SC-Database
Software version = 5.81 Data version = 4.62
Experiment list contains 791 experiments for
 (no ligands specified)
 2 metals : Yb++, Yb+++
 (no references specified)
 (no experimental details specified)

****
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
---
Yb++ ISE non-aq 25°C 100% U B2=8.3 1982MDa (62734) 1
Medium: Propylene carbonate
****
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
---
Yb++ vlt R4N.X 25°C 0.10M C K1=2.4 1984SSg (83677) 2
Method: radiopolarography. Medium: 0.10 M Me4NI.
****
C18H15B L CAS 960-71-4 (2107)
Triphenylboron; B(C6H5)3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb++ sol alc/w 25°C 80% U K1=0.82 B2=1.4 1988MKc (96976) 3
****
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
---
Yb++ ISE non-aq 25°C 100% U B2=8.4 1982MDa (97817) 4
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
---
Yb++ ISE non-aq 25°C 100% U K1=7.5 1982MDa (104922) 5
Medium: propylene carbonate
****
e- HL Electron (442)
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	oth	none	25°C	0.0	U		1974JOb (1034)		6
							K(Yb+3e=Yb(s))=-112.6(-2.22V)		
							K(Yb+e=Yb(II))=-19(-1.1V)		

Method: literature evaluated data

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	oth	none	25°C	0.0	U		1952LAb (1035)		7
							K(Yb+3e)=-114.9(-2270 mV)		
Yb+++	vlt	oth/un	25°C	var	U		1942LAa (1036)		8
							K(Yb+e)=-19.4(-1150 mV)		

****

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

Arsenate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sol	none	25°C	0.0	C		1992FIa (1167)		9
							Kso(YbAsO4)=-22.72		

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
Yb+++	gl	NaClO4	25°C	0.70M	C		K1=6.08	2004LBb (3447)	10
							K(Yb+HCO3=YbHCO3)=1.48		

Medium: 0.70 m NaClO4. Calculated for I=0, K1=7.81, B2=13.30, K(Yb+HCO3=YbHCO3)=2.53, K(Yb+HL=YbL+H)=-2.53, K(Yb+2HL=YbL2+2H)=-7.36

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	dis	NaClO4	25°C	0.70M	C	I	K1=6.08 B2=10.78	1998LBb (3448)	11

Method: H2O/tributylphosphate distribution and ICP-mass spectrometry. Values calculated for I=0.0 M, K1=8.06, B2=13.86.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	dis	NaClO4	25°C	0.70M	C		K1=6.19 B2=10.95	1993LBa (3449)	12
							K(Yb+HL)=1.55		
Yb+++	dis	NaClO4	25°C	0.68M	C		K1=5.98 B2=10.30	1987CBc (3450)	13

Method: distribution of 169Yb between 0.68 m NaClO4/NaHCO3 and tributyl phosphate. Conditional constants in terms of total carbonate, [CO3]tot.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sol	none	25°C	0.0	C		1986FMa (3451)		14
							Kso(Yb2(CO3)3)=-31.67		
Yb+++	sol	none	25°C	0.0	C		1986HMa (3452)		15
							Kso(Yb2(CO3)3)=-31.67		

Method: spectrophotometry.

```
--------------------------------------------------------------------------------
Yb+++      dis oth/un 20°C  2.5M C                        1979DBb  (3453)  16
                                          B4=15.84
Media: 2.5 M (NH4)2NO3/hexane. Analysis by NAA. By competition with edta;
K1(Yb(edta))=19.36 recalculated for I=2.5 from J.Am.Chem.Soc.,75 1953,4196
********************************************************************************
C6N6Fe---             H3L    Ferricyanide       (2491)
Hexacyanoferrate (III); Fe(III)(CN)6---
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      cal none   25°C 0.00  M   H    K1=3.66        1972SCd  (3696)  17
DH(K1)=4.4 kJ mol-1, DS=84.5 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
--------------------------------------------------------------------------------
Yb+++      dis NaCl   25°C  1.0M C        K1=-0.14       1997HTb  (5956)  18
Method: by solvent extraction from 1.0 M NaCl into CHCl3, 0.1 M
1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.
--------------------------------------------------------------------------------
Yb+++      cal non-aq 25°C 100%  U   H    K1=2.70   B2=5.31   1991ITa  (5957)  19
                                          K3=2.35
                                          K4=1.73
Medium: DMF, 0.2 M Et4NClO4. DH(K1)=25.8 kJ mol-1, DH(K2)=22.4, DH(K3)=14
DH(K4)=31. DS(K1)=138, DS(K2)=125, DS(K3)=92 J K-1 mol-1
--------------------------------------------------------------------------------
Yb+++      sol NaClO4 25°C    ?  U        K1=0.24        1982MAa  (5958)  20
--------------------------------------------------------------------------------
Yb+++      cal non-aq 25°C 100%  U        K1=2.34   B2=5.50   1980VCa  (5959)  21
Medium: dimethylacetamide
--------------------------------------------------------------------------------
Yb+++      vlt non-aq 290°C 100%  U        K1=1.45   B2=3.34   1973SSc  (5960)  22
Medium: molten (Na,K)NO3
--------------------------------------------------------------------------------
Yb+++      sp  alc/w  25°C  50%  U  I     K1=0.34        1971KBf  (5961)  23
Medium: 50% w/w MeOH/H2O, 3 M LiClO4. K1=-0.11(0%)
--------------------------------------------------------------------------------
Yb+++      sol NaClO4 25°C 0.50M U        K1=-0.56       1962SOa  (5962)  24
Medium: HClO4
--------------------------------------------------------------------------------
Yb+++      sol none   25°C  0.0  U                       1960ASd  (5963)  25
                                          Kso(Yb(OH)2Cl)=-17.9
                                          Kso(Yb(OH)2.5Cl0.5)=-22.1
********************************************************************************
F-                     HL    Fluoride         CAS 7644-39-3  (201)
Fluoride;
--------------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      ix  oth/un 25°C 0.02M C T H    K1=3.84   B2= 6.31  2004LMa  (7349)  26
Medium: 0.025 M HNO3. Applying Pitzer parameters: at I=0, K1=10.09.
Data for 5 to 45 C. DH(K1)=10.6 kJ mol-1, DH(B2)=23.1.
-------------------------------------------------------------------------
Yb+++      ISE NaClO4 25°C  0.0  C  I     K1=4.39        2000LBa  (7350)  27
Method: Fluoride ISE. Values calc. from data for I=0.015-0.70 M NaClO4.
At I=0.70 M, K1=3.456.
-------------------------------------------------------------------------
Yb+++      ix  KNO3   25°C 0.02M C        K1=3.79   B2= 6.54  1999SBc  (7351)  28
Medium: 0.025 M HNO3. Additional method: ICP-MS.
Assumed K1(HF) = 3.03, derived from literature values.
-------------------------------------------------------------------------
Yb+++      dis NaClO4 25°C 0.68M U        K1=3.29   B2=5.54   1993LBb  (7352)  29
-------------------------------------------------------------------------
Yb+++      ISE none   25°C  0.0  C   H    K1=3.31   B2=6.95   1989MJa  (7353)  30
                                          Kso=-15.4
Also by conductivity and radiometry. DH(Kso)=135.7 kJ mol-1; DS= 165.2
-------------------------------------------------------------------------
Yb+++      ISE R4N.X  25°C 0.50M C        K1=3.31   B2=6.95   1989MJb  (7354)  31
-------------------------------------------------------------------------
Yb+++      sol R4N.X  25°C 0.50M C   H    K1=3.28   B2= 6.40  1989MJc  (7355)  32
                                          Kso(YbF3)=-15.2
Medium: 0.50 M NH4NO3. Method: 169Yb; [F-] determined by ISE.
By conductivity, Kso=-16.7; DH(Kso)=136 kJ mol-1, DS(Kso)=165 J K-1 mol-1.
-------------------------------------------------------------------------
Yb+++      cal NaClO4 25°C 1.00M C   H                  1988GBa  (7356)  33
DH(K1)=11.2 kJ mol-1; DS(K1)= 106 J mol-1 K-1
-------------------------------------------------------------------------
Yb+++      dis NaCl   25°C 1.00M U                      1982BKa  (7357)  34
                                          B(YbF2(OH))=12.61
                                          B(YbF(OH)2)=18.99
-------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 1.00M U    M                1981KTb  (7358)  35
                                          K(YbEDTA+F)=1.60
                                          K(Yb(EDTA)F+F)=0.48
-------------------------------------------------------------------------
Yb+++      dis NaCl   25°C 1.00M U        K1=3.02   B2=5.72   1980BKa  (7359)  36
-------------------------------------------------------------------------
Yb+++      ISE NaClO4 25°C 0.50M U    M                1980YGa  (7360)  37
                                          K(Yb(Crypt.2,2,1)+2F)=6.48
-------------------------------------------------------------------------
Yb+++      EMF NaClO4 25°C 0.50M U        K1=3.61        1968IZa  (7361)  38
                                          K(Lu+HL=LuF+H)=0.66
-------------------------------------------------------------------------
Yb+++      EMF NaClO4 25°C  1.0M U   H    K1=3.58        1967WCa  (7362)  39
By distribution: K1=3.60. By calorimetry: DH(K1)=40.0 kJ mol-1, DS=202.7
*************************************************************************
IO3-                   HL    Iodate           CAS 7782-68-5  (1257)
```

Iodate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	dis	NaClO4	25°C	0.10M	U		K1=1.18	1973CBd (8575)	40
Yb+++	sol	oth/un	25°C	0.0	U			1966FPb (8576)	41
							Kso=-10.21		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sol	oth/un	25°C	dil	U			1974LOa (8620)	42
							Kso(Yb(H2IO6)(H2O)3)=-9.29		

****

MoO4-- H2L Molybdate (443)
Molybdate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sp	oth/un	25°C	?	U	M		1997STa (8762)	43
							K(Yb+H2L=YbL+2H)=-1.9		

Ligand: nano-Molibdenomanganate, MnMo9O32------

Yb+++	con	oth/un	25°C	.001M	U		K1=4.23	1968DKc (8763)	44

****

Mo12O42U-------- H8L (2922)
Uranium-12-molybdate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	oth/un	20°C	0.10M	U			1989SBb (8785)	45
							B(YbHL)=8.44		
							B(Yb2L)=8.69		
							B(YbH2L)=10.81		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	cal	NaClO4	25°C	2.0M	C	IH	K1=-0.89	1998BMb (10011)	46

DH(K1)=6.4 kJ mol-1. From Pitzer extrapolation to I=0.0, K1=-0.12,
DH(K1)=4.9 kJ mol-1

Yb+++	sp	KNO3	?	var	U			1970KSf (10012)	47
							K(Yb+3L+HL)=-1.29		
							K(YbL3HL+2HL)=-1.41		

```
--------------------------------------------------------------------------------
Yb+++      ix  NaClO4   ?  3.26M U        K1=0.45   B2=0.85   1962KSa (10013)  48
                                         K3=0.27
--------------------------------------------------------------------------------
Yb+++      dis NaClO4   ?   3.0M U        K1=0.57   B2=0.79   1962SKc (10014)  49
Medium: HClO4. Kd(Yb+3L+3TBP(CCl4)=YbL3(TBP)3(CCl4))=0
********************************************************************************
N3-                    HL    Azide            CAS 7782-79-8  (441)
Azide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      dis none   25°C  0.0  U        K1=0.40   B2=0.60   1983MCb (10271)  50
                                         B3=0.85
********************************************************************************
OH-                    HL    Hydroxide          (57)
Hydroxide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C  0.0  C  IH                    2000KBa (12514)  51
                                         *K1=-7.24
In 0.7 M NaClO4, *K1=-7.55. DH(*K1)=42 kJ mol-1.
--------------------------------------------------------------------------------
Yb+++      gl  NaCl   25°C 0.10M U  I                     1999FBa (12515)  52
                                         *B(1,3)=-20.68
In 0.1 M Me4NCl, *B(1,3)=-21.72.
--------------------------------------------------------------------------------
Yb+++      gl  NaCl   25°C 3.00M M                        1988FSa (12516)  53
                                         *B(2,2)=-13.55
                                         *B(3,5)=-32.38
                                         *B(4,6)=-37.46
                                         *K1=-9.15
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 3.00M U                        1982BBc (12517)  54
                                         *K1=-8.6
                                         *B(2,2)=-13.32
--------------------------------------------------------------------------------
Yb+++      sol NaClO4 22°C  1.0M U        K1=7.7    B2=15.5   1982KDa (12518)  55
                                         B3=23.2
                                         B4=37.5
                                         B5=51.9
                                         B6=66.2
--------------------------------------------------------------------------------
Yb+++      dis NaCl   25°C 1.00M U        K1=8.43   B2=15.92  1981BKa (12519)  56
--------------------------------------------------------------------------------
Yb+++      EMF alc/w  20°C  25%  U                     1973SPe (12520)  57
                                         *K1(YbA+H2O=YbAOH+H)=-7.60
Medium: ca.25 to 35% w/w MeOH or EtOH/H2O. H3A=NTA
--------------------------------------------------------------------------------
```

```
Yb+++      EMF alc/w  25°C  25%  U  I                    1972USa (12521)  58
                                        *K1=-7.76
Medium: 25% v/v EtOH/H2O, 0.05 M NaClO4. K1=-8.01(v=0), -7.36(v=50),
*K1=-7.68(v=0,I=0)
-------------------------------------------------------------------------------
Yb+++      dis NaClO4   ?  0.10M U                      1971GDb (12522)  59
                                        *K1=-4.3
Medium: LiClO4
-------------------------------------------------------------------------------
Yb+++      sol oth/un 25°C       U                      1970IEb (12523)  60
                                        K(YbL3(s)+L=TbL4)=-5.4
                                        K(YbL3(s)+2L=YbL5)=-6.0
                                        K(YbL3(s)+3L=YbL6)=-6.6
-------------------------------------------------------------------------------
Yb+++      gl  none   20°C  0.0  M                      1967AKe (12524)  61
                                        Kso=-25.06
-------------------------------------------------------------------------------
Yb+++      oth oth/un  rt   10%  U                      1967PBb (12525)  62
                                        Kso=-28.4
                                        K(YbL3(s)=YbL3)=-4.9
Medium: 10% sea water. Medium: Tyndall scattering
-------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.30M U                      1966FKa (12526)  63
                                        *K1=-7.92
-------------------------------------------------------------------------------
Yb+++      sol oth/un 25°C  var  U                      1966ISb (12527)  64
                                        K(YbL2(s)+OH=YbL3)=-4.4
Medium: NaOH var.
-------------------------------------------------------------------------------
Yb+++      oth oth/un 20°C  dil  U                      1966OPa (12528)  65
                                        Kso=-25.1
-------------------------------------------------------------------------------
Yb+++      sol none   25°C  0.0  U                      1960AKb (12529)  66
                                        Kso(Yb(OH)3)=-26.64
-------------------------------------------------------------------------------
Yb+++      gl  oth/un 25°C  var  U                      1951MFb (12530)  67
                                        Kso(Yb(OH)3)=-23.60
-------------------------------------------------------------------------------
Yb+++      gl  oth/un 25°C  var  U                      1944MKa (12531)  68
                                        Kso(Yb(OH)3)=-23.5
*******************************************************************************
PO4---                H3L    Phosphate        CAS 7664-38-2  (176)
Phosphate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Yb+++      sol none   25°C  0.0  M                      1997LBd (13387)  69
                                        Kso(YbPO4)=-24.89
Calculated from data for 0.10 M HClO4 solution.
-------------------------------------------------------------------------------
```

```
Yb+++      sol oth/un 25°C  0.0  C  I                    1993FKb (13388)  70
                                        Kso(YbPO4)=-27.08
In synthetic seawater, Ks(YbPO4)=-24.54.
--------------------------------------------------------------------------------
Yb+++      sol none   25°C  0.0  C                       1991FBa (13389)  71
                                        Kso(YbPO4)=-26.17
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 0.50M U                         1989APd (13673)  72
                                        K(Yb+H2L)=4.24
--------------------------------------------------------------------------------
Yb+++      kin none   25°C  0.0  U        B2=21.88        1967SSo (13674)  73
--------------------------------------------------------------------------------
Yb+++      sol oth/un 25°C  0.0  U        K1=17.5   B2=19.4   1966SSf (13675)  74
                                        Kso(Yb4L3)=-75
********************************************************************************
P2W17O61----------           Polytungstate      (2102)
alpha-Heterodiphospho-polytungstate (usually alpha1 isomer)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      sp  NaClO4 25°C  1.0M C        K1=7.04         2003VCa (13732)  75
Method: laser-induced fluorescence spectroscopy for Eu+++ as competing ion
For P2W18O62, K1=3.18.
--------------------------------------------------------------------------------
Yb+++      cal NaClO4 25°C  1.0M C   H                    2002VCa (13733)  76
DH(K1)=6.71 kJ mol-1, DS(K1)=157.3 J K-1 mol-1.
--------------------------------------------------------------------------------
Yb+++      cal NaClO4 25°C  1.0M C   H    K1=3.34         2002VCa (13734)  77
DH(K1)=-0.77 kJ mol-1, DS(K1)=57.0 J K-1 mol-1.
By entropy titration: DH(K1)=-1.20 KJ mol-1, DS(K1)=65.17 J K-1 mol-1.
********************************************************************************
P3O10-----           H5L                    CAS 10380-08-2  (1001)
Tripolyphosphate; from (HO)2PO.O.PO(OH).O.PO(OH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4   ?  0.10M U        B2=17.95        1962RKa (13922)  78
                                        K(Yb+HL)=5.20
                                        K(Yb+2HL)=9.29
********************************************************************************
SCN-                  HL    Thiocyanate      CAS 463-56-9  (106)
Thiocyanate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Yb+++      dis oth/un 25°C  1.0M C        K1=0.41        1997HTb (15342)  79
Method: by solvent extraction from 1.0 M NaSCN into CHCl3, 0.1 M
1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.
--------------------------------------------------------------------------------
Yb+++      cal non-aq 25°C 100%  U   H    K1=1.8    B2=3.2    1992TIa (15343)  80
                                        K3 = 0.6
Medium: DMF, 0.2 M R4NX. DH(K1)=9 kJ mol-1, DH(B2)=7, DH(B3)=36
********************************************************************************
SO4--                 H2L    Sulfate          CAS 7664-93-9  (15)
Sulfate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      sol oth/un 25°C 0.66M C        K1=1.79        2004SBb (16673)  81
Method: solubility of BaSO4 in 0.117 m YbCl3 solution.
Calculated for I=0, K1=3.46.
--------------------------------------------------------------------------------
Yb+++      dis NaCl   25°C 1.00M U        K1=1.26        1980BKb (16674)  82
                                        B3=3.11
--------------------------------------------------------------------------------
Yb+++      cal none   25°C  0.0  U   H                   1974POa (16675)  83
DH(K1)=19.8 kJ mol-1
--------------------------------------------------------------------------------
Yb+++      con oth/un 25°C  0.0  U        K1=3.51        1973FPb (16676)  84
In D2O: K1=3.55
--------------------------------------------------------------------------------
Yb+++      cal oth/un 25°C  0.0  U   H                   1969FPa (16677)  85
DH(K1)=12.1 kJ mol-1
--------------------------------------------------------------------------------
Yb+++      cal oth/un 25°C  0.0  U   H    K1=3.33   B2=5.05   1969IEa (16678)  86
DH(K1)=15.1 kJ mol-1, DH(K2)=4.1; DS(K1)=114.1 J K-1 mol-1, DS(K2)=46.4
--------------------------------------------------------------------------------
Yb+++      ISE NaClO4 25°C  2.0M U   H    K1=1.15   B2=1.59   1967CCd (16679)  87
By calorimetry: DH(K1)=17.3 kJ mol-1, DS=80.3 J K-1 m-1; DH(K2)=5.0, DS=25.5
--------------------------------------------------------------------------------
Yb+++      ix  oth/un 25°C  0.0  U        K1=3.58        1966AMa (16680)  88
--------------------------------------------------------------------------------
Yb+++      ISE oth/un 25°C  0.0  U        K1=2.56        1966APc (16681)  89
--------------------------------------------------------------------------------
Yb+++      con oth/un 25°C  0.0  U        K1=3.59        1954SJa (16682)  90
********************************************************************************
CHO3F3S                HL                     CAS 1493-13-6  (6755)
Trifluoromethanesulfonic acid; CF3SO3H
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      sp  non-aq 25°C 100%  U                       1993BCc (17471)  91
                                        K3=2.32
Medium: MeCN
********************************************************************************
```

CH4O L Methyl alcohol CAS 67-56-1 (597)
Methanol; CH3.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	alc/w	25°C	100%	C		*K1=-6.40 *B2=-13.48 *B3=-25.91 *B(2,3)=-14.49	1997ACa (17912)	92

Medium: methanol, 0.01 M NEt4ClO4. *B(2,5)=-34.75. *K1: Pr+MeOH=Pr(OMe)+H.

