SC-Database
Software version = 5.81 Data version = 4.62
Experiment list contains 618 experiments for
 (no ligands specified)
 Metal : Lu+++
 (no references specified)
 (no experimental details specified)

****
e- HL Electron (442)
Electron;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ oth none 25°C 0.0 U 1974GDa (639) 1
K(Lu+3e=Lu(s))=-115.1(-2.27V)
Method: literature evaluated data

Lu+++ oth none 25°C 0.0 U 1952LAb (640) 2
K(Lu+3e)=-114.3(-2250 mV)
****
AsO4--- H3L Arsenate CAS 7778-39-4 (1557)
Arsenate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ sol none 25°C 0.0 C 1992FIa (1150) 3
Kso(LuAsO4)=-22.66
Equilibrium monitored by EDTA and iodine titrations.
****
CO3-- H2L Carbonate CAS 465-79-6 (268)
Carbonate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 0.70M C K1=6.03 2004LBb (3263) 4
K(Lu+HCO3=LuHCO3)=1.44
Medium: 0.70 m NaClO4. Calculated for I=0, K1=7.75, B2=13.37,
K(Lu+HCO3=LuHCO3)=2.49, K(Lu+HL=LuL+H)=-2.58, K(Lu+2HL=LuL2+2H)=-7.29

Lu+++ dis NaClO4 25°C 0.70M C I K1=6.02 B2=10.85 1998LBb (3264) 5
Method: H2O/tributylphosphate distribution and ICP-mass spectrometry.
Values calculated for I=0.0 M, K1=8.00, B2=13.93

Lu+++ sol none 25°C 0.0 C 1986HMa (3265) 6
Kso(Lu2(CO3)3)=-32.16
Method: spectrophotometry.

Lu+++ dis oth/un 20°C 2.5M C 1979DBb (3266) 7
B4=15.83

Media: 2.5 M (NH4)2NO3/hexane. Analysis by NAA. By competition with edta;
K1(Lu(edta))=19.60 recalculated for I=2.5 from J.Am.Chem.Soc.,75 1953,4196

Lu+++ sol oth/un 20°C 4.20M U M 1967FMa (3267) 8
K(Na3LuL3(s)+L=3Na+LuL4)=-0.7

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	cal	none	25°C	0.00	M	H	K1=3.69	1972SCd (3674)	9

DH(K1)=4.2 kJ mol-1, DS=84.9 J K-1 mol-1

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	dis	NaCl	25°C	1.0M	C		K1=-0.14	1997HTb (5192)	10

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

Lu+++	cal	non-aq	25°C	100%	U	H	K1=2.82	B2=5.30	1991ITa (5193)	11
							K3=2.41			
							K4=1.71			

Medium: DMF, 0.2 M Et4NClO4. DH(K1)=26.8 kJ mol-1, DH(K2)=21.9, DH(K3)=17
DH(K4)=23. DS(K1)=144, DS(K2)=121, DS(K3)=104 J K-1 mol-1

Lu+++	sol	NaClO4	25°C	?	U		K1=0.23		1982MAa (5194)	12

Lu+++	cal	non-aq	25°C	100%	U		K1=2.47	B2=4.84	1980VCa (5195)	13

Medium: diemthylacetamide

Lu+++	dis	NaClO4	25°C	4.0M	U		K1=-0.35	B2=-0.57	1964SEa (5196)	14

Lu+++	sol	none	25°C	0.0	U				1962AAb (5197)	15
							Kso(Lu(OH)2.5Cl0.5)=-22.4			

Lu+++	sol	NaClO4	25°C	0.50M	U		K1=-0.48		1962SOa (5198)	16

Lu+++	vlt	KNO3	20°C	0.10M	U		K1=1.45		1953WSa (5199)	17

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	ix	oth/un	25°C	0.02M	C	T H	K1=3.74 B2= 6.31	2004LMa (7004)	18

Medium: 0.025 M HNO3. Applying Pitzer parameters: at I=0, K1=9.8.

Data for 5 to 45 C. DH(K1)=11.7 kJ mol-1, DH(B2)=24.5.

Lu+++ ISE NaClO4 25°C 0.0 C I K1=4.25 2000LBa (7005) 19

Method: Fluoride ISE. Values calc. from data for I=0.015-0.70 M NaClO4.
At I=0.70 M, K1=3.314.

Lu+++ ix KNO3 25°C 0.02M C K1=3.69 B2= 6.48 1999SBc (7006) 20

Medium: 0.025 M HNO3. Additional method: ICP-MS.
Assumed K1(HF) = 3.03, derived from literature values.

Lu+++ ISE none 25°C 0.0 C H K1=3.33 B2=6.65 1989MJa (7007) 21
Kso=-12.9

Also by conductivity and radiometry. DH(Kso)=59.8 kJ mol-1; DS=-44.

Lu+++ ISE R4N.X 25°C 0.50M C K1=3.33 B2=6.65 1989MJb (7008) 22

Lu+++ cal NaClO4 25°C 1.00M C H 1988GBa (7009) 23

DH(K1)=11.8 kJ mol-1; DS(K1)= 109 J mol-1 K-1

Lu+++ ISE NaNO3 25°C 0.10M U H 1987SMd (7010) 24
K(LuA+L)=1.95

DH=-0.6 kJ mol-1, DS=39.9 J K-1 mol-1. H3A=HEDTA

Lu+++ gl KCl 25°C 1.00M U M 1981KTb (7011) 25
K(LuEDTA+F)=1.52
K(Lu(EDTA)F+F)=0.30

Lu+++ gl NaCl 25°C 1.00M U K1=3.08 B2=5.49 1979BHa (7012) 26

Lu+++ EMF NaClO4 25°C 0.50M U K1=3.47 1968IZa (7013) 27
K(Yb+HF=YbF+H)=0.56

Lu+++ EMF NaClO4 25°C 1.0M U H K1=3.61 1967WCa (7014) 28

By calorimetry: DH(K1)=39.8 kJ mol-1, DS=202.7 J K-1 mol-1

****

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

Periodate;

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

---

Lu+++ sol oth/un 25°C dil U 1974LOa (8608) 29
Kso(Lu(H2IO6)(H2O)3)=-9.89

****

Mo12O42U-------- H8L (2922)

Uranium-12-molybdate;

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

---

Lu+++ gl oth/un 20°C 0.10M U K1=5.68 1989SBb (8777) 30
B(LuHL)=8.62

****

NH3 L Ammonia CAS 7664-41-7 (414)
Ammonia

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	R4N.X	25°C	5.00M	U		K1=0.7	1985MMa (9179)	31

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	cal	NaClO4	25°C	2.0M	C	IH	K1=-0.85	1998BMb (9762)	32

DH(K1)=5.3 kJ mol-1. From Pitzer extrapolation to I=0.0, K1=-0.08, DH(K1)=3.8 kJ mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	dis	none	25°C	0.0	U		K1=1.38	1992MSb (9763)	33

****

OH- HL Hydroxide (57)
Hydroxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	NaCl	25°C	1.0M	C			2003RSa (11708)	34
							*K1=-8.12		
							*Kso(Lu(OH)3)=17.63		

*Kso by radiometric titration using 177Lu.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	NaClO4	25°C	0.0	C	IH		2000KBa (11709)	35
							*K1=-7.27		

In 0.7 M NaClO4, *K1=-7.57. DH(*K1)=41 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	NaCl	25°C	0.10M	U	I		1999FBa (11710)	36
							*B(1,3)=-20.71		

In 0.1 M Me4NCl, *B(1,3)=-21.04.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	dis	oth/un	30°C	0.01M	C			1989MKb (11711)	37
							*K1=-3.10		

Medium: ClCH2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	EMF	alc/w	25°C	25%	U	I		1972USa (11712)	38
							*K1=-7.57		

Medium: 25% v/v EtOH/H2O, 0.05 M NaClO4. *K1=-7.66(v=0), -7.33(v=50), *K1=-7.33(v=0,I=0)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	dis	NaClO4	?	0.10M	U			1971GDb (11713)	39
							*K1=-3.5		

Medium: LiClO4

```
Lu+++      sol oth/un 25°C       U                          1970IEb (11714)  40
                                        K(LuL3(s)+L=LuL4)=-5.1
                                        K(LuL3(s)+2L=LuL5)=-5.8
                                        K(LuL3(s)+3L=LuL6)=-6.5
--------------------------------------------------------------------------------
Lu+++      vlt none   20°C  0.0  M                          1968KAc (11715)  41
                                        Kso=-26.85
--------------------------------------------------------------------------------
Lu+++      oth oth/un  rt   10%  U                          1967PBb (11716)  42
                                        Kso=-27.5
                                        K(LuL3(s)=LuL3)=-5.1
Medium: 10% sea water.
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.30M U                          1966FKa (11717)  43
                                        *K1=-7.90
--------------------------------------------------------------------------------
Lu+++      sol oth/un 25°C  var  U                          1966ISa (11718)  44
                                        K(LuL3(s)=LuL3)=-3.2
--------------------------------------------------------------------------------
Lu+++      oth oth/un 20°C  dil  U                          1966OPa (11719)  45
                                        Kso=-25.3
Method: Tyndall scattering
--------------------------------------------------------------------------------
Lu+++      gl  none   25°C  0.0  M                          1963AKb (11720)  46
                                        Kso=-27.00
--------------------------------------------------------------------------------
Lu+++      sol none   25°C  0.0  U                          1962AAb (11721)  47
                                        Kso=-26.65 (100 days)to
                                        Kso=-26.99 (150 days)
--------------------------------------------------------------------------------
Lu+++      gl  oth/un 20°C  dil  U                          1953WSa (11722)  48
                                        *K1=-6.6
--------------------------------------------------------------------------------
Lu+++      gl  oth/un 25°C  var  U                          1951MFb (11723)  49
                                        Kso(Lu(OH)3)=-23.72
--------------------------------------------------------------------------------
Lu+++      gl  oth/un 25°C  var  U                          1944MKa (11724)  50
                                        Kso(Lu(OH)3)=-23.6
********************************************************************************
PO4---                H3L    Phosphate        CAS 7664-38-2  (176)
Phosphate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      sol none   25°C  0.0  M                          1997LBd (13240)  51
                                        Kso(LuPO4)=-24.75
Calculated from data for 0.10 M HClO4 solution.
--------------------------------------------------------------------------------
Lu+++      sol oth/un 25°C  0.0  C  I                       1993FKb (13241)  52
                                        Kso(LuPO4)=-25.72
```

In synthetic seawater, Ks(LuPO4)=-23.00.

Lu+++ sol none 25°C 0.0 C 1991FBa (13242) 53
Kso(LuPO4)=-25.39

****

P2O7---- H4L Pyrophosphate CAS 2466-09-3 (198)
Diphosphate; from (HO)2PO.O.PO(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	KCl	25°C	0.50M	U			1989APd (13618)	54
							K(Lu+H2L)=4.36			
Lu+++	kin	none	25°C	0.0	U		B2=23.51		1967SSo (13619)	55

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	dis	oth/un	25°C	1.0M	C		K1=0.45		1997HTb (15136)	56

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values			Reference	ExptNo
Lu+++	dis	R4N.X	30°C	1.00M	U	T	K1=0.21	B2=0.35		1974KMa (15137)	57

Medium: NH4ClO4/NH4SCN, pH 2.8

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values			Reference	ExptNo
Lu+++	dis	NaClO4	25°C	5.0M	U		K1=0.45	B2=-1.3		1964SEa (15138)	58
							B3=-0.14				

****

SO4-- H2L Sulfate CAS 7664-93-9 (15)
Sulfate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	sol	oth/un	25°C	0.66M	C		K1=1.77		2004SBb (16310)	59

Method: solubility of BaSO4 in 0.117 m LuCl3 solution.
Calculated for I=0, K1=3.44.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	con	oth/un	25°C	0.0	U		K1=3.52		1973FPb (16311)	60

In D2O: K1=3.54

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	cal	oth/un	25°C	0.0	U	H			1969FPa (16312)	61

DH(K1)=14.8 kJ mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values			Reference	ExptNo
Lu+++	cal	oth/un	25°C	0.0	U	H	K1=3.49	B2=5.29		1969IEa (16313)	62

DH(K1)=13.8 kJ mol-1, DH(K2)=4.4; DS(K1)=114.6 J K-1 mol-1, DS(K2)=49.4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values			Reference	ExptNo
Lu+++	ISE	NaClO4	25°C	2.0M	U	H	K1=1.09	B2=1.61		1967CCd (16314)	63

By calorimetry: DH(K1)=17.8 kJ mol-1, DS=80.3 J K-1 m-1; DH(K2)=6.3, DS=30.9

```
--------------------------------------------------------------------------------
Lu+++      dis NaClO4 25°C  1.0M U        K1=1.29   B2=<2.5   1965SEa (16315)  64
                                         B3=3.36
********************************************************************************
CHO3F3S                HL                    CAS 1493-13-6  (6755)
Trifluoromethanesulfonic acid; CF3SO3H
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      sp  non-aq 25°C 100%  U                      1993BCc (17467)  65
                                         K3=2.33
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 20°C 0.10M U        K1=2.68   B2=4.83   1964PSd (18425)  66
                                         K3=1.7
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      ix  R4N.X  25°C 0.05M C        K1=6.04   B2=10.58  2001SBf (18947)  67
                                         K(Lu+HL)=2.28
Medium: 0.05 M NH4NO3. At I=0, K1=6.96, B2=11.77.
--------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C  1.0M U    M                1988KTa (18948)  68
                                         K(Lu(edta)+L)=4.50
--------------------------------------------------------------------------------
Lu+++      sol NaClO4 20°C 1.00M U        K1=5.28   B2=9.53   1969GGa (18949)  69
                                         B3=12.74
                                         B4=14.68
--------------------------------------------------------------------------------
Lu+++      dis NaClO4 25°C  1.0M U        K1=5.11   B2=9.2    1964SEa (18950)  70
                                         B3=12.79
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 20°C 0.10M U        K1=2.05   B2=3.69   1962KPa (20042)  71
********************************************************************************
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
Lu+++	gl	NaClO4	20°C	0.10M	U			1964PKa (20342)	72
							K(Lu+HL)=2.01		
							K(LuHL+HL)=1.30		

****

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
Lu+++	gl	NaClO4	25°C	3.0M	C			2002TFa (20580)	73
							B(Lu2H-2L6)=1.20		
							B(Lu4H-6L8)=-12.0		
							B(Lu4H-7L8)=-21.0		
							B(Lu4H-8L8)=-30.2		
Lu+++	gl	KNO3	32°C	0.10M	U			1980PPf (20581)	74
							K(Lu+HL=LuL+H)=-0.17		
							*K(LuL)=-5.14		
							K(Lu+2HL=LuL2+2H)=-1.33		
							*K(LuL2)=-5.23		
Lu+++	gl	NaClO4	20°C	0.10M	U		K1=3.146 B2=5.48 B3=7.28	1964PKb (20582)	75

****

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
Lu+++	cal	oth/un	25°C	0.03M	U	H	K1=4.51	1981PBa (21604)	76
Lu+++	EMF	KCl	25°C	1.0M	U			1977GMa (21605)	77
							K(LuA+L)=4.26		
							K(LuA+HL)=2.97		
							K(LuA+H2L)=3.07		

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

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	sp	non-aq	25°C	100%	U			1992MBb (22108)	78
							K8=0.6		
							K9=0.4		

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

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	NaClO4	22°C	0.10M	U				1972MCd (22150)	79
							K(LuH-1L+H)=6.50			

****

C2H6O6P2 H4L (5706)
Ethene-1,1-diphosphonic acid; H2C:C(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	KCl	25°C	0.15M	U	I			1989AMa (22173)	80
							K(Lu+H2L)=4.93			

****

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
Lu+++	ISE	non-aq	25°C	100%	C	H	K1=3.11	B2=5.87	1992CBa (23188)	81
							B3=7.76			

Medium: DMSO, 0.10 M Et4NClO4. By calorimetry, DH(K1)=-22.2, DH(B2)=-49.1, DH(B3)=-82.2 kJ mol-1.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	nmr	NaClO4	25°C	2.00M	U	H	K1=1.83		1980CCa (24058)	82

DH=-4.01 kJ mol-1. Alternative method: Calorimetry.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	NaClO4	25°C	1.00M	U		K1=3.917	B2=6.407	1987MOa (24490)	83
							B(LuHL)=6.38			
Lu+++	gl	NaClO4	25°C	0.10M	U		K1=4.84	B2=8.00	1972DCc (24491)	84
Lu+++	gl	NaClO4	25°C	1.00M	U		K1=3.88	B2=6.42	1971DGa (24492)	85
							B3=7.88			
							B(LuHL)=6.25			
							B(LuHL2)=9.51			
Lu+++	ix	NaClO4	25°C	0.15M	U				1968KKc (24493)	86

