5.34 B2=10.02 1963GTa (30868) 191  
 B3=13.23  
 -----

Method: quinhydrone electrode

\*\*\*\*\*

C4H6O6 H2L DL-Tartaric acid CAS 133-37-9 (94)  
 DL-Tartaric acid,DL-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH  
 -----

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

Er+++ gl NaClO4 25°C 1.00M U K1=3.000 B2=5.839 1987MOa (31018) 192  
 B(ErHL)=5.69  
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\*\*\*\*\*

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

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

Er+++ gl alc/w 25°C 50% U I K1=5.46 1972SSj (31228) 193  
 -----

Medium: 0.5, 0-50% EtOH. At I=0, 50% EtOH: K1=7.14

-----  
Er+++      EMF NaClO4 25°C 2.00M U      K1=3.62      B2=5.79      1969JPa (31229) 194  
-----

Er+++      gl    KCl      24°C 0.20M U      K1=3.33      1966DDa (31230) 195  
\*\*\*\*\*

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  
-----

Er+++      EMF NaClO4 25°C 0.10M U      K1=1.51      1971RCa (31500) 196  
\*\*\*\*\*

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

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

Er+++      gl    NaClO4 25°C 0.20M U      K1=5.90      B2=10.74      1995PJb (31847) 197  
-----

Er+++      gl    NaClO4 30°C 0.10M U      K1=5.71      B2=10.54      1984YLa (31848) 198  
-----

Er+++      gl    KCl      25°C 0.10M U      K1=6.08      B2=10.93      1968DRb (31849) 199  
\*\*\*\*\*

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  
-----

Er+++      gl    KCl      25°C 1.0M U      M      1988KTa (32226) 200  
-----

K(Er(edta)+L)=3.73  
-----

Er+++      EMF KCl      25°C 1.0M U      M      1977GMa (32227) 201  
-----

K(ErA+L)=5.35  
K(ErA+H2L)=0.91  
K(ErA+H3L)=2.29  
-----

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

Er+++      sp    none      25°C 0.0 U      M      1974PLa (32228) 202  
-----

K(ErL+H2O2)=3.72  
-----

Er+++      EMF KNO3      20°C 0.10M U      HM      1971GKb (32229) 203  
-----

K(ErA+L)=3.25  
-----

DH(ErA+L)=-29.25 kJ mol<sup>-1</sup>, DS=-37.7 J K<sup>-1</sup> mol<sup>-1</sup>. DH(ErAL)=-36.40, DS=299  
H4A=EDTA  
-----

Er+++      sp    oth/un 20°C 1.00M U      M      1971TKf (32230) 204  
-----

K(ErL+A)=3.4  
-----

H4A=EDTA

-----  
Er+++ sp oth/un 20°C 1.00M U M 1971TSh (32231) 205  
K(ErA+L)=3.4

H4A=EDTA

-----  
Er+++ gl KNO3 25°C 0.10M U M K1=7.09 B2=12.68 1962THa (32232) 206  
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

-----  
Er+++ gl diox/w 20°C 50% U K1=8.51 B2=16.03 1971MAf (32537) 207

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

-----  
Er+++ gl NaClO4 30°C 0.10M U K1=4.10 B2=7.07 1984YLa (32693) 208

\*\*\*\*\*

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

-----  
Er+++ gl KCl 60°C 0.10M U K1=6.46 B2=11.07 1978NBa (33083) 209

B3=13.08

\*\*\*\*\*

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

-----  
Er+++ gl KNO3 30°C 0.10M U M 1984AIa (33104) 210

K(Er(EDTA)+L)=2.218

\*\*\*\*\*

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

-----  
Er+++ gl NaClO4 25°C 2.00M U H K1=1.61 B2=2.72 1965CGa (33225) 211

By calorimetry: DH(K1)=23.0 kJ mol<sup>-1</sup>, DS=108 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=14.2, DS=70

-----  
Er+++ gl NaClO4 25°C 0.50M U K1=1.69 B2=2.59 1964SPa (33226) 212

\*\*\*\*\*

C4H8O2S HL CAS 627-04-3 (3007)

S-Ethylthioethanoic acid; CH<sub>3</sub>.CH<sub>2</sub>.S.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	31°C	2.0M	U		K1=1.42 B2=2.42	1963BCb (33404)	213
*****									
C4H8O3		HL					CAS 594-61-6	(81)	
2-Hydroxy-2-methylpropanoic acid; (CH <sub>3</sub> ) <sub>2</sub> C(OH).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	0.20M	U		K1=3.01 B2=5.70 K3=1.88 K4=1.45	1964DVa (33463)	214

Er+++	gl	NaClO4	20°C	0.10M	U		K1=3.350 B2=6.04 B3=8.13	1964PKb (33464)	215
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Er+++	gl	NaClO4	25°C	0.50M	U		K1=3.03 B2=5.54 B3=7.56	1964SPa (33465)	216
-------	----	--------	------	-------	---	--	----------------------------	-----------------	-----

Er+++	gl	NaClO4	25°C	2.0M	U		K1=3.07 B2=5.73 K3=2.07	1961CCa (33466)	217
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C4H8O4		HL					CAS 21620-60-0	(2326)	
2,3-Dihydroxy-2-methylpropanoic acid; HO.CH <sub>2</sub> .C(OH)(CH <sub>3</sub> ).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KNO3	25°C	0.10M	C		K1=3.17 B2=5.68 K3=1.81	1975PFb (33677)	218

\*\*\*\*\*

C4H8O5		HL					CAS 56309-80-9	(2365)	
2,3-Dihydroxy-2-hydroxymethylpropanoic acid; HO.CH <sub>2</sub> .C(CH <sub>2</sub> .OH)(OH).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	EMF	KNO3	25°C	0.10M	U		K1=3.05 B2=5.53 K3=1.85	1976PKb (33695)	219
Er+++	gl	NaClO4	25°C	0.50M	U		K1=2.79 B2=4.83 B3=6.57	1964SPa (33696)	220

\*\*\*\*\*

C4H11N		L	Butylamine				CAS 109-73-9	(159)	
1-Aminobutane; CH <sub>3</sub> .CH <sub>2</sub> .CH <sub>2</sub> .CH <sub>2</sub> .NH <sub>2</sub>									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	cal	non-aq	25°C	100%	U	H	K1=4.26 B2=7.61 B3=9.70	1997CDa (34764)	221

B4=11.29

Medium: MeCN. DH(K1)=-34.9 kJ mol<sup>-1</sup>, DS=36, DH(B2)=-68.2, DS=83;  
DH(B3)=-104, DS=163, DH(B4)=-121, DS=190

\*\*\*\*\*

C4H1104P HL (4276)  
Diethylphosphoric acid; (C<sub>2</sub>H<sub>5</sub>O)<sub>2</sub>PO.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	kin	oth/un	25°C		U		K1=2.08	1971MGB (35256)	222

\*\*\*\*\*

C4H12N2O L CAS 2752-17-2 (312)  
Bis-(2-aminoethyl)ether; H<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>.O.CH<sub>2</sub>.CH<sub>2</sub>.NH<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	EMF	non-aq	25°C	100%	C	H	K1=2.6 B2= 4.40	2002CDb (35505)	223

Method: comp. reactn. using Ag electrode. Medium: DMSO, 0.10 M Et<sub>4</sub>NClO<sub>4</sub>.  
Calorimetr: DH(K1)=-12 kJ mol<sup>-1</sup>, DS=10 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-26, DS=-3.

\*\*\*\*\*

C4H13N3 L Dien CAS 111-40-0 (584)  
1,4,7-Triazaheptane, 2,2'-Iminobis(ethylamine), diethylenetriamine;  
NH<sub>2</sub>.(CH<sub>2</sub>)<sub>2</sub>.NH.(CH<sub>2</sub>)<sub>2</sub>.NH<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	EMF	NaClO <sub>4</sub>	25°C	100%	C	H	K1=6.39 B2=10.43	2000CDa (35774)	224

Medium: DMF, 0.10 M Et<sub>4</sub>N[CF<sub>3</sub>SO<sub>3</sub>]. Method: Ag/Ag<sup>+</sup> electrode.  
By calorimetry: DH(K1)=-46.3, DH(B2)=-94.5 kJ mol<sup>-1</sup>.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	ISE	non-aq	25°C	100%	C	H	K1=3.82 B2=6.99	1993CCb (35775)	225

Medium: DMSO, 0.1 M Et<sub>4</sub>NClO<sub>4</sub>. Method: Ag<sup>+</sup> ISE. By calorimetry, DH(K1)=-33.2 kJ mol<sup>-1</sup>, DS=-38; DH(B2)=-74.1, DS=-115.

\*\*\*\*\*

C4H14N2O6P2 H2L EDDPO CAS 1733-49-9 (2435)  
1,2-Diaminoethane-N,N'-bis(methylenephosphonic) acid; (H<sub>2</sub>O<sub>3</sub>P.CH<sub>2</sub>.NH.CH<sub>2</sub>)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KCl	25°C	0.10M	U			1965DKb (35876)	226

K(Er+HL) > 8.79

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	cal	NaClO <sub>4</sub>	25°C	1.0M	C	H		1990YKb (36047)	227

DH(K1)=0.28 kJ mol<sup>-1</sup>, DS(K1)=55.3 J K<sup>-1</sup> mol<sup>-1</sup>.



Er+++ EMF NaClO4 25°C 1.0M C K1=2.84 B2= 4.95 1983KKb (36048) 228  
B3=6.66

Method: Pt/quinhydrone electrode.

\*\*\*\*\*

C5H4O2S HL 2-Thenoic acid CAS 527-72-0 (2312)  
Thiophene-2-carboxylic acid; C4H3S.CO0H

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

Er+++ gl NaClO4 25°C 0.10M U K1=1.74 B2=2.79 1969RFa (36256) 229

\*\*\*\*\*

C5H4O3 HL 2-Furoic acid CAS 88-14-2 (2492)  
Furan-2-carboxylic acid; C4H3O.CO0H

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

Er+++ gl NaClO4 25°C 0.10M U K1=1.74 B2=2.89 1969RFa (36294) 230

\*\*\*\*\*

C5H4O3 HL CAS 488-93-7 (1166)  
Furan-3-carboxylic acid; C4H3O.CO0H

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

Er+++ cal NaClO4 25°C 2.00M U H K1=1.45 1976YCa (36302) 231  
DH=8.66 kJ mol<sup>-1</sup> and DS=57.74 J mol<sup>-1</sup> K<sup>-1</sup>.

\*\*\*\*\*

C5H5N O2 HL CAS 16867-04-2 (2316)  
2,3-Dihydroxypyridine, 3-Hydroxypyridin-2(1H)-one; C5H3N(OH)2

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

Er+++ gl diox/w 25°C 50% U K1=8.62 1970GDa (36783) 232  
Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C5H5O3F3 HL (7056)  
2-Oxa-6-trifluorohexa-3,5-dione; CH3.O.CO.CH2.CO.CF3

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

Er+++ gl diox/w 25°C 50% M I K1=6.03 B2=11.13 1994SSa (37063) 233  
K3=3.86

Medium: 50% dioxan, I=0 corr. At 35 C: K1=5.93, K2=5.09, K3=3.77

\*\*\*\*\*

C5H6O4 H2L Itaconic acid CAS 97-65-4 (398)  
Methylenesuccinic acid; H0OC.CH2.C(:CH2).COOH

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

Er+++ gl KCl 25°C 0.20M U K1=3.18 1989MFa (37419) 234  
K(Er+HL)=1.77

Er+++	oth	NaClO4	25°C	1.0M	U		K1=2.27 B(ErHL)=6.24 B(ErH2L2)=12.23 B(ErHL2)=8.40	1972STd (37420)	235
*****									
C5H7NO3		HL					(4313)		
Isonitrosoacetylacetone; HO.N:CH.CO.CH2.CO.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	diox/w	20°C	50%	U		K1=5.26 B2=8.98	1971MAf (37524)	236
Medium: 50% v/v dioxan, 0.1 M NaClO4									
*****									
C5H8N2O3		H2L					(4317)		
Methylacetylglyoxime; CH3.C(:N.OH).C(:N.OH).CO.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	diox/w	20°C	50%	U		K1=6.19 B2=11.42	1971MAf (37701)	237
*****									
C5H8O2		HL					Acetylacetone CAS 123-54-6 (164)		
Pentane-2,4-dione; CH3.CO.CH2.CO.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	alc/w	18°C	60%	U		K1=6.17 B2=11.37 K3=3.53	1998ZBa (37942)	238
Medium: 60% EtOH/H2O, 0.1 M NaClO4									
Er+++	gl	KCl	25°C	0.10M	U		K1=5.91 B2=10.39 K3=3.21	1995PAa (37943)	239
Er+++	gl	NaClO4	20°C	0.10M	U	M		1973TZa (37944)	240
K(Er(EDTA)+L)=3.65									
Er+++	gl	R4N.X	25°C	0.10M	U	M		1972FGa (37945)	241
K(Er(EDTA)+L)=3.07									
Medium: NH4Cl. By spectroscopy, K=3.12									
Er+++	gl	alc/w	?	50%	U	I	K1=7.25	1971K0a (37946)	242
Medium: 5-80% MeOH, 0.005 ErCl3, 0.005 HL. k1(5%)=6.21, k1(80%)=8.41									
Er+++	EMF	alc/w	?	40%	U	I	K1=6.91	1968RKa (37947)	243
Medium: 5-60% MeOH, 0.02 M. K1(5%)=6.23, K1(20%)=6.49, K1(60%)=7.37									
Er+++	gl	NaClO4	25°C	2.0M	U		K1=5.70 B2=10.08	1964YCa (37948)	244
Er+++	gl	oth/un	30°C	0.10M	U		K1=5.99 B2=10.67 K3=3.38	1960GFa (37949)	245

\*\*\*\*\*

C5H8O4                      H2L                      CAS 601-75-2 (479)  
Ethylpropanedioic acid; HOOCC(C2H5).COOH

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

Er+++            gl    KCl        25°C 0.20M U            K1=4.41            1989ZPa (38240) 246  
In 70.4% v/v EtOH/H2O: K1 = 6.31

\*\*\*\*\*

C5H8O4                      H2L                      CAS 498-21-5 (2234)  
Methylsuccinic acid; HOOCC(C)CH2.COOH

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

Er+++            gl    NaClO4 25°C 0.10M U            K1=3.08    B2=5.15    1970RFa (38259) 247  
\*\*\*\*\*

C5H8O4                      H2L            Glutaric acid        CAS 110-94-1 (420)  
Pentanedioic acid; HOOCC(C)CH2.COOH

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

Er+++            gl    NaClO4 25°C 0.10M M    H        K1=3.09            1986CDb (38316) 248  
DH=17.8 kJ mol<sup>-1</sup>, DS=119 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Er+++            sol oth/un 25°C 0.50M U            K1=3.40            1970MKe (38317) 249  
\*\*\*\*\*

C5H8O7                      H2L                      CAS 40120-71-6 (3022)  
2,3,4-Trihydroxypentanedioic acid, Trihydroxyglutaric acid; HOOCC(C(O))3.COOH

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

Er+++            gl    KCl        24°C 0.20M U            K1=3.85            1966DDa (38419) 250  
\*\*\*\*\*

C5H9NO2                      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  
-----

Er+++            gl    NaClO4 25°C 0.10M U            B2=5.90            1981ZLa (38609) 251  
\*\*\*\*\*

C5H9NO3                      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  
-----

Er+++            gl    NaCl        37°C 0.15M U            K1=3.80            1997GMa (38726) 252

-----  
Er+++            gl    NaClO4 25°C 0.10M U            B2=5.47            1981ZLa (38727) 253  
\*\*\*\*\*

C5H9NO4                      H2L            MIDA            CAS 4408-64-4 (190)

N-Methyliminodiethanoic acid; CH<sub>3</sub>.N(CH<sub>2</sub>.COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	gl	KCl	25°C	0.10M	U			K1=7.27 B2=13.28 B3=15.68 B(Er+20H+L)=18.61	1980MGc (39248)	254

\*\*\*\*\*  
C5H10O3 HL CAS 3739-30-8 (3612)  
2-Hydroxy-2-methylbutanoic acid, Methylethylglycolic acid; CH<sub>3</sub>.CH<sub>2</sub>.C(OH)(CH<sub>3</sub>).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	gl	KNO <sub>3</sub>	25°C	0.10M	U			K1=3.32 B2=6.05 K3=1.98	1969PCa (40252)	255

\*\*\*\*\*  
C5H10O3 HL CAS 617-31-2 (474)  
2-Hydroxypentanoic acid; CH<sub>3</sub>.CH<sub>2</sub>.CH<sub>2</sub>.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	gl	NaClO <sub>4</sub>	25°C	1.0M	U			K1=2.68	1968GCa (40277)	256

\*\*\*\*\*  
C5H10O4 HL CAS 4767-03-7 (4297)  
2,2-Bis(hydroxymethyl)propanoic acid; CH<sub>3</sub>.C(CH<sub>2</sub>OH)<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	gl	NaClO <sub>4</sub>	25°C	0.10M	U			K1=2.28 B2=3.88	1970RDa (40295)	257