****

CH6O6P2 H4L Medronic acid CAS 1984-15-2 (2384)
Methanediphosphonic acid; CH2(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KCl	25°C	0.50M	U		K(Yb+H2L)=5.41	1989APd (18299)	93

****

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
Yb+++	gl	NaClO4	20°C	0.10M	U		K1=2.65 B2=4.73 K3=1.7	1964PSd (18434)	94

****

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
Yb+++	ix	R4N.X	25°C	0.05M	C		K1=6.03 B2=10.57 K(Yb+HL)=2.41	2001SBf (19159)	95
Yb+++	gl	KCl	25°C	1.0M	U	M	K(Yb(edta)+L)=3.70	1988KTa (19160)	96
Yb+++	sol	oth/un	25°C	0.0	U		K1=7.30 B2=11.89 K3>1.96	1951CMb (19161)	97

Medium: 0.05 M NH4NO3. At I=0, K1=6.95, B2=11.75.

****

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
Yb+++	gl	none	25°C	dil	M T H		K1=2.32 B2= 4.58	2000DCa (20231)	98

Self medium, 0.03-0.05 M. Data for 40-80 C. At 40 C, K1=2.51, B2=4.74.

DH(K1)=27.59 kJ mol-1, DS(K1)=136.6 J K-1 mol-1; DH(B2)=8.23, DS=115.3

Yb+++ gl alc/w 25°C 95% U H K1=5.53 B2=10.0 1967GWa (20232) 99
B3=13.37
B4=15.51

Medium:95% MeOH, 0.5 M NaClO4. By calorimetry:DH(K1)=20.2 kJ mol-1,DS1=173.4 J K-1 mol-1; DH(K2)=14.6,DS=134.6; DH(K3)=17.6,DS=122.9; DH(K4)=-0.4,DS=37.6

Yb+++ ix oth/un ? 0.0 U K1=2.46 B2=3.76 1966AMa (20233) 100

Yb+++ EMF oth/un 25°C 0.0 U K1=2.51 B2=3.99 1966AMd (20234) 101

Method: H electrode. Medium: 0 corr. Using glass electrode:K1=2.57, K2=1.77

Yb+++ gl oth/un 25°C 0.0 U K1=2.56 B2=4.38 1964AMa (20235) 102

Yb+++ cal NaClO4 25°C 2.0M C H 1964GRa (20236) 103

DH(K1)=14.67 kJ mol-1, DS(K1)=81.6 J K-1 mol-1; DH(B2)=25.38, DS(B2)=141; DH(B3)=27.5, DS(B3)=162.

Yb+++ gl NaClO4 20°C 0.10M U K1=2.03 B2=3.67 1962KPa (20237) 104

Yb+++ EMF NaClO4 20°C 2.0M U K1=1.64 B2=2.83 1958SOa (20238) 105
B3=3.54
B4=3.6

Method: quinhydrone electrode

****

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

---

Yb+++ gl NaClO4 20°C 0.10M U 1964PKa (20387) 106
K(Yb+HL)=1.98
K(YbHL+HL)=1.32

Yb+++ gl NaClO4 25°C 2.0M U 1962BCa (20388) 107
K(Yb+HL)=1.32
K(YbHL+HL)=0.9

****

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

---

Yb+++ EMF NaClO4 25°C 1.00M U M K1=2.65 B2=5.12 1991WPb (20661) 108
B(YbLA)=5.10

H2A=maleic acid

Yb+++ gl KNO3 32°C 0.10M U 1980PPf (20662) 109
K(Yb+HL=YbL+H)=-0.32

*K(YbL)=-5.40
K(Yb+2HL=YbL2+2H)=-1.59
*K(YbL2)=-5.36

Yb+++ gl NaClO4 25°C 0.50M C T K1=2.71 B2=4.98 1977CMa (20663) 110
B3=6.08
B4=7.8

Yb+++ cal NaClO4 25°C 2.0M C H 1964GRa (20664) 111
DH(K1)=-1.21 kJ mol-1, DS(K1)=47.7 J K-1 mol-1; DH(B2)=-3.21, DS(B2)=81.2;
DH(B3)=-6.95, DS(B3)=97.5; DH(B4)=-2.5, DS(B4)=121.

Yb+++ gl NaClO4 20°C 0.10M U K1=3.130 B2=5.37 1964PKb (20665) 112
B3=7.11

Yb+++ EMF NaClO4 20°C 2.0M U K1=2.72 B2=4.82 1959SOb (20666) 113
B3=6.3
B4=6.8
B5=7.0

Method: quinhydrone electrode

****

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

---

Yb+++ gl KNO3 25°C 0.0 M T H K1=6.11 2003MBa (21760) 114
K(Yb+HL=YbL+H)=-3.53

Extrapolated from data for I=0.07-0.32 M KNO3. DH(K1)=-18.4 kJ mol-1,
DS(K1)=-156.3 J K-1 mol-1; DH(Yb+HL)=13.7, DS(Yb+HL)=-21.7.

Yb+++ cal oth/un 25°C 0.03M U H K1=4.51 1981PBa (21761) 115

Yb+++ EMF KCl 25°C 1.0M U M 1977GMa (21762) 116
K(YbA+L)=4.38
K(YbA+HL)=3.03
K(YbA+H2L)=3.06

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

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Yb+++ sp non-aq 25°C 100% U 1992MBb (22130) 117
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
Yb+++	gl	NaClO4	22°C	0.10M	U		K(YbH-1L+H)=6.70	1972MCd (22161)	118

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KCl	25°C	0.15M	U	I	K(Yb+H2L)=4.98	1989AMa (22179)	119

****
C2H7O4P HL CAS 813-78-5 (1754)
Dimethylphosphoric acid; (CH3O)2P(O)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	kin	none	25°C	0.00	U		K1=1.45	1966SSb (22578)	120

****
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
Yb+++	ISE	non-aq	25°C	100%	C	H	K1=3.03 B2=5.70 B3=7.70	1992CBa (23246)	121

Medium: DMSO, 0.10 M Et4NClO4. By calorimetry, DH(K1)=-21.7, DH(B2)=-42.6, DH(B3)=-82.2 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	cal	non-aq	23°C	100%	U		K1=11.5 B2=20.80 K3=6.2 K4=3.8	1969FMa (23247)	122

Medium: CH3CN

****
C2H8O7P2 H4L HEDPA CAS 2809-21-4 (436)
1-Hydroxyethane-1,1-diphosphonic acid; CH3.C(OH)(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sp	oth/un	25°C	0.70M	U		K(Yb+H2L)=5.55	1987APa (23406)	123

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

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

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Yb+++ gl oth/un 25°C ? U M K1=2.09 1998PAa (23999) 124
K(YbL+acac)=5.95
K(Yb(acac)L+acac)=4.53
Additional method: nmr. Medium not stated.

Yb+++ gl NaClO4 25°C 0.10M C H K1=1.75 B2=3.37 1996HBa (24000) 125
B3=4.9
DH(K1)=16.5 kJ mol-1, DS=89 J K-1 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

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Yb+++ nmr NaClO4 25°C 2.00M U H K1=1.56 1980CCa (24084) 126
DH=-5.06 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

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Yb+++ gl NaClO4 25°C 0.10M U K1=4.91 B2=8.07 1972DCc (24596) 127

Yb+++ gl NaClO4 25°C 1.00M U K1=3.87 B2=6.43 1971DGa (24597) 128
B3=7.79
B(YbHL)=6.21
B(YbHL2)=9.76

Yb+++ ix NaClO4 25°C 0.15M U 1968KKc (24598) 129
K(Yb+HL)=2.1
K(YbHL+HL)=1.2

Yb+++ gl KNO3 25°C 0.10M U K1=4.53 B2=7.27 1968PFa (24599) 130

Yb+++ ix oth/un ? 0.0 U K1=5.44 1966AMa (24600) 131

Yb+++ EMF oth/un 25°C 0.0 U K1=5.70 B2=8.60 1966AMd (24601) 132
Method: H electrode. Medium:0 corr

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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

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Yb+++ gl KCl 25°C 0.20M U K1=3.96 1973LPb (24635) 133

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C3H5NO2 HL (4234)
Isonitrosoacetone; CH3.CO.CH:N.OH, anti-Pyruvic aldehyde oxime

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--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  diox/w 20°C  50%  U        K1=6.19        1971MAf (24653) 134
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
--------------------------------------------------------------------------------
Yb+++      gl  diox/w 20°C  50%  U        K1=7.42   B2=13.46  1971MAf (24815) 135
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
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C  2.0M U        K1=1.63   B2=2.70   1965CGa (25077) 136
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 20°C 0.10M U        K1=1.93   B2=3.38   1964PKa (25078) 137
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 2.00M U                         1968CMa (25181) 138
                                          K(Yb+HL)=1.43
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 31°C  2.0M U                         1963BCb (25182) 139
                                          K(Yb+HL)=1.43
                                          K(YbHL+HL)=1.0
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 2.00M U                         1968CMa (25234) 140
                                          K(Yb+HL)=1.43
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 31°C  2.0M U                         1963BCb (25235) 141
                                          K(Yb+HL)=1.75
                                          K(YbHL+HL)=1.3
********************************************************************************
C3H6O3                 HL                     CAS 81598-26-7  (2521)
3-Hydroxypropanoic acid; HO.CH2.CH2.COOH
--------------------------------------------------------------------------------
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	25°C	2.00M	U		K1=1.51		1969JCc (25285)	142

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
Yb+++	gl	KNO3	30°C	0.10M	U		K(Yb+HL=YbL+H)=0.46 *K(YbL)=-4.52 K(Yb+2HL=YbL2+2H)=-0.62 *K(YbL2)=-3.85		1983MPc (25577)	143
Yb+++	gl	NaClO4	25°C	0.20M	U		K1=3.03 K3=1.34 K4=0.69	B2=5.45	1964DVa (25578)	144
Yb+++	gl	NaClO4	20°C	0.10M	U		K1=3.230 B3=7.58	B2=5.82	1964PKb (25579)	145
Yb+++	gl	NaClO4	25°C	2.0M	U		K1=2.85 K3=2.69	B2=5.27	1961CCa (25580)	146
Yb+++	vlt	oth/un	?	0.10M	U		K(YbL6+e=Yb(II)L4+2L)=-7		1958KYa (25581)	147

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
Yb+++	gl	NaClO4	20°C	0.10M	U		K1=2.08	B2=3.36	1964PKa (25611)	148

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
Yb+++	gl	KNO3	25°C	0.10M	U		K1=4.9		1967EMb (26301)	149

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
Yb+++	gl	oth/un	25°C	0.10M	U		K1=3.98		1965PGe (27203)	150

C3H8NO6P H3L Phosphoserine CAS 17885-08-4 (1865)

Serine dihydrogenphosphate, O-Phosphoserine; NH2.CH(CH2.OPO3H2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KCl	25°C	0.10M	U		K1=6.12	1997ZTa (27474)	151

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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
Yb+++	gl	NaClO4	22°C	0.10M	U			1972MCd (27689)	152
							K(YbH-1L+H)=6.55		

****

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
Yb+++	gl	NaClO4	22°C	0.10M	U			1972MCd (27759)	153
							K(YbH-1L+H)=6.45		
Yb+++	gl	NaCl	25°C	0.10M	U			1970PKe (27760)	154
							K(YbH-1L+H)=6.42		

****

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
Yb+++	gl	KNO3	25°C	0.10M	U		K1=12.62 B2=22.27	2002KAa (28599)	155
							K(Yb+HL)=6.19		
							K(Yb+2HL)=10.55		
Yb+++	gl	KNO3	25°C	0.10M	C			1991SKb (28600)	156
							K(YbL+H)=7.02		

****

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
Yb+++	cal	NaClO4	25°C	0.10M	U	H	K1=2.73 B2=4.15	1976OCa (28674)	157
DH(K1)=10.1 kJ mol-1, DS=86 J K-1 mol-1; DH(B2)=16.0, DS=133									
Yb+++	gl	NaClO4	25°C	0.10M	C	H	K1=2.735 B2= 4.14	1976OCb (28675)	158
By calorimetry: DH(K1)=10.1 kJ mol-1, DS(K1)=86.2 J K-1 mol-1; DH(B2)=16.0, DS(B2)=133.									

****

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
Yb+++	gl	oth/un	25°C	0.10M	U		K1=3.470	1987TSb (28899)	159

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
Yb+++	gl	oth/un	25°C	?	U	M	K1=3.53	1998PAa (29162)	160
							K(YbL+acac)=5.33		
							K(Yb(acac)L+acac)=4.35		

Additional method: nmr. Medium not stated.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	EMF	NaClO4	25°C	1.00M	U	M	K1=2.82 B2=4.41	1991WPb (29163)	161
							B(YbLA)=5.10		

HA=glycolic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	NaClO4	25°C	0.10M	U		K1=3.64	1973CDc (29164)	162
Yb+++	gl	NaClO4	25°C	1.00M	U		K1=2.81 B2=4.65	1973DMa (29165)	163
Yb+++	gl	NaClO4	25°C	0.10M	U		K1=3.64 B2=5.73	1970RFa (29166)	164

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
Yb+++	gl	NaClO4	25°C	0.10M	C		K1=2.37	1986LCa (29229)	165
							B(YbHL)=5.91		
							K(Yb+HL)=1.83		
Yb+++	gl	NaClO4	31°C	0.10M	U		K1=2.80	1973CDc (29230)	166

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
Yb+++	gl	NaClO4	25°C	0.50M	M		K1=4.45 B2=8.11	1991MOa (29283)	167

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KCl	25°C	0.10M	U		K1=2.33	1995PAa (29706)	168

****
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
---
Yb+++ ix NaClO4 25°C 0.15M U 1968KKc (30077) 169
K(Yb+HL)=1.72
K(YbHL+HL)=1.2
****
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
---
Yb+++ gl KCl 25°C 0.20M U K1=4.33 B2=7.12 1975PLa (30143) 170
****
C4H6O4S H2L Thiodiacetic CAS 123-93-3 (140)
2,2'-Thiodiglycolic acid, Thiodiethanoic acid; HOOC.CH2.S.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaClO4 25°C 1.00M U K1=2.36 B2=2.76 1973DGa (30244) 171
B(YbHL)=5.10
B(YbHL2)=7.27
****
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
---
Yb+++ gl KNO3 30°C 0.10M U M 1984AIa (30762) 172
K(Yb(EDTA)+L)=1.945

Yb+++ gl KCl 22°C 0.12M C K1=5.10 B2=8.93 1983SLa (30763) 173
B3=11.87

Yb+++ gl KNO3 20°C 0.10M U 1980SDa (30764) 174
B(YbHL)=7.23

Yb+++ gl KNO3 20°C 0.10M U K1=4.73 B2=8.28 1980SDb (30765) 175

Yb+++ gl NaClO4 25°C 0.10M U K1=5.05 B2=8.58 1970RFa (30766) 176

Yb+++ gl oth/un 22°C 0.12M U K1=4.92 1962DAa (30767) 177
****
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

---

Yb+++ EMF NaClO4 20°C 1.00M U T K1=5.70 B2=10.54 1972GOa (30951) 178
B3=13.40
K1(5 C)=5.77, B2=10.58, B3=13.60; K1(35 C)=5.80, B2=10.57, B3=13.18;
K1(50 C)=5.83, B2=10.61, B3=13.06

Yb+++ cal NaClO4 25°C 1.0M C H 1963GRd (30952) 179
DH(K1)=5.954 kJ mol-1, DS(K1)=126 J K-1 mol-1; DH(B2)=4.377,
DS(B2)=213; DH(B3)=-16.14, DS(B3)=197.

Yb+++ EMF NaClO4 20°C 1.00M U K1=5.55 B2=10.36 1963GTa (30953) 180
B3=13.17
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
Yb+++	sp	KCl	25°C	.044M	U	M	B2=7.3	1981KFa (31401)	181
Yb+++	gl	alc/w	25°C	50%	U	I	K1=5.74	1972SSj (31402)	182
Yb+++	gl	KCl	24°C	0.20M	U		K1=3.48	1966DDa (31403)	183
Yb+++	vlt	R4N.X	?	0.10M	U			1958KYa (31404)	184
							K(YbL6+e=YbL4+2L)=-7		

Medium: 0-50% EtOH, 0.05 M. K1(0%)=4.26; K1(25%)=4.91; K1(40%)=5.22

****

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
Yb+++	gl	NaClO4	30°C	0.10M	U		K1=5.93 B2=10.93	1984YLa (31982)	185
Yb+++	gl	NaClO4	30°C	0.10M	U		K1=7.00	1973STb (31983)	186
Yb+++	gl	KCl	25°C	0.10M	U		K1=6.18 B2=11.45	1968DRb (31984)	187

****

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
Yb+++	gl	KCl	25°C	1.0M	U	M		1988KTa (32404)	188
							K(Yb(edta)+L)=2.59		
Yb+++	EMF	KCl	25°C	1.0M	U	M		1977GMa (32405)	189
							K(YbA+L)=4.79		

K(YbA+H2L)=0.63
K(YbA+H3L)=2.04
Method: Pt/H2 electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-triethanoic acid.