```
                                        K(Lu+HL)=2.2
                                        K(LuHL+HL)=1.1
--------------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M U        K1=4.45   B2=7.13   1968PFa (24494)  87
--------------------------------------------------------------------------------
Lu+++      gl  oth/un 25°C  ->0  U T H    K1=4.28        1956GNb (24495)  88
K1=4.15(35 C). DH(K1)=-22 kJ mol-1
********************************************************************************
C3H4O6                H2L                      CAS 560-27-0  (4233)
Dihydroxypropanedioic acid; HOOC.C(OH)2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.20M U        K1=3.65        1973LPb (24629)  89
********************************************************************************
C3H5NO2                HL                        (4234)
Isonitrosoacetone; CH3.CO.CH:N.OH, anti-Pyruvic aldehyde oxime
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  diox/w 20°C  50%  U        K1=6.11        1971MAf (24646)  90
Medium: 50% dioxan, 0.1 M NaClO4
********************************************************************************
C3H6N2O2               L    Methylglyoxime   CAS 2140-03-6  (2981)
Methylglyoxime; CH3.C(:N.OH).CH:N.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  diox/w 20°C  50%  U        K1=7.27   B2=13.27  1971MAf (24808)  91
Medium: 50% dioxan, 0.1 M NaClO4
********************************************************************************
C3H6O2                 HL    Propionic acid   CAS 79-09-4  (35)
Propanoic acid; CH3.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C  2.0M U        K1=1.66   B2=2.78   1965CGa (25019)  92
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 20°C 0.10M U        K1=2.00   B2=3.53   1964PKa (25020)  93
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 2.00M U                         1968CMa (25156)  94
                                        K(Lu+HL)=1.51
********************************************************************************
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
Lu+++	gl	NaClO4	25°C	2.00M	U		K(Lu+HL)=1.49	1968CMa (25218)	95

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
Lu+++	gl	NaClO4	25°C	2.00M	U		K1=1.40	1969JCc (25271)	96

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
Lu+++	gl	KNO3	30°C	0.10M	U		K(Lu+HL=LuL+H)=0.48 *K(LuL)=-4.47 K(Lu+2HL=LuL2+2H)=-0.60 *K(LuL2)=-3.84	1983MPc (25476)	97
Lu+++	EMF	alc/w	25°C	20%	U	I	K1=4.39	1973LSa (25477)	98

Also in 0% and 30% EtOH and in 0.05 M NaClO4 in 0%, 20% and 30% EtOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	NaClO4	25°C	0.10M	U		K1=3.40 B2=5.82 B3=7.9	1966GGb (25478)	99
Lu+++	gl	NaClO4	25°C	0.20M	U		K1=3.05 B2=5.56 K3=1.41 K4=0.86	1964DVa (25479)	100
Lu+++	gl	NaClO4	20°C	0.10M	U		K1=3.273 B2=5.88 B3=7.78	1964PKb (25480)	101

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
Lu+++	gl	NaClO4	20°C	0.10M	U		K1=2.09 B2=3.37	1964PKa (25603)	102

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
Lu+++	gl	KNO3	25°C	0.10M	U		K1=4.8	1967EMb (26203)	103

****
C3H7NO2 HL Sarcosine CAS 107-97-1 (87)
N-Methyl-2-aminoethanoic acid; CH3.NH.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ nmr oth/un ? 0.10M U 1971KOb (26605) 104
K(Lu+HL)=0.90
Medium: 0.1HL, 0.1 LuCl3
****
C3H7NO3 HL Serine CAS 56-45-1 (49)
2-Amino-3-hydroxypropanoic acid; H2N.CH(CH2.OH)COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl oth/un 25°C 0.10M U K1=3.98 1965PGe (27149) 105
****
C3H8O2 L Propyleneglycol CAS 57-55-6 (2025)
Propan-1,2-diol; CH3.CH(OH).CH2(OH)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 22°C 0.10M U 1972MCd (27680) 106
K(LuH-1L+H)=6.40
****
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
---
Lu+++ gl NaClO4 22°C 0.10M U 1972MCd (27740) 107
K(LuH-1L+H)=6.30

Lu+++ gl NaCl 25°C 0.10M U 1970PKe (27741) 108
K(LuH-1L+H)=6.50
****
C3H12NO9P3 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
---
Lu+++ gl KNO3 25°C 0.10M C 1991SKb (28575) 109
K(LuL+H)=6.90
****
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
---
Lu+++ cal NaClO4 25°C 0.10M U H K1=2.68 B2=4.03 1976OCa (28656) 110

DH(K1)=10.3 kJ mol-1, DS=86 J K-1 mol-1; DH(B2)=16.3, DS=132

Lu+++ gl NaClO4 25°C 0.10M C H K1=2.676 B2= 4.04 1976OCb (28657) 111
By calorimetry: DH(K1)=10.3 kJ mol-1, DS(K1)=85.8 J K-1 mol-1;
DH(B2)=16.3, DS(B2)=132.
****
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
---
Lu+++ gl oth/un 25°C 0.10M U K1=2.710 1987TSb (28892) 112
****
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
---
Lu+++ gl oth/un 25°C 0.10M U T H K1=4.65 1987TSb (28916) 113
30 C:K=4.02; 35 C: 3.55. DH=-170 kJ mol-1, DS=-518 J K-1 mol-1
****
C4H4O4 H2L Maleic acid CAS 110-16-7 (111)
cis-Butenedioic acid; HOOC.CH:CH.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 0.10M U K1=3.59 1973CDc (29101) 114

Lu+++ gl NaClO4 25°C 0.10M U K1=3.60 B2=5.68 1970RFa (29102) 115
****
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
---
Lu+++ cal NaClO4 25°C 0.10M C K1=2.47 1986LCa (29208) 116
B(LuHL)=5.98
K(Lu+HL)=1.90

Lu+++ gl NaClO4 25°C 0.10M U K1=2.81 1973CDc (29209) 117
****
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
---
Lu+++ gl oth/un 25°C ? U K1=5.9 B2=10.6 1956GNc (29272) 118
****
C4H6O2 HL Methylacrylic (6992)
2-Methylpropenoic acid; CH2:C(CH3)COOH

```
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.10M U        K1=2.32        1995PAa (29701) 119
*******************************************************************************
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
-------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M M   H    K1=3.31        1986CDb (29993) 120
DH=17.3 kJ mol-1, DS=121 J K-1 mol-1
-------------------------------------------------------------------------------
Lu+++      ix  NaClO4 25°C 0.15M U                       1968KKc (29994) 121
                                       K(Lu+HL)=1.76
                                       K(LuHL+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
-------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.20M U        K1=4.39   B2=7.00   1975PLa (30129) 122
*******************************************************************************
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
-------------------------------------------------------------------------------
Lu+++      gl  KNO3   20°C 0.10M U                       1980SDa (30671) 123
                                       B(LuHL)=7.37
-------------------------------------------------------------------------------
Lu+++      gl  KNO3   20°C 0.10M U        K1=4.98   B2=8.23   1980SDb (30672) 124
-------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M U        K1=5.08   B2=8.67   1970RFa (30673) 125
*******************************************************************************
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
-------------------------------------------------------------------------------
Lu+++      EMF NaClO4 20°C 1.00M U        K1=5.79   B2=10.75  1972GOa (30894) 126
                                       B3=13.42
-------------------------------------------------------------------------------
Lu+++      cal NaClO4 25°C  1.0M C   H                  1963GRd (30895) 127
DH(K1)=5.146 kJ mol-1, DS(K1)=126 J K-1 mol-1; DH(B2)=3.27,
DS(B2)=213; DH(B3)=-15.98, DS(B3)=198.
-------------------------------------------------------------------------------
Lu+++      EMF NaClO4 20°C 1.00M U        K1=5.64   B2=10.55  1963GTa (30896) 128
                                       B3=13.16
```

Method: quinhydrone electrode

****

C4H6O6 H2L L-Tartaric acid CAS 87-69-4 (92)

L-Tartaric acid, L-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	sp	oth/un	25°C	0.0	U	T H	K1=5.30		1975YBa (31298)	129
DH(K1)=8.4 kJ mol-1, DS=125.5 J K-1 mol-1										
Lu+++	gl	alc/w	25°C	40%	U	I	K1=5.40		1972SSj (31299)	130
Medium: 0-40% EtOH, 0.05 M. 40% EtOH, I=0: K1=6.82										
Lu+++	gl	KCl	24°C	0.20M	U		K1=3.76		1966DDa (31300)	131

****

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
Lu+++	gl	NaClO4	21°C	0.10M	M			B(LuHL)=12.71	1987WLa (31882)	132
Lu+++	gl	NaClO4	30°C	0.10M	U		K1=6.07	B2=10.90	1984YLa (31883)	133
Lu+++	gl	KCl	25°C	0.10M	U		K1=6.25	B2=11.58	1968DRb (31884)	134

****

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
Lu+++	gl	KCl	25°C	1.0M	U	M		K(Lu(edta)+L)=2.31	1988KTa (32299)	135
Lu+++	EMF	KCl	25°C	1.0M	U	M		K(LuA+L)=4.60 K(LuA+H2L)=0.70 K(LuA+H3L)=1.99	1977GMa (32300)	136
Method: Pt/H2 electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-triethanoic acid.										
Lu+++	gl	NaClO4	25°C	1.00M	U		K1=7.06	B2=12.87 B3=16.15 B(LuHL)=10.60 B(LuH2L)=12.71	1972GGa (32301)	137
Lu+++	cal	KNO3	20°C	0.10M	U	HM		K(LuA+L)=2.51	1971GKb (32302)	138
DH(LuA+L)=-16.74 kJ mol-1, DS=-9.2 J K-1 mol-1. DH(LuAL)=-27.24, DS=335.										

H4A=EDTA

Lu+++ gl KNO3 25°C 0.10M U M K1=7.61 B2=13.73 1962THa (32303) 139

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
Lu+++	gl	diox/w	20°C	50%	U		K1=8.53	B2=15.86	1971MAf (32544)	140

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
Lu+++	gl	NaClO4	21°C	0.10M	M				1987WLa (32708)	141
							B(LuH-1L)=-3.71			
Lu+++	gl	NaClO4	30°C	0.10M	U		K1=4.39	B2=7.47	1984YLa (32709)	142

****

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
Lu+++	gl	KCl	60°C	0.10M	U		K1=6.44	B2=11.14	1978NBa (33088)	143
							B3=8.83			

****

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
Lu+++	gl	NaClO4	25°C	2.00M	U	H	K1=1.65	B2=2.77	1965CGa (33236)	144

By calorimetry: DH(K1)=22.6 kJ mol-1, DS=106.6 J K-1 mol-1;DH(K2)=15.5,DS=73

Lu+++	gl	NaClO4	25°C	0.50M	U		K1=1.81	B2=2.32	1964SPa (33237)	145

****

C4H8O3 HL CAS 594-61-6 (81)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	NaClO4	25°C	0.20M	U		K1=3.18	B2=6.05	1964DVa (33487)	146
							K3=2.03			
							K4=1.92			

```
Lu+++      gl  NaClO4 20°C 0.10M U        K1=3.665  B2=6.47   1964PKb (33488) 147
                                         B3=8.82
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.50M U        K1=3.21   B2=5.85   1964SPa (33489) 148
                                         B3=8.21
********************************************************************************
C4H8O4                 HL                     CAS 21620-60-0  (2326)
2,3-Dihydroxy-2-methylpropanoic acid; HO.CH2.C(OH)(CH3).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M C        K1=3.30   B2=5.90   1975PFb (33682) 149
                                         K3=1.85
********************************************************************************
C4H8O5                 HL                     CAS 56309-80-9  (2365)
2,3-Dihydroxy-2-hydroxymethylpropanoic acid; HO.CH2.C(CH2.OH)(OH).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      EMF KNO3   25°C 0.10M U        K1=3.16   B2=5.74   1976PKb (33705) 150
                                         K3=2.08
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.50M U        K1=2.94   B2=5.19   1964SPa (33706) 151
                                         B3=6.90
********************************************************************************
C4H11N                  L    Butylamine       CAS 109-73-9  (159)
1-Aminobutane; CH3.CH2.CH2.CH2.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      cal non-aq 25°C 100%  U   H    K1=4.31   B2=7.78   1997CDa (34770) 152
                                         B3=9.90
                                         B4=11.46
Medium: MeCN. DH(K1)=-35.2 kJ mol-1, DS=36, DH(B2)=-69.2, DS=83;
DH(B3)=-106, DS=166, DH(B4)=-128, DS=209
********************************************************************************
C4H11O4P               HL                       (4276)
Diethylphosphoric acid; (C2H5O)2.PO.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      kin oth/un 25°C       U        K1=2.35        1971MGb (35262) 153
********************************************************************************
C4H12N2O                L                      CAS 2752-17-2  (312)
Bis-(2-aminoethyl)ether; H2N.CH2.CH2.O.CH2.CH2.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      EMF non-aq 25°C 100%  C   H    K1=2.82   B2= 4.79  2002CDb (35507) 154
Method: comp. reactn. using Ag electrode. Medium: DMSO, 0.10 M Et4NClO4.
```

Calorimetry: DH(K1)=-17 kJ mol-1, DS=-3 J K-1 mol-1; DH(B2)=-37, DS=-23.

****

C4H13N3 L Dien CAS 111-40-0 (584)

1,4,7-Triazaheptane, 2,2'Iminobis(ethylamine), diethylenetriamine;

NH2.(CH2)2.NH.(CH2)2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	EMF	NaClO4	25°C	100%	C	H	K1=6.87	B2=11.20	2000CDa (35795)	155

Medium: DMF, 0.10 M Et4N[CF3SO3]. Method: Ag/Ag+ electrode.

By calorimetry: DH(K1)=-51.6, DH(B2)=-101.6 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	ISE	non-aq	25°C	100%	C	H	K1=4.40	B2=7.83	1993CCb (35796)	156

Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-40.5 kJ mol-1, DS=-52; DH(B2)=-84.9, DS-135.

****

C4H14N2O6P2 H2L EDDPO CAS 1733-49-9 (2435)

1,2-Diaminoethane-N,N'-bis(methylenephosphonic) acid; (H2O3P.CH2.NH.CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	KCl	25°C	0.10M	U				1965DKb (35885)	157
							K(Lu+HL) > 8.79			

****

C5H2O5 H2L Croconic acid CAS 488-86-8 (1643)

4,5-Dihydroxycyclopent-4-ene-1,2,3-trione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	cal	NaClO4	25°C	0.10M	U	H	K1=2.91	B2=4.45	1978COa (35945)	158

DH(K1)=10.8 kJ mol-1, DS=92.0; DH(K2)=9.91, DS=62.7

****

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
Lu+++	cal	NaClO4	25°C	1.0M	C	H			1990YKb (36060)	159

DH(K1)=0.14 kJ mol-1, DS(K1)=57.5 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	EMF	NaClO4	25°C	1.0M	C		K1=2.98	B2= 5.13	1983KKb (36061)	160
							B3=7.07			

Method: Pt/quinhydrone electrode.