\*\*\*\*\*  
C5H10O4 HL CAS 19860-56-1 (2327)  
2,3-Dihydroxy-2-methylbutanoic acid; CH<sub>3</sub>.CH(OH).C(OH)(CH<sub>3</sub>).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	gl	KNO <sub>3</sub>	25°C	0.10M	C			K1=3.11 B2=5.49 K3=1.59	1975PFb (40310)	258

\*\*\*\*\*  
C5H11NO2 HL Valine CAS 72-18-4 (43)  
2-Amino-3-methylbutanoic acid; H<sub>2</sub>N.CH(CH(CH<sub>3</sub>)<sub>2</sub>).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	gl	KNO <sub>3</sub>	25°C	0.20M	U	M		K1=6.03 K(Er(phen)+L)=5.85	1990LSb (40699)	259

Er+++	cal	oth/un	25°C	0.03M	U	H		K1=4.20	1981PBa (40700)	260
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Er+++	gl	KCl	25°C	0.10M	U	T		K1=4.19	1974BFa (40701)	261
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C6H5NO2                      HL      Picolinic acid      CAS 98-98-6      (391)  
2-Pyridine-carboxylic acid; C5H4N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KNO3	25°C	0.20M	U	M	K1=5.02	1987LSc (42521)	262
K(Er(nta)+L)=4.50, K(Er(edta)+L)=4.40.									
Er+++	gl	NaClO4	25°C	0.50M	U		K1=3.96 B3=10.04	1977GGb (42522)	263
Er+++	gl	KNO3	25°C	0.10M	U		K1=4.26 K3=2.84 K4=2.08	1968PIa (42523)	264
Er+++	gl	KNO3	25°C	0.10M	U		K1=4.28 B2=7.86 B3=10.9	1964THb (42524)	265

\*\*\*\*\*

C6H5NO2                      HL      Nicotinic acid      CAS 59-67-6      (419)  
3-Pyridine-carboxylic acid; C5H4N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	0.20M	U		K1=2.21	1973FDa (42669)	266

\*\*\*\*\*

C6H5NO3                      H2L                      CAS 874-24-8      (4356)  
3-Hydroxypyridine-2-carboxylic acid; C5H3N.(OH)(COOH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	30°C	0.10M	U		K(Er+HL)=3.88 K(ErHL+HL)=3.50	1969DNc (42748)	267

\*\*\*\*\*

C6H5NO3                      HL      4-Nitrophenol      CAS 100-02-7      (454)  
4-Nitrohydroxybenzene; HO.C6H4.NO2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	R4N.X	25°C	0.10M	C		K1=1.35	1990CBe (42800)	268

\*\*\*\*\*

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
Er+++	sp	KCl	25°C	0.10M	M	I	K1=6.29	1989PEa (42951)	269

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

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Er+++      sp  KCl      25°C 0.10M U      K1=5.51      1987PLa (43107) 270
*****
C6H5O4Cl      HL      Chlorokojic aci      (3086)
3-Chloro-5-hydroxy-2-hydroxymethyl-4-pyrone;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Er+++      gl  oth/un 30°C 0.10M U      K1=6.19      B2=11.63 1972DSd (43130) 271
*****
C6H5O4I      L      (1085)
6-Iodo-5-hydroxy-2-hydroxymethyl-4H-pyran-4-one;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Er+++      sp  KCl      25°C 0.10M U      K1=5.61      1987PLa (43149) 272
*****
C6H6O2      H2L      Catechol      CAS 120-80-9 (534)
1,2-Dihydroxybenzene, pyrocatechol; HO.C6H4.OH
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Er+++      gl  NaClO4 35°C 0.20M M      K1=9.87      1982LTa (43748) 273
-----
Er+++      EMF NaCl 25°C 0.10M U      K1=11.43      1969PKe (43749) 274
*****
C6H6O3      HL      Maltol      CAS 118-71-8 (2442)
3-Hydroxy-2-methyl-4H-pyran-4-one;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Er+++      gl  NaClO4 30°C 0.10M U      K1=6.98      B2=12.66 1970DSc (44081) 275
K3=4.21
*****
C6H6O4      HL      Kojic acid      CAS 501-30-4 (1800)
5-Hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Er+++      sp  KCl      25°C 0.10M C I      K1=6.244      1987PEa (44205) 276
In 0.087 M KCl, K1=6.288.
-----
Er+++      gl  oth/un 30°C 0.10M U      K1=6.31      B2=11.77 1972DSd (44206) 277
K3=4.40
-----
Er+++      gl  NaClO4 25°C 2.0M U      K1=5.72      B2=11.32 1964YCa (44207) 278
*****
C6H6O6      H3L      cis-Aconitic      CAS 585-84-2 (3064)
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cis-1,2,3-Propenetricarboxylic acid, cis-Aconitic acid; HOOC.CH:C(COOH)CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaCl	20°C	0.10M	U		K1=4.81 K(Er+HL)=3.47	1986SKb (44296)	279

\*\*\*\*\*

C6H6O6S                      H4L                      CAS 29714-59-8 (3688)  
2,3,4-Trihydroxybenzenesulfonic acid; (HO)3.C6H2.SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	oth/un	?	1.0M	U		K1=5.86	1966TKb (44307)	280

Medium: KOH

\*\*\*\*\*

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
Er+++	gl	NaClO4	35°C	0.20M	M		K1=13.80	1982LTa (44420)	281
Er+++	gl	NaClO4	25°C	0.50M	C		K1=12.89    B2=22.40 B(ErHL2)=30.01	1976LAb (44421)	282

Er+++	gl	NaClO4	25°C	0.10M	U		K1=14.48 K(Er+HL)=5.45	1970SSi (44422)	283
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C6H7N                      L      Aniline                      CAS 62-53-3 (583)  
Aminobenzene, aniline; C6H5.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	non-aq	25°C	100%	U	HM		1982KNa (44869)	284

K(ErA3+L)=1.93

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
Er+++	gl	mixed	25°C	50%	U	I	K1=4.41    B2=8.38	1969BCa (44926)	285

Medium: 50% DMSO, 0.12 M NaClO4. In 0.12 M NaClO4, 50% dioxan: K1=5.52, K2=4.14. Medium: 0.12 NaClO4, 50% EtOH: K1=4.89, K2=4.11

\*\*\*\*\*

C6H7O3F3                      HL                      (7057)  
3-Oxa-7-trifluorohepta-4,6-dione; CH3CH2.O.CO.CH2.CO.CF3

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

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 Er+++ gl diox/w 25°C 50% M I K1=6.14 B2=11.43 1994SSa (45184) 286  
 K3=4.14

Medium: 50% dioxan, I=0 corr. At 35 C: K1=6.00, K2=5.22, K3=3.88

\*\*\*\*\*

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  
 -----

Er+++ gl KCl 25°C 0.20M U K1=4.10 1989ZPa (45466) 287

In 70.4% v/v EtOH/H2O: K1 = 6.14

\*\*\*\*\*

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  
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Er+++ gl NaClO4 25°C 2.00M U IH 1988HSa (45632) 288

K(Er+HL)=1.45

DH=8.0 kJ mol<sup>-1</sup>, DS=54.6 J K<sup>-1</sup> mol<sup>-1</sup>

In 0.1 M NaClO4, K=1.4, DH=8.0 kJ mol<sup>-1</sup>, DS=55 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
 Er+++ sp oth/un ? ? U 1966SAb (45633) 289

K(Er+HL)=0.5

-----  
 Er+++ sp oth/un ? 0.30M U K1=9.03 1966SAb (45634) 290

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C6H8O6S H3L CAS 99-68-3 (3692)

(Carboxymethylthio)butanedioic acid; HOOC.CH(S.CH2.CO2H).CH2.CO2H

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

Er+++ gl NaClO4 25°C 0.10M U TIH K1=5.09 1986AJc (45692) 291

DH(K1)=-6.4 kJ mol<sup>-1</sup>, DS=76.1 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
 Er+++ gl NaClO4 30°C 0.10M U IH K1=4.71 B2=8.06 1983ASa (45693) 292

DH(K1)=-4.7 kJ mol<sup>-1</sup>, DH(K2)=3.4

\*\*\*\*\*

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  
 -----

Er+++ gl KNO3 25°C 1.0M M 1986SZb (46073) 293

K(Er+H3L=ErHL+2H)=-2.59

K(Er+H3L=ErL+3H)=-5.94

K(Er+H3L=ErH-1L+4H)=-11.33

K(Er+2H3L=ErH2L2+4H)=-6.65

K(Er+2H3L=ErL2+6H)=-13.74, K(Er+2H3L=ErH-2L2+8H)=-28.8,



$K(\text{Er}+2\text{H3L}=\text{ErH}-3\text{L2}+9\text{H})=-27.8$ ,  $K(\text{Er}+2\text{H3L}=\text{ErH}-4\text{L2}+10\text{H})=-37.2$ .

Er+++ gl KNO3 25°C 0.10M U M 1975TDa (46074) 294  
 $B(\text{Er}(\text{IDA})\text{L})=10.5$

Er+++ dis NaClO4 25°C 0.15M U 1973HHc (46075) 295  
 $K(\text{Er}+\text{HL}+\text{L})=11.32$

Er+++ gl alc/w 25°C 25% U I K1=8.75 1972BKd (46076) 296  
Medium: EtOH/H2O, 0.05 M (NaCl,NaClO4). 0%, K1=7.86, 50%, K1=9.94

Er+++ dis oth/un ? ? U 1972PGd (46077) 297  
 $K(\text{Er}+\text{HL}+\text{L})=10.34$

\*\*\*\*\*  
C6H8O7 H3L (6770)  
Carboxymethoxysuccinic acid;  $\text{HOOC}.\text{CH2}.\text{O}.\text{CH}(\text{COOH})\text{CH2}.\text{COOH}$

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Er+++ EMF NaClO4 25°C 1.00M U K1=6.25 B2=10.40 1991WPb (46328) 298  
\*\*\*\*\*

C6H9NO6 H3L NTA CAS 139-13-9 (191)  
Nitrilotriethanoic acid;  $\text{N}(\text{CH2}.\text{COOH})3$

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Er+++ ISE NaClO4 25°C 0.10M C I K1=11.82 1997LBb (46775) 299  
Method: Cu ISE and competitive complexation by Cu. Data for 0.1-5.0 M.  
At I=0.0 M, K1=13.66.

Er+++ ISE KNO3 25°C 0.10M C K1=12.01 1980NSf (46776) 300  
Competitive method using Cd ion-selective electrode.

Er+++ gl KNO3 20°C 1.0M C K2=8.20 1978GHb (46777) 301

Er+++ gl NaClO4 25°C 0.50M U K1=11.76 1977GGb (46778) 302

Er+++ EMF KCl 25°C 1.0M U M 1977GMa (46779) 303  
 $K(\text{ErA}+\text{L})=5.95$   
 $K(\text{ErA}+\text{H2L})=1.64$   
 $K(\text{ErA}+\text{H3L})=2.05$   
 $K(\text{ErA}+\text{H4L})=3.43$

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

Er+++ cal KNO3 20°C 0.10M U HM 1971GKb (46780) 304  
 $K(\text{ErA}+\text{L})=3.52$   
H4A=EDTA.  $\text{DH}(\text{ErA}+\text{L})=-30.25 \text{ kJ mol}^{-1}$ ,  $\text{DS}=-35.6 \text{ J K}^{-1} \text{ mol}^{-1}$ .  
 $\text{DH}(\text{ErAL})=-37.4 \text{ kJ mol}^{-1}$ ,  $\text{DS}=301 \text{ J K}^{-1} \text{ mol}^{-1}$

Er+++ gl oth/un 20°C 0.20M U 1970VMa (46781) 305  
B(ErL(OH))=6.53

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Er+++ gl KNO3 25°C 0.10M U T H T K1=12.03 B2=21.29 1962MFb (46782) 306  
15 C: K1=12.03, K2=9.36; 20 C: 12.00, 9.29; 30 C: 12.09, 9.21; 35 C: 12.10, 9.14;  
40 C: 12.15, 9.11. DH(K1)=10.5 kJ mol<sup>-1</sup>, DS=266; DH(K2)=-16.2, DS=123

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Er+++ vlt KNO3 20°C 0.10M U 1957NOa (46783) 307  
B(Er2L3)=37.96

\*\*\*\*\*  
C6H9N3O2 HL Histidine CAS 71-00-1 (1)  
2-Amino-3-(4'-imidazolyl)propanoic acid; H2N.CH(CH2.C3H3N2)COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KNO3	35°C	0.10M	U		K(Er+HL)=4.06	1987RRc (47545)	308
Er+++	gl	KNO3	35°C	0.10M	U	M	K(Er+HL)=4.06	1986RMb (47546)	309
K(Er+HL+cytidine)=8.81									
Er+++	cal	oth/un	25°C	0.03M	U	H	K1=4.21	1981PBa (47547)	310
Er+++	gl	NaClO4	37°C	3.00M	U	T	K1=4.99 B2=9.91 B(ErHL)=11.40	1971JWa (47548)	311
Er+++	gl	NaClO4	25°C	3.00M	U	T	K1=4.49 B2=8.99 B(ErHL)=11.18	1970JWa (47549)	312
***** C6H10O2S HL (4370) Ethyl thioacetoacetate; CH3.CS.CH2.CO.OCH2.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	mixed	30°C	75%	U		K1=7.56 B2=13.78 K3=6.00	1970DRa (47961)	313
Medium: 75% acetone, 0.1 M									
***** 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
Er+++	gl	NaClO4	25°C	0.10M	U		K1=3.066 B2=5.65 K3=1.82 K4=1.72	1966PRb (47987)	314
***** C6H10O3 HL CAS 141-97-9 (3068) Ethyl acetoacetate; CH3.CO.CH2.CO2.C2H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	mixed	30°C	75%	U		K1=6.88 B2=12.96	1969DRa (48011)	315
Medium: 75% acetone, 0.1 M NaClO4									
*****									
C6H10O4		H2L		Adipic acid			CAS 124-04-9	(401)	
1,6-Hexanedioic acid; HOOC.(CH2)4.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	0.10M	M	H	K1=3.05	1986CDb (48069)	316
DH=19.3 kJ mol <sup>-1</sup> , DS=123 J K <sup>-1</sup> mol <sup>-1</sup>									
Er+++	sol	oth/un	25°C	0.50M	U		K1=2.43	1970MKe (48070)	317
*****									
C6H10O4S2		H2L					CAS 7244-02-2	(438)	
1,2-Bis(carboxymethylthio)ethane; HOOC.CH2.S.CH2.CH2.S.CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	1.00M	C	H	K1=2.01 B2=3.15	1974GGa (48240)	318
B(ErHL)=5.15									
*****									
C6H10O6		H2L					CAS 23243-68-7	(242)	
1,2-Bis(carboxymethoxy)ethane; HOOC.CH2.O.CH2.CH2.O.CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	oth	NaClO4	25°C	0.10M	U		K1=4.53	1984AFa (48336)	319
Laser excitation spectroscopy, competition method.									
Er+++	gl	NaClO4	25°C	1.00M	C	H	K1=4.61 B2=8.04	1974GGa (48337)	320
B3=8.94									
B(ErHL2)=9.41									
*****									
C6H10O8		H2L		Saccharic acid			CAS 87-73-0	(1191)	
D-2,3,4,5-Tetrahydroxy-1,6-hexanedioic acid, Glucaric acid; HOOC.(CHOH)4.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	0.10M	U	M	K1=4.64	1997PPb (48471)	321
K(Er(edta)+L)=4.21									
*****									
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
Er+++	gl	KNO3	20°C	1.00M	U		K1=8.32 B2=16.11	1974CMD (48715)	322

$$K(\text{ErL2}(\text{OH})+\text{H})=9.73$$

Er+++ oth NaNO3 20°C 0.10M U M K1=9.1 B2=17.10 1966JMc (48716) 323  
Method: paper electrophoresis. Mixed complexes with HEDTA

Er+++ vlt KCl 25°C 0.10M U B2=16.30 1965DTa (48717) 324

Er+++ ISE KNO3 25°C 0.10M U K1=9.24 B2=17.22 1963TLA (48718) 325

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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
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Er+++	gl	R4N.X	25°C	0.10M	C		K1=8.59	1988CCb (49232)	326
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Er+++	gl	NaClO4	25°C	1.00M	C	H	K1=8.51 B2=15.94 B(ErH2L)=17.57	1974GGa (49233)	327
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Er+++	gl	KNO3	25°C	0.10M	U		K1=8.59 B2=16.04	1962THb (49234)	328
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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
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Er+++	EMF	NaClO4	25°C	1.0M	U		K1=3.11 B2=5.27 K3=1.33 K4=0.95	1965TVa (49458)	329
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Method: quinhydrone electrode

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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
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Er+++	gl	KNO3	25°C	0.10M	U		K1=3.38 B2=5.82 K3=1.74	1979PPa (49491)	330
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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
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Er+++	EMF	alc/w	?	40%	U	I	K1=4.31	1968RKa (49707)	331
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Medium: 20-60% MeOH, 0.02 M. K1(20%)=3.64, K1(60%)=5.09

Er+++	sp	alc/w	20°C	80%	U	I	K1=4.9	1967RKa (49708)	332
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Medium: 80% MeOH. K1=2.9(0%)

Er+++ EMF alc/w 25°C 80% U I K1=5.56 1966KRb (49709) 333  
Medium: 80% MeOH. K1=4.68(50%)

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Er+++ gl KCl 25°C 0.20M U K1=2.36 B2=4.53 1963K0c (49710) 334  
\*\*\*\*\*  
C6H13NO2 HL Leucine CAS 61-90-5 (47)  
2-Amino-4-methylpentanoic acid; H2N.CH(CH2.CH(CH3)2)COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++ gl KNO3 25°C 0.20M U M K1=6.20 1990LSb (50071) 335  
K(Er(phen)+L)=6.15  
\*\*\*\*\*  
C6H13NO2 HL Norleucine CAS 616-06-8 (602)  
2-Aminohexanoic acid (2-Aminocaproic acid) CH3.(CH2)3.CH(NH2).COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++ gl NaCl04 22°C 0.10M M M K1=5.46 B2=10.35 1991DTa (50175) 336  
B3=14.30  
K(ErA+L)=9.57  
H4A=trans-cyclohexane-1,2-diaminotetraethanoic acid. Definitions wrong?