Yb+++ cal KNO3 20°C 0.10M U HM 1971GKb (32406) 190
K(YbA+L)=2.55
DH(YbA+L)=-23.18 kJ mol-1, DS=-30.1 J K-1 mol-1. DH(YbAL)=-32.84, DS=311.
H4A=EDTA

Yb+++ gl KNO3 25°C 0.10M U K1=7.49 B2=13.38 1969PMd (32407) 191

Yb+++ gl KNO3 25°C 0.10M U M K1=7.42 B2=13.27 1962THa (32408) 192
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
---
Yb+++ gl diox/w 20°C 50% U K1=8.75 B2=16.25 1971MAf (32554) 193
Medium: 50% v/v dioxan, 0.1 M NaClO4
****
C4H8N2O3 HL Gly-Gly CAS 556-50-3 (54)
Glycyl-glycine; H2N.CH2.CO.NH.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl KCl 25°C 0.10M U K1=2.75 1973FMa (33063) 194
****
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
---
Yb+++ gl KCl 60°C 0.10M U K1=6.48 B2=11.19 1978NBa (33097) 195
B3=8.28
****
C4H8N2O4 H2L CAS 39156-77-9 (3008)
Hydrazine-N,N-diethanoic acid; H2N.N(CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl KNO3 30°C 0.10M U M 1984AIa (33119) 196
K(Yb(EDTA)+L)=2.156

Yb+++ EMF KCl 25°C 0.10M U K1=4.5 B2=7.7 1954VIa (33120) 197
K3<0.1
****
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
Yb+++	gl	oth/un	25°C	0.10M	U	I	K1=2.01	B2=3.61	1970CBe (33263)	198

Medium; EtOH, 0.1 M. K1=8.02, K2=6.81, K3=4.57. in DMF, K1=3.20, K2=2.81, K3=2.57. in 40%(CH3)2SO, K1=3.16, K2=2.47, K3=1.53 plus other meia

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	25°C	2.00M	U	H	K1=1.62	B2=2.67	1965CGa (33264)	199

By calorimetry: DH(K1)=22.6 kJ mol-1,DS=106 J K-1 mol-1; DH(K2)=16.7,DS=76

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	25°C	0.50M	U		K1=1.78	B2=3.10	1964SPa (33265)	200

****

C4H8O2S HL CAS 627-04-3 (3007)

S-Ethylthioethanoic acid; CH3.CH2.S.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	31°C	2.0M	U		K1=1.40	B2=2.40	1963BCb (33416)	201

****

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
Yb+++	gl	oth/un	25°C	0.10M	U	I	K1=3.59	B2=6.45	1970CBe (33544)	202
							K3=2.45			

Medium: EtOH, 0.1 M. K1=9.67, K2=8.58, K3=6.94. In (CH3)2SO, K1=5.45, K2=4.49, K3=3.233. In 40%(CH3)2SO, K1=4.27, K2=3.72, K3=2.73

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	25°C	0.20M	U		K1=3.13	B2=5.83	1964DVa (33545)	203
							K3=2.1			
							K4=1.78			
Yb+++	gl	NaClO4	25°C	0.50M	U	I	K1=3.29	B2=6.00	1964DVa (33546)	204
							K3=2.13			
							K4=1.56			

K1=3.40(I=0),3.32(I=0.05),3.35(I=0.1),3.32(0.2); K2=2.80(0),2.79(0.05),2.75(0.1),2.73(0.2);K3=2.26(0),2.14(0.1),2.15(0.2);K4=1.69(0),1.72(0.1),1.55(.2)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	EMF	NaClO4	25°C	1.0M	U		K1=3.00	B2=5.79	1964EVa (33547)	205
							K3=2.09			
							K4=1.65			

Method: quinhydrone electrode

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	20°C	0.10M	U		K1=3.643	B2=6.42	1964PKb (33548)	206
							B3=8.69			
Yb+++	gl	NaClO4	25°C	0.50M	U		K1=3.18	B2=5.76	1964SPa (33549)	207
							B3=8.02			

```
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C  2.0M U        K1=3.15   B2=6.00   1961CCa (33550) 208
                                         K3=2.12
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M C        K1=3.27   B2=5.85   1975PFb (33689) 209
                                         K3=1.82
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      EMF KNO3   25°C 0.10M U        K1=3.13   B2=5.69   1976PKb (33719) 210
                                         K3=2.04
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.50M U        K1=2.90   B2=5.07   1964SPa (33720) 211
                                         B3=6.50
********************************************************************************
C4H9NO3                HL    Threonine         CAS 72-19-5  (48)
2-Amino-3-hydroxybutanoic acid; H2N.CH(CH(OH).CH3)COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C  0.0  M T H    K1=5.53        2003MBa (34342) 212
                                         K(Yb+HL=YbL+H)=-3.65
Extrapolated from data for I=0.07-0.32 M KNO3. DH(K1)=-72.7 kJ mol-1,
DS(K1)=-138.0 J K-1 mol-1; DH(Yb+HL)=-14.7, DS(Yb+HL)=-119.3.
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      cal non-aq 25°C 100%  U   H    K1=4.32   B2=7.76   1997CDa (34774) 213
                                         B3=10.17
                                         B4=11.52
Medium: MeCN. DH(K1)=-35.6 kJ mol-1, DS=37, DH(B2)=-70.6, DS=88;
DH(B3)=-104, DS=156, DH(B4)=-133, DS=224
********************************************************************************
C4H11O4P               HL                       (4276)
Diethylphosphoric acid; (C2H5O)2.PO.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      kin oth/un 25°C       U        K1=2.22        1971MGb (35271) 214
```

Yb+++ kin none 25°C 0.00 M K1=2.81 1966SSb (35272) 215
****
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
---
Yb+++ EMF non-aq 25°C 100% C H K1=2.70 B2= 4.70 2002CDb (35510) 216
Method: comp. reactn. using Ag electrode. Medium: DMSO, 0.10 M Et4NClO4.
Calorimetry: DH(K1)=-14 kJ mol-1, DS=4.7 J K-1 mol-1; DH(B2)=-35, DS=-28.
****
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
---
Yb+++ EMF NaClO4 25°C 100% C H K1=6.74 B2=10.82 2000CDa (35821) 217
Medium: DMF, 0.10 M Et4N[CF3SO3]. Method: Ag/Ag+ electrode.
By calorimetry: DH(K1)=-50.3, DH(B2)=-98.2 kJ mol-1.

Yb+++ ISE non-aq 25°C 100% C H K1=4.20 B2=7.72 1993CCb (35822) 218
Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-38.1
kJ mol-1, DS=-47; DH(B2)=-82.0, DS-127.
****
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
---
Yb+++ cal NaClO4 25°C 0.10M U H K1=2.93 B2=4.57 1978COa (35953) 219
DH(K1)=10.9 kJ mol-1, DS=92.8; DH(K2)=7.86, DS=57.7
****
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
---
Yb+++ cal NaClO4 25°C 2.00M U H K1=1.47 1976YCa (36313) 220
DH=8.95 kJ mol-1 and DS=58.16 J mol-1 K-1.
****
C5H5N L Pyridine CAS 110-86-1 (31)
Pyridine, Azine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ cal non-aq 30°C 100% U HM 1981GMa (36691) 221
K(YbA3+L)=3.14
Medium: benzene. HA=2,2,6,6-tetramethylheptane-3,5-dione; DH=-22.7, DS=-15

****

C5H5NO2 HL CAS 16867-04-2 (2316)
2,3-Dihydroxypyridine, 3-Hydroxypyridin-2(1H)-one; C5H3N(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	diox/w	25°C	50%	U		K1=8.83		1970GDa (36800)	222

Medium: 50% dioxan, 0.1 M NaClO4

****

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
Yb+++	gl	KCl	25°C	0.20M	U		K1=2.62		1989MFa (37461)	223
							K(Yb+HL)=1.61			

****

C5H7NO3 HL (4313)
Isonitrosoacetylacetone; HO.N:CH.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	diox/w	20°C	50%	U		K1=5.45	B2=9.07	1971MAf (37536)	224

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
Yb+++	gl	diox/w	20°C	50%	U		K1=6.42	B2=11.56	1971MAf (37713)	225

****

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
Yb+++	gl	KCl	25°C	0.10M	U		K1=6.05	B2=10.74	1995PAa (38142)	226
							K3=3.57			
Yb+++	gl	NaClO4	20°C	0.10M	U	M			1973TZa (38143)	227
							K(Yb(EDTA)+L)=3.67			
Yb+++	gl	R4N.X	25°C	0.10M	U	M			1972FGa (38144)	228
							K(Yb(EDTA)+L)=2.72			
Yb+++	gl	alc/w	?	50%	U	I	K1=7.40		1971KRd (38145)	229

Medium: 5-80% MeOH, 0.005 YbCl3, 0.005 HL. K1(5%)=6.32, K1(80%)=8.62

Yb+++	ix	NaClO4	30°C	0.10M	U		K1=5.7	B2=10.15	1964PRa (38146)	230

```
------------------------------------------------------------------------------
Yb+++      gl  oth/un 30°C 0.10M U        K1=6.18   B2=11.04  1960GFa (38147) 231
                                          K3=3.60
******************************************************************************
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
------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 0.20M U        K1=4.37        1989ZPa (38253) 232
In 70.4% v/v EtOH/H2O: K1 = 6.45
******************************************************************************
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
------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.10M U        K1=3.07   B2=5.15   1970RFa (38272) 233
******************************************************************************
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
------------------------------------------------------------------------------
Yb+++      gl  KCl    24°C 0.20M U        K1=3.85        1966DDa (38446) 234
******************************************************************************
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
------------------------------------------------------------------------------
Yb+++      gl  NaCl   37°C 0.15M U        K1=3.37        1997GMa (38762) 235
******************************************************************************
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
------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 0.10M U        K1=7.42   B2=13.64  1980MGc (39296) 236
                                          B3=15.91
                                          B(Yb+2OH+L)=19.14
******************************************************************************
C5H9N3O4S            H2L                      CAS 16907-58-7  (2106)
Thiosemicarbazone-diethanoic acid; H2N.CS.NH.N(CH2.COOH)2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Yb+++      gl  NaClO4 22°C 0.10M U        K1=4.35        1983BTa (39576) 237
******************************************************************************
C5H10N2O3             HL    Ala-Gly          CAS 687-69-4  (55)
```

Alanyl-glycine; H2N.CH(CH3).CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KCl	25°C	0.10M	U		K1=2.80		1973FMa (39896)	238

****

C5H10N2O3 HL Gly-DL-Ala CAS 926-77-2 (66)
Glycyl-DL-alanine; H2N.CH2.CO.NH.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KCl	25°C	0.10M	U		K1=2.80		1973FMa (39942)	239

****

C5H10N2O4 HL Gly-Ser CAS 7361-43-5 (281)
Glycyl-serine; H2N.CH2.CO.NH.CH(CH2.OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KCl	25°C	0.10M	U		K1=2.80		1973FMb (40105)	240

****

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
Yb+++	gl	KNO3	25°C	0.10M	U		K1=3.43 K3=2.03	B2=6.26	1969PCa (40267)	241
Yb+++	EMF	NaClO4	25°C	1.0M	U		K1=3.20 K3=1.98 K4=1.42	B2=5.87	1964EVa (40268)	242

Method: quinhydrone electrode.

****

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
Yb+++	gl	NaClO4	25°C	1.0M	U		K1=2.76		1968GCa (40289)	243

****

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
Yb+++	gl	NaClO4	25°C	0.10M	U		K1=2.30	B2=3.91	1970RDa (40307)	244

****

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
Yb+++	gl	KNO3	25°C	0.10M	C		K1=3.21 K3=1.72	B2=5.76	1975PFb (40322)	245

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
Yb+++	cal	oth/un	25°C	0.03M	U	H	K1=4.29		1981PBa (40774)	246
Yb+++	gl	KCl	25°C	0.10M	U	T	K1=4.30		1974BFa (40775)	247

C5H11NO2S H2L D-Penicillamine CAS 52-67-5 (1323)
D-2-Amino-3-mercapto-3-methylbutanoic acid; (CH3)2C(SH)CH(NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KCl	25°C	0.10M	U		K1=6.95 B(YbHL)=13.52		1996ADa (41195)	248

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
Yb+++	gl	KNO3	25°C	0.10M	U		K1=4.40 K3=2.95 K4=2.11	B2=8.23	1968PIa (42630)	249
Yb+++	gl	NaClO4	25°C	2.0M	U		K1=4.28	B2=7.66	1965YCa (42631)	250
Yb+++	gl	KNO3	25°C	0.10M	U		K1=4.43 B3=11.3	B2=8.12	1964THb (42632)	251

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
Yb+++	gl	NaClO4	25°C	0.20M	U		K1=2.18		1973FDa (42692)	252

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
Yb+++	gl	NaClO4	25°C	2.0M	U		K1=3.15	B2=5.75	1965YCa (42843)	253

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
Yb+++	sp	KCl	25°C	0.10M	M	I	K1=6.46		1989PEa (42962)	254

****

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
Yb+++	sp	KCl	25°C	0.10M	U		K1=5.68		1987PLa (43119)	255

****

C6H5O4Cl HL Chlorokojic aci (3086)
3-Chloro-5-hydroxy-2-hydroxymethyl-4-pyrone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	oth/un	30°C	0.10M	U		K1=6.28	B2=11.97	1972DSd (43140)	256

****

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
Yb+++	sp	KCl	25°C	0.10M	U		K1=5.72		1987PLa (43161)	257

****

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
Yb+++	gl	NaClO4	35°C	0.20M	M		K1=10.28		1982LTa (43870)	258
Yb+++	EMF	NaCl	25°C	0.10M	U		K1=11.67		1969PKe (43871)	259

****

C6H6O3 HL Maltol CAS 118-71-8 (2442)
3-Hydroxy-2-methyl-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	30°C	0.10M	U		K1=7.06	B2=12.89	1970DSc (44115)	260
							K3=4.39			

****

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

```
Yb+++      sp  KCl    25°C 0.10M C  I     K1=6.364       1987PEa (44262) 261
In 0.087 M KCl, K1=6.399.
-------------------------------------------------------------------------
Yb+++      gl  oth/un 30°C 0.10M U        K1=6.53   B2=12.23  1972DSd (44263) 262
                                          K3=4.82
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      gl  NaClO4 35°C 0.20M M        K1=13.99       1982LTa (44523) 263
-------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.50M C        K1=13.25  B2=22.76  1976LAb (44524) 264
                                          B(YbHL2)=30.27
-------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.10M U        K1=14.43       1970SSi (44525) 265
                                          K(Yb+HL)=5.65
*************************************************************************
C6H7N                   L    Picoline         CAS 109-06-8  (320)
2-Methylpyridine; C5H4N.CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      cal non-aq 30°C 100%  U   HM                 1981GMa (44618) 266
                                          K(YbA3+L)=2.16
Medium: benzene. HA=2,2,6,6-tetramethylheptane-3,5-dione; DH=-18.0, DS=-18
*************************************************************************
C6H7N                   L    gamma-Picoline   CAS 108-89-4  (325)
4-Methylpyridine; C5H4N.CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      cal non-aq 30°C 100%  U   HM                 1981GMa (44836) 267
                                          K(YbA3+L)=-3.27
Medium: benzene. HA=2,2,6,6-tetramethylheptane-3,5-dione; DH=-22.8, DS=-13
*************************************************************************
C6H7N                   L    Aniline          CAS 62-53-3  (583)
Aminobenzene, aniline; C6H5.NH2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      sp  non-aq 25°C 100%  U   HM                 1982KNa (44883) 268
                                          K(YbA3+L)=1.73
Medium: CCl4. HA=dipivaloylmethane
*************************************************************************
C6H7NO                 HL    2-Aminophenol    CAS 95-55-6  (2868)
2-Amino-1-hydroxybenzene; HO.C6H4.NH2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

Yb+++ gl mixed 25°C 50% U I K1=4.54 B2=8.62 1969BCa (44941) 269
Medium: 50% DMSO, 0.12 M NaClO4. In 0.12 M NaClO4, 50% dioxan: K1=5.82,
K2=4.52. Medium: 0.12 NaClO4, 50% EtOH: K1=5.12, K2=4.30
****
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
---
Yb+++ gl KCl 25°C 0.20M U K1=4.21 1989ZPa (45477) 270
In 70.4% v/v EtOH/H2O: K1 = 5.15
****
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
---
Yb+++ gl NaClO4 25°C 2.00M U IH 1988HSa (45667) 271
K(Yb+HL)=1.41
DH=7.8 kJ mol-1, DS=53.3 J K-1 mol-1
In 0.1 M NaClO4: K=1.8, DH=4.0 kJ mol-1, DS=48 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
---
Yb+++ gl KNO3 25°C 0.10M U M 1975TDa (46319) 272
B(Yb(IDA)L)=9.7

Yb+++ dis NaClO4 25°C 0.15M U 1973HHc (46320) 273
K(Yb+HL+L)=11.77

Yb+++ gl alc/w 25°C 25% U I K1=8.96 1972BKd (46321) 274
Medium: EtOH/H2O, 0.05 M (NaCl,NaClO4). 0%, K1=8.10; 50%, K1=10.00

Yb+++ ix R4N.X 20°C 0.60M U B2=9.2 1966SSh (46322) 275
Medium: NH4Cl, pH 6. By chromtography, pH 4.3: B2=9.6
****
C6H8O7 H3L (6770)
Carboxymethoxysuccinic acid; HOOC.CH2.O.CH(COOH)CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ EMF NaClO4 25°C 1.00M U K1=6.11 B2=10.10 1991WPb (46337) 276
****
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
--------------------------------------------------------------------------
Yb+++      ISE NaClO4 25°C 0.10M C  I     K1=12.17       1997LBb (47112) 277
Method: Cu ISE and competitive complexation by Cu. Data for 0.1-5.0 M.
At I=0.0 M, K1=14.00.
--------------------------------------------------------------------------
Yb+++      ISE KNO3   25°C 0.10M C        K1=12.38       1980NSf (47113) 278
Competitive method using Cd ion-selective electrode.
--------------------------------------------------------------------------
Yb+++      gl  KNO3   20°C  1.0M C        K2=8.53        1978GHb (47114) 279
--------------------------------------------------------------------------
Yb+++      gl  diox/w 30°C  50%  U    M                  1978SGf (47115) 280
                                        K(YbL+A)=5.89
HA=tropolone
--------------------------------------------------------------------------
Yb+++      EMF KCl    25°C  1.0M U    M                  1977GMa (47116) 281
                                        K(YbA+L)=5.37
                                        K(YbA+H2L)=1.45
                                        K(YbA+H3L)=1.94
                                        K(YbA+H4L)=3.18
Method: Pt/H2 electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-
triethanoic acid.
--------------------------------------------------------------------------
Yb+++      cal KNO3   20°C 0.10M U   HM                 1971GKb (47117) 282
                                        K(YbA+L)=2.85
H4A=EDTA.  DH(YbA+L)=-21.97 kJ mol-1, DS=-20.5 J K-1 mol-1.
DH(YbLA))=-31.6 kJ mol-1, DS=320 J K-1 mol-1
--------------------------------------------------------------------------
Yb+++      gl  oth/un 20°C 0.20M U                     1970VMa (47118) 283
                                        B(YbL(OH))=6.74
--------------------------------------------------------------------------
Yb+++      gl  KCl    20°C 0.10M U       K1=12.08  B2=21.30  1965ANb (47119) 284
--------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M U T H  T K1=12.40  B2=21.69  1962MFb (47120) 285
15 C: K1=12.39, K2=9.36; 20 C: 12.37, 9.33; 30 C: 12.45, 9.28; 35 C: 12.45,
9.25; 40 C: 12.48, 9.23. DH(K1)=8.7 kJ mol-1, DS=267; H(K2)=-7.8, DS=165
--------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M U                     1957NOa (47121) 286
                                        B(Yb2L3)=38.56
--------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M U      T K1=12.08     1956SGa (47122) 287
**************************************************************************
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
--------------------------------------------------------------------------
Yb+++      cal oth/un 25°C 0.03M U   H    K1=4.03        1981PBa (47630) 288
--------------------------------------------------------------------------
Yb+++      gl  NaClO4 37°C 3.00M U      T K1=4.76   B2=10.31  1971JWa (47631) 289
```

B(YbHL)=11.60

Yb+++ gl NaClO4 25°C 3.00M U T K1=4.23 B2=9.83 1970JWa (47632) 290
B(YbHL)=11.40

****

C6H10O2S HL (4370)
Ethyl thioacetoacetate; CH3.CS.CH2.CO.OCH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	mixed	30°C	75%	U		K1=7.64	B2=14.06	1970DRa (47969)	291
							K3=6.25			

Medium: 75% acetone, 0.1 M

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	25°C	0.10M	U		K1=3.175	B2=5.85	1966PRb (48000)	292
							K3=2.05			
							K4=1.32			

****

C6H10O3 HL CAS 141-97-9 (3068)
Ethyl acetoacetate; CH3.CO.CH2.CO2.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	mixed	30°C	75%	U		K1=6.96	B2=13.12	1969DRa (48021)	293

Medium: 75% acetone, 0.1 M NaClO4

****

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
Yb+++	oth	NaClO4	25°C	0.10M	U		K1=4.83		1984AFa (48361)	294