****

C5H4O3 HL CAS 488-93-7 (1166)

Furan-3-carboxylic acid; C4H3O.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	cal	NaClO4	25°C	2.00M	U	H	K1=1.45		1976YCa (36307)	161

DH=9.79 kJ mol-1 and DS=60.67 J mol-1 K-1.

****

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
Lu+++	gl	diox/w	25°C	50%	M	I	K1=6.07	B2=11.21	1994SSa (37067)	162
							K3=3.91			

Medium: 50% dioxan, I=0 corr. At 35 C: K1=5.96, K2=5.13, K3=3.77

****

C5H6O4 H2L Itaconic acid CAS 97-65-4 (398)

Methylenesuccinic acid; HOOC.CH2.C(:CH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	KCl	25°C	0.20M	U		K1=2.80		1989MFa (37429)	163
							K(Lu+HL)=1.65			

****

C5H7NO3 HL (4313)

Isonitrosoacetylacetone; HO.N:CH.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	diox/w	20°C	50%	U		K1=5.33	B2=8.83	1971MAf (37529)	164

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
Lu+++	gl	diox/w	20°C	50%	U		K1=6.30	B2=11.31	1971MAf (37706)	165

****

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
Lu+++	gl	KCl	25°C	0.10M	U		K1=6.04	B2=10.73	1995PAa (38015)	166
							K3=3.59			
Lu+++	dis	NaClO4	25°C	1.0M	C		B2=10.58		1989ALa (38016)	167
							B3=13.81			
							B4=15.60			

Method: extraction of 177Lu from 1.0 M NaClO4 into benzene/HL.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	NaClO4	20°C	0.10M	U	M			1973TZa (38017)	168
							K(Lu(EDTA)+L)=3.68			

```
Lu+++      gl  alc/w    ?   50%  U  I     K1=7.34        1971KOa (38018) 169
Medium: 5-80% MeOH, 0.005 LuCl3, 0.005 HL. K1(5%)=6.25, K1(80%)=8.59
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C  2.0M U        K1=5.98   B2=10.76  1964YCa (38019) 170
--------------------------------------------------------------------------------
Lu+++      gl  oth/un 30°C 0.10M U        K1=6.23   B2=11.00  1960GFa (38020) 171
                                         K3=3.63
********************************************************************************
C5H8O4                H2L                      CAS 601-75-2  (479)
Ethylpropanedioic acid; HOOC.CH(C2H5).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.20M U        K1=4.47        1989ZPa (38245) 172
In 70.4% v/v EtOH/H2O: K1 = 6.32
********************************************************************************
C5H8O4                H2L                      CAS 498-21-5  (2234)
Methylsuccinic acid; HOOC.CH2.CH(CH3).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M U        K1=3.07   B2=5.13   1970RFa (38265) 173
********************************************************************************
C5H8O4                H2L    Glutaric acid    CAS 110-94-1  (420)
Pentanedioic acid; HOOC.CH2.CH2.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M M   H    K1=3.16        1986CDb (38331) 174
DH=19.0 kJ mol-1, DS=124 J K-1 mol-1
********************************************************************************
C5H8O7                H2L                      CAS 40120-71-6  (3022)
2,3,4-Trihydroxypentanedioic acid, Trihydroxyglutaric acid; HOOC.(CH(OH))3.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  KCl    24°C 0.20M U        K1=4.04        1966DDa (38431) 175
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M U        B2=6.15        1981ZLa (38627) 176
********************************************************************************
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
--------------------------------------------------------------------------------
```

Lu+++ gl NaClO4 25°C 0.10M U B2=5.63 1981ZLa (38741) 177
****
C5H9NO4 H2L MIDA CAS 4408-64-4 (190)
N-Methyliminodiethanoic acid; CH3.N(CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl KCl 25°C 0.10M U K1=7.34 B2=13.43 1980MGc (39260) 178
B3=15.41
B(Lu+2OH+L)=18.86

Lu+++ nmr oth/un 25°C 1.00M U K1=7.07 1972KNb (39261) 179
****
C5H10O3 HL CAS 3739-30-8 (3612)
2-Hydroxy-2-methylbutanoic acid, Methylethylglycolic acid; CH3.CH2.C(OH)(CH3)COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl KNO3 25°C 0.10M U K1=3.45 B2=6.30 1969PCa (40258) 180
K3=2.05
****
C5H10O3 HL CAS 617-31-2 (474)
2-Hydroxypentanoic acid; CH3.CH2.CH2.CH(OH).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 1.0M U K1=2.76 1968GCa (40282) 181
****
C5H10O4 HL CAS 4767-03-7 (4297)
2,2-Bis(hydroxymethyl)propanoic acid; CH3.C(CH2OH)2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 0.10M U K1=2.34 B2=3.97 1970RDa (40300) 182
****
C5H10O4 HL CAS 19860-56-1 (2327)
2,3-Dihydroxy-2-methylbutanoic acid; CH3.CH(OH).C(OH)(CH3).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl KNO3 25°C 0.10M C K1=3.25 B2=5.83 1975PFb (40315) 183
K3=1.78
****
C5H11NO2 HL Valine CAS 72-18-4 (43)
2-Amino-3-methylbutanoic acid; H2N.CH(CH(CH3)2)COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ cal oth/un 25°C 0.03M U H K1=4.30 1981PBa (40727) 184

```
Lu+++      gl  KCl    25°C 0.10M U T      K1=4.30        1974BFa (40728) 185
********************************************************************************
C5H11NS2               HL                      CAS 147-84-2  (2126)
Diethyldithiocarbamic acid; (CH3.CH2)2N.CSSH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      sp  non-aq   ?  100%  U    M                  1968SRg (41356) 186
                                          K(Lu(HA)3+3HL=LuL3+3H2A)=4.75
Medium: CCl4.  H2A=dithizone
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 20°C 0.10M U        K1=5.36        1987EGb (42561) 187
Soln. contains 0.5 M t-butanol
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.50M U        K1=4.09   B2=7.47   1977GGb (42562) 188
                                         B3=10.00
--------------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M U        K1=4.41   B2=8.27   1968PIa (42563) 189
                                         K3=2.98
                                         K4=2.23
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C  2.0M U        K1=4.54   B2=7.65   1965YCa (42564) 190
--------------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M U        K1=4.45   B2=8.20   1964THb (42565) 191
                                         B3=11.4
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.20M U        K1=2.19        1973FDa (42675) 192
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  R4N.X  25°C 0.10M C        K1=1.46        1990CBe (42812) 193
********************************************************************************
C6H5NO3               HHL                      CAS 824-40-8  (878)
Pyridine-2-carboxylic acid N-oxide (Picolinic acid N-oxide); C5H4N(O)COO
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

Lu+++ gl NaClO4 25°C 2.0M U K1=3.48 B2=6.32 1965YCa (42836) 194
****
C6H5NO4 H2L 4-Nitrocatechol CAS 3316-09-4 (890)
1,2-Dihydroxy-4-nitrobenzene; O2N.C6H3(OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl KNO3 25°C 0.10M C K1=9.2 1988ZKa (42932) 195
B(Lu2L3)=19.0
****
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
---
Lu+++ sp KCl 25°C 0.10M M I K1=6.45 1989PEa (42956) 196
****
C6H5O4Br L CAS 40838-32-2 (1084)
6-Bromo-5-hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ sp KCl 25°C 0.10M U K1=5.64 1987PLa (43112) 197
****
C6H5O4I L (1085)
6-Iodo-5-hydroxy-2-hydroxymethyl-4H-pyran-4-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ sp KCl 25°C 0.10M U K1=5.71 1987PLa (43154) 198
****
C6H6O2 H2L Catechol CAS 120-80-9 (534)
1,2-Dihydroxybenzene, pyrocatechol; HO.C6H4.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ EMF NaCl 25°C 0.10M U K1=11.31 1969PKe (43784) 199
****
C6H6O4 HL Kojic acid CAS 501-30-4 (1800)
5-Hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ sp KCl 25°C 0.10M C I K1=6.334 1987PEa (44227) 200
In 0.087 M KCl, K1=6.346.

Lu+++ gl NaClO4 25°C 2.0M U K1=6.24 B2=11.84 1964YCa (44228) 201
****
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
Lu+++	gl	KNO3	25°C	0.10M	C		K1=14.0 K(LuL+H)=5.8	1988ZKa (44468)	202
Lu+++	gl	NaClO4	25°C	0.50M	C		K1=13.29 B2=22.86 B(LuHL2)=30.29	1976LAb (44469)	203

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
Lu+++	gl	diox/w	25°C	50%	M	I	K1=6.15 B2=11.48 K3=4.06	1994SSa (45188)	204

Medium: 50% dioxan, I=0 corr. At 35 C: K1=6.01, K2=5.28, K3=3.84

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
Lu+++	gl	KCl	25°C	0.20M	U		K1=4.03	1989ZPa (45471)	205

In 70.4% v/v EtOH/H2O: K1 = 5.98

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
Lu+++	gl	NaClO4	25°C	2.00M	U	IH	K(Lu+HL)=1.32	1988HSa (45646)	206

DH=5.4 kJ mol-1, DS=43.8 J K-1 mol-1
In 0.1 M NaClO4: K=1.7, DH=4.4 kJ mol-1, DS=49 J K-1 mol-1

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
Lu+++	gl	KNO3	25°C	0.10M	U	M	B(Lu(IDA)L)=9.4	1975TDa (46161)	207
Lu+++	dis	NaClO4	25°C	0.15M	U		K(Lu+HL+L)=11.82	1973HHc (46162)	208
Lu+++	gl	alc/w	25°C	25%	U	I	K1=8.98	1972BKd (46163)	209

Medium: EtOH/H2O, 0.05 M (NaCl,NaClO4). 0%, K1=8.12, 50%=10.08

Lu+++ ix NaCl 25°C 0.10M U K1=7.62 B2=13.00 1972OOa (46164) 210
K(Lu+HL)=5.66
K(LuHL+HL)=9.10

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	ISE	NaClO4	25°C	0.10M	C	I	K1=12.25	1997LBb (46898)	211

Method: Cu ISE and competitive complexation by Cu. Data for 0.1-5.0 M.
At I=0.0 M, K1=14.10.

Lu+++	ISE	KNO3	25°C	0.10M	C		K1=12.45	1980NSf (46899)	212

Competitive method using Cd ion-selective electrode.

Lu+++	gl	KNO3	20°C	1.0M	C		K2=8.60	1978GHb (46900)	213

Lu+++	gl	NaClO4	25°C	0.50M	U		K1=12.12	1977GGb (46901)	214

Lu+++	EMF	KCl	25°C	1.0M	U	M		1977GMa (46902)	215

K(LuA+L)=5.25
K(LuA+H2L)=1.40
K(LuA+H3L)=2.01
K(LuA+H4L)=3.04

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

Lu+++	cal	KNO3	20°C	0.10M	U	HM		1971GKb (46903)	216

K(LuA+L)=2.81

H4A=EDTA. DH(LuA+L)=-15.06 kJ mol-1, DS=2.5 J K-1 mol-1.
DH(LuLA)=-25.6 kJ mol-1, DS=346 J K-1 mol-1

Lu+++	nmr	oth/un	25°C	?	U	M		1971KTe (46904)	217

K(LuL+EDTA)=2.30

Lu+++	gl	oth/un	20°C	0.20M	U			1970VMa (46905)	218

B(LuL(OH))=6.87

Lu+++	gl	KNO3	25°C	0.10M	U	T H T	K1=12.49 B2=21.91	1962MFb (46906)	219

15 C: K1=12.48,K2=9.49; 20 C: 12.47,9.44; 30 C:12.55,9.44; 35 C: 12.54,9.39;
40 C: 12.58,9.41. DH(K1)=8.3 kJ mol-1,DS=266 J K-1 m-1; DH(K2)=-4.6, DS=165

Lu+++	vlt	KNO3	20°C	0.10M	U			1957NOa (46907)	220

B(Lu2L3)=38.81

****

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

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

```
--------------------------------------------------------------------------------
Lu+++      cal oth/un 25°C 0.03M U   H    K1=3.77        1981PBa (47576) 221
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M U        K1=3.221  B2=5.94   1966PRb (47992) 222
                                         K3=2.15
                                         K4=1.54
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M M   H    K1=3.09        1986CDb (48077) 223
DH=18.4 kJ mol-1, DS=121 J K-1 mol-1
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      oth NaClO4 25°C 0.10M U        K1=4.84        1984AFa (48344) 224
Laser excitation spectroscopy, competition method
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M U    M   K1=4.68        1997PPb (48479) 225
                                           K(Lu(edta)+L)=4.30
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  KNO3   20°C 1.00M U        K1=8.62   B2=16.45  1974CMd (48756) 226
                                         K(LuL2(OH)+H)=9.04
--------------------------------------------------------------------------------
Lu+++      oth NaNO3  20°C 0.10M U    M   K1=9.1    B2=17.05  1966JMc (48757) 227
Method: paper electrophoresis. Mixed complexes with HEDTA
--------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.10M U        K1=9.40   B2=16.38  1965DTa (48758) 228
--------------------------------------------------------------------------------
Lu+++      ISE KNO3   25°C 0.10M U        K1=9.50   B2=17.52  1963TLa (48759) 229
```

****

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
Lu+++	gl	R4N.X	25°C	0.10M	C		K1=9.09		1988CCb (49250)	230
Lu+++	gl	KNO3	25°C	0.10M	U		K1=9.09	B2=17.57	1962THb (49251)	231

****

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
Lu+++	gl	KNO3	25°C	0.10M	U		K1=3.58	B2=6.05	1979PPa (49496)	232
							K3=1.30			

****

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
Lu+++	EMF	alc/w	25°C	80%	U	I	K1=6.05		1966KRb (49735)	233

Medium: 80% MeOH. K1=5.09(50%)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	KCl	25°C	0.20M	U		K1=2.72	B2=4.78	1963KOc (49736)	234

****

C6H13NO2 HL CAS 60-32-2 (1846)
6-Aminohexanoic acid; H2N.CH2.CH2.CH2.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	KCl	20°C	0.20M	U		K1=5.13	B2=9.60	1990PLa (50219)	235

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	KNO3	20°C	0.10M	U		K1=5.46	B2=9.76	1982RFa (50382)	236
Lu+++	gl	alc/w	20°C	50%	U	I	K1=6.70		1970KRa (50383)	237

Medium: 0-80% MeOH, 0.03 M KCl. K1(0%)=5.46, K1(20%)=6.10, K1(80%)=7.86

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	oth	NaNO3	20°C	0.10M	U		K1=7.5	B2=13.50	1966JMc (50384)	238

Method: paper electrophoresis

****

C6H15N3O3 L (6613)
1,3,5-Triamino-1,3,5-trideoxy-cis-inositol,5-Amino-5-deoxy-streptamine;

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------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.10M C                          1998HGa (51453) 239
                                          B(LuH-6L2)=-11.3
******************************************************************************
C6H18N4                 L    Tren             CAS 4097-89-6  (817)
2,2',2''-Triaminotriethylamine; (H2N.CH2.CH2)3N
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Lu+++      ISE non-aq 25°C 100%  C   H    K1=6.16   B2=8.02   1993CCb (52202) 240
Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-61.1
kJ mol-1, DS=-87; DH(B2)=-88.7, DS=-144.
******************************************************************************
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
------------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M C                          1991SKb (52348) 241
                                          K(LuL+H)=7.42
                                          K(LuHL+H)=5.9
******************************************************************************
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
------------------------------------------------------------------------------
Lu+++      gl  oth/un 24°C 0.20M U       K1=5.51            1972PSd (52489) 242
Medium: LiCl
******************************************************************************
C7H5NO4               H2L    Dipicolinic aci  CAS 449-83-2  (418)
2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Lu+++      cal NaClO4 25°C 0.50M C   H                     1963GRd (52786) 243
DH(K1)=-9.17 kJ mol-1, DS(K1)=142 J K-1 mol-1; DH(B2)=-25.08,
DS(B2)=236; DH(B3)=-52.96, DS(B3)=231.
------------------------------------------------------------------------------
Lu+++      EMF oth/un 20°C 0.50M U       K1=9.03   B2=16.80  1961GRa (52787) 244
                                         K3=4.68
******************************************************************************
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
------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M C   H    K1=1.64           1986CLc (52869) 245
```