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Er+++ gl KCl 20°C 0.20M U K1=4.08 B2=8.18 1990PLa (50176) 337  
\*\*\*\*\*  
C6H13NO2 HL CAS 60-32-2 (1846)  
6-Aminohexanoic acid; H2N.CH2.CH2.CH2.CH2.CH2.COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++ gl KCl 20°C 0.20M U K1=5.09 B2=10.77 1990PLa (50214) 338  
\*\*\*\*\*  
C6H13NO4 HL Bicine CAS 150-25-4 (2124)  
N,N-Bis(2-hydroxyethyl)glycine; (HO.CH2.CH2)2N.CH2.COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++ gl KNO3 20°C 0.10M U K1=5.36 B2=10.23 1982RFa (50350) 339

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Er+++ gl KCl 30°C 0.10M U K1=5.38 B2=9.49 1973MSe (50351) 340

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Er+++ gl alc/w 20°C 50% U I K1=6.60 1970KRb (50352) 341  
Medium: 0-80% MeOH, 0.03 M KCl. K1(0%)=5.39, K1(20%)=5.91, K1(80%)=7.83

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Er+++ EMF alc/w 20°C 50% U I K1=6.58 1968KRc (50353) 342  
Medium: 0-80% MeOH, 0.02 M. K1(0%)=5.41, K1(20%)=5.88, K1(60%)=7.06,  
K1(80%)=7.82

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Er+++ oth NaNO3 20°C 0.10M U K1=7.7 B2=13.60 1966JMc (50354) 343  
Method: paper electrophoresis

\*\*\*\*\*

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

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

Er+++ gl NaCl 37°C 0.15M U M K1=3.29 1997GMa (50575) 344  
B(ErHL)=10.20  
B(ErH2AL)=24.45

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

\*\*\*\*\*

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

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

Er+++ ISE non-aq 25°C 100% C H K1=5.59 B2=6.65 1993CCb (52194) 345  
Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-51.2  
kJ mol<sup>-1</sup>, DS=-65; DH(B2)=-81.6, DS=-146.

\*\*\*\*\*

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

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

Er+++ gl KNO3 25°C 0.10M C 1991SKb (52329) 346  
K(ErL+H)=7.36  
K(ErHL+H)=6.09

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C7H4N2O7 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  
-----

Er+++ gl oth/un 24°C 0.20M U K1=5.43 1972PSd (52475) 347  
Medium: LiCl

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C7H5NO4 H2L Dipicolinic aci CAS 449-83-2 (418)  
2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2

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

Er+++ cal NaClO4 25°C 0.50M C H 1963GRd (52764) 348  
DH(K1)=-7.74 kJ mol<sup>-1</sup>, DS(K1)=141 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-24.07,  
DS(B2)=232; DH(B3)=-56.09, DS(B3)=232.

-----  
Er+++ ISE oth/un 20°C 0.50M U K1=8.77 B2=16.39 1961GRa (52765) 349  
K3=5.74

\*\*\*\*\*

C7H5NO4 HL CAS 121-92-6 (490)

3-Nitrobenzoic acid; O2N.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	0.10M	C	H	K1=1.64	1986CLc (52864)	350
DH=9.5 kJ mol <sup>-1</sup> , DS=63 J K <sup>-1</sup> mol <sup>-1</sup>									
*****									
C7H5NO4		HL					CAS 62-23-7	(489)	
4-Nitrobenzoic acid; O2N.C6H4.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	0.10M	M	H	K1=1.67	1999YKa (52905)	351
By calorimetry: DH(K1)=10.07 kJ mol <sup>-1</sup> , DS(K1)=65.8 J K <sup>-1</sup> mol <sup>-1</sup> .									
*****									
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
Er+++	gl	NaClO4	25°C	0.10M	C	H	K1=1.76	1986CLc (53233)	352
DH=8.9 kJ mol <sup>-1</sup> , DS=63 J K <sup>-1</sup> mol <sup>-1</sup>									
*****									
C7H5O2F		HL					CAS 456-22-4	(5710)	
4-Fluorobenzoic acid; F.C6H4.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	0.10M	C	H	K1=1.88	1986CLc (53253)	353
DH(K1)=9.6 kJ mol <sup>-1</sup> , DS=68 J K <sup>-1</sup> mol <sup>-1</sup>									
*****									
C7H5O6BrS		H2L					(1626)		
3-Bromo-5-sulfosalicylic acid; Br.C6H2(OH)(COOH).SO3H									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	0.10M	C	H T		1993ALa (53366)	354
							B(1,1,1)=12.30		
							B(1,0,1)=7.72		
							B(1,0,2)=13.19		
							B(1,-1,1)=0.36		
B(p,q,r); pEr+qH+rL=(Er)pHqLr. B(1,-2,1)=-7.17.									
*****									
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
Er+++	gl	KNO3	25°C	0.10M	U		K1=7.54 B2=13.91 K3=5.24	1969CMB (53670)	355

K4=3.96

\*\*\*\*\*

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
Er+++	cal	NaClO4	25°C	0.10M	U	H	K1=1.92    B2=3.63	1982CBc (53829)	356
DH1= 11.3 kJ mol <sup>-1</sup> , DS1= 75 J K <sup>-1</sup> mol <sup>-1</sup>									

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	0.1M	C	H		1996HYa (54187)	357
By calorimetry: DH(K1)=3.81 kJ mol <sup>-1</sup> , DH(B2)=6.31 J K <sup>-1</sup> mol <sup>-1</sup>									

Er+++	gl	NaClO4	25°C	0.10M	C	T		1989HMa (54188)	358
							K(Er+HL)=1.78 K(ErHL+HL)=1.81		

Er+++	ix	mixed	20°C	50%	U			1976TRa (54189)	359
							K(Er+HL)=2.42 K(Er+HL)=1.82 K(Er+3HL)=5.92		

Medium: 50% v/v acetone/H2O, 0.25 M NaClO4

\*\*\*\*\*

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
Er+++	gl	NaClO4	25°C	0.10M	C	H		1988LLa (54377)	360
							K(Er+HL)=1.90		

DH=11.96 kJ mol<sup>-1</sup>, DS=76.4 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

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
Er+++	gl	NaClO4	25°C	0.10M	M	H	K1=1.70	1999YKa (54411)	361
By calorimetry: DH(K1)=13.84 kJ mol <sup>-1</sup> , DS(K1)=79.0 J K <sup>-1</sup> mol <sup>-1</sup> .									

Er+++	gl	NaClO4	25°C	0.10M	C	H		1988LLa (54412)	362
							K(Er+HL)=2.05		

DH=12.98 kJ mol<sup>-1</sup>, DS=82.7 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

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
Er+++	gl	NaCl04	20°C	1.0M	U		K1=7.20 B2=13.02	1972CBb (54967)	363
Er+++	sp	NaCl04	20°C	0.10M	U		K1=8.15 B2=14.45 K(Er+HL)=2.12	1968KTb (54968)	364

\*\*\*\*\*  
 C7H6O9S2 H3L CAS 56507-30-3 (2659)  
 3,5-Disulfosalicylic acid; (H03S)2.C6H2(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaCl04	25°C	0.50M	C	T	K1=8.81 B2=14.64	1976LAc (55094)	365
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
Er+++	gl	NaCl04	25°C	0.10M	C		K1=2.16 B2=4.21	1989HMa (55219)	366
Er+++	gl	NaCl04	25°C	0.10M	U	H	K1=4.51	1982KYc (55220)	367
By calorimetry, DH(K1)=8.58 kJ mol <sup>-1</sup> , DS(K1)=115.14 J K <sup>-1</sup> mol <sup>-1</sup> .									
Er+++	gl	non-aq	25°C	100%	U		K1=7.35 B2=13.32 K3=3.69 K4=2.38	1970BBh (55221)	368

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
Er+++	gl	NaCl04	25°C	0.10M	M	H	K1=1.94	1999YKa (55376)	369
By calorimetry: DH(K1)=11.21 kJ mol <sup>-1</sup> , DS(K1)=74.7 J K <sup>-1</sup> mol <sup>-1</sup> .									
Er+++	gl	KCl	25°C	0.20M	U		K1=2.20	1977EBa (55377)	370
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
Er+++	gl	mixed	25°C	75%	U			1970SEa (55591)	371
							K(Er+HL)=7.82 K(ErHL+HL)=7.03 K(Er(HL)2+HL)=5.10		

Medium: 75% acetone, 0.1 M NaClO4

\*\*\*\*\*

C7H7NO6S H3L CAS 6201-86-1 (7899)

3-Amino-5-sulfosalicylic acid;

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

Er+++ gl KCl 25°C 0.20M M T H K1=8.51 1991BPb (55686) 372

K(Er+OH+L)=15.43

DH(K1)=-101 kJ mol<sup>-1</sup>, DS(K1)=-175 J K<sup>-1</sup> mol<sup>-1</sup>.

Also data for 35, 45 and 55 C.

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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  
-----

Er+++ gl mixed 25°C 50% U I K1=4.60 B2=8.72 1969BCb (56065) 373

Medium: 50% DMSO, 0.12 M NaClO4. In 40% dioxan, 0.12 M NaClO4: K1=5.77,

K2=4.62; 50% EtOH, 0.12 M NaClO4: K1=5.27, K2=4.33

\*\*\*\*\*

C7H8O4 HL Methyl kojic CAS 1506-07-8 (2686)

3-Hydroxy-6-(hydroxymethyl)-2-methyl-4H-pyran-4-one;

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

Er+++ sp KCl 25°C 0.10M M I K1=6.64 1986PLb (56125) 374

\*\*\*\*\*

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  
-----

Er+++ sp KCl 25°C 0.10M M I K1=6.30 1986PLb (56144) 375

\*\*\*\*\*

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  
-----

Er+++ gl KNO3 25°C 0.10M U K1=4.24 B2=6.76 1971PJb (56730) 376

\*\*\*\*\*

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  
-----

Er+++ gl KNO3 25°C 0.10M U K1=6.42 B2=12.07 1963THb (56804) 377

\*\*\*\*\*

C7H11NO6 H3L (2926)

2-Aminobutanoic-N-propane-1,3-dioic acid; HOOC.CH(C2H5)NH.CH(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	KNO3	25°C	0.1M	U			K1=9.17	1982KKc (56842)	378
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C7H11NO6		H3L		MNTA				(1026)		
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Nitrilo(2-propanoic)-diethanoic acid; HOOC.CH(CH3).N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	KNO3	20°C	0.10M	U			K1=12.70 B2=22.19	1974RMg (56909)	379
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C7H12N2O3		HL		Gly-Pro				CAS 704-15-4 (257)		
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Glycyl-proline; H2N.CH2.CO.NC4H7.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	KNO3	25°C	0.15M	M T H			K1=4.02	1983SKb (57119)	380
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Data for 35 and 45 C. At 35 C, DH(K1)=19 kJ mol<sup>-1</sup>, DS(K1)=141 J K<sup>-1</sup> mol<sup>-1</sup>.

Er+++	gl	KNO3	25°C	0.15M	U T H			K1=4.04	1979SKe (57120)	381
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At 35 C, K1=4.09; at 45 C, K1=4.13. At 35 C, DH(K1)=8.13 kJ mol<sup>-1</sup>,

DS(K1)=105 J K<sup>-1</sup> mol<sup>-1</sup>

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	oth	oth/un	?	?	U			K1=2.58 B2=4.52	1970Gnd (57259)	382
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K3=1.96

Er+++	gl	NaClO4	25°C	1.0M	U			K1=2.48 B2=4.83	1967STd (57260)	383
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C7H12O3		HL						(4422)		
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3-Methyl ethylacetoacetate; CH3.CO.CH(CH3).CO.OCH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	mixed	30°C	75%	U			K1=8.62	1971DRb (57272)	384
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Medium: 75% acetone, 0.1 M

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	KNO3	25°C	0.10M	U			K1=4.66 B2=7.26	1968PFa (57361)	385
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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
Er+++	gl	NaCl	20°C	0.10M	U		K1=2.88	1977SSc (57395)	386
Er+++	EMF	NaCl04	25°C	1.0M	U		K1=2.85 K3=1.63 K4=0.96	19670Ta (57396)	387

Method: quinhydrone electrode

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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
Er+++	gl	KNO3	20°C	0.10M	U		K1=8.88    B2=16.82	1980RPa (57610)	388

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C7H14O3                      HL                      CAS 63204-98-9 (3738)  
2-Hydroxy-2,4-dimethylpentanoic acid; (CH3)2.CH.CH2.C(CH3)(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	EMF	NaCl04	25°C	1.0M	U		K1=3.24    B2=5.87 K3=1.89 K4=1.09	1965TVa (57860)	389

Method: quinhydrone electrode

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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
Er+++	gl	NaCl04	25°C	0.10M	C		K1=2.95    B2=4.81	1976SPa (57872)	390

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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
Er+++	gl	KNO3	20°C	0.10M	U		K1=5.13    B2=9.71	1982RFa (57934)	391

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	non-aq	25°C	100%	C		K1=5.70	2003ZRa (58497)	392

Medium: DMSO.

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Er+++ sp KNO3 12°C 0.10M U 1965GEa (58498) 393  
K(Er+H2L)=3.48

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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  
-----

Er+++ cal non-aq 25°C 100% C H 2004MIa (58612) 394  
Method: calorimetric titration. Medium: chloroform. DH(ErL3+A)=4.7 kJ  
mol-1, DS=71 J K-1 mol-1; DH(ErL3+2A)=-2.6, DS=91. HA is benzoic acid.

-----  
Er+++ gl alc/w 22°C 80% U K1=6.37 B2=12.29 1995MTa (58613) 395  
K3=4.94

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

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Er+++ gl mixed 25°C 50% U K1=5.97 1980SBc (58614) 396  
Medium: 50% MeCN

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

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

Er+++ gl NaClO4 30°C 0.10M U K1=4.43 B2=7.79 1966KPb (58966) 397

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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  
-----

Er+++ cal NaClO4 25°C 0.10M U H K1=2.58 1982CBc (59050) 398  
DH= 16.22 kJ mol-1, DS= 104 J K-1 mol-1

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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Er+++ gl diox/w 20°C 50% U K1=6.37 B2=12.04 1971MAf (59099) 399  
Medium: 50% v/v dioxan, 0.1 M NaClO4

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C8H7O2Cl HL CAS 1450-74-4 (6325)  
2-Hydroxy-5-chloro-acetophenone; Cl(HO)C6H3.CO.CH3

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

Er+++ gl alc/w 25°C 20% M TIH K1=6.498 2000KDa (59216) 400  
K(Er(egta)+L)=3.564

Medium contains 0.1 M NaNO<sub>3</sub>. Data for 0.05, 0.15 M NaNO<sub>3</sub> and 35 and 45 C.  
At I=0, K<sub>1</sub>=6.705, K(Er(egta)+L)=3.740. DH(Er(egta)L)=-17.2 kJ mol<sup>-1</sup>.

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C8H8N2O2 HL Phenylglyoxime (3222)

Phenylglyoxime; C<sub>6</sub>H<sub>5</sub>.C(:N.OH).CH:N.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	diox/w	20°C	50%	U		K <sub>1</sub> =7.48 B <sub>2</sub> =14.02	1971MAf (59334)	401
Medium: 50% dioxan, 0.1 M NaClO <sub>4</sub>									

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C8H8O2 HL 2-Acetylphenol CAS 118-93-4 (1888)

2-Hydroxyacetophenone; HO.C<sub>6</sub>H<sub>4</sub>.CO.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	alc/w	25°C	20%	M TIH		K <sub>1</sub> =6.870 K(Er(egta)+L)=4.558	2000KDa (59460)	402

Medium contains 0.1 M NaNO<sub>3</sub>. Data for 0.05, 0.15 M NaNO<sub>3</sub> and 35 and 45 C.  
At I=0, K<sub>1</sub>=7.118, K(Er(egta)+L)=4.772. DH(Er(egta)L)=-20.1 kJ mol<sup>-1</sup>.