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
Yb+++	gl	NaClO4	25°C	0.10M	U	M	K1=4.67		1997PPb (48492)	295
							K(Yb(edta)+L)=4.25			

****

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
-------------------------------------------------------------------------
Yb+++      oth NaNO3  20°C 0.10M U    M   K1=9.1    B2=16.90  1966JMc (48817) 296
Method: paper electrophoresis. Ternary complexes with HEDTA
-------------------------------------------------------------------------
Yb+++      vlt KCl    25°C 0.10M U        B2=16.37       1965DTa (48818) 297
-------------------------------------------------------------------------
Yb+++      ISE KNO3   25°C 0.10M U        K1=9.38   B2=17.12  1963TLa (48819) 298
*************************************************************************
C6H11N3O4              HL    Gly-Gly-Gly      CAS 556-33-2  (415)
Glycyl-glycyl-glycine; H2N.CH2.CO.NH.CH2.CO.NH.CH2.COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 0.10M U        K1=2.50        1973FMa (48991) 299
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      gl  R4N.X  25°C 0.10M C        K1=8.93        1988CCb (49286) 300
-------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M U        K1=8.93   B2=16.85  1962THb (49287) 301
*************************************************************************
C6H12O3                HL    DiEtGlycolic     CAS 3639-21-2  (421)
2-Ethyl-2-hydroxybutanoic acid; (C2H5)2.C(OH).COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 1.00M U         K1=3.13   B2=5.35   1970GNd (49469) 302
                                          K3=1.40
                                          K4=0.82
-------------------------------------------------------------------------
Yb+++      EMF NaClO4 25°C  1.0M U         K1=3.10   B2=5.36   1965TVa (49470) 303
                                          K3=1.31
                                          K4=1.09
Method: quinhydrone electrode
*************************************************************************
C6H12O3                HL                    CAS 92841-97-9  (3658)
2-Hydroxy-2,3-dimethylbutanoic acid; CH3.CH(CH3).C(OH)(CH3).COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 1.00M U         K1=3.10   B2=5.51   1970GNd (49477) 304
                                          K3=1.74
                                          K4=1.23
-------------------------------------------------------------------------
Yb+++      EMF NaClO4 25°C  1.0M U         K1=3.12   B2=5.56   1965TVa (49478) 305
                                          K3=1.65
```

K4=1.39

Method: quinhydrone electrode

****

C6H12O3 HL (3662)

2-Hydroxy-2-methylpentanoic acid; (Methylpropylglycolic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	EMF	NaClO4	25°C	1.0M	U		K1=3.29	B2=5.84	1964EVa (49485)	306
							K3=2.21			
							K4=1.12			

Method: quinhydrone electrode.

****

C6H12O4 HL CAS 1112-33-0 (1246)

2,3-Dihydroxy-2,3-dimethylbutanoic acid; (CH3)2.C(OH).C(OH)(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KNO3	25°C	0.10M	U		K1=3.50	B2=5.91	1979PPa (49503)	307
							K3=1.20			

****

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
Yb+++	EMF	alc/w	25°C	80%	U	I	K1=5.97		1966KRb (49769)	308

Medium: 80% MeOH. K1=5.10(50%)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KCl	25°C	0.20M	U		K1=2.72	B2=4.68	1962KOa (49770)	309

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	vlt	R4N.X	?	0.10M	U				1958KYa (49771)	310
							K(YbL6+e=YbL4+2L)=-5.8			

Medium: Me4NI

****

C6H13NO2 HL Norleucine CAS 616-06-8 (602)

2-Aminohexanoic acid (2-Aminocaproic acid) CH3.(CH2)3.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	22°C	0.10M	M	M	K1=5.67	B2=10.68	1991DTa (50199)	311
							B3=14.68			
							K(YbA+L)=9.75			

H4A=trans-cyclohexane-1,2-diaminotetraethanoic acid. Definitions wrong?

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KCl	20°C	0.20M	U		K1=3.81	B2=9.17	1990PLa (50200)	312

****

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
-------------------------------------------------------------------------
Yb+++      gl  KNO3   20°C 0.10M U        K1=5.42   B2=9.82   1982RFa (50419) 313
-------------------------------------------------------------------------
Yb+++      gl  alc/w  20°C  50%  U  I     K1=6.64        1970KRa (50420) 314
Medium: 0-80% MeOH, 0.03 M KCl.  K1(0%)=5.45, K1(20%)=6.08, K1(80%)=7.84
-------------------------------------------------------------------------
Yb+++      oth NaNO3  20°C 0.10M U        K1=7.7    B2=13.70  1966JMc (50421) 315
Method: paper electrophoresis
*************************************************************************
C6H13N3O3              HL    Citrulline         (579)
2-Amino-5-ureidovaleric acid; H2N.CO.NH.CH2.CH2.CH2.CH(NH2).COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      gl  NaCl   37°C 0.15M U    M   K1=3.33        1997GMa (50590) 316
                                          B(YbHL)=11.28
                                          B(YbH2AL)=24.63
Ligand is DL-citrulline. HA is L-hydroxyproline.
*************************************************************************
C6H15O3P               HL                     CAS 3935-30-6  (8314)
Methylphosphonic acid monoisopentyl ester;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      dis oth/un 20°C  1.0M C                        1994NSc (51505) 317
K(Yb+3HL(org)=YbL3(org)+3H)=4.6. Method: extraction of 169Yb from
1.0 M HNO3 into benzene. Data for a range of alkyl- and cyclohexyl- esters
*************************************************************************
C6H15O4P               HL                     CAS 1611-31-0  (4393)
Dipropylphosphoric acid; (CH3.CH2.CH2.O)2.PO.OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      kin none   25°C 0.00  M        K1=3.12        1966SSb (51517) 318
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      ISE non-aq 25°C 100%  C   H    K1=6.02   B2=7.75   1993CCb (52212) 319
Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-58.2
kJ mol-1, DS=-80; DH(B2)=-85.5, DS=-139.
*************************************************************************
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
-------------------------------------------------------------------------
```

```
Yb+++      gl  NaCl   37°C 0.15M C        K1=9.98        1995WJa (52373) 320
                                          K(YbL+H)=9.12
                                          K(YbH2L+H)=5.43
                                          K(YbHL+H)=6.84
-------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M C                       1991SKb (52374) 321
                                          K(YbL+H)=7.24
                                          K(YbHL+H)=5.8
*******************************************************************************
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
-------------------------------------------------------------------------------
Yb+++      gl  KNO3   30°C 0.20M U T      K1=4.73        1975PMc (52511) 322
40 C: K=4.55, 50 C: K=4.35
-------------------------------------------------------------------------------
Yb+++      gl  oth/un 24°C 0.20M U        K1=5.60        1972PSd (52512) 323
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
-------------------------------------------------------------------------------
Yb+++      cal NaClO4 25°C 0.50M C   H                    1963GRd (52825) 324
DH(K1)=-8.05 kJ mol-1, DS(K1)=142 J K-1 mol-1; DH(B2)=-24.20,
DS(B2)=236; DH(B3)=-54.00, DS(B3)=232.
-------------------------------------------------------------------------------
Yb+++      EMF oth/un 20°C 0.50M U        K1=8.85   B2=16.61  1961GRa (52826) 325
                                          K3=5.12
*******************************************************************************
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
-------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.10M C   H    K1=1.65        1986CLc (52875) 326
DH=8.7 kJ mol-1, DS=61 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
-------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.10M M   H    K1=1.68        1999YKa (52914) 327
By calorimetry: DH(K1)=9.24 kJ mol-1, DS(K1)=63.2 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
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.10M C   H    K1=1.79        1986CLc (53244) 328
DH=8.3 kJ mol-1, DS=62 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
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.10M C   H    K1=1.88        1986CLc (53264) 329
DH(K1)=12.0 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
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.10M C   H  T                1993ALa (53378) 330
                                        B(1,1,1)=12.39
                                        B(1,0,1)=7.83
                                        B(1,0,2)=13.66
                                        B(1,-2,1)=-6.40
B(p,q,r); pYb+qH+rL=(Yb)pHqLr
********************************************************************************
C7H6OS                 HL    Thiotropolone    CAS 1073-38-7  (8477)
2-Mercapto-2,4,6-cycloheptatrien-1-one;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  diox/w 30°C  50%  M  I     K1=4.69   B2= 8.73  1978SSi (53550) 331
Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4. Data for 0.005 and 0.2 M
NaClO4.
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M U        K1=7.85   B2=14.35  1969CMb (53702) 332
                                        K3=5.48
                                        K4=3.90
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      cal NaClO4 25°C 0.10M U   H    K1=1.94   B2=3.72   1982CBc (53863) 333
```

DH1= 12.6 kJ mol-1, DS1= 79 J K-1 mol-1

****

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
Yb+++	gl	NaClO4	25°C	0.1M	C	H			1996HYa (54343)	334

By calorimetry: DH(K1)=2.98 kJ mol-1, DH(B2)=18.58 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	25°C	0.10M	C	T			1989HMa (54344)	335
							K(Yb+HL)=1.78			
							K(YbHL+HL)=1.67			

****

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
Yb+++	gl	NaClO4	25°C	0.10M	C				1988LLa (54392)	336
							K(Yb+HL)=1.93			

****

C7H6O3 H2L CAS 99-96-7 (1371)

4-Hydroxybenzoic acid; HO.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	25°C	0.10M	M	H	K1=1.69		1999YKa (54438)	337

By calorimetry: DH(K1)=13.09 kJ mol-1, DS(K1)=76.3 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	25°C	0.10M	C				1988LLa (54439)	338
							K(Yb+HL)=2.28			

****

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
Yb+++	gl	NaClO4	20°C	1.0M	U		K1=7.32	B2=13.24	1972CBb (55082)	339
Yb+++	sp	NaClO4	20°C	0.10M	U		K1=8.35	B2=15.16	1968KTb (55083)	340
							K(Yb+HL)=2.30			

****

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
Yb+++	gl	NaClO4	25°C	0.50M	C	T	K1=8.90	B2=14.89	1976LAc (55106)	341

****

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
Yb+++	gl	NaClO4	25°C	0.10M	C		K1=2.24	B2=4.40	1989HMa (55273)	342
Yb+++	gl	NaClO4	25°C	0.10M	U	H	K1=4.88		1982KYc (55274)	343

By calorimetry, DH(K1)=8.54 kJ mol-1, DS(K1)=122.13 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	non-aq	25°C	100%	U		K1=7.22	B2=13.39	1970BBh (55275)	344
							K3=3.64			
							K4=2.94			

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
Yb+++	gl	NaClO4	25°C	0.10M	M	H	K1=1.96	1999YKa (55396)	345

By calorimetry: DH(K1)=13.20 kJ mol-1, DS(K1)=81.8 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KCl	25°C	0.20M	U		K1=2.15	1977EBa (55397)	346

C7H7NO3 H2L CAS 89-73-6 (204)
2-Hydroxybenzohydroxamic acid (salicylhydroxamic acid); HO.C6H4.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	mixed	25°C	75%	U			1970SEa (55620)	347
							K(Yb+HL)=8.13		
							K(YbHL+HL)=7.25		

Medium: 75% acetone, 0.1 M NaClO4

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KCl	25°C	0.20M	M	T H	K1=9.08	1991BPb (55697)	348
							K(Yb+OH+L)=15.94		

DH(K1)=-127 kJ mol-1, DS(K1)=-252 J K-1 mol-1. DH(Yb(OH)L)=-151,
DS(Yb(OH)L)=-203. Also data for 35, 45 and 55 C.

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

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

Yb+++ gl mixed 25°C 50% U I K1=4.82 B2=9.41 1969BCb (56085) 349
Medium: 50% DMSO, 0.12 M NaClO4. In 50% dioxan, 0.12 M NaClO4: K1=5.86,
K2=4.64; 50% EtOH, 0.12 M NaClO4: K1=5.49, K2=4.62
****
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
---
Yb+++ sp KCl 25°C 0.10M M I K1=6.78 1986PLb (56137) 350
****
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
---
Yb+++ sp KCl 25°C 0.10M M I K1=6.44 1986PLb (56156) 351
****
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
---
Yb+++ gl KNO3 25°C 0.10M U K1=4.26 B2=6.88 1971PJb (56738) 352
****
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
---
Yb+++ gl KNO3 25°C 0.10M U K1=6.64 B2=12.47 1963THb (56816) 353
****
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
---
Yb+++ gl KNO3 25°C 0.1M U K1=9.43 1982KKc (56855) 354
****
C7H11NO6 H3L MNTA (1026)
Nitrilo(2-propanoic)-diethanoic acid; HOOC.CH(CH3).N(CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl KNO3 20°C 0.10M U K1=13.23 B2=23.05 1974RMg (56922) 355
****
C7H12N2O3 HL Gly-Pro CAS 704-15-4 (257)
Glycyl-proline; H2N.CH2.CO.NC4H7.COOH

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

---
Yb+++ gl KNO3 25°C 0.15M M T H K1=4.10 1983SKb (57131) 356
Data for 35 and 45 C. At 35 C, DH(K1)=21 kJ mol-1, DS(K1)=149 J K-1 mol-1.

Yb+++ gl KNO3 25°C 0.15M U T H K1=4.08 1979SKe (57132) 357
At 35 C, K1=4.13; at 45 C, K1=4.17. At 35 C, DH(K1)=8.13 kJ mol1-1,
DS(K1)=109 J K-1 mol-1
****
C7H12N2O3 HL Pro-Gly CAS 2578-97-6 (262)
Prolyl-glycine; C4H8N.CO.NH.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl KCl 25°C 0.10M U K1=3.50 1973FMa (57153) 358
****
C7H12O3 HL CAS 609-69-8 (3731)
2-Hydroxycyclohexanecarboxylic acid; HO.C6H10.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaClO4 25°C 1.0M U K1=2.61 B2=5.06 1967STd (57269) 359
****
C7H12O3 HL (4422)
3-Methyl ethylacetoacetate; CH3.CO.CH(CH3).CO.OCH2.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl mixed 30°C 75% U K1=8.66 1971DRb (57280) 360
Medium: 75% acetone, 0.1 M
****
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
---
Yb+++ gl KNO3 25°C 0.10M U K1=4.76 B2=7.43 1968PFa (57376) 361
****
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
---
Yb+++ gl NaCl 20°C 0.10M U K1=3.09 1977SSc (57416) 362

Yb+++ EMF NaClO4 25°C 1.0M U K1=2.97 B2=5.30 1967OTa (57417) 363
K3=1.77
K4=1.08
Method: quinhydrone electrode
****
C7H13NO6 H2L CAS 32013-58-4 (6079)

N-(2,3-Dihydroxypropyl)iminodiethanoic acid; HO.CH2.CH(OH).CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KNO3	20°C	0.10M	U		K1=9.06	B2=16.78	1980RPa (57622)	364

****

C7H14N2O3S HL Gly-Met CAS 554-94-9 (726)
Glycyl-methionine; H2N.CH2.CO.NH.CH(CH2.CH2.S.CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KCl	25°C	0.10M	U		K1=2.85	1973FMa (57801)	365

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	25°C	1.0M	U		K1=3.23	B2=5.93	1970GNd (57867)	366
							K3=1.83			
							K4=1.27			
Yb+++	EMF	NaClO4	25°C	1.0M	U		K1=3.21	B2=5.95	1965TVa (57868)	367
							K3=1.75			
							K4=1.40			

Method: quinhydrone electrode

****

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
Yb+++	gl	NaClO4	25°C	0.10M	C		K1=3.02	B2=4.92	1976SPa (57883)	368

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KNO3	20°C	0.10M	U		K1=5.19	B2=9.62	1982RFa (57945)	369

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sp	non-aq	25°C	100%	U		K1=6.20	1983PSc (58544)	370

Medium: DMSO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sp	KNO3	12°C	0.10M	U			1965GEa (58545)	371

K(Yb+H2L)=3.41

****

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
Yb+++	cal	non-aq	25°C	100%	C	H			2004MIa (58696)	372

Method: calorimetric titration. Medium: chloroform. DH(YbL3+A)=5.2 kJ mol-1, DS=71 J K-1 mol-1; DH(YbL3+2A)=-7, DS=71. HA is benzoic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	alc/w	22°C	80%	U		K1=6.31	B2=12.08	1995MTa (58697)	373
							K3=4.88			

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	mixed	25°C	50%	U		K1=5.93		1980SBc (58698)	374

Medium: 50% MeCN

****

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
Yb+++	cal	NaClO4	25°C	0.10M	U	H	K1=2.59		1982CBc (59064)	375

DH= 17.71 kJ mol-1, DS= 109 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
Yb+++	gl	diox/w	20°C	50%	U		K1=6.64	B2=12.21	1971MAf (59111)	376

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
Yb+++	gl	diox/w	20°C	50%	U		K1=7.67	B2=14.09	1971MAf (59346)	377

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
Yb+++	gl	NaClO4	25°C	0.1M	C	H	K1=1.80		1996HYa (59572)	378

By calorimetry: DH(K1)=16.10 kJ mol-1

Yb+++ gl NaClO4 25°C 0.10M C H K1=1.80 1990HYa (59573) 379
By calorimetry: DH(K1)=16.1 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
---
Yb+++ sp alc/w ? 3% U K1=7.74 1967GDb (59607) 380
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
---
Yb+++ gl NaClO4 25°C 0.10M M H K1=1.85 1988CLb (59758) 381
DH=9.79 kJ mol-1, DS=68 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
---
Yb+++ gl NaClO4 25°C 0.10M C K1=3.29 B2=5.76 1989HMa (59889) 382

Yb+++ gl NaClO4 25°C 2.0M U T K1=2.72 1972DCb (59890) 383
****
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
---
Yb+++ gl NaClO4 25°C 0.10M M H K1=2.01 1988CLb (59924) 384
DH=11.8 kJ mol-1, DS=78 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
---
Yb+++ gl NaClO4 25°C 0.10M M H K1=2.01 1988CLb (59967) 385
DH=15.3 kJ mol-1, DS=90 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
---
Yb+++ gl diox/w 35°C 50% U K1=5.13 B2=8.71 1971MAa (60102) 386

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
Yb+++	gl	diox/w	35°C	50%	U				1971MAa (60508)	387
							K(Yb+HL)=5.03			
							K(Yb+2HL)=8.53			

Medium: 50% dioxan, 0.1 M NaClO4

****

C8H10N6O2S2 H2L (2746)

2,5-Dihydroxybenzoquinone bis-thiosemicarbazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	diox/w	30°C	50%	C	TIH	K1=5.49	B2=10.25	1989GDa (60821)	388

DH(K1)=-119.7 kJ mol-1

****

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
Yb+++	gl	alc/w	22°C	20%	U		K1=4.73	B2=8.39	1988ZTa (60858)	389
							K3=3.37			

****

C8H10O5 H2L CAS 145-73-7 (138)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KCl	30°C	0.10M	C		K1=5.88	B2=9.83	1996SZa (60879)	390

For the 5-en-2-exo isomer, K1=6.06, B2=10.66.