DH=9.0 kJ mol-1, DS=62 J K-1 mol-1
****
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
---
Lu+++ gl NaClO4 25°C 0.10M M H K1=1.67 1999YKa (52910) 246
By calorimetry: DH(K1)=8.87 kJ mol-1, DS(K1)=61.7 J K-1 mol-1.
****
C7H5O2F HL CAS 445-29-4 (5711)
3-Fluorobenzoic acid; F.C6H4.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 0.10M C H K1=1.80 1986CLc (53238) 247
DH=9.2 kJ mol-1, DS=65 J K-1 mol-1
****
C7H5O2F HL CAS 456-22-4 (5710)
4-Fluorobenzoic acid; F.C6H4.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 0.10M C H K1=1.89 1986CLc (53258) 248
DH(K1)=11.8 kJ mol-1, DS=76 J K-1 mol-1
****
C7H5O6BrS H2L (1626)
3-Bromo-5-sulfosalicylic acid; Br.C6H2(OH)(COOH).SO3H

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 0.10M C H T 1993ALa (53371) 249
B(1,1,1)=12.33
B(1,0,1)=7.56
B(1,0,2)=13.42
B(1,-1,1)=0.42
B(p,q,r); pLu+qH+rL=(Lu)pHqLr. B(1,-2,1)=-6.85.
****
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
---
Lu+++ gl KNO3 25°C 0.10M U K1=7.69 B2=14.33 1969CMb (53680) 250
K3=5.44
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
-------------------------------------------------------------------------
Lu+++      cal NaClO4 25°C 0.10M U   H    K1=1.92   B2=3.77   1982CBc (53841) 251
DH1= 11.5 kJ mol-1, DS1= 76 J K-1 mol-1
-------------------------------------------------------------------------
Lu+++      gl  alc/w  25°C  99%  U        K1=6.32   B2=11.82  1974BPb (53842) 252
                                        K3=3.28
*************************************************************************
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
-------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C  0.1M C   H                    1996HYa (54255) 253
By calorimetry: DH(K1)=2.98 kJ mol-1, DH(B2)=18.58 J K-1 mol-1
-------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C  0.1M C   H                    1996HYa (54256) 254
By calorimetry: DH(K1)=3.61 kJ mol-1, DH(B2)=9.46 J K-1 mol-1
-------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M C      T                 1989HMa (54257) 255
                                        K(Lu+HL)=1.65
                                        K(LuHL+HL)=2.10
-------------------------------------------------------------------------
Lu+++      ix  mixed  20°C  50%  U                        1976TRa (54258) 256
                                        K(Lu+HL)=2.53
                                        K(Lu+2HL)=4.27
                                        K(Lu+3HL)=5.86
Medium: 50% v/v acetone/H2O, 0.25 M NaClO4
-------------------------------------------------------------------------
Lu+++      gl  alc/w  25°C 100%  U        K1=5.82   B2=10.69  1973BPd (54259) 257
                                        K3=3.79
Medium: 99.9% MeOH, 0.1 M NaCl
*************************************************************************
C7H6O3               H2L                    CAS 99-06-9  (1370)
3-Hydroxybenzoic acid; HO.C6H4.COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M C                       1988LLa (54384) 258
                                        K(Lu+HL)=1.94
-------------------------------------------------------------------------
Lu+++      gl  alc/w  25°C  99%  U        K1=6.70   B2=12.29  1974BPb (54385) 259
                                        K3=3.43
*************************************************************************
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
-------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M M   H    K1=1.61           1999YKa (54425) 260
```

By calorimetry: DH(K1)=12.03 kJ mol-1, DS(K1)=71.2 J K-1 mol-1.

Lu+++ gl NaClO4 25°C 0.10M C 1988LLa (54426) 261
K(Lu+HL)=2.10

Lu+++ gl alc/w 25°C 99% U K1=6.68 B2=12.72 1974BPb (54427) 262
K3=3.45

****

C7H6O6S H3L CAS 5965-83-3 (399)
5-Sulfosalicylic acid, 2-Hydroxy-5-sulfobenzoic; HO3S.C6H3(OH).COOH

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

---

Lu+++ gl NaClO4 20°C 1.0M U K1=7.33 B2=13.30 1972CBb (55021) 263

Lu+++ sp NaClO4 20°C 0.10M U K1=8.43 B2=15.46 1968KTb (55022) 264
K(Lu+HL)=2.47

****

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

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

---

Lu+++ gl NaClO4 25°C 0.50M C T K1=8.86 B2=14.85 1976LAc (55098) 265

****

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

---

Lu+++ gl NaClO4 25°C 0.10M C K1=2.22 B2=4.53 1989HMa (55241) 266

Lu+++ gl NaClO4 25°C 0.10M U H K1=4.67 1982KYc (55242) 267
By calorimetry, DH(K1)=9.75 kJ mol-1, DS(K1)=122.13 J K-1 mol-1.

Lu+++ gl non-aq 25°C 100% U K1=7.29 B2=13.57 1970BBh (55243) 268
K3=3.83
K4=2.49
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

---

Lu+++ gl NaClO4 25°C 0.10M M H K1=1.96 1999YKa (55386) 269
By calorimetry: DH(K1)=12.60 kJ mol-1, DS(K1)=79.8 J K-1 mol-1.

Lu+++ gl KCl 25°C 0.20M U K1=2.17 1977EBa (55387) 270

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	KCl	25°C	0.20M	M	T H	K1=9.11		1991BPb (55691)	271
							K(Lu+OH+L)=16.55			

DH(K1)=-133 kJ mol-1, DS(K1)=-272 J K-1 mol-1. DH(Lu(OH)L)=-246,
DS(Lu(OH)L)=-506. Also data for 35, 45 and 55 C.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	sp	KCl	25°C	0.10M	M	I	K1=6.76		1986PLb (56130)	272

****

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
Lu+++	sp	KCl	25°C	0.10M	M	I	K1=6.41		1986PLb (56149)	273

****

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
Lu+++	gl	KNO3	25°C	0.10M	U		K1=4.22	B2=6.65	1971PJb (56735)	274

****

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
Lu+++	gl	KNO3	25°C	0.10M	U		K1=6.71	B2=12.55	1963THb (56809)	275

****

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
Lu+++	gl	KNO3	25°C	0.1M	U		K1=9.44	1982KKc (56848)	276

****

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

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

Lu+++ gl KNO3 25°C 0.10M U K1=4.69 B2=7.40 1968PFa (57367) 277
****
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
---
Lu+++ gl NaCl 20°C 0.10M U K1=3.22 1977SSc (57406) 278
****
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
---
Lu+++ gl NaClO4 25°C 0.10M C K1=3.03 B2=4.86 1976SPa (57877) 279
****
C8H5N5O6 H3L Murexide (453)
Purpuric acid (Murexide is ammonium salt);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ sp KNO3 12°C 0.10M U 1965GEa (58521) 280
K(Lu+H2L)=3.45
****
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
---
Lu+++ cal non-aq 25°C 100% C H 2004MIa (58641) 281
Method: calorimetric titration. Medium: chloroform. DH(LuL3+A)=8.5 kJ
mol-1, DS=81 J K-1 mol-1; DH(LuL3+2A)=-11, DS=50. HA is benzoic acid.

Lu+++ gl alc/w 22°C 80% U K1=6.27 B2=11.87 1995MTa (58642) 282
K3=4.79
Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.

Lu+++ gl mixed 25°C 50% U K1=5.96 1980SBc (58643) 283
Medium: 50% MeCN

Lu+++ dis non-aq 25°C 100% U T M 1972KKd (58644) 284
K(LuL3+bpy)=6.49
K(LuL3+2bpy)=8.63
K(LuL3+A)=5.17
K(LuL3+2A)=6.88
Medium: benzene. K(LuL3+phen)=7.27, K(LuL3+2phen)=11.88. A=4,4'-dipyridyl.
Temperature range 15-35 C.

Lu+++ dis non-aq 25°C 100% U M 1972KKd (58645) 285
K(LuL3+bpy)=5.52

K(LuL3+2bpy)=8.86
Medium: CCl4

Lu+++ dis non-aq 25°C 100% U M 1972KKd (58646) 286
K(LuL3+bpy)=4.62
K(LuL3+2bpy)=7.70
Medium: CHCl3

Lu+++ dis non-aq 25°C 100% U M 1972KKd (58647) 287
K(LuL3+bpy)=5.99
K(LuL3+2bpy)=9.06
Medium: cyclohexane
****
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
---
Lu+++ cal NaClO4 25°C 0.10M U H K1=2.58 1982CBc (59056) 288
DH= 19.23 kJ mol-1, DS= 114 J K-1 mol-1
****
C8H7NO2 HL CAS 532-54-7 (4363)
Isonitrosoacetophenone, Phenylglyoxal 2-oxime;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl diox/w 20°C 50% U K1=6.53 B2=12.02 1971MAf (59104) 289
Medium: 50% v/v dioxan, 0.1 M NaClO4
****
C8H8N2O2 HL Phenylglyoxime (3222)
Phenylglyoxime; C6H5.C(:N.OH).CH:N.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl diox/w 20°C 50% U K1=7.43 B2=13.70 1971MAf (59339) 290
Medium: 50% dioxan, 0.1 M NaClO4
****
C8H8O2 HL Phenylacetic CAS 103-82-2 (1361)
Phenylethanoic acid; C6H5.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 0.1M C H K1=1.82 1996HYa (59554) 291
By calorimetry: DH(K1)=15.76 kJ mol-1

Lu+++ gl NaClO4 25°C 0.10M C H K1=1.82 1990HYa (59555) 292
By calorimetry: DH(K1)=15.8 J K-1 mol-1
****
C8H8O2 HL CAS 583-80-2 (3191)
beta-Methyltropolone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ sp alc/w ? 3% U K1=8.01 1967GDb (59600) 293
Medium: 3% EtOH, 0.2 M NaClO4
****
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
---
Lu+++ gl NaClO4 25°C 0.10M M H K1=1.88 1988CLb (59740) 294
DH=10.6 kJ mol-1, DS=72 J K-1 mol-1
****
C8H8O3 HL Mandelic Acid CAS 611-72-3 (80)
2-Phenyl-2-hydroxyethanoic acid; C6H5.CH(OH).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 0.10M C K1=3.25 B2=5.83 1989HMa (59848) 295

Lu+++ gl NaClO4 25°C 2.0M U T K1=2.77 1972DCb (59849) 296
****
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
---
Lu+++ gl NaClO4 25°C 0.10M M H K1=2.03 1988CLb (59914) 297
DH=11.9 kJ mol-1, DS=79 J K-1 mol-1
****
C8H8O3 HL p-Anisic acid CAS 100-09-4 (1373)
4-Methoxybenzoic acid; CH3O.C6H4.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 0.10M M H K1=2.01 1988CLb (59957) 298
DH=13.4 kJ mol-1, DS=84 J K-1 mol-1
****
C8H8O4 HL CAS 520-45-6 (4478)
3-Acetyl-2-hydroxy-6-methylpyran-4-one, Dehydroethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl diox/w 35°C 50% U K1=4.92 B2=8.50 1971MAa (60093) 299
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
Lu+++	gl	diox/w	35°C	50%	U		1971MAa (60499)		300
							K(Lu+HL)=4.90		
							K(Lu+2HL)=8.31		

Medium: 50% dioxan, 0.01 M NaClO4

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	alc/w	22°C	20%	U		K1=4.60 B2=8.28	1988ZTa (60851)	301
							K3=3.19		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KCl	30°C	0.10M	C		K1=5.90 B2=9.96	1996SZa (60871)	302

For the -5-en-2-exo isomer, K1=6.29, B2=11.34.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KCl	25°C	0.10M	U		K1=12.25 B2=18.97	1979BEb (61211)	303
							B(LuHL)=16.37		

****

C8H11O4P H2L (4536)
(alpha-Hydroxy-alpha-methylbenzyl)phosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	NaCl	25°C	0.10M	U			1973BSg (61312)	304
							K(Lu+HL)=3.37		

****

C8H12N2O3 H2L Barbital CAS 57-44-3 (2744)
5,5-Diethylbarbituric acid, Veronal, Barbitone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	oth/un	25°C	0.10M	U		K1=2.890	1987TSb (61439)	305

****

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

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

---
Lu+++ gl KNO3 20°C 0.10M U K1=12.45 B2=18.91 1975DPa (61513) 306

Lu+++ gl KNO3 25°C 0.10M U K1=11.39 1972GBd (61514) 307
By polarography K1=11.48
****
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
---
Lu+++ gl NaClO4 25°C 0.10M M H K1=4.35 1986CDb (61712) 308
DH=22.2 kJ mol-1, DS=158 J K-1 mol-1
****
C8H16O4 L 12-Crown-4 CAS 294-93-9 (174)
1,4,7,10-Tetraoxacyclododecane; cyclo(-O.(CH2.CH2.O)3.CH2.CH2-)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ ISE non-aq 25°C 100% U K1=5.00 1982MDa (62695) 309
Medium: propylene carbonate
****
C8H18N2O10P2 H6L EDDADPO CAS 2310-83-0 (2436)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-dimethylphosphonic acid;
(-CH2.N(CH2.COOH)(CH2.PO3H2))2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl KCl 25°C 0.10M U 1965DKb (62903) 310
K(Lu+HL)=17.7
K(Lu+H4L)=9.2
****
C8H18O4 L Triglyme CAS 112-49-2 (2358)
1,2-Bis(methoxyethoxy)ethane; CH3O.C2H4O.CH2.CH2.OC2H4.OCH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl non-aq 25°C 100% C K1=4.41 1989BPa (62990) 311
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4
****
C8H19NO5 L Bis-tris CAS 6976-37-0 (2827)
Bis-(2-hydroxyethyl)imino-tris(hydroxymethyl)methane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaCl 30°C 0.10M C K1=2.34 2002NWa (63063) 312
B(Lu2L)=2.00
Constants expressed on the molality scale.
****
C8H19O4P HL CAS 107-66-4 (2130)

Dibutylphosphoric acid; (C4H9O)2P(O)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	kin	oth/un	25°C	0.02M	U		K1=3.03	1974GMc (63185)	313
Lu+++	kin	oth/un	25°C	?	U		K1=3.55	1971MGb (63186)	314

C8H22N2O6P2 H4L CAS 13516-59-1 (3850)
2,2'-(Ethylenedi-imino)bis(propylphosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KCl	25°C	0.10M	U		K1=13.37 K(Lu+HL)=7.67	1965DKb (63341)	315

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	diox/w	35°C	75%	U		K1=7.70 B2=13.85 K3=4.90	1971MAb (63567)	316

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

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	sp	diox/w	20°C	50%	U		K1=3.08 B2=5.06	1977MBb (63611)	317

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
Lu+++	gl	NaClO4	25°C	0.10M	U		K1=5.82 B2=10.32	1973MAa (63700)	318

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
Lu+++	gl	oth/un	20°C	0.10M	U		K1=6.84	1977SKd (63815)	319

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