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C8H8O2 HL Phenylacetic CAS 103-82-2 (1361)

Phenylethanoic acid; C<sub>6</sub>H<sub>5</sub>.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO <sub>4</sub>	25°C	0.1M C	H		K <sub>1</sub> =1.70	1996HYa (59541)	403
By calorimetry: DH(K <sub>1</sub> )=16.34 kJ mol <sup>-1</sup>									

Er+++	gl	NaClO <sub>4</sub>	25°C	0.10M C	H		K <sub>1</sub> =1.70	1990HYa (59542)	404
By calorimetry: DH(K <sub>1</sub> )=16.3 J K <sup>-1</sup> mol <sup>-1</sup>									

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C8H8O2 HL CAS 583-80-2 (3191)

beta-Methyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	alc/w	?	3%	U		K <sub>1</sub> =7.57	1967GDb (59595)	405
Medium: 3% EtOH, 0.2 M NaClO <sub>4</sub>									

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C8H8O3 H2L CAS 490-78-8 (6324)

2,5-Dihydroxyacetophenone; (HO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>.CO.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	alc/w	25°C	20%	M TIH		K <sub>1</sub> =6.632 K(Er(egta)+L)=4.732	2000KDa (59677)	406

Medium contains 0.1 M NaNO<sub>3</sub>. Data for 0.05, 0.15 M NaNO<sub>3</sub> and 35 and 45 C.  
At I=0, K<sub>1</sub>=6.846, K(Er(egta)+L)=4.938. DH(Er(egta)L)=-19.6 kJ mol<sup>-1</sup>.

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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
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Er+++      gl   NaClO4 25°C 0.10M M      H      K1=1.82      1988CLb (59727) 407  
DH=10.6 kJ mol<sup>-1</sup>, DS=70 J K<sup>-1</sup> mol<sup>-1</sup>

Er+++ sp KCl 25°C 0.10M U K1=1.45 B2=2.11 1981MTc (59728) 408

C8H8O3	HL	Mandelic Acid	CAS 611-72-3	(80)
2-Phenyl-2-hydroxyethanoic acid; C <sub>6</sub> H <sub>5</sub> .CH(OH).COOH				

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

Er+++      gl   NaClO4 25°C 0.10M C      K1=3.15    B2=5.41    1989HMa (59822) 409

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Er+++      gl  NaClO4 25°C  2.0M U      T K1=2.68      1972DCb (59823) 410
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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
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Er+++      gl    NaClO4 25°C 0.10M M    H      K1=2.01      1988CLb (59909) 411  
 PH=12.8 kJ mol<sup>-1</sup>, DS=81 J K<sup>-1</sup> mol<sup>-1</sup>

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
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Er+++      gl    NaClO4 25°C 0.10M M    H      K1=2.00      1988CLb (59950) 412  
DH=15.3 kJ mol<sup>-1</sup>, DS=90 J K<sup>-1</sup> mol<sup>-1</sup>

C8H8O4 HL CAS 520-45-6 (4478)  
3-Acetyl-2-hydroxy-6-methylpyran-4-one, Dehydroethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++      gl   diox/w 35°C 50% U      K1=4.96    B2=8.92    1971MAa (60085) 413  
Medium: 50% dioxan, 0.1 M NaClO4

C8H9NO4	H2L	(4520)
Dehydroethanoic acid oxime;		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++      gl   diox/w 35°C   50%   U      1971MAa (60491) 414  
K(Er+HL)=4.83

K(Er+2HL)=8.55

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

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C8H<sub>10</sub>O<sub>4</sub> L CAS 34241-51-5 (5701)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	alc/w	22°C	20%	U		K1=4.86 B2=8.58 K3=3.45	1988ZTa (60846)	415

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C8H<sub>10</sub>O<sub>5</sub> H<sub>2</sub>L CAS 145-73-7 (138)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KCl	30°C	0.10M	C		K1=5.87 B2=9.83	1996SZa (60866)	416

For the -5-en-2-exo isomer, K1=6.14, B2=10.87.

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C8H<sub>11</sub>N<sub>3</sub> HL Vitamin B<sub>6</sub> CAS 65-23-6 (254)

5-Hydroxy-6-methyl-3,4-pyridinedimethanol, Pyridoxine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KCl	25°C	0.1M	C		K1=3.7 B(ErHL)=11.9	1999DNa (61114)	417

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C8H<sub>11</sub>N<sub>2</sub>O<sub>8</sub> H<sub>4</sub>L CAS 7408-20-0 (2608)

Amino-di(butanedioic acid);HN(CH(COOH)CH<sub>2</sub>.COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KCl	25°C	0.10M	U		K1=11.50 B2=18.05 B(ErHL)=15.74	1979BEb (61204)	418

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C8H<sub>12</sub>N<sub>2</sub>O<sub>3</sub> H<sub>2</sub>L Barbitol CAS 57-44-3 (2744)

5,5-Diethylbarbituric acid, Veronal, Barbitone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	oth/un	25°C	0.10M	U		K1=3.000	1987TSb (61434)	419

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C8H<sub>12</sub>N<sub>2</sub>O<sub>8</sub> H<sub>4</sub>L CAS 35039-85-1 (4537)

1,2-Diaminoethane-N,N'-dimalonic acid; (HOOC)2.CH.NH.CH<sub>2</sub>.CH<sub>2</sub>.NH.CH(COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KNO <sub>3</sub>	20°C	0.10M	U		K1=12.45 B2=18.09	1975DPa (61500)	420
Er+++	gl	KNO <sub>3</sub>	25°C	0.10M	U		K1=11.29	1972GBd (61501)	421



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C8H12O2                      HL                      CAS 874-23-7 (3203)  
2-Acetylcyclohexanone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	mixed	25°C	75%	U		K1=9.29    B2=17.77 K3=8.45	1971DRa (61668)	422

Medium: 75% acetone, 0.1 M NaClO4

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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
Er+++	gl	NaClO4	25°C	0.10M	M	H	K1=4.29	1986CDb (61707)	423

DH=19.6 kJ mol<sup>-1</sup>, DS=148 J K<sup>-1</sup> mol<sup>-1</sup>

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C8H13NO6                      H3L                      (3835)  
2-Amino-2-carboxypropane-N,N-diethanoic acid; H00CC(CH3)2N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KNO3	20°C	0.10M	U		K1=10.28    B2=17.69	1974RMg (61762)	424

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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
Er+++	gl	KNO3	20°C	0.10M	U		K1=11.77    B2=20.37	1974RMg (61786)	425

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C8H14O3                      HL                      CAS 607-97-6 (4489)  
3-Ethylethylacetoacetate; CH3.CO.CH(C2H5).CO.OC2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	mixed	30°C	75%	U		K1=9.17	1971DRb (62076)	426

Medium: 75% acetone, 0.1 M

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C8H16O3                      HL                      CAS 58888-84-9 (3807)  
2-Hydroxy-2-propylpentanoic acid; CH3.CH2.CH2.C(OH)(CH2.CH2.CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	EMF	NaClO4	25°C	1.0M	U		K1=3.29    B2=5.53 K3=2.1	1965TVa (62632)	427

Method: quinhydrone electrode

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C8H16O4                      L                      12-Crown-4                      CAS 294-93-9 (174)

1,4,7,10-Tetraoxacyclododecane; cyclo(-O.(CH<sub>2</sub>.CH<sub>2</sub>.O)<sub>3</sub>.CH<sub>2</sub>.CH<sub>2</sub>-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	non-aq	25°C	100%	C			K1=4.85	1989BPa (62669)	428
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Medium: anhydrous propylene carbonate, 0.1 M Et<sub>4</sub>NClO<sub>4</sub>

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C8H <sub>18</sub> N <sub>2</sub> O <sub>10</sub> P <sub>2</sub>	H <sub>6</sub> L	EDDADPO						CAS 2310-83-0	(2436)	
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1,2-Diaminoethane-N,N'-diethanoic-N,N'-dimethylphosphonic acid;

(-CH<sub>2</sub>.N(CH<sub>2</sub>.COOH)(CH<sub>2</sub>.PO<sub>3</sub>H<sub>2</sub>))<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	KCl	25°C	0.10M	U				1965DKb (62898)	429
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K(Er+HL)=17.7

K(Er+H<sub>4</sub>L)=9.2

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C8H <sub>18</sub> O <sub>4</sub>	L	Triglyme						CAS 112-49-2	(2358)	
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1,2-Bis(methoxyethoxy)ethane; CH<sub>3</sub>O.C<sub>2</sub>H<sub>4</sub>O.CH<sub>2</sub>.CH<sub>2</sub>.OC<sub>2</sub>H<sub>4</sub>.OCH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	non-aq	25°C	100%	C			K1=3.70	1989BPa (62985)	430
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Medium: anhydrous propylene carbonate, 0.1 M Et<sub>4</sub>NClO<sub>4</sub>

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C8H <sub>19</sub> N <sub>5</sub> O <sub>5</sub>	L	Bis-tris						CAS 6976-37-0	(2827)	
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Bis-(2-hydroxyethyl)imino-tris(hydroxymethyl)methane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	NaCl	30°C	0.10M	C			K1=2.66	2002Nwa (63058)	431
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B(Er<sub>2</sub>L)=2.00

Constants expressed on the molality scale.

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C8H <sub>22</sub> N <sub>2</sub> O <sub>6</sub> P <sub>2</sub>	H <sub>4</sub> L							CAS 13516-59-1	(3850)	
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2,2'-(Ethylenedi-imino)bis(propylphosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	KCl	25°C	0.10M	U			K1=13.39	1965DKb (63337)	432
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K(Er+HL)=6.88

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C <sub>9</sub> H <sub>5</sub> N <sub>2</sub> O <sub>2</sub> I <sub>2</sub>	HL							CAS 83-73-8	(3280)	
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5,7-Di-iodo-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	diox/w	35°C	75%	U			K1=7.45	B2=13.60	1971MAb (63560)
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K3=5.40

Medium: 75% v/v dioxan, 0.1 M NaClO<sub>4</sub>

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

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Er+++ sp diox/w 20°C 50% U K1=2.83 B2=4.74 1977MBb (63605) 434  
\*\*\*\*\*

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  
-----  
Er+++ gl NaClO4 25°C 0.10M U K1=5.69 B2=10.50 1973MAa (63693) 435  
K3=4

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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  
-----  
Er+++ gl NaClO4 35°C 0.20M M K1=6.13 1982LTa (63787) 436  
-----  
Er+++ gl oth/un 20°C 0.10M U K1=6.45 1977SKd (63788) 437  
\*\*\*\*\*

C9H6N3OClS HL CAS 27004-41-7 (216)  
2-(2'-Thiazolylazo)-4-chlorophenol; C3H2NS.N:N.C6H3(Cl).OH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Er+++ gl KNO3 25°C 0.10M U K1=8.18 1974KSa (63922) 438  
\*\*\*\*\*

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

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Er+++ gl NaClO4 25°C 0.10M U H K1=4.82 1994CRa (63966) 439  
K(Er+HL)=2.84

DH(K1)=22.3 kJ mol<sup>-1</sup>; DS=167 J K<sup>-1</sup> mol<sup>-1</sup>

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C9H7N L CAS 91-22-5 (1538)  
Quinoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Er+++ gl NaClO4 25°C 0.5M M H K1=3.90 1991KBb (64059) 440  
By calorimetry: DH(K1)=3.36 kJ mol<sup>-1</sup>, DS(K1)=85.9 J K<sup>-1</sup> mol<sup>-1</sup>  
\*\*\*\*\*

C9H7NO HL Oxine CAS 148-24-3 (504)

8-Hydroxyquinoline (8-quinolinol);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sol	none	RT	0.0	U			1981FCa (64251)	441

Kso(ErL3)=-32.50

Method: spectrophotometry.

Er+++	gl	oth/un	20°C	0.10M	U		K1=7.46	1977SKd (64252)	442
Er+++	gl	diox/w	30°C	50%	U		K1=9.39 B2=17.98	1970GMb (64253)	443

Medium: 50% dioxan, 0.3 M NaClO4

\*\*\*\*\*

C9H7N02 HL CAS 1127-45-3 (4614)

8-Hydroxyquinoline-N-oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	diox/w	30°C	50%	U		K1=7.25	1970GMb (64402)	444

Medium: 50% dioxan, 0.3 M NaClO4

\*\*\*\*\*

C9H7N04S H2L Sulfoxine CAS 84-88-8 (448)

8-Hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	35°C	0.20M	M		K1=6.65	1982LTa (64531)	445
Er+++	cal	KNO3	20°C	0.10M	U	HM		1971GKb (64532)	446

K(ErA+L)=4.66

DH(ErA+L)=-24.95 kJ mol<sup>-1</sup>, DS=4.18 J K<sup>-1</sup> mol<sup>-1</sup>

DH(ErAL): DH=-32.10, DS=340.25. H4A=EDTA

Er+++	gl	oth/un	25°C	0.0	U	H	K1=7.16 B2=13.34 K3=5.22	1958F0b (64533)	447
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DH(K1)=-22.6 kJ mol<sup>-1</sup>, DS=63 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-23.8, DS=38; DH(K3)=-23.4, DS=21

\*\*\*\*\*

C9H7N3O2S H2L TAR CAS 2246-46-0 (707)

4-(2'-Thiazolylazo)-resorcinol; C3H2NS.N:N.C6H3(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	NaNO3	25°C	0.10M	C		K1=8.10 K(Er+HL)=4.71 K(ErL+H)=6.05	19850Hb (64701)	448

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C9H8O4 H2L CAS 97652-17-0 (3855)

3-Carboxy-4-methyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	NaClO4	?	0.20M	U		K1=8.65 B(ErHL)=10.78	1967GDc (64937)	449
Er+++	gl	NaClO4	25°C	0.20M	U		K1=8.35 B2=15.20 K3=4.18	1966GDa (64938)	450
*****									
C9H8O4		H2L					CAS 15872-28-3	(8407)	
Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxylic acid;									
-----									
Er+++	gl	KCl	30°C	0.10M	U		K1=4.33 B2= 7.94	1996SZa (64973)	451
*****									
C9H10O2		HL					CAS 501-52-0	(1362)	
3-Phenylpropanoic acid; C6H5.CH2.CH2.COOH									
-----									
Er+++	gl	NaClO4	25°C	0.10M	C	H	K1=1.89 B2= 3.40	1996HYa (65365)	452
By calorimetry: DH(K1)=15.15 kJ mol <sup>-1</sup> , DH(B2)=16.82 J K <sup>-1</sup> mol <sup>-1</sup>									
-----									
Er+++	gl	NaClO4	25°C	0.10M	C	H	K1=1.89 B2=3.40	1990HYa (65366)	453
By calorimetry: DH(K1)=15.2 J K <sup>-1</sup> mol <sup>-1</sup> , DH(K2)=1.7									
*****									
C9H10O3		HL					CAS 940-31-8	(3859)	
2-Hydroxy-2-phenylpropanoic acid; CH3.C(OH)(C6H5).COOH									
-----									
Er+++	gl	NaClO4	25°C	1.0M	U		K1=3.03 B2=5.51 K3=2.01 K4=1.90	1966TVa (65436)	454
*****									
C9H10O3		HL					CAS 1878-49-5	(1600)	
2-Phenyl-2-methoxyethanoic acid; C6H5.CH(OCH3)COOH									
-----									
Er+++	gl	NaClO4	25°C	0.10M	C		K1=2.19 B2=3.61	1989HMa (65458)	455
*****									
C9H10O3		HL					CAS 529-64-6	(1601)	
2-Phenyl-3-hydroxypropanoic acid; HO.CH2.CH(COOH)C6H5									
-----									
Er+++	gl	NaClO4	25°C	0.10M	C		K1=1.99 B2=3.93	1989HMa (65472)	456
*****									
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
Er+++	gl	KCl	30°C	0.10M	C			K1=4.20 B2=7.02	1996SZa (65569)	457
For the -2,5-dien-2-exo isomer, K1=4.33, B2=7.94.										

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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
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Er+++	gl	NaClO4	24°C	0.10M	U			K1=4.46 K(Er+HL)=1.55	1986ZBa (65584)	458
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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
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Er+++	gl	KCl	30°C	0.10M	U			K1=5.26 B2= 7.91	1996SZa (65601)	459
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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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Er+++	gl	KCl	30°C	0.10M	C			K1=5.26 B2=7.91	1996SZa (65616)	460
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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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Er+++	gl	NaCl	25°C	0.15M	U	H		K1=3.77	1992ZNa (65931)	461
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By calorimetry: DH(K1)=4.27 kJ mol<sup>-1</sup>, DS(K1)=86.51 J K<sup>-1</sup> mol<sup>-1</sup>.