****

C8H11NO3 HL Vitamin B6 CAS 65-23-6 (254)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KCl	25°C	0.1M	C		K1=3.4		1999DNa (61126)	391
							B(YbHL)=11.4			

****

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
Yb+++	gl	KCl	25°C	0.10M	U		K1=11.49	B2=18.52	1979BEb (61220)	392

B(YbHL)=15.82

****

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
Yb+++	gl	oth/un	25°C	0.10M	U		K1=3.190		1987TSb (61446)	393

****

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
Yb+++	gl	KNO3	20°C	0.10M	U		K1=12.46	B2=18.68	1975DPa (61533)	394
Yb+++	gl	KNO3	25°C	0.10M	U		K1=11.42		1972GBd (61534)	395

By polarography K1=10.96

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	mixed	25°C	75%	U		K1=9.43	B2=18.24	1971DRa (61679)	396
							K3=8.60			

Medium: 75% acetone, 0.1 M NaClO4

****

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
Yb+++	gl	NaClO4	25°C	0.10M	M	H	K1=4.34		1986CDb (61719)	397

DH=21.0 kJ mol-1, DS=153 J K-1 mol-1

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KNO3	20°C	0.10M	U		K1=10.49	B2=17.80	1974RMg (61773)	398

****

C8H13NO6 H3L (5681)
2-Aminobutanoic-N,N-diethanoic acid; CH3CH2CH(COOH)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KNO3	20°C	0.10M	U		K1=12.19	B2=21.01	1974RMg (61798)	399

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	mixed	30°C	75%	U		K1=9.23		1971DRb (62084)	400

Medium: 75% acetone, 0.1 M

****

C8H16N2O3 HL Gly-Leu CAS 869-19-2 (255)
Glycyl-leucine; H2N.CH2.CO.NH.CH(CH2.CH(CH3)2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KCl	25°C	0.10M	U		K1=2.85		1973FMa (62395)	401

****

C8H16N2O3 HL Leu-Gly CAS 686-50-0 (1248)
Leucyl-glycine; H2N.CH(CH2.CH(CH3)2).CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	KCl	25°C	0.10M	U		K1=2.60		1973FMa (62438)	402

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	EMF	NaClO4	25°C	1.0M	U		K1=3.36 K3=2.1	B2=5.59	1965TVa (62638)	403

Method: quinhydrone electrode

****

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
Yb+++	ISE	non-aq	25°C	100%	U		K1=4.94		1982MDa (62735)	404

Medium: propylene carbonate

****

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
Yb+++	gl	non-aq	25°C	100%	C		K1=4.56		1989BPa (62999)	405

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
-------------------------------------------------------------------------
Yb+++      gl  NaCl   30°C 0.10M C        K1=6.83   B2=10.75  2002NWa (63071) 406
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
-------------------------------------------------------------------------
Yb+++      kin oth/un 25°C 0.02M U        K1=2.96        1974GMc (63197) 407
-------------------------------------------------------------------------
Yb+++      kin none   25°C  0.0  M        K1=3.49        1966SSb (63198) 408
-------------------------------------------------------------------------
Yb+++      dis oth/un   ?   var  U                       1962SKb (63199) 409
                                        K(Yb+3HL+3L)=18.6
-------------------------------------------------------------------------
Yb+++      sol oth/un   ?     ?  U                       1962SKb (63200) 410
                                        K(YbL3+1.5H2L2)=-0.9
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      gl  diox/w 35°C  75%  U        K1=7.75   B2=13.85  1971MAb (63574) 411
                                        K3=5.05
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
-------------------------------------------------------------------------
Yb+++      sp  diox/w 20°C  50%  U        K1=2.98   B2=4.96   1977MBb (63618) 412
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.10M U        K1=5.93   B2=10.57  1973MAa (63708) 413
                                        K3=3.8
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      gl  NaClO4 35°C 0.20M M        K1=6.35        1982LTa (63838) 414
```

Yb+++ gl oth/un 20°C 0.10M U K1=6.75 1977SKd (63839) 415
****
C9H6N3OClS HL CAS 27004-41-7 (216)
2-(2'-Thiazolylazo)-4-chlorophenol; C3H2NS.N:N.C6H3(Cl).OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl KNO3 25°C 0.10M U K1=8.43 1974KSa (63931) 416
****
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
---
Yb+++ gl NaClO4 25°C 0.10M U H K1=4.80 1994CRa (63980) 417
K(Yb+HL)=2.88
DH(K1)=19.2 kJ mol-1; DS=156 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
---
Yb+++ gl NaClO4 25°C 0.5M M H K1=4.03 1991KBb (64068) 418
By calorimetry: DH(K1)=2.45 kJ mol-1, DS(K1)=85.3 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
---
Yb+++ sol none RT 0.0 U 1981FCa (64377) 419
Kso(YbL3)=-32.60
Method: spectrophotometry.

Yb+++ gl oth/un 20°C 0.10M U K1=7.66 1977SKd (64378) 420

Yb+++ gl diox/w 30°C 50% U K1=9.67 B2=18.32 1970GMb (64379) 421
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
---
Yb+++ gl diox/w 30°C 50% U K1=7.65 1970GMb (64415) 422
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
Yb+++	gl	NaClO4	35°C	0.20M	M		K1=6.86		1982LTa (64592)	423
Yb+++	cal	KNO3	20°C	0.10M	U	HM			1971GKb (64593)	424
							K(YbA+L)=4.82			

DH(YbA+L)=-26.46 kJ mol-1, DS=2.09 J K-1 mol-1
DH(YbAL): DH=-36.11, DS=342.3. 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
Yb+++	sp	NaNO3	25°C	0.10M	C		K1=8.78		1985OHb (64739)	425
							K(Yb+HL)=4.77			
							K(YbL+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
Yb+++	sp	NaClO4	?	0.20M	U		K1=8.86		1967GDc (64960)	426
							K(YbHL)=10.95			
Yb+++	gl	NaClO4	25°C	0.20M	U		K1=8.60	B2=15.60	1966GDa (64961)	427
							K3=4.42			

****

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
Yb+++	gl	KCl	30°C	0.10M	U		K1=4.29	B2= 7.99	1996SZa (64985)	428

****

C9H10O2 HL Benzylacetic CAS 501-52-0 (1362)
3-Phenylpropanoic acid; C6H5.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	25°C	0.1M	C	H	K1=1.98	B2= 3.58	1996HYa (65378)	429

By calorimetry: DH(K1)=14.82 kJ mol-1, DH(B2)=22.98 J K-1 mol-1

Yb+++	gl	NaClO4	25°C	0.10M	C	H	K1=1.98	B2=3.58	1990HYa (65379)	430

By calorimetry: DH(K1)=14.8 J K-1 mol-1, DH(K2)=8.2

****

C9H10O3 HL Atrolactic acid CAS 940-31-8 (3859)

2-Hydroxy-2-phenylpropanoic acid; CH3.C(OH)(C6H5).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	25°C	1.0M	U		K1=3.05	B2=5.61	1966TVa (65445)	431
							K3=2.07			
							K4=1.86			

****

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
Yb+++	gl	NaClO4	25°C	0.10M	C		K1=2.23	B2=4.10	1989HMa (65469)	432

****

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
Yb+++	gl	NaClO4	25°C	0.10M	C		K1=2.05	B2=3.98	1989HMa (65483)	433

****

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
Yb+++	gl	KCl	30°C	0.10M	C		K1=4.16	B2=6.60	1996SZa (65581)	434

Foe the -2,5-dien-2-exo isomer, K1=4.29, B2=7.99.

****

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
Yb+++	gl	NaClO4	24°C	0.10M	U		K1=4.35		1986ZBa (65595)	435
							K(Yb+HL)=1.30			

****

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
Yb+++	gl	KCl	30°C	0.10M	U		K1=5.19	B2= 8.31	1996SZa (65613)	436

****

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

Yb+++ gl KCl 30°C 0.10M C K1=5.19 B2=8.31 1996SZa (65628) 437
****
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
---
Yb+++ gl NaCl 25°C 0.15M U H K1=3.98 1992ZNa (65990) 438
By calorimetry: DH(K1)=3.72 kJ mol-1, DS(K1)=88.69 J K-1 mol-1.
****
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
---
Yb+++ gl KNO3 25°C 0.10M U I 1976SAc (66245) 439
K(Yb+HL)=5.35
K(YbHL+HL)=5.00

Yb+++ gl KNO3 25°C 0.10M U T H K1=5.00 B2=9.70 1976SAe (66246) 440
****
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
---
Yb+++ ISE KNO3 25°C 0.10M U K1=12.29 1983KBd (66750) 441
Hg-electrode.
****
C9H13NO6 H3L (3881)
2,6-Dicarboxypiperidyl-N-ethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl KNO3 25°C 0.10M U K1=11.73 B2=20.64 1968TKe (66898) 442
****
C9H14N4O3 HL Carnosine CAS 305-84-0 (272)
3-Alanyl-histidine; H2N.CH2.CH2.CO.NH.CH(CH2.C3H3N2).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ nmr KCl 25°C 2.00M U 1983MAa (67328) 443
K(Yb+H2L)=0.61
****
C9H15NO6 H3L (7177)
2-Aminopentanoic-N,N-diethanoic acid; C3H7C(COOH)N(CH2COOH)2

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

Yb+++ gl KNO3 20°C 0.10M U K1=11.99 B2=20.57 1974RMg (67417) 444
****
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
---
Yb+++ cal NaClO4 25°C 0.50M M IH K1=14.01 1986RCa (67648) 445
DH=-15.1 kJ mol-1, DS=218 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
---
Yb+++ gl KNO3 25°C 0.10M U K1=4.81 B2=7.56 1968PFa (67782) 446
****
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
---
Yb+++ gl alc/w 22°C 80% U K1=6.31 B2=12.02 1995MTa (68436) 447
K3=5.47
Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.
****
C10H6O8 H4L Pyromellitic Ac CAS 89-05-4 (519)
Benzene-1,2,4,5-tetracarboxylic acid; C6H2.(COOH)4

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaClO4 25°C 0.10M U H K1=4.59 1994CRa (68533) 448
K(Yb+HL)=3.65
DH(K1)=25.7 kJ mol-1, DS=174 J K-1 mol-1; DH(Yb+HL)=14.5, DS=119
****
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
---
Yb+++ sp KCl 25°C 0.10M M I K1=4.46 1976PEa (68600) 449
****
C10H7NO2 HL Quinaldic acid CAS 93-10-7 (2209)
Quinoline-2-carboxylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaClO4 30°C 0.10M U K1=2.70 B2=5.28 1969DNc (68725) 450
****
C10H7NO2 HL CAS 86-59-9 (873)

Quinoline-8-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	NaClO4	30°C	0.10M	U		K1=2.86	1969DNc (68774)	451

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
Yb+++	gl	KCl	25°C	0.10M	M		K1=4.39	1979LSb (68822)	452

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sp	KCl	25°C	0.10M	C		K1=4.53	1973PMb (68858)	453

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KCl	25°C	0.10M	U	I	K1=3.09	1967MAi (68899)	454

K1=4.18(I=0)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sp	KCl	25°C	0.10M	M		K1=5.06	1978PPb (68956)	455

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KCl	25°C	0.10M	U		K1=4.74	1968MAe (69040)	456

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	diox/w	25°C	75%	U		K1=5.83 B2=11.49	1986MIa (69104)	457

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
Yb+++	gl	alc/w	22°C	80%	U		K1=7.17	B2=13.36	1995MTa (69165)	458
							K3=5.87			

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
Yb+++	sp	non-aq	25°C	100%	C	T	K1=2.63		2005SYa (69664)	459

In ethylacetate;At 50 C K1=2.39

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	diox/w	25°C	75%	U		K1=6.15	B2=11.89	1986MIa (69738)	460

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	NaClO4	20°C	0.10M	U	M		1973PAc (69786)	461
							K(YbA+L)=8.02, H4A=EDTA		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	NaClO4	35°C	0.20M	M		K1=10.49		1982LTa (69873)	462
Yb+++	gl	NaClO4	25°C	0.50M	C		K1=10.43	B2=19.08	1976LAd (69874)	463
							B3=23.6			
							B(YbHL2)=25.85			

****

C10H9N3OS HL CAS 1823-44-5 (4780)
2-(2'-Thiazolylazo)-4-methylphenol; CH3.C6H3(OH).N:N.C3H3NS

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sp	alc/w	25°C	100%	U			1989OKb (70352)	464
							K1eff=4.73		

At pH 3.4 by competition with 18-crown-6. Medium: MeOH, 0.03 M Et4NClO4

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ sp diox/w 25°C 10% U K1=9.69 B2=19.59 1973KSd (70368) 465
Medium: 10% dioxan, 0.1 M KNO3
****
C10H9N3O2S HL CAS 3012-52-0 (217)
2-(2'-Thiazolylazo)-4-methoxyphenol; CH3O.C6H3(OH).N:N.C3H2N2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ sp KNO3 25°C 0.10M U K1=9.60 1974KSa (70406) 466
****
C10H10N4O2S HL Sulfadiazine CAS 68-35-9 (1885)
4-Amino-N-(2-pyrimidinyl)benzenesulfonamide; C4H3N2NHSO2C6H4NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaNO3 25°C 0.10M U M 1988SSg (70621) 467
K(Yb(EDTA)+L)=2.91
****
C10H10OS HL CAS 13522-48-0 (4722)
3-Mercapto-1-phenylbut-2-en-1-one; C6H5.CO.CH:CH.C(SH).CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl mixed 30°C 75% U K1=4.33 B2=8.15 1969DNb (70642) 468
K3=3.55
Medium: 75% acetone, 0.1 M NaClO4
****
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
---
Yb+++ gl alc/w 25°C 80% U K1=8.44 B2=14.93 1967DZa (70789) 469
K3=4.46
Medium: 80% MeOH, 0.1 M NaCl

Yb+++ gl alc/w 24°C 80% U K1=8.44 B2=14.93 1967DZb (70790) 470
K3 = 4.46
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

---

Yb+++	gl	NaClO4	25°C	0.10M	M	K1=4.02	1977HCb (70865)	471

Yb+++	nmr	none	25°C	0.0	U	K1=1.84	1977KCc (70866)	472

****

C10H11NO3 HL (1960)
N-Hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	diox/w	20°C	82%	U		K1=7.89 B2=14.73 K3=6.69	1979KSb (70947)	473

****

C10H11N5O L CAS 105507-56-0 (8131)
N-Methylisatin-beta-amidinohydrazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	diox/w	30°C	50%	C	TIH	K1=6.54 B2=11.17	1986SGc (71097)	474

Medium: 50% v/v dioxan/H2O, 0.10 M NaClO4. Data for 0.02-0.20 M NaClO4
and 30-50 C. DH(K1)=58.4 kJ mol-1, DS=318 J K-1 mol-1; DH(K2)=52.6, DS=263

****

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
Yb+++	gl	KNO3	25°C	0.10M	U		K1=9.60 B2=17.33	1964THa (71284)	475

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	diox/w	30°C	50%	U	M	K2=7.43 K3=6.53	1980SGa (71615)	476

Yb+++	sp	alc/w	?	3%	U		K1=7.62	1967GDb (71616)	477

Medium: 3% EtOH, 0.2 M NaClO4

****

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
Yb+++	gl	KCl	25°C	0.10M	U		K1=13.60 K(Yb+HL)=7.07	1980MMe (73198)	478

Yb+++	gl	KCl	25°C	0.10M	U		K2=4.25	1979MMe (73199)	479

```
Yb+++      gl  KNO3   20°C 0.10M U        K1=14.11  B2=19.89  1975DPa (73200) 480
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 30°C 0.10M U        K1=11.31       1972STe (73201) 481
--------------------------------------------------------------------------------
Yb+++      vlt KNO3   25°C 0.10M U        K1=14.13       1971BGb (73202) 482
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      cal NaClO4 25°C 0.10M C   H                    1987YJa (74330) 483
DH(K1)=-8.84 kJ mol-1, DS(K1)=334 J K-1 mol-1.
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 20°C 0.02M U    M                   1982MPd (74331) 484
                                        K(YbL+PO4)=3.18
--------------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M U        K1=19.67       1978NLb (74332) 485
--------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C  1.0M U                      1976GMb (74333) 486
                                        K(YbL+H)=1.17
--------------------------------------------------------------------------------
Yb+++      EMF KCl    25°C 0.10M U      T                1974BKb (74334) 487
                                        K(YbL+H)=0.8
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.10M U    M                   1969AIb (74335) 488
                                        K(YbL+A)=7.45, H4A=tiron
--------------------------------------------------------------------------------
Yb+++      dis oth/un 25°C    ?  U        K1=18.16       1969PJa (74336) 489
Method: paper electrophoresis. Medium: pH=1.86
--------------------------------------------------------------------------------
Yb+++      ix  KCl    25°C 0.10M U   H    K1=18.99       1959BDb (74337) 490
DH(K1)=5.5 kJ mol-1, DS=382 J K-1 mol-1
--------------------------------------------------------------------------------
Yb+++      gl  oth/un 20°C 0.01M U        K1=19.81       1955WSa (74338) 491
Polarography also used
--------------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M U      T K1=19.51       1954SGa (74339) 492
--------------------------------------------------------------------------------
Yb+++      gl  KCl    20°C 0.10M U  I   T K1=18.68       1953WSa (74340) 493
By polarography K1=18.88. In 0.1 M KNO3 K1=19.82 or 19.39
--------------------------------------------------------------------------------
Yb+++      gl  KCl    20°C 0.10M U        K1=18.70       1952VIa (74341) 494
********************************************************************************
C10H16N5O13P3         H4L    ATP              CAS 56-65-5  (403)
Adenosine-5'-triphosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 0.10M U        K1=6.44   B2=10.56  1988SSd (74843) 495
```

```
                                        K(Yb+HL)=3.96
-------------------------------------------------------------------------------
Yb+++      kin oth/un 25°C 0.05M C        K1=7.62        1983MCc (74844) 496
Method: inhibition of the hexokinase reaction, pH 8.0 (0.05 M TAPS).
*******************************************************************************
C10H16O2               HL                      CAS 100563-25-5  (4706)
2-Butanoylcyclohexanone; CH3.CH2.CH2.CO.C6H9O
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Yb+++      gl  oth/un 30°C 0.10M U        K1=10.81  B2=20.57  1972DSe (74927) 497
                                        K3=9.61
*******************************************************************************
C10H17N2O10P          H5L                      CAS 69219-70-1  (7961)
Bis{[bis(carboxymethyl)amino]methyl}phosphinic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Yb+++      gl  NaCl   25°C 0.16M C        K1=15.56       2001XRa (75027) 498
                                       K(Yb+HL)=8.73
                                       K(YbL+H)=2.44
                                       B(YbHL)=18.01
*******************************************************************************
C10H17N3O6S           H3L    Glutathione      CAS 70-18-8  (333)
Glutamyl-cysteinyl-glycine;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.10M U TIH    K1=7.806       2003GSb (75150) 499
Values for 0.05-0.2 M NaClO4, 15-45 C and 10-30% MeOH/H2O, 20% EtOH/H2O,
20% DMF/H2O. At I=0, K1=9.010. DH(K1)=-24.2 kJ mol-1, DS(K1)=-91.
*******************************************************************************
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
-------------------------------------------------------------------------------
Yb+++      EMF KCl    25°C  1.0M U        K2=3.75        1977GMa (75541) 500
                                       K(YbL+HL)=1.90
                                       K(YbL+H2L)=0.86
                                       K(TmL+H3L)=0.73
                                       K(TmL+H4L)=1.54
Method: Pt/H2 electrode.
-------------------------------------------------------------------------------
Yb+++      EMF KCl    25°C  1.0M U    M                  1977GMa (75542) 501
                                       K(Yb(edta)+L)=2.43
                                       K(Yb(edta)+HL)=1.97
                                       K(Yb(edta)+H2L)=1.94
                                       K(Yb(edta)+H3L)=1.58
Method: Pt/H2 electrode.
```