```
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M U   H    K1=4.80        1994CRa (63972) 320
                                          K(Lu+HL)=2.93
DH(K1)=19.5 kJ mol-1; DS=157 J K-1 mol-1
********************************************************************************
C9H7N                   L                    CAS 91-22-5  (1538)
Quinoline;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C  0.5M M   H    K1=4.02        1991KBb (64065) 321
By calorimetry: DH(K1)=2.08 kJ mol-1, DS(K1)=83.9 J K-1 mol-1.
********************************************************************************
C9H7NO                  HL    Oxine          CAS 148-24-3  (504)
8-Hydroxyquinoline (8-quinolinol);
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      sol none    RT   0.0  U                      1981FCa (64305) 322
                                          Kso(LuL3)=-33.46
Method: spectrophotometry.
--------------------------------------------------------------------------------
Lu+++      gl  oth/un 20°C 0.10M U        K1=7.74        1977SKd (64306) 323
--------------------------------------------------------------------------------
Lu+++      gl  diox/w 30°C  50%  U        K1=9.79   B2=18.40  1970GMb (64307) 324
Medium: 50% dioxan, 0.3 M NaClO4
********************************************************************************
C9H7NO2                 HL                   CAS 1127-45-3  (4614)
8-Hydroxyquinoline-N-oxide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  diox/w 30°C  50%  U        K1=7.70        1970GMb (64408) 325
Medium: 50% dioxan, 0.3 M NaClO4
********************************************************************************
C9H7NO4S              H2L    Sulfoxine      CAS 84-88-8  (448)
8-Hydroxyquinoline-5-sulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      cal KNO3   20°C 0.10M U   HM                   1971GKb (64558) 326
                                          K(LuA+L)=4.82
DH(LuA+L)=-26.33 kJ mol-1, DS=2.09 J K-1 mol-1
DH(LuAL): DH=-36.82, DS=345.7.  H4A=EDTA
********************************************************************************
C9H7N3O2S             H2L    TAR            CAS 2246-46-0  (707)
4-(2'-Thiazolylazo)-resorcinol; C3H2NS.N:N.C6H3(OH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Lu+++      sp  NaNO3  25°C 0.10M C        K1=8.78        1985OHb (64712) 327
                                          K(Lu+HL)=4.77
                                          K(LuL+H)=5.43
********************************************************************************
C9H8O4               H2L                      CAS 97652-17-0  (3855)
3-Carboxy-4-methyltropolone;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      sp  NaClO4   ?  0.20M U        K1=8.85        1967GDc (64946) 328
                                          K(LuHL)=10.97
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.20M U        K1=8.64   B2=15.70  1966GDa (64947) 329
                                          K3=4.60
********************************************************************************
C9H8O4               H2L                      CAS 15872-28-3  (8407)
Bicyclo[2.2.1]hepta-2,5-diene-2,3-dicarboxylic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  KCl    30°C 0.10M U        K1=4.29   B2= 7.62  1996SZa (64978) 330
********************************************************************************
C9H10O3               HL                      CAS 1878-49-5  (1600)
2-Phenyl-2-methoxyethanoic acid; C6H5.CH(OCH3)COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M C        K1=2.31   B2=3.97   1989HMa (65463) 331
********************************************************************************
C9H10O3               HL    Tropic acid      CAS 529-64-6  (1601)
2-Phenyl-3-hydroxypropanoic acid; HO.CH2.CH(COOH)C6H5
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M C        K1=2.09   B2=3.97   1989HMa (65477) 332
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  KCl    30°C 0.10M C        K1=4.16   B2=6.65   1996SZa (65574) 333
For the -2,5-dien-2-exo isomer, K1=4.29, B2=7.62.
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 24°C 0.10M U        K1=4.28        1986ZBa (65589) 334
```

K(Lu+HL)=1.20

****

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
Lu+++	gl	KCl	30°C	0.10M	U		K1=4.88	B2= 7.72	1996SZa (65606)	335

****

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
Lu+++	gl	KCl	30°C	0.10M	C		K1=4.88	B2=7.72	1996SZa (65621)	336

****

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
Lu+++	gl	NaCl	25°C	0.15M	U	H	K1=3.99		1992ZNa (65952)	337

By calorimetry: DH(K1)=3.13 kJ mol-1, DS(K1)=86.91 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	KCl	25°C	0.10M	U		K1=4.45	B2=7.95	1972BFe (65953)	338

****

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
Lu+++	gl	KCl	25°C	0.10M	U				1972BFe (66231)	339
							K(Lu+HL)=4.55			
							K(LuHL+HL)=4.5			

****

C9H11NO6S H3L CAS 73487-23-7 (5467)
N,N-Dimethyl-2,3-dihydroxy-5-sulfonatobenzamide; HSO3.C6H2(OH)2.CONMe2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	KNO3	25°C	0.10M	C		K1=13.3		1988ZKa (66465)	340
							B(Lu2L3)=27.6			

****

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
Lu+++	ISE	KNO3	25°C	0.10M	U		K1=12.76		1983KBd (66740)	341

Hg-electrode.
****
C9H13NO6 H3L (3881)
2,6-Dicarboxypiperidyl-N-ethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl KNO3 25°C 0.10M U K1=11.74 B2=20.66 1968TKe (66888) 342
****
C9H16N2O6 H3L MEDTA CAS 40423-02-7 (5717)
N-Methyldiaminoethane-N,N',N'-triethanoic acid; HOOC.CH2.N(CH3)CH2.CH2.N(CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ cal NaClO4 25°C 0.50M M IH K1=14.18 1986RCa (67641) 343
DH=-16.3 kJ mol-1, DS=217 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
---
Lu+++ gl KNO3 25°C 0.10M U K1=4.78 B2=7.53 1968PFa (67775) 344
****
C10H5O2F7S L (6996)
1-(2-Thienyl)-3-heptafluoropropylpropane-1,3-dione; C3F7.C(O)CH2C(O)C4H3S

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl alc/w 22°C 80% U K1=6.22 B2=12.20 1995MTa (68429) 345
K3=5.30
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
---
Lu+++ gl diox/w 25°C 50% C T H K1=8.44 B2=15.96 1992SAa (68477) 346
K3=7.22
At 35 C: K1=8.16, K2=7.06, K3=5.91; DH(K1)=-49.3 kJ mol-1
****
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
---
Lu+++ gl NaClO4 25°C 0.10M U H K1=4.60 1994CRa (68522) 347
K(Lu+HL)=3.64
DH(K1)=21.0 kJ mol-1, DS=159 J K-1 mol-1; DH(Lu+HL)=14.3, DS=118

****
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
---
Lu+++ sp KCl 25°C 0.10M M I K1=4.48 1976PEa (68581) 348
****
C10H7NO5S H2L CAS 14090-74-5 (2676)
1-Nitroso-2-hydroxynaphalene-7-sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl KCl 25°C 0.10M M K1=4.33 1979LSb (68815) 349
****
C10H7NO5S H2L (4766)
1-Nitroso-2-hydroxynaphthalene-6-sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ sp KCl 25°C 0.10M C K1=4.58 1973PMb (68849) 350
****
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
---
Lu+++ sp KCl 25°C 0.10M U K1=5.06 1978PPb (68948) 351
****
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
---
Lu+++ gl alc/w 22°C 80% U K1=6.79 B2=13.28 1995MTa (69154) 352
K3=5.61
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
---
Lu+++ sp non-aq 25°C 100% C T K1=2.68 2005SYa (69599) 353
In ethylacetate;At 50 C K1=2.39

Lu+++ cal non-aq 25°C 100% U M 1972KKc (69600) 354
K(LuA3+L)=4.75
K(LuA3+2L)=7.75
Medium: CHCl3. A=4,4,4-trifluoro-1-(2-thienyl)-1,3-butanedione

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 20°C 0.10M U M 1973PAc (69773) 355
K(LuA+L)=8.17, H4A=EDTA
****
C10H8O5S H3L DHNSA (877)
2,3-Dihydroxynaphthalene-6-sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 0.50M C K1=10.44 B2=19.28 1976LAd (69853) 356
B3=24.1
B(LuHL2)=26.05
****
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
---
Lu+++ gl alc/w 25°C 80% U K1=8.37 B2=14.81 1967DZa (70747) 357
K3=4.45
Medium: 80% MeOH, 0.1 M NaCl

Lu+++ gl alc/w 24°C 80% U K1=8.37 B2=14.81 1967DZb (70748) 358
K3 = 4.45
Medium: 80% v/v MeOH/H2O, 0.1 M NaCl
****
C10H10O6 H2L CAS 5411-14-3 (2394)
1,2-Phenylenedioxodiethanoic acid; C6H4(O.CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 25°C 0.10M M K1=4.04 1977HCb (70854) 359
****
C10H12N2O4 H2L CAS 16598-05-3 (967)
2-Pyridylmethyliminodiethanoic acid; C5H4N.CH2.N(CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl KNO3 25°C 0.10M U K1=9.72 B2=17.47 1964THa (71265) 360
****
C10H12O2 HL CAS 1946-74-3 (202)
3-Isopropyltropolone;

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

```
Lu+++      sp  alc/w    ?    3%  U        K1=7.95        1967GDb (71591) 361
Medium: 3% EtOH, 0.2 M NaClO4
********************************************************************************
C10H15N5O10P2         H3L    ADP              CAS 20398-34-9  (2181)
Adenosine-5'-diphosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      EMF KNO3   25°C 0.10M C T H    K1=11.92       1990HLa (72989) 362
                                          K(LuL+H)=3.42
Method: Competitive reaction with Hg++, using Hg indicator electrode.
Data for 15-35 C. DH(K1)=-43.8 kJ mol-1, DS(K1)=81.1 J K-1 mol-1.
--------------------------------------------------------------------------------
Lu+++      kin oth/un 30°C 0.05M C                       1989FVa (72990) 363
                                          K1eff=5.10
Competitive reaction with MgL. Medium: 0.05 M PIPES, pH 7.0.
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.10M U        K1=13.66       1980MMe (73152) 364
                                          K(Lu+HL)=7.17
--------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.10M U        K2=4.80        1979MMe (73153) 365
--------------------------------------------------------------------------------
Lu+++      gl  KNO3   20°C 0.10M U        K1=14.15  B2=20.12  1975DPa (73154) 366
--------------------------------------------------------------------------------
Lu+++      vlt KNO3   25°C 0.10M U        K1=14.32       1971BGb (73155) 367
********************************************************************************
C10H16N2O8            H4L    EDTA             CAS 60-00-4  (120)
1,2-Diaminoethane-N,N,N',N'-tetraethanoic acid, Sequestric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 20°C 0.02M U    M                   1982MPd (73934) 368
                                          K(LuL+PO4)=3.12
--------------------------------------------------------------------------------
Lu+++      vlt KNO3   20°C 0.10M U        K1=19.99       1978NLb (73935) 369
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.50M U        K1=18.19       1977GGb (73936) 370
--------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C  1.0M U                       1976GMb (73937) 371
                                          K(LuL+H)=1.15
--------------------------------------------------------------------------------
Lu+++      EMF KCl    25°C 0.10M U      T                 1974BKb (73938) 372
                                          K(LuL+H)=0.7
--------------------------------------------------------------------------------
Lu+++      nmr oth/un 20°C 1.00M U    M                   1974TKa (73939) 373
```

```
                                        K(LuL+Citrate)=1.2
--------------------------------------------------------------------------------
Lu+++      nmr oth/un 40°C 0.10M U                      1969MGc (73940) 374
                                        K(Lu(OH)L(H2O)n-1+H)=11.7
                                        K(LuL(H2O)n+H) < 2.0
--------------------------------------------------------------------------------
Lu+++      dis oth/un 25°C    ?  U       K1=18.25       1969PJa (73941) 375
Method: paper electrophoresis. Medium: pH=1.86
--------------------------------------------------------------------------------
Lu+++      ix  KCl    25°C 0.10M U   H    K1=19.14       1959BDb (73942) 376
DH(K1)=2.7 kJ mol-1, DS=375 J K-1 mol-1
--------------------------------------------------------------------------------
Lu+++      gl  oth/un 20°C 0.01M U        K1=20.07       1955WSa (73943) 377
Polarography also used
--------------------------------------------------------------------------------
Lu+++      gl  KNO3   20°C 0.10M U      T K1=19.83       1954SGa (73944) 378
--------------------------------------------------------------------------------
Lu+++      gl  KCl    20°C 0.10M U  I   T K1=19.06       1953WSa (73945) 379
By polarography K1=19.07. In 0.1 M KNO3 K1=19.65
********************************************************************************
C10H16N5O13P3         H4L    ATP              CAS 56-65-5  (403)
Adenosine-5'-triphosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      kin oth/un 30°C 0.05M C                      1989FVa (74758) 380
                                        K1eff=5.60
Competitive reaction with MgL. Medium: 0.05 M PIPES, pH 7.0.
--------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.10M U        K1=6.33   B2=10.47  1988SSd (74759) 381
                                        K(Lu+HL)=3.88
--------------------------------------------------------------------------------
Lu+++      kin oth/un 25°C 0.05M C        K1=7.36        1983MCc (74760) 382
Method: inhibition of the hexokinase reaction, pH 8.0 (0.05 M TAPS).
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.50M U        K1=15.32       1977GGb (75437) 383
--------------------------------------------------------------------------------
Lu+++      EMF KCl    25°C  1.0M U        K2=3.56        1977GMa (75438) 384
                                        K(LuL+HL)=1.82
                                        K(LuL+H2L)=1.32
                                        K(LuL+H3L)=1.39
                                        K(LuL+H4L)=1.59
Method: Pt/H2 electrode.
--------------------------------------------------------------------------------
Lu+++      EMF KCl    25°C  1.0M U    M                  1977GMa (75439) 385
```

K(Lu(edta)+L)=2.41
K(Lu(edta)+HL)=1.98
K(Lu(edta)+H2L)=1.96
K(Lu(edta)+H3L)=1.63

Method: Pt/H2 electrode.

Lu+++ gl NaClO4 25°C 1.0M U K2=3.11 1973NMa (75440) 386
K(LuL+HL)=2.03
K(LuL+H2L)=2.03
K(LuL+H3L)=1.94

Lu+++ gl KNO3 25°C 0.10M U M 1963TLb (75441) 387
K(LuL+A)=4.51
K(LuL+B)=3.88

H2A=iminodiethanoic acid, H2B=hydroxyethyliminodiethanoic acid

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Lu+++ EMF oth/un 20°C 0.10M U K1=16.25 1962PMa (75442) 388

Lu+++ gl KNO3 15°C 0.10M U T H K1=15.87 1961MFb (75443) 389

K1=15.89(20 C), 15.88(25 C), 15.85(30 C), 15.92(35 C), 15.80(40 C)
DH(K1)=0.9 kJ mol-1(25 C), DS=307 J K-1 mol-1

Lu+++ gl KNO3 25°C 0.10M U K1=15.79 1956SPa (75444) 390

By polarography K1=16.0

****

C10H20N2O4 H2L (4753)
N,N'-Diethylethylenedinitrilo-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KNO3	25°C	0.10M	U		K1=7.1	1973PSb (75784)	391

****

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
Lu+++	gl	non-aq	25°C	100%	C		K1=7.50	1989BPa (76050)	392

Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	ISE	non-aq	25°C	100%	U		K1=5.83 B2=7.89	1982MDa (76051)	393

Medium: propylene carbonate

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	ISE	non-aq	25°C	100%	C		K1=3.72	1986BDa (76459)	394

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
Lu+++	gl	KCl	25°C	0.10M	C		K1=19.3		1998BRa (76806)	395
							*K(LuL)=-8.2			
							K(LuL+H)=7.2			
							B(LuHL2)=38.7			

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	diox/w	30°C	75%	U	T	K1=4.13	B2=8.20	1984APa (77038)	396

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	diox/w	35°C	50%	U		K1=4.31	B2=7.13	1971MAa (77181)	397

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
Lu+++	gl	NaClO4	25°C	0.10M	C		K1=8.81	B2=15.68	1979LAb (77230)	398
							K(Lu+HL)=1.82			

****

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
Lu+++	cal	NaClO4	25°C	0.10M	C	H	K1=8.80	B2=14.5	1986LLc (77283)	399
							K(Lu+HL)=1.99			

DH(Lu+HL)=7.5 kJ mol-1, DS=63 J K-1 mol-1

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	diox/w	35°C	50%	U				1971MAa (77424)	400
							K(Lu+HL)=4.03			

K(Lu+2HL)=6.66
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
Lu+++	sp	NaNO3	25°C	0.10M	C		K1=10.70		1984OHa (77558)	401
							K(Lu+HL)=4.39			
							*K(LuHL)=-5.99			

Medium pH 4.8-6.3.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	sp	KCl	20°C	0.10M	U				1971EKa (77559)	402
							K(Lu+HL)=3.81			

****
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
Lu+++	gl	KCl	25°C	0.10M	U	T H	K1=5.1		1976BFc (78215)	403

For 55C K1= 4.55

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	gl	KCl	25°C	0.10M	U		K1=5.2	B2=9.90	1972BFe (78216)	404

****
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
Lu+++	gl	oth/un	30°C	0.10M	U		B2=22.18		1985EEb (78323)	405

Medium: not stated. For 3'-sulfophenylhydrazo-, B2=22.23; for 2'-sulfo-
phenylhydrazo-, B2=24.92; for 4'-methyl-2'-sulfophenylhydrazo-, B2=24.21.
****
C11H13NO4 L CAS 15658-60-3 (4587)
Diethyl 2,6-pyridinedicarboxylate; Dipicolinic acid diethyl ester;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	sp	non-aq	20°C	100%	C		K1=7.0	B2=14.00	1997RPa (78535)	406
							B3=18.0			

Medium: acetonitrile.
****
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
Lu+++	gl	KNO3	25°C	0.10M	C		K1=14.87	B2=27.76	1989YSa (78632)	407

K(Lu+HL)=6.71

Lu+++ gl KNO3 20°C 0.10M U K1=14.62 B2=25.88 1983MSc (78633) 408

****

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
Lu+++	gl	KNO3	25°C	0.10M	U		K1=7.60 B2=12.99	1964THa (78887)	409

****

C11H15NO5 HL CAS 1429-25-0 (2696)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	sp	KCl	25°C	0.10M	M	I		1986POa (79052)	410

B(LuHL)=11.87

****

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
Lu+++	gl	KNO3	20°C	0.10M	U		K1=15.98	1981NSc (79307)	411
Lu+++	EMF	KNO3	25°C	0.10M	U		K1=16.60	1980KBc (79308)	412
Lu+++	vlt	KNO3	20°C	0.10M	U		K1=20.64	1978NLb (79309)	413
Lu+++	vlt	KNO3	20°C	0.10M	U		K1=20.56	1964ICb (79310)	414

****

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
Lu+++	gl	KNO3	25°C	0.10M	U		K1=11.17	1976GKd (79369)	415

****

C11H18N2O8 H4L CAS 4408-81-5 (923)

1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.)2.CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	ix	KNO3	20°C	0.10M	U	H	K1=15.54	1971AWa (79456)	416

DH=14.75 kJ mol-1, DS=348.6 J K-1 mol-1

****

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
-------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M M        K1=15.87       1986PLc (79564) 417
*************************************************************************
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
-------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M U        K1=12.15       1976GKd (79600) 418
*************************************************************************
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
-------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M U        K1=4.78   B2=7.76   1968PFa (79770) 419
*************************************************************************
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
-------------------------------------------------------------------------
Lu+++      gl  alc/w  22°C  80%  U        K1=6.20   B2=11.87  1995MTa (80186) 420
                                         K3=5.28
Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.
*************************************************************************
C12H8N2                 L    Phenanthroline   CAS 66-71-7  (144)
1,10-Phenanthroline;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      sp  non-aq 25°C 100%  C   H    K1=2.09        2002KNc (80477) 421
Medium: N,N-dimethylformamide, 0.20 M Et4NClO4.
By calorimetry: DH(K1)=-14.1 kJ mol-1.
-------------------------------------------------------------------------
Lu+++      dis non-aq 25°C 100%  C   HM                  1998YHa (80478) 422
                                        K(LuA3+L)=7.69
Method: solvent extraction from 0.10 M NaClO4 into CHCl3. HA is
1-(2-thienyl)-4,4,4-trifluoro-1,3-butanedione. DH(LuA3+L)=-20 kJ mol-1.
-------------------------------------------------------------------------
Lu+++      gl  oth/un 25°C 0.10M U        K1=2.93        1984PMa (80479) 423
*************************************************************************
C12H11O4P              HL                       CAS 838-85-7  (2133)
Diphenylphosphoric acid; (C6H5O)2P(O)OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      kin oth/un 25°C 0.02M U        K1=2.97        1974GMc (80951) 424
*************************************************************************
```