Er+++	gl	KCl	25°C	0.10M	U			K1=4.35 B2=8.25	1972BFe (65932)	462
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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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Er+++	gl	KNO3	25°C	0.10M	U	I			1976SAc (66216)	463
-------	----	------	------	-------	---	---	--	--	-----------------	-----

K(Er+HL)=5.15  
K(ErHL+HL)=4.86

Er+++	gl	KNO3	25°C	0.10M	U	T H			1976SAe (66217)	464
-------	----	------	------	-------	---	-----	--	--	-----------------	-----

K(Er+H2L)=4.83

Er+++	gl	KCl	25°C 0.10M U	1972BFe (66218) 465
			K(Er+HL)=4.4	
			K(ErHL+HL)=4.1	

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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Er+++ ISE KNO3 25°C 0.10M U K1=12.25 1983KBd (66733) 466  
Hg-electrode.

C9H13N06                      H3L                      (3881)  
2,6-Dicarboxypiperidyl-N-ethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++ gl KNO3 25°C 0.10M U K1=11.35 B2=19.77 1968TKe (66883) 467

C9H13N3O5                      L      Cytidine                      CAS 65-46-3    (2152)  
Cytidine, Cytosine-1-beta-D-ribofuranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++            g1   KNO3    35°C 0.10M U        M    K1=3.21                    1986Rmb (67054) 468  
K(Er+L+HGly)=8.41, K(Er+L+HHis)=8.54, K(Er+L+oxalate)=9.89

C9H15NO6                      H3L                      (7177)  
2-Aminopentanoic-N,N-diethanoic acid; C3H7C(COOH)N(CH<sub>2</sub>COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++ g1 KN03 20°C 0.10M U K1=11.70 B2=20.24 1974RMg (67406) 469

C9H16N2O6	H3L	MEDTA	CAS 40423-02-7 (5717)
N-Methyldiaminoethane-N,N',N'-triethanoic acid; $\text{HOOC.CH}_2.\text{N}(\text{CH}_3)\text{CH}_2.\text{CH}_2.\text{N}(\text{CH}_2.\text{COOH})_2$			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++ cal NaClO4 25°C 0.50M M IH K1=13.53 1986Rca (67636) 470  
DH=-12.8 kJ mol-1, DS=216 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
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Er+++ gl KNO3 25°C 0.10M U K1=4.73 B2=7.35 1968PFa (67770) 471  
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C10H5O2F7S L (6996)  
1-(2-Thienyl)-3-heptafluoropropylpropane-1,3-dione; C3F7.C(0)CH2C(0)C4H3S

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

Er+++ gl alc/w 22°C 80% U K1=6.38 B2=11.78 1995MTa (68424) 472  
K3=5.57

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

\*\*\*\*\*

C10H6O3 HL CAS 481-39-0 (3295)  
5-Hydroxy-1,4-naphthoquinone;

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

Er+++ gl diox/w 25°C 50% C T H K1=8.33 B2=15.75 1992SAa (68474) 473  
K3=6.58

At 35 C: K1=8.11, K2=6.84, K3=5.48; DH(K1)=-38.7 kJ mol<sup>-1</sup>

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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  
-----

Er+++ gl NaClO4 25°C 0.10M U H K1=4.60 1994CRa (68512) 474  
K(Er+HL)=3.67

DH(K1)=27.7 kJ mol<sup>-1</sup>, DS=181 J K<sup>-1</sup> mol<sup>-1</sup>; DH(Er+HL)=14.0, DS=117

\*\*\*\*\*

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  
-----

Er+++ sp KCl 25°C 0.10M M I K1=4.36 1976PEa (68575) 475

\*\*\*\*\*

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

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

Er+++ gl KNO3 25°C 0.10M U K1=6.00 B2=11.40 1982LPc (68643) 476

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C10H7NO2 HL Quinaldic acid CAS 93-10-7 (2209)  
Quinoline-2-carboxylic acid;

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

Er+++ gl NaClO4 30°C 0.10M U K1=2.67 B2=5.30 1969DNc (68704) 477

\*\*\*\*\*



C10H7NO2 HL CAS 86-59-9 (873)  
Quinoline-8-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaClO4	30°C	0.10M	U		K1=2.78	1969DNc (68757)	478

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KCl	25°C	0.10M	M		K1=4.30	1979LSb (68809)	479

\*\*\*\*\*

C10H7NO5S H2L (4766)  
1-Nitroso-2-hydroxynaphthalene-6-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	KCl	25°C	0.10M	C		K1=4.41	1973PMb (68841)	480

\*\*\*\*\*

C10H7NO5S H2L CAS 3682-32-4 (1812)  
2-Nitroso-1-hydroxynaphthalene-4-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KCl	25°C	0.10M	U	I	K1=3.09	1967MAi (68882)	481

K1=4.19(I=0)  
\*\*\*\*\*

C10H7NO5S H2L CAS 31005-79-9 (1814)  
2-Nitroso-1-hydroxynaphthalene-8-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	KCl	25°C	0.10M	M		K1=5.01	1978PPb (68942)	482

\*\*\*\*\*

C10H7NO8S2 H3L Nitroso-R acid CAS 525-05-3 (1811)  
1-Nitroso-2-hydroxynaphthalene-3,6-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	oth/un	25°C	0.10M	U		K1=5.21 B2=9.55	1990ATa (69005)	483

Er+++	gl	KCl	25°C	0.10M	U		K1=4.65	1968MAe (69006)	484
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C10H7N5O5 HL CAS 102964-51-2 (6212)  
5-(2'-Nitrophenylazo)barbituric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++ gl diox/w 25°C 75% U K1=5.58 B2=10.93 1986MIa (69094) 485  
\*\*\*\*\*

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

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

Er+++ gl alc/w 22°C 80% U K1=7.50 B2=13.29 1995MTa (69141) 486  
K3=6.07

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

\*\*\*\*\*

C10H8N2 L 2,2'-Bipyridyl CAS 366-18-7 (25)  
2,2'-Bipyridine; (C5H4N)2

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

Er+++ sp non-aq 25°C 100% C T K1=2.92 2005SYa (69549) 487  
In ethylacetate; At 50 C K1=2.31

\*\*\*\*\*

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

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

Er+++ gl diox/w 25°C 75% U K1=5.96 B2=11.52 1986MIa (69728) 488  
\*\*\*\*\*

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

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

Er+++ gl NaClO4 20°C 0.10M U M 1973PAC (69767) 489  
K(ErA+L)=7.90, H4A=EDTA

\*\*\*\*\*

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

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

Er+++ gl NaClO4 35°C 0.20M M K1=10.17 1982LTa (69840) 490

Er+++ gl NaClO4 25°C 0.50M C K1=10.31 B2=18.67 1976LAd (69841) 491  
B(ErHL2)=25.49

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C10H9N3OS HL CAS 60321-26-8 (4671)  
2-(2-Thiazolylazo)methylphenol; C3H2NS.N:N.C6H3(CH3)OH

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

Er+++ sp diox/w 25°C 10% U K1=9.65 B2=19.08 1973KSd (70358) 492

Medium: 10% dioxan, 0.1 M KNO3

\*\*\*\*\*

C10H9N3O2S HL CAS 3012-52-0 (217)

2-(2'-Thiazolylazo)-4-methoxyphenol; CH3O.C6H3(OH).N:N.C3H2N2

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

Er+++ sp KNO3 25°C 0.10M U K1=9.49 1974Ksa (70397) 493

\*\*\*\*\*

C10H10N2O4S H2L CAS 52047-96-8 (4782)

4-Sulfophenyl-3-methylpyrazol-5-one;

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

Er+++ sp oth/un ? ? U 1966TPa (70580) 494

K(Er+3HL=ErL3+3H)(?)=2.79

\*\*\*\*\*

C10H10O5 HL CAS 13522-48-0 (4722)

3-Mercapto-1-phenylbut-2-en-1-one; C6H5.CO.CH:CH.C(SH).CH3

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

Er+++ gl mixed 30°C 75% U K1=4.18 B2=7.88 1969DNb (70634) 495  
K3=3.45

Medium: 75% acetone, 0.1 M NaClO4

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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  
-----

Er+++ gl alc/w 25°C 80% U K1=8.47 B2=15.02 1967DZa (70719) 496  
K3=4.55

Medium: 80% MeOH, 0.1 M NaCl

-----  
Er+++ gl alc/w 24°C 80% U K1=8.47 B2=15.02 1967DZb (70720) 497  
K3 = 4.55

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

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C10H10O6 H2L CAS 5411-14-3 (2394)

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

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

Er+++ gl NaClO4 25°C 0.10M M K1=3.92 1977HCb (70848) 498

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C10H11NOS L (2831)

Acetothioacetanilide; CH3.CO.CH2.CS.NH.C6H5

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

-----  
Er+++ gl diox/w 25°C 50% U K1=5.58 B2=10.68 1986NBa (70880) 499  
\*\*\*\*\*

C10H11NO2 L CAS 102-01-2 (250)  
Acetoacetanilide; CH3.CO.CH2.CO.NH.C6H5  
-----

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

Er+++ gl diox/w 25°C 50% U K1=6.15 1986NBa (70909) 500  
\*\*\*\*\*

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

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

Er+++ gl KNO3 25°C 0.10M U K1=9.25 B2=16.90 1964THa (71256) 501  
\*\*\*\*\*

C10H12N4O5 HL Inosine CAS 58-63-9 (2344)  
Hypoxanthine-9-beta-D-ribofuranoside;  
-----

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

Er+++ gl KNO3 35°C 0.10M U M K1=4.71 1987RRc (71386) 502  
B(Er(gly)L)=10.86  
B(Er(his)L)=11.09  
\*\*\*\*\*

C10H12N4O6 H2L Xanthosine CAS 5968-90-1 (1176)  
3,9-Dihydro-9-ribofuranosyl-1H-purine-2,6-dione;  
-----

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

Er+++ gl KNO3 35°C 0.10M U M 1987RRc (71486) 503  
K(Er+HA+HL)=5.55  
K(Er+HB+HL)=6.49  
K(Er+HL)=4.63

HA=glycine, HB=histidine.

\*\*\*\*\*

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

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

Er+++ gl alc/w 24°C 80% U K1=9.0 B2=16.50 1968DZb (71578) 504  
K3=6.2  
K4=4.8

Medium: 80% MeOH, 0.1 M NaCl  
-----

Er+++ sp alc/w ? 3% U K1=7.49 1967GDb (71579) 505  
Medium: 3% EtOH, 0.2 M NaCl  
-----

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KCl	25°C	0.10M	U		K1=13.23 K(ErHL)=6.66	1980MMe (73122)	506

Er+++	gl	KCl	25°C	0.10M	U		K2=4.10	1979MMe (73123)	507
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Er+++	gl	KNO3	20°C	0.10M	U		K1=13.76    B2=18.82	1975DPa (73124)	508
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Er+++	vlt	KNO3	25°C	0.10M	U		K1=13.63	1971BGB (73125)	509
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C10H16N2O8                      H4L        EDTA                      CAS 60-00-4 (120)  
 1,2-Diaminoethane-N,N,N',N'-tetraethanoic acid, Sequestic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	oth/un	20°C	0.20M	U	M		1982ATa (73705)	510

K(ErL+oxalate)=1.46

Er+++	gl	NaClO4	20°C	0.02M	U	M		1982MPd (73706)	511
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K(ErL+PO4)=3.21

Er+++	vlt	KNO3	20°C	0.10M	U		K1=19.01	1978NLb (73707)	512
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Er+++	gl	NaClO4	25°C	0.50M	U		K1=17.45	1977GGb (73708)	513
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Er+++	gl	KCl	25°C	1.00M	U		K2=2.13 K(ErL+HL)=1.15 K(2ErL+L)=4.56	1976BKa (73709)	514
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Er+++	gl	KCl	25°C	1.0M	U		K(ErL+H)=1.27	1976GMb (73710)	515
-------	----	-----	------	------	---	--	---------------	-----------------	-----

Er+++	sp	KCl	25°C	0.10M	U		K2=2.13 K(2ErL+L)=4.56 K(ErL+HL)=1.15	1975BKa (73711)	516
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Er+++	EMF	KCl	25°C	0.10M	U	T	K(ErL+H)=0.9	1974BKb (73712)	517
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Er+++	gl	KCl	25°C	1.0M	C		K2=2.13 K(ErL+HL)=1.15 K(2ErL+L=Er2L3)=4.56	1974BKe (73713)	518
-------	----	-----	------	------	---	--	---	-----------------	-----

Er+++	gl	KNO3	25°C	0.10M	U	T    M	K(ErL+HA)=4.95 K(ErL+A)=7.01	1973TRb (73714)	519
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Also at 2, 35 and 45 C. H5A=tripolyphosphoric acid.  $K(\text{ErL+B})=6.1$   
 $\text{H4B=ATP}$ .  $K(2\text{ C})=6.5$ ,  $K(35\text{ C})=6.2$ ,  $K(45\text{ C})=6.0$

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
Er+++	gl	NaClO4	25°C	0.50M	U		K1=14.87	1977GGb (75362)	532
Er+++	EMF	KCl	25°C	1.0M	U		K2=3.95 K(ErL+HL)=2.37 K(ErL+H4L)=1.76	1977GMa (75363)	533

Method: Pt/H2 electrode.

Er+++	EMF	KCl	25°C	1.0M	U	M		1977GMa (75364)	534
							K(Er(edta)+L)=2.69 K(Er(edta)+HL)=1.89 K(Er(edta)+H2L)=1.97 K(Er(edta)+H3L)=1.22		

Method: Pt/H2 electrode.

Er+++	gl	NaClO4	25°C	1.0M	U		K2=3.23 K(ErL+HL)=2.29 K(ErL+H3L)=1.28	1973NMa (75365)	535
Er+++	gl	oth/un	20°C	?	U		K(ErL+HL)=1.96 K(ErL+L)=3.74	1971MNa (75366)	536

Er+++	gl	KNO3	25°C	0.10M	U	M	K(ErL+A)=5.30 K(ErL+B)=4.62	1963TLb (75367)	537
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H2A=iminodiethanoic acid, H2B=hydroxyethyliminodiethanoic acid

Er+++	EMF	oth/un	20°C	0.10M	U		K1=15.61	1962PMa (75368)	538
Er+++	gl	KNO3	15°C	0.10M	U	T H	K1=15.45 K1=15.45(20 C), 15.42(25 C), 15.41(30 C), 15.46(35 C), 15.42(40 C) DH(K1)=-1.34 kJ mol <sup>-1</sup> (25 C), DS=290 J K <sup>-1</sup> mol <sup>-1</sup>	1961MFb (75369)	539

Er+++	gl	KNO3	25°C	0.10M	U		K1=15.17	1956SPa (75370)	540
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By polarography K1=15.4  
 \*\*\*\*\*  
 C10H19N3O4 HL Leu-Gly-Gly CAS 1187-50-4 (1230)  
 Leucyl-glycyl-glycine; H2N.CH(CH2.CH(CH3)2).CO.NH.CH2.CO.NH.CH2.CO.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KNO3	25°C	0.10M	U	T H	K1=3.49	1981SKg (75687)	541
							Data for 35 and 45 C. DH(K1)=8.16 kJ mol <sup>-1</sup> , DS(K1)=85.9 J K <sup>-1</sup> mol <sup>-1</sup> .		
							*****		
							C10H20N2O4 H2L (4753)		
							N,N'-Diethylethylenedinitrilo-N,N'-diethanoic acid;		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KNO3	25°C	0.10M	U		K1=7.0	1973PSb (75780)	542
*****									
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
Er+++	gl	non-aq	25°C	100%	C		K1=7.50	1989BPa (75998)	543
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4									
-----									
Er+++		ISE non-aq	25°C	100%	C		K1=5.53	1983ANb (75999)	544
The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4									
*****									
C10H22N2O3		L		Cryptand 2,1			CAS 31249-95-3	(835)	
4,7,13-Trioxa-1,10-diazacyclopentadecane (Trioxa(2,1)cryptand);									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++		ISE non-aq	30°C	100%	C T H		K1=14.2	1986ALa (76315)	545
Medium: propylene carbonate, 0.1M Et4NClO4. DH and DS given									
*****									
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
Er+++		ISE non-aq	25°C	100%	C		K1=3.73	1986BDa (76446)	546
Medium: propylene carbonate, 0.1 M Et4NClO4									
*****									
C10H26N4O6P2		H4L					CAS 200951-96-8	(7643)	
1,4,7,10-Tetraazacyclododecane-1,7-bis(methanephosphonic acid);									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KCl	25°C	0.10M	C		K1=19.2	1998BRa (76802)	547
							*K(ErL)=-7.9		
							K(ErL+H)=7.0		
							B(ErHL2)=39.2		
*****									
C11H8O3		L					CAS 1133-72-8	(2614)	
2-Aceto-1,3-indandione;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	mixed	22°C	60%	U		K1=3.91 B2=7.44	1979JMa (77029)	548
							K3=3.15		
Medium: 60% acetone/H2O									
*****									



C11H8O3                      H2L                      CAS 92-70-6 (1130)  
2-Hydroxy-3-naphthoic acid (3-Hydroxy-2-naphthoic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	diox/w	20°C	50%	U T		K1=8.34    B2=16.93 B3=24.91 K3=7.98	1977SKf (77121)	549

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	diox/w	35°C	50%	U		K1=4.21    B2=7.33	1971MAa (77173)	550
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
Er+++	gl	NaClO4	25°C	0.10M	C		K1=8.88    B2=15.47 K(Er+HL)=2.01	1979LAb (77223)	551

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	cal	NaClO4	25°C	0.10M	C	H	K1=8.86    B2=14.7 K(Er+HL)=1.88	1986LLc (77277)	552

DH(Er+HL)=9.2 kJ mol<sup>-1</sup>, DS=67 J K<sup>-1</sup> mol<sup>-1</sup>  
\*\*\*\*\*  
C11H9NO4                      H2L                      CAS 4321-82-7 (4829)  
3-Acetyl-4-hydroxycoumarin oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	diox/w	35°C	50%	U		K(Er+HL)=3.90 K(Er+2HL)=6.83	1971MAa (77416)	553

Medium: 50% dioxan, 0.01 M NaClO4  
\*\*\*\*\*  
C11H9N3O2                      H2L    PAR                      CAS 1141-59-9 (636)  
4-(2'-Pyridylazo)-1,3-dihydroxybenzene; C5H4N.N:N.C6H3(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	NaNO3	25°C	0.10M	C		K1=10.52	1984OHa (77535)	554

K(Er+HL)=4.31  
\*K(ErHL)=-6.09

Medium pH 4.8-6.3.