```
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C  1.0M U        K2=3.11        1973NMa (75543) 502
                                        K(YbL+HL)=2.04
                                        K(YbL+H2L)=1.61
                                        K(YbL+H3L)=1.86
--------------------------------------------------------------------------------
Yb+++      gl  oth/un 20°C    ?  U                       1971MNa (75544) 503
                                        K(YbL+HL)=1.15
                                        K(YbL+L)=3.11
--------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M U    M                  1963TLb (75545) 504
                                        K(YbL+A)=4.74
                                        K(YbL+B)=4.05
Id=iminodiacetic acid
--------------------------------------------------------------------------------
Yb+++      EMF oth/un 20°C 0.10M U       K1=16.17       1962PMa (75546) 505
--------------------------------------------------------------------------------
Yb+++      gl  KNO3   15°C 0.10M U T H    K1=15.91       1961MFb (75547) 506
K1=15.93(20 C), 15.88(25 C), 15.86(30 C), 15.95(35 C), 15.92(40 C)
DH(K1)=1.5 kJ mol-1(25 C), DS=310 J K-1 mol-1
--------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M U       K1=15.64       1956SPa (75548) 507
By polarography K1=15.8
********************************************************************************
C10H19N3O4             HL    Leu-Gly-Gly      CAS 1187-50-4  (1230)
Leucyl-glycyl-glycine; H2N.CH(CH2.CH(CH3)2).CO.NH.CH2.CO.NH.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M U T H    K1=3.68        1981SKg (75698) 508
Data for 35 and 45 C. DH(K1)=3.64 kJ mol-1, DS(K1)=82.6 J K-1 mol-1.
--------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 0.10M U       K1=2.30        1973FMa (75699) 509
********************************************************************************
C10H20N2O4             H2L                        (4753)
N,N'-Diethylethylenedinitrilo-N,N'-diethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M U       K1=7.1         1973PSb (75788) 510
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  non-aq 25°C 100%  C       K1=7.25   B2=8.78   1989BPa (76146) 511
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4
--------------------------------------------------------------------------------
Yb+++      ISE non-aq 25°C 100%  C       K1=5.53        1983ANb (76147) 512
```

The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4

****

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
Yb+++	ISE	non-aq	25°C	100%	C		K1=3.70		1986BDa (76479)	513

Medium: propylene carbonate, 0.1 M Et4NClO4

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	diox/w	30°C	75%	U	T	K1=3.95	B2=7.79	1984APa (77048)	514
Yb+++	gl	mixed	22°C	60%	U		K1=3.86	B2=8.34	1979JMa (77049)	515
							K3=3.08			

Medium: 60% acetone/H2O

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	diox/w	20°C	50%	U	T	K1=8.26	B2=16.96	1977SKf (77137)	516
							B3=25.89			
							K3=8.93			

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	diox/w	35°C	50%	U		K1=4.46	B2=7.38	1971MAa (77190)	517

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
Yb+++	gl	NaClO4	25°C	0.10M	C		K1=8.83	B2=15.68	1979LAb (77237)	518
							K(Yb+HL)=1.83			

****

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

```
---------------------------------------------------------------------------
Yb+++      cal NaClO4 25°C 0.10M C   H    K1=8.91   B2=14.6   1986LLc (77290) 519
                                          K(Yb+HL)=1.90
DH(Yb+HL)=7.7 kJ mol-1, DS=62 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
---------------------------------------------------------------------------
Yb+++      gl  diox/w 35°C  50%  U                        1971MAa (77433) 520
                                          K(Yb+HL)=4.15
                                          K(Yb+2HL)=6.92
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
---------------------------------------------------------------------------
Yb+++      sp  NaNO3  25°C 0.10M C        K1=10.70       1984OHa (77605) 521
                                          K(Yb+HL)=4.39
                                          *K(YbHL)=-5.99
Medium pH 4.8-6.3.
---------------------------------------------------------------------------
Yb+++      sp  KCl    20°C 0.10M U                       1971EKa (77606) 522
                                          K(Yb+HL)=3.81
---------------------------------------------------------------------------
Yb+++      sp  NaClO4 20°C 0.10M U        K1=10.2        1967SNb (77607) 523
                                          K(Yb+HL)=11.1
***************************************************************************
C11H10N4O3            HL                    CAS 92265-24-2  (6211)
5-(2'-Methylphenylazo)barbituric acid;
---------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
---------------------------------------------------------------------------
Yb+++      gl  diox/w 25°C  75%  U        K1=6.02   B2=11.36  1986MIa (77736) 524
***************************************************************************
C11H10N4O4            HL                    CAS 92265-26-4  (6210)
5-(2'-Methoxyphenylazo)barbituric acid;
---------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
---------------------------------------------------------------------------
Yb+++      gl  diox/w 25°C  75%  U        K1=6.42   B2=12.41  1986MIa (77751) 525
***************************************************************************
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
---------------------------------------------------------------------------
```

Yb+++ gl KCl 25°C 0.10M U T H K1=5.11 1976BFc (78241) 526
For 55C K1= 4.58
****
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
---
Yb+++ gl oth/un 30°C 0.10M U B2=22.06 1985EEb (78331) 527
Medium: not stated. For 3'-sulfophenylhydrazo-, B2=22.00; for 2'-sulfo-
phenylhydrazo-, B2=24.83; for 4'-methyl-2'-sulfophenylhydrazo-, B2=24.03.
****
C11H12O3 HL CAS 94-02-0 (3351)
Ethyl benzoylacetate; C6H5.CO.CH2.CO2.C2H5

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl mixed 25°C 75% U K1=8.84 B2=16.14 1971DRa (78406) 528
Medium: 75% acetone, 0.1 M NaClO4
****
C11H13NO3 H2L CAS 63467-38-9 (1961)
4-Methyl-N-hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H4.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl diox/w 20°C 82% U K1=8.56 B2=15.52 1979KSb (78504) 529
K3=6.64
****
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
---
Yb+++ gl KNO3 25°C 0.10M C K1=14.54 B2=26.67 1989YSa (78646) 530
K(Yb+HL)=6.44
K(Yb+2HL)=12.59

Yb+++ gl KNO3 20°C 0.10M U K1=14.57 B2=25.83 1983MSc (78647) 531
****
C11H14N2O3 HL Gly-Phe CAS 3321-03-7 (829)
Glycyl-phenylalanine; H2N.CH2.CO.NH.CH(CH2.C6H5).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl KCl 25°C 0.10M U K1=2.75 1973FMa (78816) 532
****
C11H14N2O4 H2L Gly-Tyr CAS 658-79-5 (533)
Glycyl-tyrosine; H2N.CH2.CO.NH.CH(CH2.C6H4.OH).COOH

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

```
------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 0.10M U                      1973FMa (78862) 533
                                          K(Yb+HL)=2.85
******************************************************************************
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
------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M U        K1=7.65   B2=12.98  1964THa (78896) 534
******************************************************************************
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
------------------------------------------------------------------------------
Yb+++      gl  KNO3   20°C 0.10M U        K1=15.87       1981NSc (79349) 535
------------------------------------------------------------------------------
Yb+++      EMF KNO3   25°C 0.10M U        K1=16.57       1980KBc (79350) 536
------------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M U        K1=20.40       1978NLb (79351) 537
------------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M U        K1=20.25       1964ICb (79352) 538
******************************************************************************
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
------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M U        K1=11.19       1976GKd (79377) 539
******************************************************************************
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
------------------------------------------------------------------------------
Yb+++      ix  KNO3   20°C 0.10M U   H    K1=15.42       1971AWa (79479) 540
Polarography also used. DH=15.3 kJ mol-1, DS=336 J K-1 mol-1
------------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M U        K1=15.88       1964LAa (79480) 541
By glass electrode: K1=15.94
******************************************************************************
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
------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M M        K1=15.72       1986PLc (79581) 542
******************************************************************************
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
Yb+++	gl	KNO3	25°C	0.10M	U		K1=12.39	1976GKd (79610)	543

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	mixed	30°C	75%	U		K1=10.18 B2=19.52 K3=8.90	1972DSd (79659)	544

Medium: 75% acetone

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	mixed	30°C	75%	U		K1=10.74 B2=20.58	1972DSd (79670)	545

Medium: 75% acetone

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KNO3	25°C	0.10M	U		K1=4.80 B2=7.61	1968PFa (79775)	546

****

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
Yb+++	gl	alc/w	22°C	80%	U		K1=6.25 B2=11.84 K3=5.35	1995MTa (80193)	547

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
Yb+++	dis	non-aq	25°C	100%	C	HM	K(YbA3+L)=7.74	1998YHa (80532)	548

Method: solvent extraction from 0.10 M NaClO4 into CHCl3. HA is
1-(2-thienyl)-4,4,4-trifluoro-1,3-butanedione. DH(YbA3+L)=-17 kJ mol-1.

****

C12H9N2OCl HL CAS 73446-98-7 (9081)

N-2-(5-Chloropyridyl)salicylaldimine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl alc/w 25°C 50% C T H K1=5.35 B2= 8.70 1997GSa (80590) 549
Medium: 50% v/v EtOH/H2O, 0.20 M KCl. At 50 C, K1=4.96, K2=3.09.
DH(K1)=-30 kJ mol-1.
****
C12H10N2O HL CAS 1823-47-8 (3969)
2-Salicylideneaminopyridine; (2-OH).C6H4.CH:N.C5H4N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl alc/w 25°C 50% C T H K1=6.52 B2=11.27 1997GSa (80680) 550
K3=3.57
Medium: 50% v/v EtOH/H2O, 0.20 M KCl. At 50 C, K1=6.04, K2=4.38,
K3=3.29. DH(K1)=-35 kJ mol-1.
****
C12H10N2O HL CAS 3860-58-0 (9082)
2-[(2-Pyridylmethylene)amino]phenol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl alc/w 25°C 50% C K1=7.41 B2=13.56 1997GSa (80687) 551
Medium: 50% v/v EtOH/H2O, 0.20 M KCl.
****
C12H10N2S L CAS 19257-96-6 (9084)
2-(2-Pyridyl)benzothiazoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl alc/w 25°C 50% C K1=7.19 B2=13.08 1997GSa (80745) 552
Medium: 50% v/v EtOH/H2O, 0.20 M KCl.
****
C12H10N6O4S H2L CAS 77327-19-6 (8343)
2-[4-Amino-3-(1,2,4-triazolylazo)]napthol-4-sulphonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaClO4 30°C 0.10M U T H B2=14.11 1982GMb (80791) 553
B3=19.29
Data for 40 and 50 C. Also DH and DS values.
****
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
---
Yb+++ kin oth/un 25°C 0.02M U K1=2.89 1974GMc (80953) 554
****

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
---
Yb+++ sp NaClO4 25°C 0.50M U K1=2.112 1987MSa (80978) 555
****
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
---
Yb+++ gl alc/w 22°C 0.1M U K1=6.62 B2=12.37 2000TBb (81084) 556
K3=4.44
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
---
Yb+++ sp NaClO4 25°C 0.50M U K1=2.269 1987MSa (81208) 557
****
C12H14N4O2S L Sulfadimidine CAS 57-68-1 (6167)
2-(4-Aminobenzolsulfamido)-4,6-dimethylpyrimidine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaNO3 25°C 0.10M U M 1988SSg (81375) 558
K(Yb(EDTA)+L)=2.93
****
C12H16O7S HL CAS 204931-01-1 (7817)
2,3-Benzo-1,4,7,10-tetraoxacyclododeca-2-ene-4'-sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ dis R4N.X 25°C 0.12M C K1=0.79 1998SUa (81702) 559
Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
****
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
---
Yb+++ gl KNO3 25°C 0.10M C K1=6.13 1988YSa (81823) 560
****
C12H18N2O8 H2L CAS 93031-52-8 (5829)
1,4-Dioxa-7,10-diazacyclododecane-5,12-dione-7,10-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	R4N.X	25°C	0.10M	C		K1=6.64		1988CCb (81846)	561

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
Yb+++	EMF	KNO3	25°C	0.10M	U		K1=14.26		1985SGa (81885)	562
Yb+++	EMF	KNO3	25°C	0.10M	U		K1=15.84	B2=22.34	1980SGb (81886)	563

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
Yb+++	vlt	KNO3	20°C	0.10M	U		K1=20.87		1968NLa (82037)	564

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
Yb+++	gl	KNO3	20°C	0.10M	U		K1=9.82	B2=16.28	1975DPa (82110)	565
Yb+++	gl	KNO3	25°C	0.10M	U		K1=9.40		1973GBd (82111)	566
Yb+++	gl	NaClO4	30°C	0.10M	U		K1=10.28		1973STb (82112)	567

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
Yb+++	vlt	KNO3	20°C	0.10M	U		K1=19.21		1976NKa (82148)	568

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
Yb+++	gl	NaClO4	25°C	0.10M	U	IH	K1=14.52		1988RNa (82183)	569
								B(Yb+HL)=6.69		

DH(K1)=2.89 kJ mol-1, DH(Yb+HL)=25.0, DS(K1)=288 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	vlt	R4N.X	30°C	0.01M	C		K1=16.30		1981GMh (82184)	570

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
Yb+++	gl	NaClO4	25°C	0.50M	M	H	K1=11.35 K(YbL+H)=5.98 K(YbHL+H)=4.88	1985CBa (82242)	571

DH(K1)=24.3 kJ mol-1, DS=299 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
Yb+++	vlt	oth/un	20°C	0.10M	U		K1=21.29	1966DMa (82343)	572
Yb+++	vlt	KNO3	20°C	0.10M	U		K1=21.29	1966NSb (82344)	573

****

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
Yb+++	sp	NaClO4	20°C	0.10M	U		K1=18.08	1971ISa (82426)	574
Yb+++	vlt	oth/un	20°C	0.10M	U		K1=18.11	1966DMa (82427)	575

****

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
Yb+++	gl	KNO3	25°C	0.10M	C		K1=14.32	1985TPa (82480)	576

****

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
Yb+++	EMF	KNO3	20°C	0.10M	U		K1=17.85	1962MMc (82575)	577

****

C12H20N2O10 H4L CAS 10258-50-1 (3993)
(2,3-Dihydroxytetramethylenedinitrilo)tetraethanoic acid;

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

```
Yb+++      oth oth/un   ?     ?  U                        1967LDa (82593) 578
                                        B(Yb2L)=25.91
Method: high-frequency titration
--------------------------------------------------------------------------------
Yb+++      EMF KCl    25°C 0.10M U                        1967SSa (82594) 579
                                        K(Yb+H2L)=12.62
                                        K(Yb+HL)=18.27
                                        K(Yb+YbHL)=8.04
********************************************************************************
C12H20O8N2            H4L                          (6908)
2-Methyl-1,2-diaminopropane-N,N,N'N'-tetraethanoic acid;
(HOOC.CH2)2N.CH2.C(CH3)2.N(CH2.COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M C        K1=18.04       1978NLa (82684) 580
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  alc/w  20°C  40%  U        K1=11.99       1985LBc (82708) 581
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
--------------------------------------------------------------------------------
Yb+++      gl  R4N.X  25°C 0.10M C        K1=13.26       1998CCb (83095) 582
--------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 0.10M C        K1=20.6        1997HTa (83096) 583
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      dis R4N.X  25°C 0.12M C        K1=<0.2        1998SUa (83678) 584
Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
--------------------------------------------------------------------------------
Yb+++      sp  alc/w  25°C 100%  U                       1989OKb (83679) 585
                                        K1eff=1.91
At pH 3.4 by competition with 18-crown-6. Medium: MeOH, 0.03 M Et4NClO4
--------------------------------------------------------------------------------
Yb+++      ISE non-aq 25°C 100%  C        K1=7.50        1983ANb (83680) 586
The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4
********************************************************************************
```

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	ISE	non-aq	25°C	100%	U		K1=>10.6		1990MGa (83917)	587

In acetonitrile, 0.1 M Et4NClO4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	non-aq	25°C	100%	U		K1=<2		1989MGa (83918)	588

Medium: DMF, 0.10 M Et4NClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	ISE	non-aq	25°C	100%	C		K1=16.9		1986ALa (83919)	589

Medium: propylene carbonate, 0.1 M Et4NClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	ISE	non-aq	25°C	100%	C		K1=15.4		1983ANb (83920)	590

The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4

****

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
Yb+++	gl	R4N.X	25°C	0.10M	U		K1=13.70		1996BJa (84168)	591
							K(Yb+HL)=10.38			
							K(Yb+H2L)=6.32			

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
Yb+++	gl	NaCl	20°C	0.10M	C		K1=11.2		1988SJb (84363)	592

****

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
Yb+++	gl	alc/w	22°C	80%	U		K1=5.70	B2=10.92	1995MTa (84464)	593
							K3=4.30			

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

****

C13H9N3OS HL TAN CAS 1147-56-4 (4030)
1-(1',3'-Thiazol-2'-ylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	dis	oth/un	20°C	0.05M	U		K1=9.81	B2=19.32	1966NAa (84618)	594
							B3=28.53			

B4=37.44

****

C13H11NOS H2L (7306)
2-(Salicylideneamino)thiophenol, Salicylaldehyde-2-mercaptoanil;
HO.C6H4.CH:N.C6H4.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	alc/w	25°C	70%	U		K1=11.15	B2=21.00	1995IFa (85051)	595

Medium: 70% v/v EtOH/H2O, 0.10 M NaCl.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	mixed	25°C	75%	U		K1=9.17	B2=16.12	1969DSb (85187)	596
							K3=6.15			

Medium: 75% acetone, 0.1 M NaClO4

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	alc/w	25°C	70%	U		K1=8.35	B2=15.56	1995IFa (85235)	597

Medium: 70% v/v EtOH/H2O, 0.10 M NaCl. Also data for p-Cl, p-NMe2, p-OH,
p-OCH3, p-CH3, p-NO2 substituted benzaldehyde Schiff bases.