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
Lu+++	sp	NaClO4	25°C	0.50M	U		K1=2.248		1987MSa (80969)	425

****
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
Lu+++	gl	alc/w	22°C	0.1M	U		K1=6.83	B2=12.76	2000TBb (81076)	426
							K3=4.70			

Medium: 0.1 M NaClO4 in 70% v/v EtOH/H2O
****
C12H13NO3 HL (1054)
4-Dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H4.CH:CH.CO.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	sp	NaClO4	25°C	0.50M	U		K1=2.367		1987MSa (81199)	427

****
C12H17NO4 HL (2695)
3-Hydroxy-6-(hydroxymethyl)-2-(1-piperidinylmethyl)-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	sp	KCl	25°C	0.10M	M	I			1986POa (81717)	428
							B(LuHL)=14.46			

****
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
Lu+++	gl	KNO3	25°C	0.10M	C		K1=6.03	B2=11.01	1988YSa (81815)	429

****
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
Lu+++	gl	R4N.X	25°C	0.10M	C		K1=6.80		1988CCb (81839)	430

****
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

```
Lu+++      EMF KNO3   25°C 0.10M U        K1=14.25       1985SGa (81871) 431
--------------------------------------------------------------------------------
Lu+++      EMF KNO3   25°C 0.10M U        K1=15.71       1980SGb (81872) 432
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      vlt KNO3   20°C 0.10M U        K1=20.97       1968NLa (82028) 433
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  KNO3   20°C 0.10M U        K1=10.00  B2=16.52  1975DPa (82082) 434
--------------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M U        K1=9.50        1973GBd (82083) 435
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      vlt KNO3   20°C 0.10M U        K1=19.41       1976NKa (82137) 436
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M U  IH    K1=14.48       1988RNa (82171) 437
                                          B(Lu+HL)=6.79
DH(K1)=3.25 kJ mol-1, DH(Lu+HL)=24.7, DS(K1)=288 J K-1 mol-1
--------------------------------------------------------------------------------
Lu+++      vlt R4N.X  30°C 0.01M C        K1=16.50       1981GMh (82172) 438
Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.
********************************************************************************
C12H20N2O8            H4L                    CAS 2458-58-4  (922)
1,4-Diaminobutane-N,N,N',N'-tetraethanoic acid; (HOOC.CH2)2N.(CH2)4.N(CH2.COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.50M M   H    K1=11.44       1985CBa (82228) 439
                                         K(LuL+H)=5.94
                                         K(LuHL+H)=4.76
DH(K1)=27.4 kJ mol-1, DS=311 J K-1 mol-1 (by calorimetry)
********************************************************************************
```

C12H20N2O8 H4L BDTA CAS 868-43-9 (1742)
DL-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	vlt	oth/un	20°C	0.10M	U		K1=21.33	1966DMa (82314)	440
Lu+++	vlt	KNO3	20°C	0.10M	U		K1=21.33	1966NSb (82315)	441

****
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
Lu+++	sp	NaClO4	20°C	0.10M	U		K1=18.10	1971ISa (82404)	442
Lu+++	vlt	oth/un	20°C	0.10M	U		K1=18.11	1966DMa (82405)	443

****
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
Lu+++	gl	KNO3	25°C	0.10M	C		K1=14.10	1985TPa (82466)	444

****
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
Lu+++	EMF	KNO3	20°C	0.10M	U		K1=17.75	1962MMc (82548)	445

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	alc/w	20°C	40%	U		K1=12.17	1985LBc (82700)	446

Medium: 40% v/v MeOH/H2O, 0.1 M KNO3

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	R4N.X	25°C	0.10M	C		K1=13.16	1998CCb (83088)	447

****
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
Lu+++	gl	non-aq	25°C	100%	C		K1=7.20	1989BPa (83468)	448

Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	non-aq	25°C	100%	C		K1=4.14	1989BPa (84008)	449

Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

****

C12H27N3O3 L CAS 490025-63-3 (8901)
1,3,5-Trideoxy-1,3,5-tris(ethylamino)-cis-inositol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KCl	25°C	0.1M	C			2002DGc (84075)	450
							B(Lu3H-6L3)=-16.9		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	R4N.X	25°C	0.10M	U		K1=14.16	1996BJa (84159)	451
							K(Lu+HL)=10.65		
							K(Lu+H2L)=6.55		

Medium: 0.1 M Me4NCl

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	NaNO3	25°C	0.20M	C	T H	K1=9.15	1991KKa (84340)	452

At 15 C K1=8.96; at 35 C K1=9.32. DH=29.7 kJ mol-1, DS=276.0 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	NaCl	20°C	0.10M	C		K1=11.8	1988SJb (84341)	453

****

C13H5O2F13S 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
Lu+++	gl	alc/w	22°C	80%	U		K1=5.65 B2=10.63	1995MTa (84457)	454
							K3=4.30		

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

****

C13H11N2O3F3 HL (5563)
3-(2-Acetylphenylhydrazone)-1,1,1-trifluoropentane-2,4-dione;
CF3.CO.C(CO.CH3):N.HN.C6H4.COCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	diox/w	30°C	75%	U		K1=9.30 B2=17.30	1988ESb (85249)	455

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	oth/un	25°C	0.10M	U		K1=12.769	1987KSc (85362)	456

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	EMF	alc/w	20°C	50%	U		K1=3.90	1971MAc (85415)	457

Medium: 50% EtOH, 0.1 M NaClO4

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	EMF	alc/w	20°C	50%	U		K1=2.30	1971MAc (85465)	458

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
Lu+++	gl	diox/w	30°C	75%	U		K1=11.32 B2=21.40	1988ESb (85612)	459

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KCl	25°C	1.0M	U		K1=14.57	1989CMb (86124)	460
							K(LuHL+H)=2.96		
							K(LuL+H)=3.63		

****

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
Lu+++	gl	KNO3	25°C	0.10M	C		K1=11.36 K(Lu+HL)=7.33	1982PPd (86199)	461

****
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
Lu+++	vlt	KNO3	20°C	0.10M	U		K1=20.99	1974NLa (86230)	462

****
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
Lu+++	gl	KNO3	20°C	0.10M	U		K1=14.01	1981NSc (86258)	463

****
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
Lu+++	vlt	KNO3	20°C	0.10M	U		K1=20.79	1968NLb (86285)	464

****
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
Lu+++	gl	KNO3	25°C	0.10M	C		K1=15.14 K(Lu+HL)=9.40	1985PLa (86306)	465

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	oth/un	25°C	0.10M	U		K1=13.16	1981EIa (86646)	466

****
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

Lu+++ sp oth/un 25°C ? U 1967SAa (86740) 467
K(?)=9.2
****
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
---
Lu+++ gl mixed 30°C 0.10M U T H K1=13.00 B2=23.26 1988TRb (87722) 468
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water
****
C14H15O4P HL CAS 843-24-3 (2134)
Di(4-methylphenyl)phosphoric acid; (CH3C6H5O)2P(O)OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ kin oth/un 25°C 0.02M U K1=3.91 1974GMc (87795) 469
****
C14H16N2O2S HL CAS 189231-67-2 (8475)
2-Thiophenylhydrazodimedone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl diox/w 25°C 75% C T H K1=13.87 B2=26.15 1997EIa (87871) 470
Medium: 75% v/v dioxane/H2O, 0.10 M KNO3. Data for 10-40 C. DH(K1)=-8.81
kJ mol-1, DS(K1)=-14.45 J K-1 mol-1; DH(K2)=-8.15, DS(K2)=-14.03.
****
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
---
Lu+++ gl mixed 30°C 0.10M U T H K1=13.16 B2=23.84 1988TRb (87889) 471
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
---
Lu+++ gl NaClO4 25°C 1.00M C H K1=16.26 1992YNa (87958) 472
By calorimetry: DH(K1)=5.4 kJ mol-1, DS=329 J K-1 mol-1
****
C14H19NO7 HL (6775)
16-Nitro-3,6,9,12-tetraoxabicyclo[12.3.1]octadeca-1(18),14,16-trien-18-ol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl R4N.X 25°C 0.10M C K1=3.05 1990CBe (88150) 473
****

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
Lu+++	ISE	R4N.X	25°C	0.10M	C		K1=2.41	1986XJa (88305)	474

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KCl	25°C	1.0M	U		K1=4.81	1987CMe (88432)	475
							K(LuL+H)=6.44		

****

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
Lu+++	gl	KCl	25°C	1.0M	U		K1=8.42	1987CMe (88445)	476
							K(LuHL+H)=4.82		
							K(LuL+H)=7.02		

****

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
Lu+++	gl	KCl	25°C	1.0M	U		K1=9.77	1987CMe (88459)	477
							K(LuHL+H)=5.35		
							K(LuL+H)=5.5		

****

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
Lu+++	gl	KCl	25°C	1.0M	U		K1=21.52	1987CMe (88712)	478
							K(LuL+H)=1.11		
Lu+++	gl	KCl	25°C	1.00M	U		K1=21.52	1984MFa (88713)	479
Lu+++	gl	NaClO4	25°C	0.50M	U		K1=19.90	1977GGb (88714)	480
Lu+++	vlt	KNO3	20°C	0.10M	U		K1=21.51	1954SGa (88715)	481

****

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
--------------------------------------------------------------------------
Lu+++      gl  KCl    25°C  1.0M U        K1=9.90        1987CMe (88861) 482
                                          K(LuHL+H)=5.44
                                          K(LuL+H)=5.67
--------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 1.00M U        K1=9.90        1984MFb (88862) 483
**************************************************************************
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
--------------------------------------------------------------------------
Lu+++      gl  R4N.X  25°C 0.10M C        K1=7.71        1988CCb (88883) 484
**************************************************************************
C14H23N3O10           H5L    DTPA            CAS 67-43-6  (238)
Diethylenetriamine-pentaethanoic acid; HOOC.CH2.N(CH2.CH2.N(CH2.COOH)2)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      cal KNO3   25°C 0.10M C T                    1988MIa (89309) 485
                                          DH1=-22.70 kJ/mol
                                          DS1=354.2 J/(mol.K)
DH(K1)=-21.3 kJ mol-1, DS=301.8 J mol-1 K-1. Also data for 283 and 313 K
--------------------------------------------------------------------------
Lu+++      cal NaClO4 25°C 0.50M U   H                1977CGc (89310) 486
DH(K1)=-32.0 kJ mol-1
--------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.50M U        K1=20.77       1977GGb (89311) 487
--------------------------------------------------------------------------
Lu+++      sp  oth/un 20°C    ?  U        K1=22.32       1969KAf (89312) 488
--------------------------------------------------------------------------
Lu+++      cal KNO3   27°C 0.10M U   H                1968CLd (89313) 489
DH(K1)=-21.3 kJ mol-1, DS=358 J K-1 mol-1
--------------------------------------------------------------------------
Lu+++      EMF KNO3   25°C 0.10M U   H    K1=22.44       1962MTc (89314) 490
DH(K1)=-19.2 kJ mol-1, DS=365 J K-1 mol-1
**************************************************************************
C14H23O2P              HL                     CAS 64266-08-6  (2137)
Phenyl(2-ethylhexyl)phosphinic acid; (C6H5)(2-C2H5C6H12)P(O)OH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      kin oth/un 25°C 0.02M U        K1=4.77        1974GMc (89472) 491
**************************************************************************
C14H23O2P              HL                     CAS 31066-81-6  (2136)
Phenyl(n-octyl)phosphinic acid; (C6H5)(C8H17)P(O)OH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
```