-----  
Er+++ sp KCl 20°C 0.10M U 1971EKa (77536) 555  
K(Er+HL)=3.66  
-----

Er+++ sp NaClO4 20°C 0.10M U K1=10.1 1967SNb (77537) 556  
K(Er+HL)=11.0  
-----

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Er+++ gl diox/w 25°C 75% U K1=5.97 B2=11.59 1986MIa (77727) 557  
\*\*\*\*\*  
C11H10N4O4 HL CAS 92265-26-4 (6210)  
5-(2'-Methoxyphenylazo)barbituric acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Er+++ gl diox/w 25°C 75% U K1=6.14 B2=11.88 1986MIa (77741) 558  
\*\*\*\*\*  
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  
-----  
Er+++ gl KCl 25°C 0.10M U T H K1=5.0 1976BFc (78197) 559  
For 55C K1= 4.46  
-----  
Er+++ gl KCl 25°C 0.10M U K1=5.1 B2=9.60 1972BFe (78198) 560  
\*\*\*\*\*  
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  
-----  
Er+++ gl oth/un 30°C 0.10M U B2=21.83 1985EEb (78317) 561  
Medium: not stated. For 3'-sulfophenylhydrazo-, B2=21.98; for 2'-sulfo-  
phenylhydrazo-, B2=24.86; for 4'-methyl-2'-sulfophenylhydrazo-, B2=23.74.  
\*\*\*\*\*  
C11H12O3 HL CAS 94-02-0 (3351)  
Ethyl benzoylacetate; C6H5.CO.CH2.CO2.C2H5  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Er+++ gl mixed 25°C 75% U K1=8.77 B2=16.27 1971DRa (78398) 562  
Medium: 75% acetone, 0.1 M NaClO4

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KNO3	25°C	0.10M	C		K1=14.30 B2=25.93 K(Er+HL)=6.22 K(Er+2HL)=12.20	1989YSa (78620)	563

Er+++	gl	KNO3	20°C	0.10M	U		K1=14.32 B2=25.36	1983MSc (78621)	564
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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
Er+++	gl	KNO3	25°C	0.10M	U		K1=7.42 B2=12.64	1964THa (78880)	565

\*\*\*\*\*

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
Er+++	vlt	KNO3	20°C	0.10M	U		K1=15.30	1981NSc (79277)	566
Er+++	EMF	KNO3	25°C	0.10M	U		K1=16.40	1980KBc (79278)	567
Er+++	vlt	KNO3	20°C	0.10M	U		K1=19.68	1978NLb (79279)	568
Er+++	vlt	KNO3	20°C	0.10M	U		K1=19.61	1964ICb (79280)	569

\*\*\*\*\*

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
Er+++	gl	KNO3	25°C	0.10M	U		K1=10.91	1976GKd (79361)	570

\*\*\*\*\*

C11H18N2O8                      H4L                      CAS 4408-81-5 (923)  
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOCH2)2N.CH2.)2.CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	ix	KNO3	20°C	0.10M	U	H	K1=14.80	1971AWa (79435)	571

Polarography also used. DH=17.6 kJ mol<sup>-1</sup>, DS=337 J K<sup>-1</sup> mol<sup>-1</sup>

Er+++	vlt	KNO3	20°C	0.10M	U		K1=15.10	1964LAa (79436)	572
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By glass electrode: K1=15.15

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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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Er+++      g1    KNO3    25°C 0.10M M      K1=15.09      1986PLc (79549) 573

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
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Er+++      g1    KNO3    25°C 0.10M U      K1=12.09      1976GKd (79593) 574

C11H18O2                      HL                      CAS 40072-58-3 (4820)  
2-(3'-Methylbutanoyl)cyclohexanone (2-isovaleryl cyclohexanone);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++      g1   mixed   30°C   75%   U      K1=10.04   B2=19.83   1972DSd (79651) 575  
K3=8.41

Medium: 75% acetone

C11H18O2 HL CAS 5601-52-5 (4821)  
2-Butanoyl-6-methylcyclohexanone (2-butyryl-6-methylcyclohexanone);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Er+++      gl   mixed   30°C   75%   U      K1=10.70   B2=20.81   1972DSd (79662) 576

Medium: 75% acetone

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Er+++      gl    KNO3    25°C 0.10M U      K1=6.74    B2=7.53    1968PFa (79766) 577

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
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Er+++      gl   alc/w   22°C   80% U      K1=6.30   B2=11.78   1995MTa (80181) 578  
K3=5.32

Medium: 0.1 M NaClO<sub>4</sub> in 80% (v/v) EtOH/H<sub>2</sub>O.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	dis	non-aq	25°C	100%	C	HM		1998YHa (80424)	579

K(ErA3+L)=8.00

Method: solvent extraction from 0.10 M NaClO4 into CHCl3. HA is 1-(2-thienyl)-4,4,4-trifluoro-1,3-butanedione. DH(ErA3+L)=-8 kJ mol<sup>-1</sup>.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	sp	NaClO4	25°C	0.50M	U		K1=2.085	1987MSa (80964)	580
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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
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Er+++	gl	alc/w	22°C	0.1M	U		K1=6.40 K3=4.25	B2=12.05 2000TBb (81070)	581
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Medium: 0.1 M NaClO4 in 70% v/v EtOH/H2O

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	sp	NaClO4	25°C	0.50M	U		K1=2.239	1987MSa (81194)	582
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C12H16O7S	HL	CAS 204931-01-1	(7817)
2,3-Benzo-1,4,7,10-tetraoxacyclododeca-2-ene-4'-sulfonic acid;			

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

Er+++	dis	R4N.X	25°C	0.12M	C		K1=1.31	1998SUa (81695)	583
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Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

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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
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Er+++	gl	KNO3	25°C	0.10M	C		K1=5.94	1988YSa (81808)	584
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C12H18N2O8	H2L	CAS 93031-52-8	(5829)
1,4-Dioxa-7,10-diazayclododecane-5,12-dione-7,10-diethanoic acid;			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++      g1  R4N.X  25°C  0.10M C      K1=6.36      1988CCb (81834) 585
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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
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Er+++ EMF KNO3 25°C 0.10M U K1=14.10 1985SGa (81860) 586

Er+++ EMF KNO3 25°C 0.10M U K1=15.55 B2=21.55 1980Sgb (81861) 587

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
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Er+++      vlt KNO3      20°C 0.10M U      K1=20.11      1968NLa (82023) 588
*****
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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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Er+++      gl    KNO3    20°C 0.10M U      K1=9.37    B2=14.73    1975DPa (82065) 589

Er+++ g1 KN03 25°C 0.10M U K1=8.99 1973GBd (82066) 590  
\*\*\*\*\*

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
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Er+++          vlt KN03      20°C 0.10M U          K1=18.51          1976Nka (82130) 591
*****
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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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Er+++	gl	NaClO4	25°C	0.10M	U	IH	K1=14.13 B(Er+HL)=6.46	1988RNa (82162)	592
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$$\Delta H(K1)=3.40 \text{ kJ mol}^{-1}, \Delta H(Er+HL)=30.1, \Delta S(K1)=282 \text{ J K}^{-1} \text{ mol}^{-1}$$

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C12H20N2O8                      H4L                      CAS 2458-58-4    (922)

1,4-Diaminobutane-N,N,N',N'-tetraethanoic acid;  $(\text{HOOC}\cdot\text{CH}_2)_2\text{N}\cdot(\text{CH}_2)_4\cdot\text{N}(\text{CH}_2\cdot\text{COOH})_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++ gl NaClO4 25°C 0.50M M H K1=10.94 1985CBa (82216) 593  
K(ErL+H)=6.20  
K(ErHL+H)=4.98  
DH(K1)=28.0 kJ mol<sup>-1</sup>, DS=303 J K<sup>-1</sup> mol<sup>-1</sup> (by calorimetry)  
\*\*\*\*\*  
C12H20N2O8 H4L BDTA CAS 868-43-9 (1742)  
DL-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;  
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2  
-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Er+++ sp NaClO4 20°C 0.10M U K1=20.30 1971ISa (82293) 594  
-----  
Er+++ vlt oth/un 20°C 0.10M U K1=20.68 1966DMa (82294) 595  
-----  
Er+++ vlt KNO3 20°C 0.10M U K1=20.68 1966NSb (82295) 596  
\*\*\*\*\*  
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  
-----  
Er+++ sp NaClO4 20°C 0.10M U K1=17.59 1971ISa (82390) 597  
-----  
Er+++ vlt oth/un 20°C 0.10M U K1=17.55 1966DMa (82391) 598  
\*\*\*\*\*  
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  
-----  
Er+++ gl KNO3 25°C 0.10M C K1=14.51 1985TPa (82451) 599  
\*\*\*\*\*  
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  
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Er+++ EMF KNO3 20°C 0.10M U K1=17.99 1962MMc (82528) 600  
\*\*\*\*\*  
C12H20N2O10 H4L CAS 10258-50-1 (3993)  
(2,3-Dihydroxytetramethylenedinitrilo)tetraethanoic acid;  
-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Er+++ EMF KCl 25°C 0.10M U K(Er+H2L)=13.6  
K(Er+HL)=18.34  
\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	vlt	KN03	20°C	0.10M	C		K1=17.46	1978NLa (82672)	602

\*\*\*\*\*

C12H21NO6 H3L (7209)  
 1-Carboxy-1-aminoheptane-N,N-diethanoic acid; H00C.CH(C6H13)N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	alc/w	20°C	40%	U		K1=11.65	1985LBc (82695)	603

Medium: 40% v/v MeOH/H2O, 0.1 M KN03  
 \*\*\*\*\*

C12H21N3O6 H3L NOTA (5589)  
 1,4,7-Triazacyclononane-N,N',N"-triethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	NaCl	25°C	0.10M	C		K(Er+HL)=3.8	1990BSe (82731)	604

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	R4N.X	25°C	0.10M	C		K1=13.31	1998CCb (83081)	605

\*\*\*\*\*  
 C12H24O6 L 18-Crown-6 CAS 17455-13-9 (577)  
 1,4,7,10,13,16-Hexaoxacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	non-aq	25°C	100%	C		K1=1.75	2003ZRa (83347)	606

Medium: DMSO. Method: competition with murexide.

Er+++	dis	R4N.X	25°C	0.12M	C		K1=<0.2	1998SUa (83348)	607
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Medium: 0.12 M Et4NBr.  
 Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

Er+++	ISE	non-aq	25°C	100%	C		K1=7.67	1983ANb (83349)	608
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The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NCl04  
 \*\*\*\*\*  
 C12H26N2O4 L Cryptand 2,2 CAS 23978-55-4 (925)  
 4,7,13,16-Tetraoxa-1,10-diazacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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 Er+++ ISE non-aq 25°C 100% C T H K1=16.9 1986ALa (83833) 609  
 Medium: propylene carbonate, 0.1 M Et4NClO4. DH and DS given  
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Er+++ gl alc/w 25°C 100% C I K1=8.70 1983ANb (83834) 610  
 The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NClO4  
 In propylene carbonate, 0.1 M Et4NClO4, K1=14.8  
 \*\*\*\*\*

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  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	gl	non-aq	25°C	100%	C		K1=4.63	1989BPa (83998)	611
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Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4  
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C12H28N2O9P2 H4L (7242)  
 1,4,10-Trioxa-7,13-diazacyclopentadecane-7,13-diylldimethylenediphosphonic acid;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	gl	R4N.X	25°C	0.10M	U		K1=13.31 K(Er+HL)=9.91 K(Er+H2L)=5.60	1996BJa (84154)	612
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Medium: 0.1 M Me4NCl  
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C12H30N6 L CAS 296-35-5 (143)  
 1,4,7,10,13,16-Hexaazacyclooctadecane; cyclo(-(NH.CH2.CH2)6-)  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	gl	NaCl	20°C	0.10M	C		K1=10.0	1988SJB (84326)	613
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 C13H50F13S 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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Er+++	gl	alc/w	22°C	80%	U		K1=5.71 B2=11.20 K3=4.37	1995MTa (84452)	614
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Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.  
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C13H11NOS H2L (7306)  
 2-(Salicylideneamino)thiophenol, Salicylaldehyde-2-mercaptoanil;  
 HO.C6H4.CH:N.C6H4.SH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++	gl	alc/w	25°C	70%	U		K1=12.05 B2=22.44	1995IFa (85042)	615
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Medium: 70% v/v EtOH/H2O, 0.10 M NaCl.

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

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

Er+++ dis KCl RT 0.10M C 1996KNa (85143) 616  
Method: extraction into benzene from 0.10 M KCl (pH 7.0; borate buffer).  
K(Er+3HL(org)=ErL3(org)+3H)=-16.38

-----  
Er+++ gl mixed 25°C 75% U K1=8.75 B2=15.45 1969DSb (85144) 617  
K3=5.90

Medium: 75% dioxan, 0.1 M NaClO4

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C13H11NS HL CAS 42152-36-3 (8401)  
2-[(Phenylmethylene)amino]benzenethiol;

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

Er+++ gl alc/w 25°C 70% U K1=8.01 B2=14.85 1995IFa (85227) 618  
Medium: 70% v/v EtOH/H2O, 0.10 M NaCl. Also data for p-Cl, p-NMe2, p-OH,  
p-OCH3, p-CH3, p-NO2 substituted benzaldehyde Schiff bases.

\*\*\*\*\*

C13H11N2O3F3 HL (5563)  
3-(2-Acetylphenylhydrazon)-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  
-----

Er+++ gl diox/w 30°C 75% U K1=8.96 B2=16.54 1988ESb (85243) 619  
\*\*\*\*\*

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

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

Er+++ gl oth/un 25°C 0.10M U K1=12.598 1987KSc (85357) 620

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C13H12N4O L Diphenylcarbaz. CAS 538-62-5 (1195)  
Diphenylcarbazone; C6H5.NH.NH.CO.N:N.C6H5

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

Er+++ EMF alc/w 20°C 50% U K1=3.80 1971MAc (85409) 621  
Medium: 50% EtOH, 0.1 M NaClO4

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	EMF	alc/w	20°C	50%	U		K1=2.20	1971MAc (85455)	622

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
Er+++	gl	diox/w	30°C	75%	U		K1=11.58 B2=21.88	1988ESb (85606)	623

\*\*\*\*\*

C13H15NO6 H3L (4999)

2-Benzylnitritotriethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	oth	oth/un	25°C	0.10M	U		K1=11.8 B2=20.96	1962HKa (85736)	624

\*\*\*\*\*

C13H20N2O8 H4L CAS 123064-92-6 (7929)

trans-1,3-Cyclopentanediaminotetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KCl	25°C	1.0M	U		K1=14.33 K(ErHL+H)=3.29 K(ErL+H)=3.70	1989CMb (86119)	625

\*\*\*\*\*

C13H22N2O8 H4L CAS 1798-14-7 (921)

(Pentamethylenedinitrilo)tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KNO3	25°C	0.10M	C		K1=11.03 K(Er+HL)=7.14	1982PPd (86192)	626

\*\*\*\*\*

C13H22N2O8 H4L CAS 1198-14-7 (5004)

1,2-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)2NCH2CH(C3H7)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	vlt	KNO3	20°C	0.10M	U		K1=20.09	1974NLa (86225)	627

\*\*\*\*\*

C13H22N2O8 H4L (7164)

2,4-Diaminopentane-N,N,N',N'-tetraethanoic acid;  
(HOOCCH2)2NCH(CH3)CH2CH(CH3)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	vlt	KNO3	20°C	0.10M	U		K1=13.48	1981NSc (86252)	628

\*\*\*\*\*

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  
-----

Er+++            vlt KNO3    20°C 0.10M U            K1=19.97            1968NLb (86280) 629

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

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

Er+++            gl    KNO3    25°C 0.10M C            K1=14.90            1985PLa (86301) 630

K(Er+HL)=9.24

\*\*\*\*\*

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

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

Er+++            gl    oth/un 25°C 0.10M U            K1=12.60            1981EIa (86640) 631

\*\*\*\*\*

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  
-----

Er+++            sp    mixed    ?    50% U                      1973KTb (86726) 632

K1eff=7.87

B3eff=17.90

Medium: 50% v/v acetone. Borax buffers.