****

C13H11N2O3F3 HL (5563)
3-(2-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
Yb+++	gl	diox/w	30°C	75%	U		K1=9.43	B2=17.53	1988ESb (85257)	598

****

C13H12N2O HL CAS 59129-92-9 (9080)
N-2-(5-Methylpyridyl)salicylaldimine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	alc/w	25°C	50%	C T H		K1=8.03	B2=13.64	1997GSa (85345)	599
							K3=4.94			

Medium: 50% v/v EtOH/H2O, 0.20 M KCl. At 50 C, K1=7.44, K2=5.15,
K3=4.54. DH(K1)=-43 kJ mol-1.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	oth/un	25°C	0.10M	U		K1=12.635	1987KSc (85368)	600

****

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
Yb+++	EMF	alc/w	20°C	50%	U		K1=3.80	1971MAc (85423)	601

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
Yb+++	EMF	alc/w	20°C	50%	U		K1=2.30	1971MAc (85477)	602

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
Yb+++	gl	diox/w	30°C	75%	U		K1=11.63 B2=21.96	1988ESb (85620)	603

****

C13H15NO6 H3L (660)
2-(Carboxymethyl)benzylamine-N,N-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KNO3	30°C	0.10M	U		K1=10.73	1985ZXa (85726)	604

****

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
Yb+++	gl	KNO3	25°C	0.10M	C		K1=11.33	1982PPd (86212)	605
							K(Yb+HL)=7.32		

****

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
Yb+++	vlt	KNO3	20°C	0.10M	U		K1=20.80	1974NLa (86239)	606

****

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
Yb+++	gl	KNO3	20°C	0.10M	U		K1=13.83		1981NSc (86267)	607

****
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
Yb+++	vlt	KNO3	20°C	0.10M	U		K1=20.65		1968NLb (86294)	608

****
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
Yb+++	gl	KNO3	25°C	0.10M	C		K1=15.17		1985PLa (86314)	609
							K(Yb+HL)=9.38			

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	oth/un	25°C	0.10M	U		K1=12.62		1981EIa (86654)	610

****
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
Yb+++	sp	oth/un	25°C	?	U				1967SAa (86772)	611
							K(?)=8.7			

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	diox/w	25°C	70%	U		K1=8.95	B2=17.77	1996DAb (86855)	612

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

****
C14H11N5 L CAS 7014-08-6 (8461)
1,5-Diphenyl-3-cyanoformazan;

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

```
-------------------------------------------------------------------------------
Yb+++      gl  diox/w 25°C  70%  U        K1=9.64   B2=17.12  1996DAb (87004) 613
Medium: 70% dioxane/H2O, 0.10 M NaClO4.
*******************************************************************************
C14H12N2O3           H2L                      CAS 4870-46-6  (3432)
2-Hydroxy-5-methyl-2'-carboxy-azobenzene; HO.C6H3(CH3).N:N.C6H4.COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Yb+++      gl  diox/w 25°C  50%  U  I     K1=4.03   B2=8.05   1985ANa (87226) 614
*******************************************************************************
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
-------------------------------------------------------------------------------
Yb+++      gl  mixed  30°C 0.10M U T H    K1=13.05  B2=23.97  1988TRb (87728) 615
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
-------------------------------------------------------------------------------
Yb+++      kin oth/un 25°C 0.02M U        K1=3.79        1974GMc (87798) 616
*******************************************************************************
C14H16N2O2S           HL                      CAS 189231-67-2  (8475)
2-Thiophenylhydrazodimedone;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Yb+++      gl  diox/w 25°C  75%  C T H    K1=13.82  B2=26.00  1997EIa (87877) 617
Medium: 75% v/v dioxane/H2O, 0.10 M KNO3. Data for 10-40 C. DH(K1)=-8.70
kJ mol-1, DS(K1)=-14.17 J K-1 mol-1; DH(K2)=-7.71, DS(K2)=-12.64.
*******************************************************************************
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
-------------------------------------------------------------------------------
Yb+++      gl  mixed  30°C 0.10M U T H    K1=13.28  B2=24.06  1988TRb (87895) 618
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
-------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 1.00M C   H    K1=16.06       1992YNa (87972) 619
By caloriemtry: DH(K1)=5.3 kJ mol-1, DS=325 J K-1 mol-1
```

****
C14H16O5 L CAS 2880-96-8 (6798)
2,3-Anhydro-4,6-O-benzylidene-alpha-D-mannopyranoside;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ nmr non-aq ? 100% U M 1991HKf (88030) 620
K(YbA3+L)=0.98
Medium: CDCl3. A=6,6,7,7,8,8,8-heptafluoro-2,2-dimethyloctane-3,5-dione
****
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
---
Yb+++ gl R4N.X 25°C 0.10M C K1=3.07 1990CBe (88155) 621
****
C14H20O8S HL CAS 127461-53-4 (7818)
2,3-Benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene-4'-sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ dis R4N.X 25°C 0.12M C K1=0.50 1998SUa (88398) 622
Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
****
C14H22N2O8 H4L cis-1,3-CDTA CAS 92681-23-7 (2847)
cis-1,3-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl KCl 25°C 1.0M U K1=8.42 1987CMe (88451) 623
K(YbHL+H)=4.85
K(YbL+H)=7.04
****
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
---
Yb+++ gl KCl 25°C 1.0M U K1=9.69 1987CMe (88465) 624
K(YbHL+H)=5.23
K(YbL+H)=5.58
****
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
---
Yb+++ kin KCl 25°C 0.10M U 2000SBa (88821) 625

K(YbL+H)=3.84

Yb+++ gl KCl 25°C 1.00M U K1=21.28 1984MFa (88822) 626

Yb+++ EMF KNO3 25°C 0.10M U T H K1=20.80 1962MHa (88823) 627
DH(K1)=-18.8 kJ mol-1, DS=33.5 J K-1 mol-1. At 20 C: K(YbL+H)=2.36

Yb+++ vlt KNO3 20°C 0.10M U K1=21.12 1954SGa (88824) 628

****

C14H22N2O8 H4L trans-1,3-CDTA CAS 92681-24-8 (2849)
trans-1,3-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

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

---

Yb+++ gl KCl 25°C 1.0M U K1=8.72 1987CMe (88844) 629
K(YbHL+H)=4.23
K(YbL+H)=7.12

****

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

---

Yb+++ gl KCl 25°C 1.0M U K1=9.83 1987CMe (88873) 630
K(YbHL+H)=5.49
K(YbL+H)=5.67

Yb+++ gl KCl 25°C 1.00M U K1=9.83 1984MFb (88874) 631

****

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

---

Yb+++ gl R4N.X 25°C 0.10M C K1=7.92 1988CCb (88888) 632

****

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

---

Yb+++ cal KNO3 25°C 0.10M C T 1988MIa (89441) 633
DH(K1)=-24.65 kJ mol-1, DS=351.0 J mol-1 K-1. Also data for 283 and 313 K

Yb+++ cal NaClO4 25°C 0.10M C H 1987YJa (89442) 634
DH(K1)=-17.9 kJ mol-1, DS(K1)=373 J K-1 mol-1.

Yb+++ sp KCl 25°C 0.10M U M 1984NMa (89443) 635
K(NdL+Yb=YbNdL)=2.6

```
Yb+++      cal NaClO4 25°C 0.50M U   H                  1977CGc (89444) 636
DH(K1)=-34.9 kJ mol-1
-------------------------------------------------------------------------------
Yb+++      gl  KNO3   30°C 0.10M U        K1=22.59       1976GAa (89445) 637
-------------------------------------------------------------------------------
Yb+++      cal KNO3   27°C 0.10M U   H                  1968CLd (89446) 638
DH(K1)=-25.9 kJ mol-1, DS=346 J K-1 mol-1
-------------------------------------------------------------------------------
Yb+++      EMF KNO3   25°C 0.10M U   H    K1=22.62      1962MTc (89447) 639
DH(K1)=-23.0 kJ mol-1, DS=356 J K-1 mol-1
-------------------------------------------------------------------------------
Yb+++      gl  oth/un 25°C 0.10M U        K1=23.01       1959HCa (89448) 640
*******************************************************************************
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
-------------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M U        K1=18.70       1969NDc (89522) 641
*******************************************************************************
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
-------------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M U        K1=20.61       1974NLa (89541) 642
*******************************************************************************
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
-------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 1.00M U    M                  1976BKa (89618) 643
                                        K(YbEDTA+L)=2.1
                                        K(YbEDTA+HL)=1.9
-------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 0.10M U                       1974KPd (89619) 644
                                        K(Yb+HL)=7.30
*******************************************************************************
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
-------------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M U        K1=20.74       1968NLb (89645) 645
*******************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  R4N.X  25°C 0.10M C        K1=10.66       1988CCb (89659) 646
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  NaClO4 25°C 0.10M U                       1995HAa (89693) 647
                                      K(Yb+HL)=4.58
                                      K(Yb+H2L)=3.56
                                      K(Yb+H3L)=2.67
                                      B(YbHL)=14.01
B(YbH2L)=19.11, B(YbH3L)=22.39
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M U        K1=12.08       1984TPa (89740) 648
                                      K(Yb+HL)=8.09
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C  1.0M U    M   K2=1.28        1985KBb (89970) 649
                                      K(YbL+ida)=1.2
--------------------------------------------------------------------------------
Yb+++      EMF KNO3   20°C 0.10M U        K1=17.78       1962MMc (89971) 650
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  KNO3   25°C 0.10M C        K1=17.70       1985TPa (90110) 651
********************************************************************************
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
--------------------------------------------------------------------------------
Yb+++      gl  R4N.X  25°C 0.10M M        K1=10.76       1986COb (90213) 652
********************************************************************************
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
Yb+++	ISE	non-aq	25°C	100%	U	H	K1=9.5	1990MGa (90454)	653

In acetonitrile, 0.1 M Et4NClO4. DH=-12 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	ISE	non-aq	25°C	100%	C		K1=4.52	1989MGa (90455)	654

Medium: DMF, 0.10 M Et4NClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	ISE	non-aq	25°C	100%	C		K1=15.6	1986ALa (90456)	655

Medium: propylene carbonate, 0.1 M Et4NClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sp	non-aq	25°C	100%	U		K1=4.43	1983PSc (90457)	656

Medium: DMSO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	R4N.X	25°C	0.25M	C		K1=6.51	1981BBe (90458)	657

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
Yb+++	gl	R4N.X	25°C	0.10M	C		K1=6.39	1988CCc (90490)	658

****

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
Yb+++	gl	R4N.X	25°C	0.10M	U		K1=14.08 K(Yb+HL)=10.27 K(Yb+H2L)=6.48	1996BJa (90776)	659

Medium: 0.1 M Me4NCl

****

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
Yb+++	sp	alc/w	21°C	50%	U	I	K1=10.17	1981MCb (91246)	660

Medium: 50% MeOH, 0.1 M NaClO4. In 75% MeOH K1=11.62

****

C15H14NOCl HL CAS 268214-29-5 (8398)

4-Chloro-3,5-dimethyl-2-[(phenylimino)methyl]phenol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	diox/w	30°C	75%	M		K1=7.76	2000ANa (91698)	661

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

****

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
Yb+++	gl	alc/w	20°C	75%	U	T H	K1=11.96	B2=20.17	1993RAa (92042)	662

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Yb+++	gl	mixed	30°C	0.10M	U	T H	K1=13.45	B2=25.90	1988TRb (92043)	663

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
Yb+++	gl	KNO3	25°C	0.10M	C		K1=13.85	1978MPb (92161)	664

****

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
Yb+++	sp	non-aq	25°C	100%	M		K1=8.5	B2=15.60	1997RPb (92293)	665
							B3=22.8			

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
Yb+++	EMF	KCl	?	0.10M	U		K1=16.46	1966VLa (92387)	666

****

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
Yb+++	gl	KNO3	25°C	0.10M	C		K1=19.51	1989SPa (92402)	667
							K(Yb+HL)=13.16		

****

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

Yb+++ gl KCl 25°C 0.10M C K1=20.4 2000SBb (92440) 668
****
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
---
Yb+++ gl KCl 25°C 0.10M C K1=19.5 2000SBb (92455) 669
****
C15H33NO6 L CAS 70384-51-9 (838)
Tris(3,6-dioxaheptyl)amine; (CH3.CH2.O.CH2.CH2.O.CH2.)3N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ ISE non-aq 25°C 100% C K1=10.1 B2=18.3 1986ALa (92571) 670
Medium: propylene carbonate, 0.1 M Et4NClO4
****
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
---
Yb+++ kin oth/un 25°C 0.02M U K1=5.56 1972GSe (92669) 671
****
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
---
Yb+++ sp oth/un 25°C ? U 1967SAa (92872) 672
K1eff=4.3
****
C16H11N5O4 H2L (5153)
1,5-Bis(2-carboxyphenyl)-3-cyanoformazan;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl diox/w 25°C 70% U I K1=12.66 B2=22.57 1996DAb (92902) 673
Medium: 70% dioxane/H2O, 0.10 M NaClO4. In 50% EtOH/H2O, 0.10 M NaClO4,
K1=12.00, K2=10.73.
****
C16H12N2O HL CAS 5603-14-5 (9083)
2-[(Quinolylmethylene)amino]phenol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl alc/w 25°C 50% C K1=6.90 B2=12.59 1997GSa (92930) 674
Medium: 50% v/v EtOH/H2O, 0.20 M KCl.
****
C16H12N2S L CAS 31230-95-2 (9085)

2(2-Benzothiazolinyl)quinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl alc/w 25°C 50% C K1=6.68 B2=12.17 1997GSa (93109) 675
Medium: 50% v/v EtOH/H2O, 0.20 M KCl.
****
C16H12N3O4ClS H2L CAS 133131-00-7 (8468)
7-Amino-8-[(4-chlorophenyl)azo]-4-hydroxy-2-naphthalenesulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaCl 25°C 0.10M U K1=8.38 B2=15.56 1997IHa (93123) 676
B3=22.67
Also data for the 4'-bromo-, 4'-fluoro-, 4'-nitro-, 4'-methoxy-, 4'-di-
methylamino-, 4'-hydroxy-, 4'-carboxy-, 4'-AsO(OH)2-, 2'-hydroxy- analogue
****
C16H12N5O3 L CAS 77251-11-7 (5928)
1-Phenyl-3-methyl-4(2'-nitrophenylhydrazo)-5-pyrazolone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl diox/w 30°C 75% M K1=7.78 1987ESa (93137) 677
****
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
---
Yb+++ gl NaClO4 30°C 0.10M U 1976NDa (93219) 678
K(Yb+H2L=YbH2L)=6.10
K(YbHL+H)=6.70
K(YbL+H)=8.74
K(YbL+OH)=3.20

Yb+++ sp oth/un 25°C ? U 1967SAa (93220) 679
K(?)=9.6
****
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
---
Yb+++ sp oth/un 20°C 0.10M U 1971SSd (93273) 680
K(Yb+H2L)=8.35
****
C16H15NO7 H4L (4082)
N-(3-Carboxy-2-hydroxynaphthy-1-ylmethyl)iminodiethanoic acid;

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

```
------------------------------------------------------------------------------
Yb+++      gl  KCl    25°C 0.10M U        K1=16.7        1975TRb (93634) 681
                                          K(Yb+HL)=9.4
******************************************************************************
C16H15N5                L                      CAS 7014-14-4  (8462)
1,5-Bis(4-methylphenyl)-3-cyanoformazan;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Yb+++      gl  diox/w 25°C  70%  U        K1=9.85   B2=18.49  1996DAb (93645) 682
Medium: 70% dioxane/H2O, 0.10 M NaClO4.
******************************************************************************
C16H15N5O7S2          H2L    Cefixime         CAS 79350-37-1  (8532)
5-Thia-1-azabicyclo[4,2,0]oct-2-ene-2-carboxylic acid;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Yb+++      con non-aq 25°C 100%  C        K1=6.97   B2= 9.43  2003GNa (93654) 683
Medium: DMSO.
******************************************************************************
C16H18N2O3             HL                      (5564)
2-(2-Acetylphenylhydrazone)-5,5-dimethyl-1,3-cyclohexanedione;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Yb+++      gl  diox/w 30°C  75%  U        K1=10.85  B2=20.07  1988ESb (93790) 684
******************************************************************************
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
------------------------------------------------------------------------------
Yb+++      vlt KNO3   20°C 0.10M U        K1=19.68       1969NDb (94055) 685
******************************************************************************
C16H23N5O4              L                      (6969)
12-(4-Nitrobenzyl)-1,4,7,10-tetraazacyclotridecane-11,13-dione;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Yb+++      gl  NaClO4 30°C 0.10M M        K1=-1.05       1994LZa (94302) 686
                                          B(YbH-1L)=-5.54
                                          B(YbH-2L)=-10.10
******************************************************************************
C16H24O9S              HL    SB18C6           CAS 185099-14-3  (7819)
2,3-Benzo-1,4,10,13,16-hexaoxacyclooctadeca-2-ene-4'-sulfonic acid;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Yb+++      dis R4N.X  25°C 0.12M C        K1=<0.2        1998SUa (94483) 687
Medium: 0.12 M Et4NBr.
```

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
****
C16H26N2O10 H2L CAS 93031-54-0 (5831)
1,4,7,10-Tetraoxa-13,16-diazacyclooctadecane-11,18-dione-13,16-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	R4N.X	25°C	0.10M	C		K1=8.52	1988CCb (94579)	688

****
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
Yb+++	sp	KCl	25°C	0.08M	U		K1=10.6	1994FCa (94679)	689

****
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
Yb+++	sp	KCl	25°C	0.08M	U		K1=14.4	1994FCa (94693)	690

****
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
Yb+++	gl	KNO3	20°C	0.10M	U		K1=15.38	1969NDc (94724)	691

By polarography: K1=15.55
****
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
Yb+++	vlt	KNO3	20°C	0.10M	U		K1=18.75	1969NDc (94750)	692

****
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
Yb+++	vlt	KNO3	20°C	0.10M	U		K1=20.58	1979MBd (94776)	693

****
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