```
Lu+++      kin oth/un 25°C 0.02M U        K1=4.72        1974GMc (89475) 492
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      vlt KNO3   20°C 0.10M U        K1=18.90       1969NDc (89513) 493
********************************************************************************
C14H24N2O8            H4L                          (7165)
1,2-Diaminohexane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)NCH2CH(C4H9)N(CH2COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      vlt KNO3   20°C 0.10M U        K1=20.81       1974NLa (89533) 494
********************************************************************************
C14H24N2O8            H4L    HMDTA            CAS 1633-00-7  (920)
1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2.CH2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 1.00M U    M                   1976BKa (89587) 495
                                        K(LuEDTA+L)=2.0
                                        K(LuEDTA+HL)=1.8
--------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.10M U                        1974KPd (89588) 496
                                        K(Lu+HL)=7.46
********************************************************************************
C14H24N2O8            H4L                      CAS 1633-00-7  (5076)
4-Methyl-1,2-diaminopentane-N,N,N',N'-tetraethanoic acid;
(HOOCCH2)2NCH2CH(N(CH2COOH)2CH2CH(CH3)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      vlt KNO3   20°C 0.10M U        K1=20.92       1968NLb (89636) 497
********************************************************************************
C14H24N2O8            H2L                      CAS 17619-53-3  (5833)
Diaminoethane-N,N'-Di(ethylaceto)-N,N'-diethanoic acid;
(-CH2.N(CH2.COOH)CH2.COOC2H5)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  R4N.X  25°C 0.10M C        K1=10.39       1988CCb (89654) 498
********************************************************************************
C14H24N2O8            H4L    EDTP              (2936)
Diaminoethane-N,N,N',N'-tetrapropanoic acid; (HOOC.CH2CH2)2N.CH2CH2.N(CH2CH2.COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M U                        1995HAa (89686) 499
```

K(Lu+HL)=4.58
K(Lu+H2L)=3.54
K(Lu+H3L)=2.62
B(LuHL)=14.01
B(LuH2L)=19.09, B(LuH3L)=22.34

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KNO3	25°C	0.10M	U		K1=12.14	1984TPa (89733)	500
							K(Lu+HL)=8.13		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KCl	25°C	1.0M	U	M	K2=1.71	1985KBb (89892)	501
							K(LuL+ida)=0.9		
Lu+++	EMF	KNO3	20°C	0.10M	U		K1=17.81	1962MMc (89893)	502

****

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
Lu+++	gl	KNO3	25°C	0.10M	C		K1=17.68	1985TPa (90103)	503

****

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
Lu+++	vlt	KCl	?	0.10M	U		K1=13.35	1968VLa (90117)	504

****

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
Lu+++	gl	R4N.X	25°C	0.10M	M		K1=10.33	1986COb (90196)	505

****

C14H26N4O6 H3L DOTRA (6701)
1,4,7,10-Tetraazacyclododecane-1,4,7-triethanoic acid;

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

Lu+++ sp R4N.X 25°C 0.10M C K1=23.0 1993KCa (90252) 506
Medium: Me4NCl
****
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
---
Lu+++ gl R4N.X 25°C 0.25M C K1=6.55 1981BBe (90403) 507
Medium: Me4NCl
****
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
---
Lu+++ gl R4N.X 25°C 0.10M C K1=6.01 1988CCc (90483) 508
****
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
---
Lu+++ gl non-aq 25°C 100% C K1=5.78 1989BPa (90528) 509
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4
****
C14H30O7 L CAS 1072-40-8 (2499)
2,5,8,11,14,17,20-Heptaoxaheneicosane; CH3.O.(CH2.CH2.O)6.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl non-aq 25°C 100% C K1=4.57 1989BPa (90700) 510
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-diyldimethylenediphosphonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl R4N.X 25°C 0.10M U K1=14.91 1996BJa (90767) 511
K(Lu+HL)=10.80
K(Lu+H2L)=6.83
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
---
Lu+++ gl KCl 25°C 0.10M C K1=9.88 1998BRa (90845) 512

****

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
Lu+++	gl	alc/w	21°C	50%	C		K1=9.73		1986CMb (91228)	513

Other constants in 75%, 50% and 75% n-C3H7OH/H2O and i-C3H7OH/H2O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Lu+++	sp	alc/w	21°C	50%	U	I	K1=9.96		1981MCb (91229)	514

Medium: 50% MeOH, 0.1 M NaClO4. In 75% MeOH K1=11.28

****

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
Lu+++	gl	alc/w	20°C	75%	U	T H	K1=12.07	B2=21.29		1993RAa (92029)	515

Medium: 75% v/v MeOH/H2O; 0.10 M KNO3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values			Reference	ExptNo
Lu+++	gl	mixed	30°C	0.10M	U	T H	K1=13.25	B2=25.09		1988TRb (92030)	516

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

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values			Reference	ExptNo
Lu+++	gl	KNO3	25°C	0.10M	C		K1=13.93			1978MPb (92154)	517

****

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
Lu+++	sp	non-aq	25°C	100%	M		K1=8.1 B3=22.9	B2=15.20		1997RPb (92286)	518

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
Lu+++	EMF	KCl	?	0.10M	U		K1=16.28		1966VLa (92376)	519
Lu+++	vlt	oth/un	?	?	U		K1=18.59		1966VLa (92377)	520

****

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
-------------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M C        K1=19.34       1989SPa (92396) 521
                                         K(Lu+HL)=13.09
*******************************************************************************
C15H26N4O9            H4L                      (7685)
Diethylenetriamine-N,N,N',N",N"-pentaethanoic acid N'-methylamide;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.10M C        K1=20.2        2000SBb (92434) 522
*******************************************************************************
C15H26N4O9            H4L                      CAS 137076-43-8  (5085)
Diethylenetriamine-N,N,N',N",N"-pentaethanoic acid N-methylamide;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Lu+++      gl  KCl    25°C 0.10M C        K1=19.1        2000SBb (92449) 523
*******************************************************************************
C16H9N2OBr3            HL                       CAS 84317-74-8  (5169)
1-(2,4,6-Tribromophenylazo)-2-hydroxynaphthalene;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Lu+++      kin oth/un 25°C 0.02M U        K1=5.71        1972GSe (92657) 524
*******************************************************************************
C16H11N3O10S2         H4L    Chromotrope 2B   CAS 548-80-1  (896)
2-((4-Nitrophenyl)azo)chromotropic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Lu+++      sp  oth/un 25°C    ?  U                        1967SAa (92864) 525
                                         K1eff=5.2
*******************************************************************************
C16H12N2O11S3         H5L                      CAS 548-81-2  (5180)
2-(4'-Sulfophenylazo)chromotropic acid,
2-(4-sulfophenylazo)-1,8-dihydroxyaphthalene-3,6-diHSO3
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Lu+++      gl  oth/un 25°C 0.10M U        K1=8.11   B2=13.00  1985AAa (93098) 526
Data also for 12 other 4-substituted phenyl analogues
*******************************************************************************
C16H12N5O3             L                        CAS 77251-11-7  (5928)
1-Phenyl-3-methyl-4(2'-nitrophenylhydrazo)-5-pyrazolone;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Lu+++      gl  diox/w 30°C  75%  M        K1=8.13        1987ESa (93132) 527
```

****
C16H13N2O10AsS2 H5L Thorin I CAS 3688-92-4 (2609)
1-((2-Arsonophenyl)azo)-2-hydroxy-3,6-naphthalyldisulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl NaClO4 30°C 0.10M U 1976NDa (93200) 528
K(Lu+H2L=LuH2L)=6.17
K(LuHL+H)=6.60
K(LuL+H)=8.54
K(LuL+OH)=3.26

Lu+++ sp oth/un 25°C ? U 1967SAa (93201) 529
K(?)=9.7
****
C16H13N2O11AsS2 H6L Arsenazo I CAS 520-10-5 (277)
2-(2'-Arsonophenylazo)chromotropic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ sp oth/un 20°C 0.10M U 1971SSd (93261) 530
K(Lu+H2L)=8.42
****
C16H18N2O3 HL (5564)
2-(2-Acetylphenylhydrazone)-5,5-dimethyl-1,3-cyclohexanedione;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl diox/w 30°C 75% U K1=10.85 B2=19.70 1988ESb (93781) 531
****
C16H18N4O4 H2L CAS 161563-39-9 (8399)
1,3-Phenylenediamine bisazoacetylacetone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl diox/w 25°C 50% U K1=6.86 B2=12.66 1997MAb (93861) 532
Medium: 50% v/v dioxan/H2O, 0.10 M NaClO4. For the 1,4-phenylenediamine
derivative, K1=8.22, K2=7.35.
****
C16H18N4O4 H2L CAS 161563-40-2 (8400)
1,3-Phenylenediamine bisazobenzoylacetone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ gl diox/w 25°C 50% U K1=5.95 B2=10.35 1997MAb (93868) 533
Medium: 50% v/v dioxan/H2O, 0.10 M NaClO4. For the 1,4-phenylenediamine
derivative, K1=6.40, K2=5.00.
****
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
---
Lu+++ vlt KNO3 20°C 0.10M U K1=19.83 1969NDb (94042) 534
****
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
---
Lu+++ gl R4N.X 25°C 0.10M C K1=2.74 1990CBe (94261) 535
****
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
---
Lu+++ ISE R4N.X 25°C 0.10M C K1=3.60 1986XJa (94269) 536
****
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
---
Lu+++ gl R4N.X 25°C 0.10M C K1=8.57 1988CCb (94572) 537
****
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
---
Lu+++ sp KCl 25°C 0.08M U K1=11.1 1994FCa (94672) 538
****
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
---
Lu+++ sp KCl 25°C 0.08M U K1=14.3 1994FCa (94687) 539
****
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
---
Lu+++ vlt KNO3 20°C 0.10M U K1=15.77 1969NDc (94715) 540
By glass electrode: K1=15.50
****
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
Lu+++	vlt	KNO3	20°C	0.10M	U		K1=18.92	1969NDc (94741)	541

****

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
Lu+++	vlt	KNO3	20°C	0.10M	U		K1=20.75	1979MBd (94767)	542

****

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
Lu+++	gl	NaCl	37°C	1.0M	C		K1=23.5	1994TBb (94913)	543

Method: Competitive reaction with Eu3+ ion.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	EMF	NaCl	20°C	1.00M	C		K1=29.2	1986LDb (94914)	544

****

C16H29N5O8 H3L (6505)

Diethylenetriaminepentaethanoic acid N,N'-bismethylamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	NaClO4	25°C	0.10M	C	H	K1=17.06	1993RCa (95000)	545

DH(K1)=-19.1 kJ mol-1, DS(K1)=263 J K-1 mol-1

****

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
Lu+++	gl	R4N.X	25°C	0.10M	U		K1=10.84	1983CRb (95046)	546

****

C16H30N4O12P2 H6L CAS 330623-46-6 (8581)

1,5,8,12-Tetraaza-3,10-dihydroxy-3,10-dioxide-3,10-diphosphacyclotetradecane-1,5,8,12-tetraOAc;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	NaCl	25°C	0.16M	C		K1=11.71 K(Lu+HL)=10.82 K(Lu+H2L)=7.52	2002SSa (95088)	547

****

C16H35O2P HL CAS 13525-99-0 (2135)

Di(2-ethylhexyl)phosphinic acid; (2-C2H5C6H12)2P(O)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	kin	oth/un	25°C	0.02M	U		K1=5.22	1974GMc (95502)	548

****

C17H13N4O3 HL (5927)
1-Phenyl-3-methyl-4-(2'-carboxyphenylhydrazo)-5-pyrazolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	diox/w	30°C	75%	M		K1=16.54 B2=30.73	1987ESa (95769)	549

****

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
Lu+++	dis	alc/w	21°C	50%	U		K1=5.21 B2=11.01 B3=17.40	1990CKa (95891)	550
Medium: 50% MeOH/H2O, 0.1 M NaClO4									
Lu+++	gl	NaNO3	20°C	0.10M	U	M	B(Lu+3L+2TBP)=25.10 B(Lu+3L+TBPoxide)=24.0 B(Lu+3L+4TBPoxide)=35.7	1981GCa (95892)	551

****

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
Lu+++	gl	diox/w	30°C	75%	M		K1=8.70 B2=17.13	1987ESa (96010)	552

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	alc/w	22°C	0.1M	U		K1=5.65 B2=10.15	2000TBb (96287)	553
Medium: 0.1 M NaClO4 in 70% v/v EtOH/H2O									

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	sp	NaNO3	25°C	0.10M	C		K1=8.77 K(Lu+HL)=2.79	1988OHa (96422)	554

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KNO3	25°C	0.10M	U		K1=9.83 K(Lu+HL)=6.43	1984TPa (96574)	555

****

C17H32N4O7 H3L CAS 120041-08-9 (6702)
10-Hydroxypropyl-1,4,7,10-tetraazacyclododecane-1,4,7-triethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	sp	R4N.X	25°C	0.10M	C		K1=23.3	1993KCa (96717)	556

Medium: Me4NCl

****

C18H16N2O3 HL (5560)
2-(2-Acetylphenylhydrazone)-1-phenyl-but-1,3-dione;
C6H5.CO.C(CO.CH3):N.NH.C6H4.COCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	diox/w	30°C	75%	U		K1=11.00 B2=20.60	1988ESb (97174)	557

****

C18H18N4 L CAS 16858-01-8 (1528)
Tris(2-pyridylmethyl)amine; (C5H4NCH2)3N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	nmr	KCl	25°C	1.0M	C		K1=2.07	2004BRa (97265)	558

Method: 1H nmr measurements in D2O.

****

C18H20N2O6 H4L CAS 10328-28-6 (3501)
Ethylenedinitrilo-N,N'-bis(2'-hydroxyphenyl)-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KNO3	25°C	0.10M	C		K1=19.2 K(Lu+HL)=14.1 K(Lu+H2L)=9.3 *K(LuH2L)=-6.8 *K(LuHL)=-8.4	1992GVa (97404)	559

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	EMF	KNO3	25°C	0.10M	C	T H	K1=21.68	1985HWb (97435)	560

K(LuL+H)=7.26
Method: Hg (and glass) electrode, using Hg(II) as competitive indicator ion. Data for 10-35 C. DH(K1)=-87.3 kJ mol-1, DS(K1)=122 J K-1 mol-1.

****

C18H25N3O8 H4L BEATA CAS 87732-99-8 (5600)
N,N-Bis(2-aminoethyl)aniline-N',N',N'',N''-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KNO3	25°C	0.10M	C		K1=14.74	1985TPa (97656)	561

****

C18H26N6 L (6628)
3,6,14,17,23,24-Hexaazatricyclo[17.3.1.1]tetracosa-1(23),8,10,12(24),19,21-hexaene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KCl	25°C	0.10M	M		K1=7.8	1996MBb (97717)	562

****

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
Lu+++	gl	non-aq	25°C	100%	U		K1=2.80	1982MDa (97808)	563

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
Lu+++	gl	R4N.X	25°C	0.10M	C		K1=8.93	1988CCb (97912)	564

****

C18H30N4O12 H6L TTHA CAS 869-52-3 (694)
Triethylenetetraaminehexaethanoic acid;((HOOC.CH2)2N.CH2.CH2.N(CH2.COOH).CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	EMF	KNO3	25°C	0.10M	C	T H	K1=23.91	1987HCa (98066)	565
							K(LuL+H)=5.12		
							K(LuHL+H)=2.26		

Method: Hg electrode; competitive reaction with Hg(II).
Data for 15-35 C. At 25 C, DH(K1)=126 kJ mol-1, DS(K1)=879 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	vlt	R4N.X	30°C	0.01M	C		K1=19.40	1981GMh (98067)	566

Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.