\*\*\*\*\*

C14H9N5Cl2                      L                      CAS 7071-45-6 (8463)  
1,5-Bis(4-chlorophenyl)-3-cyanoformazan;

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

Er+++            gl    diox/w 25°C 70% U            K1=7.72    B2=14.10    1996DAb (86848) 633

Medium: 70% dioxane/H2O, 0.10 M NaClO4.

\*\*\*\*\*

C14H12N2O3                      H2L                      CAS 4870-46-6 (3432)  
2-Hydroxy-5-methyl-2'-carboxy-azobenzene; HO.C6H3(CH3).N:N.C6H4.COOH

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

Er+++            gl    diox/w 25°C 50% U I            K1=3.72    B2=7.36    1985ANa (87213) 634

\*\*\*\*\*

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
Er+++	gl	mixed	30°C	0.10M	U T H			K1=12.44 B2=22.82	1988TRb (87717)	635
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water										
*****										
C14H16N2O2S		HL						CAS 189231-67-2	(8475)	
2-Thiophenylhydrazodimedone;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	gl	diox/w	25°C	75%	C T H			K1=13.65 B2=25.62	1997EIa (87866)	636
Medium: 75% v/v dioxane/H2O, 0.10 M KNO3. Data for 10-40 C. DH(K1)=-8.26										
kJ mol <sup>-1</sup> , DS(K1)=-12.85 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-7.16, DS(K2)=-11.00.										
*****										
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
Er+++	gl	mixed	30°C	0.10M	U T H			K1=12.71 B2=23.37	1988TRb (87884)	637
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water										
*****										
C14H16N2O8		H4L						CAS 40774-59-2	(1901)	
1,2-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Er+++	gl	NaClO4	25°C	1.00M	C H			K1=15.55	1992YNa (87948)	638
By calorimetry: DH(K1)=8.4 kJ mol <sup>-1</sup> , DS=326 J K <sup>-1</sup> mol <sup>-1</sup>										
*****										
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
Er+++	gl	R4N.X	25°C	0.10M	C			K1=3.11	1990CBe (88146)	639
*****										
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
Er+++	ISE	R4N.X	25°C	0.10M	C			K1=2.40	1986XJa (88266)	640
*****										
C14H20O8S		HL						CAS 127461-53-4	(7818)	
2,3-Benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene-4'-sulfonic acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo

Er+++ dis R4N.X 25°C 0.12M C K1=1.00 1998SUa (88391) 641  
Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

\*\*\*\*\*

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  
-----

Er+++ gl KCl 25°C 1.0M U K1=8.21 1987CMe (88440) 642  
K(ErHL+H)=5.05  
K(ErL+H)=7.10

\*\*\*\*\*

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

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

Er+++ gl KCl 25°C 1.0M U K1=9.43 1987CMe (88455) 643  
K(ErHL+H)=5.63  
K(ErL+H)=6.09

\*\*\*\*\*

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

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

Er+++ gl KCl 25°C 1.0M U K1=20.63 1987CMe (88627) 644  
K(ErL+H)=1.24

-----  
Er+++ gl KCl 25°C 1.00M U K1=20.63 1984MFa (88628) 645  
-----

Er+++ gl NaClO4 25°C 0.50M U K1=19.38 1977GGb (88629) 646  
-----

Er+++ EMF KNO3 25°C 0.10M U T H K1=20.20 1962MHa (88630) 647  
DH(K1)=0.4 kJ mol<sup>-1</sup>, DS=289 J K<sup>-1</sup> mol<sup>-1</sup>. At 20 C: K(ErL+H)=2.43

-----  
Er+++ vlt KNO3 20°C 0.10M U K1=20.68 1954SGa (88631) 648

\*\*\*\*\*

C14H22N2O8 H4L trans-1,3-CDTA CAS 92681-24-8 (2849)  
trans-1,3-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

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

Er+++ gl KCl 25°C 1.0M U K1=9.43 1987CMe (88835) 649  
K(ErHL+H)=4.51  
K(ErL+H)=7.04

\*\*\*\*\*

C14H22N2O8 H4L trans-1,4-CDTA CAS 92681-26-0 (2843)  
trans-1,4-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KCl	25°C	1.0M	U		K1=9.46 K(ErHL+H)=5.62 K(ErL+H)=5.86	1987CMe (88853)	650

Er+++	gl	KCl	25°C	1.00M	U		K1=9.46	1984MFb (88854)	651
*****									
C14H22N2O9		H2L		CAS 93031-53-9		(5830)			
1,4,7-Trioxa-10,13-diazacyclopentadecane-8,15-dione-10,13-diethanoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	R4N.X	25°C	0.10M	C		K1=8.08	1988CCb (88878)	652
*****									
C14H23N3O10		H5L		DTPA		CAS 67-43-6		(238)	
Diethylenetriamine-pentaethanoic acid; H00C.CH2.N(CH2.CH2.N(CH2.C00H)2)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	cal	KNO3	25°C	0.10M	C	T		1988MIa (89210)	653
DH(K1)=-28.45 kJ mol-1, DS=339.9 J mol-1 K-1. Also data for 283 and 313 K									
Er+++	cal	NaClO4	25°C	0.50M	U	H		1977CGc (89211)	654
DH(K1)=-41.3 kJ mol-1									
Er+++	gl	NaClO4	25°C	0.50M	U		K1=21.08	1977GGb (89212)	655
Er+++	cal	KNO3	27°C	0.10M	U	H		1968CLd (89213)	656
DH(K1)=-30.9 kJ mol-1, DS=332 J K-1 mol-1									
Er+++	EMF	KNO3	25°C	0.10M	U	H	K1=22.74	1962MTc (89214)	657
DH(K1)=-30.5 kJ mol-1, DS=333 J K-1 mol-1									

Er+++	gl	oth/un	25°C	0.10M	U		K1=23.18	1959HCa (89215)	658
*****									
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
Er+++	vlt	KNO3	20°C	0.10M	U		K1=18.19	1969NDc (89507)	659
*****									
C14H24N2O8		H4L		(7165)					
1,2-Diaminohexane-N,N,N',N'-tetraethanoic acid; (H00CCH2)NCH2CH(C4H9)N(CH2C00H)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	vlt	KNO3	20°C	0.10M	U		K1=19.87	1974NLa (89528)	660

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

Er+++      gl    KCl      25°C 0.10M U      K(Er+HL)=7.07      1974Kpd (89571) 662

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

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

C14H24N2O8                      H4L                      EDTP                      (2936)  
Diaminoethane-N,N,N',N'-tetrapropanoic acid; (H<sup>+</sup>OC.CH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>N.CH<sub>2</sub>CH<sub>2</sub>.N(CH<sub>2</sub>CH<sub>2</sub>.COOH)<sub>2</sub>

$$B(\text{ErH}_2\text{L})=19.17, \quad B(\text{ErH}_3\text{L})=22.38$$

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

\*\*\*\*\*



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
Er+++	gl	alc/w	25°C	20%	M	TI	K1=17.093	2000KDa (89856)	667
Medium: 20% v/v EtOH/H2O, 0.10 M NaNO3. Data for 0.05 and 0.15 M NaNO3. At I=0, K1=17.291. Data for 35 and 45 C and I=0.10 M NaNO3.									
Er+++	gl	KCl	25°C	1.0M	U	M	K2=1.58 K(ErL+ida)=1.2	1985KBb (89857)	668

Er+++ EMF KNO3 20°C 0.10M U K1=17.40 1962MMc (89858) 669  
 \*\*\*\*\*  
 C14H25N3O8 H4L DEATA CAS 97315-55-4 (5601)  
 N,N-Bis(2-aminoethyl)ethylamine-N',N',N'',N''-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	KNO3	25°C	0.10M	C		K1=17.70	1985TPa (90098)	670
*****									
C14H25N3O9		H4L						CAS 4454-15-3 (5078)	
(N-(2-Hydroxyethyl)-2,2'-iminodiethylene)dinitrilo)tetraethanoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	vlt	KCl	?	0.10M	U		K1=13.87	1968VLa (90114)	671
*****									
C14H26N2O7		H2L					(1567)		
1,4,10-Trioxa-7,13-diazacyclopentadecane-N,N'-diethanoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	cal	R4N.X	25°C	0.10M	U	H		1995MMb (90182)	672
Medium: NMe4NO3. DH(K1)=-15.4 kJ mol-1, DS=265 J K-1 mol-1.									

Er+++ gl R4N.X 25°C 0.10M M K1=11.15 1986COb (90183) 673  
 \*\*\*\*\*  
 C14H28N2O4 L Cryptand 2,1,1 CAS 31250-06-3 (836)  
 1,10-Diaza-4,7,13,18-tetraoxabicyclo[8,5,5]eicosane (2,1,1);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	ISE	non-aq	25°C	100%	C	T H	K1=15.5	1986ALa (90361)	674
Medium: propylene carbonate, 0.1 M Et4NC104 *****									
C14H28N2O6		HL						CAS 82353-42-2 (5850)	
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7-ethanoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Er+++ gl R4N.X 25°C 0.10M C K1=6.70 1988CCc (90478) 675  
\*\*\*\*\*

C14H28O7 L 21-Crown-7 CAS 33089-36-0 (2264)  
1,4,7,10,13,16,19-Heptaoxacycloheneicosane;  
-----

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

Er+++ gl non-aq 25°C 100% C K1=6.10 1989BPa (90519) 676  
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4  
\*\*\*\*\*

C14H30O7 L CAS 1072-40-8 (2499)  
2,5,8,11,14,17,20-Heptaoheneicosane; CH3.O.(CH2.CH2.O)6.CH3  
-----

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

Er+++ gl non-aq 25°C 100% C K1=5.31 1989BPa (90691) 677  
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4  
\*\*\*\*\*

C14H32N2O10P2 H4L CAS 81963-60-2 (7240)  
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diylldimethylenediphosphonic acid;  
-----

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

Er+++ gl R4N.X 25°C 0.10M U K1=12.81 1996BJa (90762) 678  
K(Er+HL)=9.74  
K(Er+H2L)=5.66  
Medium: 0.1 M Me4NCl  
\*\*\*\*\*

C14H34N4O6P2 H4L CAS 200952-02-9 (7644)  
1,4,7,10-Tetraazacyclododecane-1,7-bis(methanephosphonic acid monoethyl ester);  
-----

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

Er+++ gl KCl 25°C 0.10M C K1=9.68 1998BPa (90841) 679  
\*\*\*\*\*

C15H11N3O HL PAN CAS 85-85-8 (572)  
1-(2-Pyridylazo)-2-naphthol; C5H4N.N:N.C10H6.OH  
-----

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

Er+++ sp alc/w 21°C 50% U I K1=9.51 1981MCb (91211) 680  
Medium: 50% MeOH, 0.1 M NaClO4. In 75% MeOH K1=11.15  
\*\*\*\*\*

C15H13NO2 HL CAS 959-66-0 (245)  
Benzoyl-acetanilide; C6H5.CO.CH2.CO.NH.C6H5  
-----

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

Er+++ gl alc/w 30°C 70% M K1=5.95 1978SAb (91627) 681

\*\*\*\*\*

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  
-----

Er+++ gl diox/w 30°C 75% M K1=7.34 2000ANa (91689) 682

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

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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  
-----

Er+++ gl alc/w 20°C 75% U T H K1=11.72 B2=19.92 1993RAa (92019) 683

Medium: 75% v/v MeOH/H2O; 0.10 M KNO3

-----  
Er+++ gl mixed 30°C 0.10M U T H K1=12.85 B2=23.96 1988TRb (92020) 684

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;

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

Er+++ gl KNO3 25°C 0.10M C K1=13.47 1978MPb (92149) 685

\*\*\*\*\*

C15H23N3O2 L CAS 36763-33-4 (5176)

N,N,N',N'-Tetraethyl-2,6-pyridinedicarboxamide;

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

Er+++ sp non-aq 25°C 100% M K1=7.7 B2=14.40 1997RPb (92281) 686

B3=22.7

Medium: acetonitrile.

\*\*\*\*\*

C15H25N3O10 H5L (5127)

Diethylenetriamine-N,N,N'',N''-tetraethanoic acid-N'-propanoic acid;

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

Er+++ EMF KCl ? 0.10M U K1=16.46 1966VL a (92368) 687

-----  
Er+++ vlt oth/un ? ? U K1=16.49 1966VL a (92369) 688

\*\*\*\*\*

C15H25N3O10 H5L (6100)

Diethylenetriamine-N,N,N',N''-tetraethanoic acid-N''-propanoic acid;

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



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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	NaCl04	30°C	0.10M	U				1976NDa (93189)	696
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K(Er+H2L=ErH2L)=5.98

K(ErHL+H)=6.85

K(ErL+H)=8.94

K(ErL+OH)=3.05

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C16H13N2O11AsS2	H6L	Arsenazo I	CAS 520-10-5	(277)
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2-(2'-Arsonophenylazo)chromotropic acid;

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

Er+++	sp	oth/un	20°C	0.10M	U				1971SSd (93252)	697
-------	----	--------	------	-------	---	--	--	--	-----------------	-----

K(Er+H2L)=8.28

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C16H15N5	L		CAS 7014-14-4	(8462)
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1,5-Bis(4-methylphenyl)-3-cyanoformazan;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	gl	diox/w	25°C	70%	U			K1=8.58 B2=16.30	1996DAb (93638)	698
-------	----	--------	------	-----	---	--	--	------------------	-----------------	-----

Medium: 70% dioxane/H2O, 0.10 M NaCl04.

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C16H18N2O3	HL		(5564)
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2-(2-Acetylphenylhydrazone)-5,5-dimethyl-1,3-cyclohexanedione;

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

Er+++	gl	diox/w	30°C	75%	U			K1=10.45 B2=19.50	1988ESb (93775)	699
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C16H18N4O4	H2L		CAS 161563-39-9	(8399)
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1,3-Phenylenediamine bisazoacetylacetone;

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

Er+++	gl	diox/w	25°C	50%	U			K1=8.11 B2=15.31	1997MAb (93858)	700
-------	----	--------	------	-----	---	--	--	------------------	-----------------	-----

Medium: 50% v/v dioxan/H2O, 0.10 M NaCl04. For the 1,4-phenylenediamine derivative, K1=8.72, K2=8.20.

\*\*\*\*\*

C16H18N4O4	H2L		CAS 161563-40-2	(8400)
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1,3-Phenylenediamine bisazobenzoylacetone;

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

Er+++	gl	diox/w	25°C	50%	U			K1=6.50 B2=11.61	1997MAb (93865)	701
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Medium: 50% v/v dioxan/H2O, 0.10 M NaCl04. For the 1,4-phenylenediamine derivative, K1=7.65, K2=6.30.

\*\*\*\*\*

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  
-----

Er+++              vlt KNO3      20°C 0.10M U              K1=19.01              1969NDb (94036) 702

\*\*\*\*\*

C16H23NO8                      HL                      (6776)

19-Nitro-3,6,9,12,15-pentaoxabicyclo[15.13.1]heneicosa-1(21),17,19-trien-21-ol;

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

Er+++              gl R4N.X      25°C 0.10M C              K1=2.79              1990CBe (94257) 703

\*\*\*\*\*

C16H23NO8                      L                      CAS 53408-96-1 (1765)

2,3-(4'-Nitrobenzo)-1,4,7,10,13,16-hexaoxacyclooctadeca-2-ene;

4'-Nitrobenzo-18-crown-6

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

Er+++              ISE R4N.X      25°C 0.10M C              K1=3.40              1986XJa (94265) 704

\*\*\*\*\*

C16H24O9S                      HL              SB18C6              CAS 185099-14-3 (7819)

2,3-Benzo-1,4,10,13,16-hexaoxacyclooctadeca-2-ene-4'-sulfonic acid;

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

Er+++              dis R4N.X      25°C 0.12M C              K1=0.71              1998SUa (94476) 705

Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

\*\*\*\*\*

C16H26N2O10                      H2L                      CAS 93031-54-0 (5831)

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

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

Er+++              gl R4N.X      25°C 0.10M C              K1=8.78              1988CCb (94567) 706

\*\*\*\*\*

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  
-----

Er+++              sp KCl              25°C 0.08M U              K1=11.2              1994FCa (94666) 707

\*\*\*\*\*

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  
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-----  
Er+++ sp KCl 25°C 0.08M U K1=14.8 1994FCa (94682) 708  
\*\*\*\*\*

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

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

Er+++ gl KNO3 20°C 0.10M U K1=14.91 1969NDc (94709) 709  
By polarography: K1=14.99

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

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

Er+++ vlt KNO3 20°C 0.10M U K1=18.16 1969NDc (94735) 710  
\*\*\*\*\*

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

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

Er+++ vlt KNO3 20°C 0.10M U K1=19.83 1979MBd (94761) 711  
\*\*\*\*\*

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

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

Er+++ gl NaCl 37°C 1.0M C K1=23.5 1994TBb (94888) 712  
Method: Competitive reaction with Eu3+ ion.