```
--------------------------------------------------------------------------------
Yb+++      gl  R4N.X  25°C 0.10M U        K1=26.4        1998BFa (94938) 694
                                         K(YbL+H)=1.5
Medium: 0.1 M NMe4Cl.
--------------------------------------------------------------------------------
Yb+++      gl  NaCl   25°C 1.00M C                       1994TBa (94939) 695
                                         K(Yb+H2L)=4.2
--------------------------------------------------------------------------------
Yb+++      gl  NaCl   37°C  1.0M C        K1=24.0        1994TBb (94940) 696
Method: Competitive reaction with Eu3+ ion.
********************************************************************************
C16H30N2O8            H2L                    CAS 72912-01-7  (1568)
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-N,N'-diethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  R4N.X  25°C 0.10M U        K1=10.90       1983CRb (95062) 697
********************************************************************************
C16H32N2O5             L    Cryptand 2,2,1   CAS 31364-42-8  (837)
1,10-Diaza-4,7,13,16,21-pentaoxabicyclo[8,8,5]tricosane  (2,2,1);
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      ISE non-aq 25°C 100%  U   H    K1=11.6        1990MGa (95305) 698
In acetonitrile, 0.1 M Et4NClO4.
--------------------------------------------------------------------------------
Yb+++      ISE non-aq 25°C 100%  C        K1=3.3         1989MGa (95306) 699
Medium: DMF, 0.10 M Et4NClO4
--------------------------------------------------------------------------------
Yb+++      sp  non-aq 25°C 100%  U        K1=4.00        1983PSc (95307) 700
Medium: DMSO
********************************************************************************
C16H35O4P              HL                     CAS 3115-39-7  (2131)
Dioctylphosphoric acid; (C8H17O)2P(O)OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      kin oth/un 25°C 0.02M U        K1=5.51        1974GMc (95520) 701
********************************************************************************
C17H13N4O3             HL                       (5927)
1-Phenyl-3-methyl-4-(2'-carboxyphenylhydrazo)-5-pyrazolone;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  diox/w 30°C  75%  M        K1=16.18  B2=28.02  1987ESa (95774) 702
********************************************************************************
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
```

Yb+++ dis alc/w 21°C 50% U K1=5.56 B2=11.21 1990CKa (95908) 703
B3=16.95
Medium: 50% MeOH/H2O, 0.1 M NaClO4

Yb+++ gl NaNO3 20°C 0.10M U M 1981GCa (95909) 704
B(Yb+3L+2TBP)=24.76
B(Yb+3L+TBPoxide)=24.0
B(Yb+3L+4TBPoxide)=34.7
****
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
---
Yb+++ gl diox/w 30°C 75% M K1=8.54 B2=16.89 1987ESa (96015) 705
****
C17H20N3O3F HL (7845)
1-Ethyl-6-fluoro-7-(4-methylpyperazine-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxyli
c acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl alc/w 22°C 0.1M U K1=5.70 B2=10.26 2000TBb (96293) 706
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
---
Yb+++ sp NaNO3 25°C 0.10M C K1=8.77 1988OHa (96428) 707
K(Yb+HL)=2.79
****
C17H27NO4 L CAS 71089-11-7 (7945)
13-Phenylmethyl-1,4,7,10-tetraoxa-13-azacyclopentadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ cal non-aq 25°C 100% C H 1993LLb (96540) 708
K(YbNO3+L)=2.33
Medium: acetonitrile. DH(YbNO3+L)=-132.88 kJ mol-1.
****
C17H29N3O10 H4L CAS 89378-46-1 (5528)
(Bis(3-(bis(carboxymethyl)amino)propyl)methylammonio)ethanoate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl KNO3 25°C 0.10M U K1=9.85 1984TPa (96580) 709
K(Yb+HL)=6.41

****
C17H32N4O7 H3L CAS 168078-22-6 (7734)
10-(2-Methoxyethyl)-1,4,7,10-tetraazacyclododecane-1,4,7-triethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ sp KCl 25°C 0.10M C K1=18.7 2000STb (96698) 710
****
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
---
Yb+++ gl diox/w 30°C 75% U K1=10.96 B2=20.73 1988ESb (97183) 711
****
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
---
Yb+++ nmr KCl 25°C 1.0M C H K1=2.03 2004BRa (97275) 712
Method: 1H nmr measurements in D2O. DH(K1)=-6 kJ mol-1,
DS(K1)=18 J mol-1K-1
****
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
---
Yb+++ EMF oth/un ? ? U 1968TRc (97411) 713
K(Yb+HL)=9.07
****
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
---
Yb+++ EMF KNO3 25°C 0.10M C T H K1=21.65 1985HWb (97444) 714
K(YbL+H)=7.11
Method: Hg (and glass) electrode, using Hg(II) as competitive indicator
ion. Data for 10-35 C. DH(K1)=-85.2 kJ mol-1, DS(K1)=129 J K-1 mol-1.
****
C18H22N4O4 H2L CAS 2444-14-6 (3502)
N,N'-Bis(2-pyridylmethyl)diaminoethane-N,N'-diethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaCl 25°C 0.16M C K1=13.42 1997CMa (97549) 715
K(Yb+L=YbL(OH)+H)=4.43

K(YbL(OH)+H)=8.98
****
C18H24N6O9 H3L BAMTPH CAS 87834-24-0 (5915)
N,N',N"-Tris(3-(hydroxyamino)-3-oxopropyl)-1,3,5-benzenetricarboxamide;
C6H3(CONHCH2CH2CONHOH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	NaNO3	25°C	0.10M	C		K1=18.08	1989EHa (97624)	716

****
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
Yb+++	gl	KNO3	25°C	0.10M	C		K1=14.88	1985TPa (97662)	717

****
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
Yb+++	gl	non-aq	25°C	100%	U		K1=2.8	1982MDa (97818)	718

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
Yb+++	gl	R4N.X	25°C	0.10M	C		K1=9.01	1988CCb (97919)	719

****
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
Yb+++	EMF	KNO3	25°C	0.10M	C	T H	K1=23.60	1987HCa (98105)	720
							K(YbL+H)=5.11		
							K(YbHL+H)=2.50		

Method: Hg electrode; competitive reaction with Hg(II).
Data for 15-35 C. At 25 C, DH(K1)=111 kJ mol-1, DS(K1)=823 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	vlt	R4N.X	30°C	0.01M	C		K1=19.46	1981GMh (98106)	721

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	vlt	NaClO4	25°C	0.40M	C		K1=23.58	1978MNb (98107)	722

Medium: 0.40 M NaClO4, pH 4.80. Method: polarography, using Cd as
indicator ion.

Yb+++ gl KNO3 30°C 0.10M U K1=19.46 1976GAa (98108) 723
****
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
---
Yb+++ EMF NaCl 80°C 1.00M C K1=16.55 1986LDb (98236) 724
K(YbL+H)=2.44
****
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
---
Yb+++ gl R4N.X 25°C 0.10M C K1=6.10 1988CCc (98348) 725
****
C18H36N2O6 L Cryptand 2,2,2 CAS 23978-09-8 (514)
1,10-Diaza-4,7,13,16,21,24-hexaoxabicyclo[8.8.8]hexacosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ cal non-aq 25°C 100% C H K1=14.12 2003DCa (98766) 726
Method: competitive titration calorimetry of AgL+. Medium: acetonitrile.
DH(K1)=-93.3 kJ mol-1, DS(K1)=-43 J K-1 mol-1.

Yb+++ ISE non-aq 25°C 100% U H K1=10.6 1990MGa (98767) 727
In acetonitrile, 0.1 M Et4NClO4. DH=-100 kJ mol-1.

Yb+++ ISE non-aq 25°C 100% C K1=2.9 1989MGa (98768) 728
Medium: DMF, 0.10 M Et4NClO4

Yb+++ ISE non-aq 25°C 100% C K1=18.0 1986ALa (98769) 729
Medium: propylene carbonate, 0.1 M Et4NClO4

Yb+++ ISE non-aq 25°C 100% U H K1=17.56 1984GBa (98770) 730
0.1 M tetraethylammonium perchlorate.DH=-106.6 kJ mol-1; DS=-24 J K-1 mol-1
In propylene carbonate.

Yb+++ gl alc/w 25°C 100% C I K1=12.00 1983ANb (98771) 731
The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NClO4
In propylene carbonate, 0.1 M Et4NClO4, K1=19.1

Yb+++ sp non-aq 25°C 100% U K1=4.11 1983PSc (98772) 732
Medium: DMSO
****
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
-------------------------------------------------------------------------
Yb+++      gl  R4N.X  25°C 0.10M U        K1=6.55        1996BJa (98902) 733
Medium: 0.1 M Me4NCl
*************************************************************************
C19H15NO8             H4L    Alizarin Comp.   CAS 3952-78-1  (671)
(3,4-Dihydroxy-2-anthraquinonyl-methyl)iminodiethanoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      con oth/un 25°C 0.10M U        K1=4.41   B2=8.34   1981EIc (99144) 734
*************************************************************************
C20H13N3O7S           H3L    Eriochrome Bl T  CAS 1787-61-7  (997)
1-(1-Hydroxy-2-naphthylazo)-6-nitro-2-naphthol-4-sulfonic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      gl  NaClO4 30°C 0.10M U    M   K1=11.6   B2=21.69  1987SOa (99579) 735
                                         K(YbA+L)=10.28
                                         K(YbB+L)=9.42
H2A=hydroxyethyliminodiethanoic acid, H3B=nitrilotriethanoic acid
*************************************************************************
C20H14N2O11S3         H5L    Chromotrope 8B   CAS 5850-64-6  (2674)
3-(4'-Sulfonaphthylazo)chromotropic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      sp  NaClO4 25°C 0.10M C        K1=6.24        1979PLb (99719) 736
*************************************************************************
C20H14N2O11S3         H2L    Hydroxynaphthol  CAS 63451-35-4  (2835)
Hydroxynaphthol blue, 1-(2-Hydroxy-4-sulfo-1-naphthylazo)-2-naphthol-3,
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      sp  none   25°C  0.0  U                        1978BRb (99739) 737
                                         K1eff=3.50
Keff at pH 10
*************************************************************************
C20H18N4O2             HL                      (5917)
Pyruvic monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      gl  diox/w 30°C  75%  U                        1985RSb (99844) 738
                                         K(Yb+HL)=5.35
                                         K(Yb+2HL)=10.75
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      gl  KNO3   20°C 0.10M U        K1=20.50       1985SNb (100018) 739
                                          K(YbL+H)=4.95
                                          K(YbHL+H)=4.49
*************************************************************************
C20H24O6                L    DiBz-18-Crown-6  CAS 14187-32-7  (604)
2,3:11,12-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,11-diene
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      gl  oth/un 25°C  0.0  U   H    K1=3.82        1991HJa (100259) 740
*************************************************************************
C20H24O12S2           H2L                      CAS 172985-47-6  (7820)
2,3:11,12-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,11-diene-4',4"-disulfonic
acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      dis R4N.X  25°C 0.12M C        K1=<0.2        1998SUa (100286) 741
Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      sp  KCl    25°C 0.08M U        K1=17.0        1994FCa (100566) 742
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      kin oth/un 25°C 0.02M U        K1=4.72        1974GMc (100913) 743
*************************************************************************
C21H17N5               L                        (7365)
2,6-Bis(1-methylbenzimidazol-2-yl)pyridine
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      sp  non-aq 20°C 100%  U        K1=9.4    B2=16.50  1997PBa (101095) 744
                                          K3=5.2
Medium: CH3CN
*************************************************************************
C22H14O9               H5L                      CAS 4431-00-9  (3513)
Aurintricarboxylic acid;
-------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Yb+++      sp  oth/un 25°C    ?  U                         1967SAa (101516) 745
                                        K(Yb+HL)=5.2(?)
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      sp  oth/un   ?     ?  U        K1=16.40       1971SSi (101559) 746
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      sp  oth/un  rt  0.10M C                         2004LLa (101662) 747
                                        K1eff=5.60
                                        B2eff=9.79
                                        B(2,2)eff=15.63
Method: spectral deconvolution. Medium: 0.1 M chloroacetate buffer, pH 3.5
-------------------------------------------------------------------------
Yb+++      sp  oth/un 25°C  var  U  I                     1997HRb (101663) 748
                                        K1(eff)=7.175
                                        B(YbLCl)eff=6.412
                                        B(YbL2Cl)eff=13.250
Conditional constants in chloride medium at pH 3.3. Also data in sulfate
and perchlorate media. K(Yb+Cl)=2.159.
-------------------------------------------------------------------------
Yb+++      sp  NaClO4 25°C 0.10M U                         1975NMa (101664) 749
                                        K(Yb+H5L)=7.23
-------------------------------------------------------------------------
Yb+++      sp  oth/un 20°C    ?  U                         1972SSi (101665) 750
                                        K(Yb+H4L)=14.98
-------------------------------------------------------------------------
Yb+++      sp  NaNO3  20°C 0.20M U                         1963BUa (101666) 751
                                        B(Yb2L2)=81.9
*************************************************************************
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
-------------------------------------------------------------------------
Yb+++      EMF KNO3   25°C 0.10M C T H    K1=11.80       1990HLa (101906) 752
                                        K(YbL+H)=3.33
Method: Competitive reaction with Hg++, using Hg indicator electrode.
Data for 15-35 C. DH(K1)=-43.3 kJ mol-1, DS(K1)=80.8 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
Yb+++	gl	R4N.X	25°C	0.10M	C		K1=10.61	1993YTa (101989)	753

****
C22H28O13S2 H2L DSDB21C7 CAS 204931-02-2 (7821)
2,3:11,12-Dibenzo-1,4,7,10,13,16,19-heptaoxacycloheneicosa-2,11-diene-4',4"-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	dis	R4N.X	25°C	0.12M	C		K1=0.71	1998SUa (102082)	754

Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
****
C22H37N5O14 H7L CAS 3234-59-1 (2425)
Tetraethylenepentaminehеptaethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	vlt	R4N.X	30°C	0.01M	C		K1=19.82	1981GMh (102347)	755

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

Yb+++	gl	KNO3	30°C	0.10M	U		K1=19.82	1976GAa (102348)	756
Yb+++	gl	KNO3	25°C	0.10M	U		K1=19.75 K(Yb+HL)=13.80 B(YbH-1L)=5.23	1968MIc (102349)	757

****
C22H40N4O8 H4L CAS 138763-18-5 (8607)
5,7,12,14-Tetramethyl-1,4,8,11-tetraazacyclotetradecane-N,N',N",N'"-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	gl	KNO3	40°C	0.50M	U	T	K1=18.12 K(YbL+H)=4.27	1995BIa (102361)	758

Also data for 80 C.
****
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
Yb+++	gl	diox/w	30°C	75%	U		K1=11.32 B2=20.17	1988ESb (102605)	759

****

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
---
Yb+++ sp oth/un 25°C ? U B2=9.1 1968MDc (102640) 760
****
C23H24N4O2 L Trichachnine CAS 1251-85-0 (2606)
4,4'-Diantipyrylmethane,
4,4'-phenylmethylene-bis-(1,2-dihydro-1,5-dimethyl-2-phenylpyrazol-3-one
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ sp diox/w 25°C 100% U K1=4.15 1995KMa (102681) 761
****
C24H20N4O14Cl2P2S2 H8L (4165)
2,7-Bis(4'-chloro-5'-methyl-2'-phosphonophenylazo)chromotropic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ sp KNO3 25°C 0.20M U 1967BMc (102918) 762
B(YbH12L2)=105.8
****
C24H29N3O12S3 H6L (7355)
1,2,3-Tris((2-hydroxy-5-sulfobenzyl)amino)propane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaCl 25°C 0.16M C K1=15.15 1998LCa (103021) 763
K(YbL+H)=6.39
****
C24H32O14S2 H2L CAS 204931-03-3 (7822)
2,3:11,12-Dibenzo-1,4,7,10,13,16,19,22-octaoxacyclotetracosa-2,14-diene-4',4"-disul
fonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ dis R4N.X 25°C 0.12M C K1=0.71 1998SUa (103198) 764
Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
****
C25H32N2O7 H2L (7374)
1,15-Diaza-3,4:12,13-dibenzo-5,8,11-trioxacycloctadecane-N,N'-diethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl KNO3 25°C 0.5M C K1=6.955 1993YNa (103736) 765
****
C25H48N6O8 H3L Desferrioxamine CAS 70-51-9 (2488)
Desferrioxamine B; NH2.((CH2)5.NOH.CO.C2H4.CO.NH)2.(CH2)5.NOH.CO.CH3

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  NaNO3  20°C  0.1M U                      1963AEa (103825) 766
                                      K(Yb+HL)=16.0
                                      K(Yb+H2L)=11.0
                                      K(Yb+H3L)=6.4
********************************************************************************
C26H23N5O2             HL                        (5918)
Hippuric monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  diox/w 30°C  75%  U        K1=11.75  B2=22.23  1985RSb (103891) 767
********************************************************************************
C26H27N3O10           H4L                       (7231)
2-((2-Amino-5-methylphenoxy)-methyl)-6-methoxy-8-aminoquinoline-N,N,N',N'-tetraetha
noic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  R4N.X  25°C 0.10M C        K1=14.68       1993YTa (103975) 768
********************************************************************************
C26H33N3O12S3         H6L                       (7354)
1,1,1-Tris(((2-hydroxy-5-sulfobenzyl)amino)methyl)ethane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  NaCl   25°C 0.16M C        K1=13.78       1998LCa (104068) 769
                                      K(YbL+H)=6.33
********************************************************************************
C27H24N4O               L    BAHP              (1023)
Benzoylacetone-monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      gl  diox/w 30°C  75%  U        K1=8.74        1983RSa (104393) 770
********************************************************************************
C27H29NO11              L    Adriamycin       CAS 25316-40-9  (2407)
Doxorubicin;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Yb+++      sp  oth/un 25°C 0.02M U T H    K1=4.89        1985LSa (104465) 771
Medium: 0.02M pH 7.6 buffer
********************************************************************************
C27H36N4O6            H6L                      CAS 222626-11-1  (8885)
Tris((2,3-dihydroxybenzylamino)ethyl)amine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

Yb+++ gl NaClO4 25°C 0.10M C 2002BDc (104559) 772
B(YbHL)=29.08
B(YbH2L)=35.59
B(YbH3L)=40.79
B(YbH6L2)=80.64
K(Yb+H3L)=9.20, K(YbH3L+H3L)=8.26.
****
C27H36N4O12S3 H6L (7353)
Tris(((2-hydroxy-5-sulfobenzyl)amino)ethyl)amine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaCl 25°C 0.16M C H K1=8.53 B2=18.26 1995CHa (104568) 773
By calorimetry: DH(K1)=-23.30 kJ mol-1, DS(K1)=85 J K-1 mol-1; DH(K2)=
-21.81, DS(K2)=113.
****
C28H24O16S4 H8L CAS 206559-10-6 (7767)
25,26,27,28-Tetrahydroxycalix[4]arene-5,11,17,23-tetrasulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ cal oth/un 25°C 0.10M C H 2001BIa (104703) 774
K(Yb+H4L)=3.81
Medium: 0.10 m Na4H4L, pH=2. DH(Yb+H4L)=10.0 kJ mol-1.
****
C28H40N4O4 H2L CAS 138110-63-1 (8608)
7,14-Dimethyl-5,12-diphenyl-1,4,8,11-tetraazacyclotetradecane-1,8-diethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl KCl 40°C 0.50M M K1=10.47 1997BZa (104829) 775
****
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
---
Yb+++ gl non-aq 25°C 100% U K1=2.57 1980MDb (104854) 776
Medium: Propylene carbonate.
Medium: propylene carbonate. K1=7.31 with Yb++
****
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
---
Yb+++ ISE non-aq 25°C 100% U K1=4.76 1982MDa (104923) 777
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
---
Yb+++ gl diox/w 30°C 75% U I K1=10.08 1983RRa (105413) 778
In 75% MeOH: K1=7.87; 75% DMF: 6.68
****
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
---
Yb+++ sp NaNO3 20°C 0.20M U 1963BBb (105513) 779
B(Yb2L2)=45.7
****
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
---
Yb+++ sp diox/w 25°C 100% C 1997KMa (105638) 780
K(La(NO3)3+L)=4.09
****
C33H36N2O13S H6L Me-Xylenol blue CAS 29412-85-9 (582)
Methyl xylenol blue,
3,3'-bis-N,N'-Di(carboxymethyl)aminomethylxylenolsulfophthalein;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ sp KCl 22°C 0.10M U 1975KKb (105890) 781
K(Yb+H3L)=14.92
K(Yb(OH)+2H3L)=24.86
****
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
---
Yb+++ nmr KCl 25°C 1.0M C H K1=1.94 2004BRa (105977) 782
Method: 1H nmr measurements in D2O. DH(K1)=28 kJ mol-1
DS(K1)=133 J mol-1K-1
****
C36H60O30 L a-Cyclodextrin CAS 10016-20-3 (6946)
alpha-Cyclodextrin, Cyclohexaamylose;

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

Yb+++ gl NaCl 25°C 0.10M U I K1=2.44 1999FBa (106475) 783
In 0.1 M Me4NCl, K1=3.0.
****
C37H44N2O13S H6L MeThymol Blue (428)
3,3'-Bis(N,N-di(carboxymethyl)aminomethyl)thymolsulfonephthalein;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl NaClO4 30°C 0.10M U 1980NAb (106627) 784
K(Yb+H3L)=4.73
K(Yb+H2L)=7.74
K(YbH2L+H)=4.13
Also data for YbHnL(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
---
Yb+++ sp non-aq 25°C 100% C I K1=6.8 2001RDa (107235) 785
Medium: CH3CN.
****
C46H58O6 HL (6716)
Calix[4]arene-O(1)-ethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl alc/w 25°C 0.01M C K1=25.7 1997ACa (107300) 786
B(YbHL)=36.26
B(YbH2L)=41.0
B(YbH-1L)=12.6
B(YbH3L)=46.5
Medium: methanol, 0.01 M NEt4ClO4. Also data for many other calixarenes
with mixed functionalities.
****
C47H46N6O4 L (7367)
2,6-Bis(1-(3,5-dimethoxybenzyl)benzimidazol-2-yl)-4-(4-diethylamino)phenyl)pyridine
;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Yb+++ gl non-aq 25°C 100% C K2=6.8 1997PBa (107322) 787
K3=3.1
Medium: CH3CN; 0.1 M Et4NClO4
****
C48H60O8 H2L R-Bu-Calixarene CAS 147513-53-9 (6705)
4-tert-Butylcalix[4]arenedicarboxylic acid;

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

Yb+++ gl alc/w 25°C 0.01M C K1=15.7 1997ACa (107408) 788
B(YbHL)=18.4
B(YbH-1L)=11.0
Medium: methanol, 0.01 M NEt4ClO4. Also data for many other calixarenes with mixed functionalities.

****

C62H94N2O4S2 L (8109)
5,11,17,23-Tetrakis(1,1-dimethylethyl)-25-27-bis[2-methylthio)ethoxy]...calix(4)arene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	cal	non-aq	25°C	100%	U	H	K1=4.35	2001NJa (107712)	789

Method: microcalorimetry. Medium: MeCN.. DH(K1)=-156.5 kJ mol-1

****

C76H116N4O8 L (8156)
p-tert-Butylcalix(4)arene tetradiisopropylethanoamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	cal	non-aq	25°C	100%	U	H	K1=3.78	2001NJa (107888)	790

Method: microcalorimetry. Medium: MeCN.. DH(K1)=-83.7 kJ mol-1

****

Polymer HL Bleomycin (2324)
Bleomycin A2, B2 etc.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Yb+++	sp	oth/un	25°C		?	U		1980LPb (108096)	791

K1eff=6.0 pH 6.8

Method: fluorescence

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EXPLANATORY NOTES

DATA Flags are :-

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

EVALUATION Flags are :-

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

END