****

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
--------------------------------------------------------------------------
Lu+++      gl  NaNO3  25°C 0.20M C T H    K1=15.31       1991KKa (98213) 567
At 15 C K1=15.20;at 35 C K1=15.40. DH=17.1 kJ mol-1, DS=351.2 J K-1 mol-1
**************************************************************************
C18H34N2O8            H2L                     CAS 68670-15-5  (5851)
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-di-(3-propanoic acid);
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      gl  R4N.X  25°C 0.10M C        K1=6           1988CCc (98340) 568
**************************************************************************
C18H34N4O9            H3L    DO3A-B             (7301)
10-[2,3-Dihydroxy-(1-hydroxymethyl)-propyl]-1,4,7,10-tetraazacyclododecane-1,4,7-tr
iethanoic ac.;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      gl  NaCl   25°C 0.10M C  I     K1=18.8        1996TKa (98381) 569
In 0.1 M Me4NCl K=20.9
**************************************************************************
C18H39N3O3             L                     CAS 490025-64-4  (8902)
1,3,5-Tris(butylamino)-1,3,5-trideoxy-cis-inositol;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      gl  KCl    25°C  0.1M C                        2002DGc (98880) 570
                                        B(Lu3H-6L3)=-17.6
**************************************************************************
C18H40N2O10P2         H2L                       (7241)
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diyldimethylenediphosphonic acid
bis(Et-ester);
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      gl  R4N.X  25°C 0.10M U        K1=6.64        1996BJa (98895) 571
Medium: 0.1 M Me4NCl
**************************************************************************
C20H18N4O2             HL                       (5917)
Pyruvic monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      gl  diox/w 30°C  75%  U                        1985RSb (99836) 572
                                        K(Lu+HL)=5.39
                                        K(Lu+2HL)=10.69
**************************************************************************
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
-------------------------------------------------------------------------
Lu+++      gl  KNO3   20°C 0.10M U        K1=20.70       1985SNb (100009) 573
                                         K(LuL+H)=4.86
                                         K(LuHL+H)=4.43
-------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M U        K1=20.38       1967LMd (100010) 574
                                         K(Lu+H2L)=7.06
*************************************************************************
C20H35N5O10           H5L                        (6545)
1,4,7,10,13-Pentaazacyclopentadecane-N,N',N",N"',N""-pentaethanoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      gl  NaNO3  25°C 0.20M C T H    K1=16.71       1991KKa (100542) 575
At 15 C K1=16.67;at 35 C K1=16.74. DH=5.85 kJ mol-1, DS=355.5 J K-1 mol-1
*************************************************************************
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
-------------------------------------------------------------------------
Lu+++      sp  KCl    25°C 0.08M U        K1=17.0        1994FCa (100560) 576
*************************************************************************
C20H37N5O10           H3L    MEA              CAS 129009-83-2  (7322)
N,N'-Bis(2-methoxyethylcarbamoylmethyl)diethylenetriamine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M C   H    K1=18.00       1997ICa (100736) 577
DH(K1)=-21.1 kJ mol-1, DS=274
*************************************************************************
C20H43O4P              HL                     CAS 7785-87-1  (2132)
Didecylphosphoric acid; (C10H21O)2P(O)OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      kin oth/un 25°C 0.02M U        K1=4.86        1974GMc (100909) 578
*************************************************************************
C21H17N5               L                        (7365)
2,6-Bis(1-methylbenzimidazol-2-yl)pyridine
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      sp  non-aq 20°C 100%  U        K1=9.0    B2=15.40  1997PBa (101090) 579
                                         K3=4.9
Medium: CH3CN
*************************************************************************
C22H14O9               H5L                    CAS 4431-00-9  (3513)
```

Aurintricarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	sp	oth/un	25°C	?	U			1967SAa (101503)	580
							K(Lu+HL)=5.3(?)		

****

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
Lu+++	sp	oth/un	?	?	U		K1=16.72	1971SSi (101548)	581

****

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
Lu+++	sp	NaClO4	25°C	0.10M	U			1975NMa (101635)	582
							K(Lu+H5L)=7.21		
Lu+++	sp	oth/un	20°C	?	U			1972SSi (101636)	583
							K(Lu+H4L)=15.05		

****

C22H20O13 H5L Carminic acid CAS 1260-17-9 (714)
Carminic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	sp	oth/un	?	0.10M	U			1970PLc (101704)	584
							K(LuOH+2H3L)=19.29		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	EMF	KNO3	25°C	0.10M	C T H		K1=11.92	1990HLa (101900)	585
							K(LuL+H)=3.42		

Method: Competitive reaction with Hg++, using Hg indicator electrode.
Data for 15-35 C. DH(K1)=-43.8 kJ mol-1, DS(K1)=81.1 J K-1 mol-1.

****

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

```
Lu+++      gl  R4N.X  25°C 0.10M C        K1=10.42       1993YTa (101980) 586
**************************************************************************
C22H35N3O4              L                        (7928)
4-(t-Butoxycarbonylethyl)-2,6-bis(diethylcarbamoyl)pyridine;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      sp  non-aq 25°C 100%  C        K1=8.7    B2=15.30  2001MSa (102248) 587
                                         B3=20.3
Medium: acetonitrile, 0.10 M Et4NClO4
**************************************************************************
C22H37N5O14           H7L                     CAS 3234-59-1  (2425)
Tetraethylenepentaminehеptaethanoic acid;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      vlt R4N.X  30°C 0.01M C        K1=19.15       1981GMh (102335) 588
Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.
--------------------------------------------------------------------------
Lu+++      gl  KNO3   25°C 0.10M U        K1=19.14       1968MIc (102336) 589
                                        K(Lu+HL)=13.26
                                        B(LuH-1L)=5.11
**************************************************************************
C22H41N5O10           H3L    MMEA             CAS 192631-00-8  (7323)
N,N'-Bis(methyl-2-methoxyethylcarbamoylmethyl)diethylenetriamine;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M C   H    K1=19.28       1997ICa (102394) 590
DH(K1)=-29.5 kJ mol-1, DS=241
**************************************************************************
C23H16O9Cl2S          H4L    Chrome azurol S  CAS 1667-99-8  (711)
Chromazurol S;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      sp  oth/un 25°C    ?  U                        1967SPf (102564) 591
                                        K(?)=10.4
**************************************************************************
C23H18N2O3             HL                       (5561)
2-(2-Acetylphenylhydrazone)-1,3-diphenyl-prop-1,3-dione;
C6H5.CO.C(CO.C6H5):N.NH.C6H4.COCH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      gl  diox/w 30°C  75%  U        K1=11.02  B2=19.35  1988ESb (102597) 592
**************************************************************************
C23H18O9S             H4L    Eriochrome cyan  CAS 3564-18-9  (433)
4'-Hydroxy-3,3'-dimethyl-2''-sulfofuchsone-5,5'-dicarboxylic acid;
--------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      sp  oth/un 25°C    ?  U        B2=9.2         1968MDc (102632) 593
*************************************************************************
C24H18N4O18As2S2      10L                      CAS 2604-69-5  (4164)
2,7-Bis(2'-arsono-5'-carboxyphenylazo)chromotropic acid;
           H
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      sp  KNO3   20°C 0.20M U                        1965BMd (102876) 594
                                          B(LuH12L2)=96.8
*************************************************************************
C24H38N4O6              L                      CAS 380488-78-8  (7921)
3-[2,6-Bis(diethylcarbamoyl)pyridine-4-yl)-N-(tert-butoxycarbonyl)alanine methyl
ester;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      sp  non-aq 25°C 100%  C        K1=8.7    B2=15.20  2001MSa (103317) 595
                                          B3=20.5
Medium: acetonitrile, 0.10 M Et4NClO4
*************************************************************************
C24H42N6O12           H6L                        (6546)
1,4,7,10,13,16-Hexaazacyclooctadecane-N,N',N",N"',N"",N""'-hexaethanoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      gl  NaNO3  25°C 0.20M C T H    K1=24.26       1991KKa (103380) 596
                                          K(Lu+H2L)=17.03
Also 15 C and 35 C. DH(K1)=-1.25 kJ mol-1, DS(K1)=460.0 J K-1 mol-1
*************************************************************************
C24H45N5O12           H3L    HEMEA            CAS 185214-83-9  (7324)
N,N'-Bis(2-hydroxyethyl-2-methoxyethylcarbamoylmethyl)diethylenetriamine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      gl  NaClO4 25°C 0.10M C   H    K1=17.75       1997ICa (103445) 597
DH(K1)=-29.5 kJ mol-1, DS=241
*************************************************************************
C24H51OP                L                      CAS 78-50-2  (4162)
Trioctylphosphine oxide; (C8H17)3P:O
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Lu+++      dis non-aq 25°C 100%  U                        1990MMd (103542) 598
                                          K(LuA3+L)=6.69
                                          K(LuA3L+2L)=8.84
Medium: benzene.  HA=1-phenyl-3-methyl-4-benzoyl-5-pyrazolone.
*************************************************************************
```

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	diox/w	30°C	75%	U		K1=11.76 B2=22.29	1985RSb (103883)	599

****
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
Lu+++	gl	R4N.X	25°C	0.10M	C		K1=14.69	1993YTa (103966)	600

****
C26H32N4O14 H4L CAS 372109-77-8 (8980)
9,20-Dihydroxy-10,21-dioxo-23,24-dioxa-3,6,14,17-tetraazatricyclotetracosatetraenetetraethanoic:

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	NaCl	25°C	0.16M	M		K1=16.5 K(LuL+H)=9.6 K(LuHL+H)=9.4 K(Lu+H2L)=8.26 K(Lu+H3L)=6.1	2001SKe (104049)	601

K(Gd+HL)=12.1.

****
C26H34N6O8 H4L CAS 132709-65-0 (8941)
3,6,14,17,23,24-Hexaazatricyclotetracosa-1,8,10,12,19,21-hexaene-3,6,14,17-tetraacetic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	sp	KCl	25°C	0.10M	C		K1=21.7	1996MBb (104096)	602

Method: competitive titration with arsenazo-III.

****
C26H38N6 L CAS 180684-75-7 (7295)
1,8,14,17,24,31-Hexaazatricyclo[25.3.1.1.0.0]dotriaconta-10,12,14,26,28,

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	KNO3	25°C	0.20M	C		K1=6.0	1996FJa (104207)	603

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Lu+++	gl	diox/w	30°C	75%	U		K1=8.84	1983RSa (104387)	604

```
**************************************************************************
C27H27N5O2              L                     CAS 502691-12-5  (8900)
2,6-Bis[(1-methylbenzimidazol-2-yl)]pyridine-4-carboxylate;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      sp  non-aq 25°C 100%  C        K1=8.0    B2=14.40  2002MRc (104423) 605
                                         K3=2.9
Medium: acetonitrile, 0.10 M Et4NClO4. By 1H nmr, K1=7.9, K2=6.5, K3=3.1.
**************************************************************************
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
--------------------------------------------------------------------------
Lu+++      gl  non-aq 25°C 100%  U        K1=2.51        1980MDb (104844) 606
                                         Medium: Propylene carbonate.
Medium: propylene carbonate
**************************************************************************
C28H40O10               L    DiBz-30-crown10  CAS 104946-67-0  (1776)
2,3:17,18-Dibenzo-1,4,7,10,13,16,19,22,25,28-decaoxacyclotriaconta-2,17-diene;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      ISE non-aq 25°C 100%  U        K1=4.80        1982MDa (104894) 607
Medium: propylene carbonate
**************************************************************************
C31H24N4O              HL                     CAS 88700-85-0  (1409)
1,2-Diphenyl-1,2-ethanedione-3-(4-benzyl-6-phenyl)-pyridazinyl hydrazone;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      gl  diox/w 30°C  75%  U  I     K1=10.01       1983RRa (105406) 608
In 75% MeOH: K1=7.74; 75% DMF: 6.64
**************************************************************************
C31H32N2O13S          H6L    Xylenol orange   CAS 63721-85-5  (432)
5,5'-Bis-N,N-bis(carboxymethyl)aminomethyl-4'-hydroxy-3,3'-dimethylfuchsone-2"-sulf
onic acid;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Lu+++      sp  NaCl   20°C 0.20M U                        1967KUc (105479) 609
                                         K(Lu+H2L)=9.94
--------------------------------------------------------------------------
Lu+++      sp  NaClO4 20°C 0.20M U                        1966KSd (105480) 610
                                         K(Lu+HL)=14.09
**************************************************************************
C32H34N4O2              L                     CAS 163892-66-8  (7329)
1-Phenyl-1,1-di(2,3-dimethyl-1-phenyl-3-pyrazolyl-5-one)butane;C6H5C(C3H7)((C2N2(O)
(CH3)2(C6H5))2
```

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      sp  diox/w 25°C 100%  C                         1997KMa (105633) 611
                                        K(La(NO3)3+L)=4.31
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      nmr KCl    25°C  1.0M C   H    K1=1.79          2004BRa (105971) 612
Method: 1H nmr measurements in D2O. DH(K1)=29 kJ mol-1
DS(K1)=133 J mol-1K-1
********************************************************************************
C36H48O6                L                     CAS 76543-12-9  (7372)
p-tert-Butyloxacalix[3]arene;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      nmr non-aq 25°C 100%  U                         1997HDa (106390) 613
                                      Keff(LuA3+H3L=LuL+3H+3A)=-22.6
Medium: DMSO; 0.2 M 1,4-Diazabicyclo[2.2.2]octane, pH 8.5. A=triflate.
For p-chlorooxacalix[3]arene, Keff(LuA3+H3L=LuL+3H+3A)=-17.06
********************************************************************************
C36H60O30               L    a-Cyclodextrin   CAS 10016-20-3  (6946)
alpha-Cyclodextrin, Cyclohexaamylose;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  NaCl   25°C 0.10M U  I     K1=2.3           1999FBa (106468) 614
In 0.1 M Me4NCl, K1=3.0.
********************************************************************************
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
--------------------------------------------------------------------------------
Lu+++      gl  non-aq 25°C 100%  C        K2=5.4           1997PBa (106550) 615
                                        K3=2.9
Medium: CH3CN; 0.1 M Et4NClO4
********************************************************************************
C37H44N2O13S          H6L    MeThymol Blue      (428)
3,3'-Bis(N,N-di(carboxymethyl)aminomethyl)thymolsulfonephthalein;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Lu+++      gl  NaClO4 30°C 0.10M U                         1980NAb (106612) 616
                                        K(Lu+H3L)=4.80
                                        K(Lu+H2L)=7.94
```

K(LuH2L+H)=4.00
Also data for LuHnL(OH) species
****
C45H66N10O6 L CAS 362613-35-2 (7912)
Tris[3-(6-diethylcarbamoylpyridine-2-carboxamide)propyl]amine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ sp non-aq 25°C 100% C I K1=6.5 2001RDa (107232) 617
K(Lu+HL)=6.8
Medium: CH3CN. In 95% v/v CH3CN/H2O, K1=5.6, K(Lu+HL)=5.6.
****
C52H69NO7 L CAS 178626-47-6 (8569)
5,11,17,23-Tetra-t-butyl-25-(diethylcarbamoyl)methoxy-27-carboxymethoxy-26,28-dihyd
roxycalix[4]ar

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Lu+++ sp non-aq 25°C 100% C K1=4.82 2002BBc (107515) 618
Method: uv/vis spectroscopy. Medium: DMSO. Also data for the 25-methoxy-
ethyl(carbamoylmethoxy)- and 25-di-(n-hexyl-carbamoyl)methoxy- derivatives

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EXPLANATORY NOTES

DATA Flags are :-

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

EVALUATION Flags are :-

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

END