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

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

Er+++ cal R4N.X 25°C 0.10M U H 1995MMb (95033) 713  
Medium: NMe4NO3. DH(K1)=-3.05 kJ mol-1, DS=226 J K-1 mol-1.

-----  
Er+++ gl R4N.X 25°C 0.10M U K1=11.30 1983CRb (95034) 714  
\*\*\*\*\*

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

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

Er+++ ISE non-aq 30°C 100% C T H K1=18.9 1986ALa (95199) 715

Medium: propylene carbonate, 0.1 M Et4NClO4

-----  
Er+++ gl R4N.X 25°C 0.25M C K1=6.60 1981BBe (95200) 716  
Medium: Me4NCl

\*\*\*\*\*

C17H13N4O3 HL (5927)  
1-Phenyl-3-methyl-4-(2'-carboxyphenylhydrazo)-5-pyrazolone;

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

Er+++ gl diox/w 30°C 75% M K1=16.03 B2=28.32 1987ESa (95764) 717

\*\*\*\*\*

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  
-----

Er+++ gl NaNO3 20°C 0.10M U M 1981GCa (95878) 718

B(Er+3L+2TBP)=24.29  
B(Er+3L+TBPOxide)=23.2  
B(Er+3L+4TBPOxide)=34.0

-----  
Er+++ dis non-aq 25°C 100% U M 1973TEc (95879) 719

K(ErA+3L)=2.29  
K(ErB2+3L)=7.56  
K(Er(phen)2+3L)=8.26

Medium: CHCl3. A=tributyl phosphate, B=piperidine

\*\*\*\*\*

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  
-----

Er+++ gl diox/w 30°C 75% M K1=8.39 B2=16.49 1987ESa (96005) 720

\*\*\*\*\*

C17H16N2O3S2 L CAS 127335-83-5 (6849)  
Sulfafurazole thiophene-2-aldehyde Schiff base; C4H3S.CH:N.C6H4.SO2.NH.C4H0(CH3)2

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

Er+++ gl oth/un 25°C 0.10M U T K1=5.58 1990TSa (96037) 721  
30 C: K=5.36, 35 C: K=5.16

\*\*\*\*\*

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

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

Er+++ gl alc/w 22°C 0.1M U K1=5.57 B2=10.02 2000TBb (96283) 722



\*\*\*\*\*

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

Er+++	sp	NaNO3	25°C	0.10M	C	K1=8.58	19880Ha (96417)	723
						K(Er+HL)=2.80		

13-Phenylmethyl-1,4,7,10-tetraoxa-13-azacyclopentadecane;

Er+++ cal non-aq 25°C 100% C H 1993LLb (96531) 724  
K(ErNO3+L)=2.47

\*\*\*\*\*

(Bis(3-(bis(carboxymethyl)amino)propyl)methylammonio)ethanoate;

Er+++	gl	KN03	25°C	0.10M	U	K1=9.54	1984TPa (96569)	725
						K(Er+HL)=6.20		

2-(2-Acetylphenylhydrazone)-1-phenyl-but-1,3-dione;

Er+++      gl    diox/w 30°C    75%   U                  K1=10.80   B2=20.30   1988ESb (97168) 726

Tris(2-pyridylmethyl)amine; (C<sub>5</sub>H<sub>4</sub>NCH<sub>2</sub>)<sub>3</sub>N

Er+++ nmr KCl 25°C 1.0M C H K1=1.86 2004BRa (97257) 727  
Method: 1H nmr measurements in D2O. DH(K1)=-3 kJ mol<sup>-1</sup>,  
DS(K1)=23 J mol<sup>-1</sup>K<sup>-1</sup>

N,N'-Ethylene-bis-(2-(2'-hydroxyphenyl))glycine; (H<sub>2</sub>NCH(C<sub>6</sub>H<sub>4</sub>OH)COOH)<sub>2</sub>

Er+++ EMF KNO3 25°C 0.10M C T H K1=20.97 1985HWb (97423) 728

$$K(\text{ErL}+\text{H})=7.00$$

Method: Hg (and glass) electrode, using Hg(II) as competitive indicator ion. Data for 10-35 C.  $\text{DH}(\text{K1})=-75.2 \text{ kJ mol}^{-1}$ ,  $\text{DS}(\text{K1})=149 \text{ J K}^{-1} \text{ mol}^{-1}$ .

\*\*\*\*\*

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
Er+++	gl	KNO3	25°C	0.10M	C		K1=14.81	1985TPa (97651)	729

\*\*\*\*\*

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
Er+++	gl	non-aq	25°C	100%	U		K1=2.82	1982MDa (97804)	730

Medium: propylene carbonate

\*\*\*\*\*

C18H30N2O11 H2L CAS 93049-99-1 (5832)  
1,4,7,10,13-Pentaoxa-16,19-diazacycloeicosane-14,21-dione-16,19-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	R4N.X	25°C	0.10M	C		K1=9.08	1988CCb (97907)	731

\*\*\*\*\*

C18H30N4O12 H6L TTHA CAS 869-52-3 (694)  
Triethylenetetraaminehexaethanoic acid;((HOOCH2)2N.CH2.CH2.N(CH2.COOH).CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	EMF	KNO3	25°C	0.10M	C T H		K1=23.35 K(ErL+H)=4.40 K(ErHL+H)=2.42	1987HCa (98022)	732

Method: Hg electrode; competitive reaction with Hg(II).

Data for 15-35 C. At 25 C,  $\text{DH}(\text{K1})=95.7 \text{ kJ mol}^{-1}$ ,  $\text{DS}(\text{K1})=766 \text{ J K}^{-1} \text{ mol}^{-1}$ .

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	vlt	NaClO4	25°C	0.40M	C		K1=23.62	1978MNB (98023)	733

Medium: 0.40 M NaClO4, pH 4.80. Method: polarography, using Cd as indicator ion.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	EMF	KNO3	25°C	0.10M	U		K1=23.40	1970HAA (98024)	734

By ion-selective electrode: K1=23.19  
By glass electrode: K(ErL+H)=4.50, B(Er2L)=3.73, K(Er2L+20H)=13.0

\*\*\*\*\*

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
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Er+++ EMF NaCl 80°C 1.00M C K1=16.49 1986LDb (98197) 735  
K(ErL+H)=3.50

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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  
-----

Er+++ gl R4N.X 25°C 0.10M C K1=6.20 1988CCc (98335) 736

\*\*\*\*\*

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  
-----

Er+++ cal non-aq 25°C 100% C H K1=13.88 2003DCa (98564) 737

Method: competitive titration calorimetry of AgL+. Medium: acetonitrile.

DH(K1)=-133.6 kJ mol<sup>-1</sup>, DS(K1)=-182 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Er+++ ISE non-aq 30°C 100% C T H K1=16.5 1986ALa (98565) 738

Medium: propylene carbonate, 0.1 M Et4NClO4. DH and DS given

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Er+++ gl alc/w 25°C 100% C I K1=10.78 1983ANb (98566) 739

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  
-----

Er+++ gl R4N.X 25°C 0.10M U K1=6.40 1996BJa (98890) 740

Medium: 0.1 M Me4NCl

\*\*\*\*\*

C20H14N2O11S3 H5L Chromotrope 8B CAS 5850-64-6 (2674)

3-(4'-Sulfonaphthylazo)chromotropic acid;

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

Er+++ sp NaClO4 25°C 0.10M C K1=6.31 1979PLb (99709) 741

\*\*\*\*\*

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  
-----

Er+++ sp none 25°C 0.0 U 1978BRb (99728) 742

K1eff=3.60

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
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Er+++	gl	diox/w	30°C	75%	U				1985RSb (99830)	743
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K(Er+HL)=5.37  
K(Er+2HL)=10.70

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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
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Er+++	gl	KNO3	20°C	0.10M	U			K1=20.15	1985SNb (99991)	744
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K(ErL+H)=5.06  
K(ErHL+H)=4.71

\*\*\*\*\*

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
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Er+++	sp	non-aq	25°C	100%	C			K1=1.49	2003ZRa (100116)	745
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Medium: DMSO. Method: competition with murexide.

Er+++	gl	oth/un	25°C	0.0	U	H		K1=2.80	1991HJa (100117)	746
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C20H24O12S2 H2L CAS 172985-47-6 (7820)  
2,3:11,12-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,11-diene-4',4''-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	dis	R4N.X	25°C	0.12M	C			K1=1.06	1998SUa (100279)	747
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Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++	sp	KCl	25°C	0.08M	U			K1=17.2	1994FCa (100554)	748
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C20H36O6 L DiCy-18-crown-6 CAS 16069-36-6 (1653)  
2,3:11,12-Dicyclohexyl-1,4,7,10,13,16-hexaoxacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Er+++ sp non-aq 25°C 100% C K1=1.61 2003ZRa (100645) 749  
Medium: DMSO. Method: competition with murexide.

\*\*\*\*\*

C21H17N2O5As H2L ArsenoBDMPH (5931)  
2-Arsonodibenzoylmethanephénylhydrazone; C6H5.CO.C(CO.C6H5):N.NH.C6H4.AsO3H2

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

Er+++ gl alc/w 27°C 40% U K1=17.35 B2=22.95 1990MOc (101077) 750  
Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4

\*\*\*\*\*

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

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

Er+++ gl non-aq 25°C 100% C K3=4.7 1997PBa (101085) 751

Medium: CH3CN; 0.1 M Et4NClO4

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

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Er+++ sp oth/un 25°C ? U K(Er+HL)=5.1(?) 1967SAa (101495) 752

\*\*\*\*\*

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  
-----

Er+++ sp oth/un ? ? U K1=15.67 1971SSi (101542) 753

\*\*\*\*\*

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  
-----

Er+++ sp oth/un 25°C var U I K1(eff)=7.241  
B(ErLCl)eff=5.895  
B(ErL2Cl)eff=13.283

Conditional constants in chloride medium at pH 3.3. Also data in sulfate and perchlorate media. K(Er+Cl)=2.028.

-----  
Er+++ sp oth/un 20°C ? U 1972SSi (101618) 755

K(Er+H4L)=16.39

\*\*\*\*\*

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  
-----

Er+++ EMF KNO3 25°C 0.10M C T H K1=11.42 1990HLA (101894) 756

K(ErL+H)=3.31

Method: Competitive reaction with Hg++, using Hg indicator electrode.

Data for 15-35 C. DH(K1)=-40.3 kJ mol<sup>-1</sup>, DS(K1)=83.5 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C22H26N4O10 H4L BAPTA (7230)

1,2-Bis(o-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;

((HOOCCH2)2NCH(OC6H4NH2)2

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

Er+++ gl R4N.X 25°C 0.10M C K1=10.54 1993YTa (101975) 757

\*\*\*\*\*

C22H28O13S2 H2L DSDB21C7 CAS 204931-02-2 (7821)

2,3:11,12-Dibenzo-1,4,7,10,13,16,19-heptaoxacycloheicosa-2,11-diene-4',4"-disulfo  
nic acid;

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

Er+++ dis R4N.X 25°C 0.12M C K1=1.31 1998SUa (102075) 758

Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

\*\*\*\*\*

C23H18N2O3 HL (5561)

2-(2-Acetylphenylhydrazon)-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  
-----

Er+++ gl diox/w 30°C 75% U K1=11.35 B2=20.49 1988ESb (102591) 759

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C23H23NO5 L CAS 218619-58-0 (7808)

Dibenzo-pyridino-18-crown-6;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Er+++ sp non-aq 25°C 100% C K1=1.62 2003ZRa (102657) 760

Medium: DMSO. Method: competition with murexide.

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C23H24N4O2 L Trichachnine CAS 1251-85-0 (2606)

4,4'-Diantipyrylmethane,

4,4'-phenylmethylen-bis-(1,2-dihydro-1,5-dimethyl-2-phenylpyrazol-3-one

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	diox/w	25°C	100%	U		K1=4.17	1995KMa (102670)	761
*****									
C24H32O14S2 H2L CAS 204931-03-3 (7822)									
2,3:11,12-Dibenzo-1,4,7,10,13,16,19,22-octaoxacyclotetracos-2,14-diene-4',4''-disulfonic acid;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	dis	R4N.X	25°C	0.12M	C		K1=1.35	1998SUa (103191)	762
Medium: 0.12 M Et4NBr.									
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid									
*****									
C26H23N5O2 HL (5918)									
Hippuric monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	diox/w	30°C	75%	U		K1=11.61 B2=22.15	1985RSb (103878)	763
*****									
C26H27N3O10 H4L (7231)									
2-((2-Amino-5-methylphenoxy)-methyl)-6-methoxy-8-aminoquinoline-N,N,N',N'-tetraethanoic acid;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	R4N.X	25°C	0.10M	C		K1=14.23	1993YTa (103961)	764
*****									
C27H24N4O L BAHP (1023)									
Benzoylacetone-monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	diox/w	30°C	75%	U		K1=8.75	1983RSa (104382)	765
*****									
C27H29NO11 L Adriamycin CAS 25316-40-9 (2407)									
Doxorubicin;									
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	oth/un	25°C	0.02M	U T H		K1=4.80	1985LSa (104454)	766
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
Er+++	gl	non-aq	25°C	100%	U		K1=3.16	1980MDb (104838)	767

Medium: Propylene carbonate.

Medium: propylene carbonate

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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
Er+++	ISE	non-aq	25°C	100%	U		K1=4.48	1982MDa (104882)	768

Medium: propylene carbonate

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C28H52N4O10 H5L CAS 137203-80-6 (8096)  
1-N-Dodecyltriethylenetetramine-N,N',N'', N''',N''''-pentaethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	alc/w	25°C	50%	C		K1=22.1 K(ErL+H)=4.4	2001SYb (104988)	769

Medium: 50% EtOH/H2O, 0.10 M KNO3.

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C31H24N4O HL CAS 88700-85-0 (1409)  
1,2-Diphenyl-1,2-ethanedione-3-(4-benzyl-6-phenyl)-pyridaziny1 hydrazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	diox/w	30°C	75%	U I		K1=9.99	1983RRa (105401)	770

In 75% MeOH: K1=7.78; 75% DMS: 6.54

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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
Er+++	nmr	KCl	25°C	1.0M	C H		K1=2.14	2004BRa (105967)	771

Method: 1H nmr measurements in D2O. DH(K1)=27 kJ mol<sup>-1</sup>  
DS(K1)=133 J mol<sup>-1</sup>K<sup>-1</sup>

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C36H60O30 L a-Cyclodextrin CAS 10016-20-3 (6946)  
alpha-Cyclodextrin, Cyclohexaamylose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	gl	NaCl	25°C	0.10M	U I		K1=3.46	1999FBa (106460)	772

In 0.1 M Me4NCl, K1=3.6.

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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
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Er+++ gl non-aq 25°C 100% C K2=5.1 1997PBa (106547) 773  
K3=3.0

Medium: CH3CN; 0.1 M Et4NClO4

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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
Er+++	gl	NaClO4	30°C	0.10M	U			1980NAb (106592)	774
							K(Er+H3L)=4.59		
							K(Er+H2L)=7.47		
							K(ErH2L+H)=4.27		

Also data for ErHnL(OH) species

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C45H66N10O6 L CAS 362613-35-2 (7912)  
Tris[3-(6-diethylcarbamoilpyridine-2-carboxamide)propyl]amine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	non-aq	25°C	100%	C I		K1=6.9	2001RDa (107230)	775

Medium: CH3CN.

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C62H94N2O4S2 L (8109)  
5,11,17,23-Tetrakis(1,1-dimethylethyl)-25-27-bis[2-methylthio)ethoxy]...calix(4)are  
ne;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	cal	non-aq	25°C	100%	U H		K1=3.96	2001NJa (107701)	776

Method: microcalorimetry. Medium: MeCN.. DH(K1)=-171 kJ mol<sup>-1</sup>

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C76H116N4O8 L (8156)  
p-tert-Butylcalix(4)arene tetradiisopropylethanoamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	cal	non-aq	25°C	100%	U H		K1=4.29	2001NJa (107878)	777

Method: microcalorimetry. Medium: MeCN.. DH(K1)=-81.2 kJ mol<sup>-1</sup>

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Polymer HL Bleomycin (2324)  
Bleomycin A2, B2 etc.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Er+++	sp	oth/un	25°C	? U				1980LPb (108086)	778
							K1eff=5.0 pH 6.8		

Method: fluorescence

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#### EXPLANATORY NOTES

DATA Flags are :-

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

EVALUATION Flags are :-

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

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