SC-Database
Software version = 5.81 Data version = 4.62
Experiment list contains 1100 experiments for
 (no ligands specified)
 2 metals : Ce+++, Ce++++
 (no references specified)
 (no experimental details specified)

****

e- HL Electron (442)
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	oth	none	25°C	0.0	U		1974JOb (387)		1
							K(Ce+3e=Ce(s))=-118.2(-2.33V)		
							K(Ce+e=Ce(II))=-59(-3.5V)		

Method: Literature evaluated data

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	oth	none	25°C	0.0	U		1952LAb (388)		2
							K(Ce+3e)=-125.9(-2480 mV)		
Ce+++	oth	none	25°C	0.0	U		1952SMb (389)		3
							K(Ce+3e)=-118.4(-2335 mV)		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	dis	NaClO4	25°C	1.0M	U		K1=-0.2	1963CUb (1817)	4

Medium: HClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	ix	none	25°C	0.0	U		K1=0.38	1951MSa (1818)	5

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaClO4	25°C	0.70M	C		K1=5.53	2004LBb (3162)	6
							K(Ce+HCO3=CeHCO3)=1.26		

Medium: 0.70 m NaClO4. Calculated for I=0, K1=7.06, B2=11.76,
K(Ce+HCO3=CeHCO3)=2.31, K(Ce+HL=CeL+H)=-3.27, K(Ce+2HL=CeL2+2H)=-8.90

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	dis	NaClO4	25°C	0.70M	C	I	K1=5.33 B2= 9.24	1998LBb (3163)	7

Method: H2O/tributylphosphate distribution and ICP-mass spectrometry.
Values calculated for I=0.0 M, K1=7.31, B2=12.32

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	dis	NaClO4	25°C	0.70M	C		K1=5.27 B2=9.37	1993LBa (3164)	8

K(Ce+HL)=1.74

Ce+++ dis NaClO4 25°C 0.68M C K1=5.42 B2= 9.29 1987CBc (3165) 9
Method: distribution of 139Ce between 0.68 m NaClO4/NaHCO3 and tributyl phosphate. Conditional constants in terms of total carbonate, [CO3]tot.

Ce+++ sol NaClO4 25°C 3.0M C K1=6.32 B2=11.1 1983FGa (3166) 10
B3=12.6
B4=13.7
Kso(NaCeL2(s))=-17.5
K(Ce2L3(s)+6H=2Ce+3CO2(g)+3H2O)=21.80
****
C6N6Fe---- H4L (2191)
Hexacyanoferrate (II); Fe(II)(CN)6----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ con alc/w 25°C 10% U TI 1973BMg (3560) 11
K(KCeL(s)=K+Ce+L)=-10.10
30 C: Ks=-10.25. 0% EtOH, 20 C: -9.20; 30 C: -9.30. 20% EtOH, 25 C: -10.85; 30 C: -11.08. 35% EtOH, 25 C:-11.25; 30 C: -11.50
****
Cl- HL Chloride CAS 7647-01-0 (50)
Chloride;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ cal non-aq 25°C 100% C HM K1=3.12 2002KNc (4589) 12
B(Ce(phen)Cl)=5.0
B(Ce(phen)Cl2)=7.4
B(Ce(phen)Cl3)=8.99
B(Ce(phen)2Cl)=5.8
Medium: DMF, 0.20 M Et4NClO4. DH(K1)=15.9 kJ mol-1, DH(Ce(phen)Cl)=3.2, DH(Ce(phen)Cl2)=17, DH(Ce(phen)Cl3)=23, DH(Ce(phen)2Cl)=-16.

Ce+++ dis NaClO4 25°C 1.0M U I K1=-0.04 1999ATa (4590) 13
Method: back extraction of 141Ce into toluene/HDEHP. Data for 0-0.353 mol fraction (n) MeOH/H2O. At n=0.267, K1=0.43; at n=0.308, K1=0.68

Ce+++ con non-aq 25°C 100% C 1991IAa (4591) 14
K3=3.56
Medium: hexamethylphosphortriamide.

Ce+++ cal non-aq 25°C 100% U H K1=3.25 B2=5.41 1991ITa (4592) 15
K3=1.36
K4=0.24
Medium: DMF, 0.2 M Et4NClO4. DH(K1)=16.4 kJ mol-1, DH(K2)=11.1, DH(K3)=16 DH(K4)=120, DS(K1)=118, DS(K2)=79, DS(K3)=79 J K-1 mol-1

Ce+++ sol NaClO4 25°C ? U K1=0.47 1982MAa (4593) 16

```
-------------------------------------------------------------------------------
Ce+++      cal non-aq 25°C 100%  U        K1=2.38   B2=3.95   1980VCa  (4594)  17
Medium: diemthylacetamide
-------------------------------------------------------------------------------
Ce+++      cal oth/un       var  U   H                  1967AHa  (4595)  18
DS(K1)=75.2 J K-1 mol-1
-------------------------------------------------------------------------------
Ce+++      dis NaClO4 25°C  1.0M U        K1=-0.1   B2=-0.7   1963CUb  (4596)  19
-------------------------------------------------------------------------------
Ce+++      cal oth/un  0°C  0.0  U   H    K1=0.0         1962MOa  (4597)  20
Medium HCl var. DH(K1)=23 kJ mol-1
-------------------------------------------------------------------------------
Ce+++      sol none   25°C  0.0  U                      1959ASc  (4598)  21
                                      Kso(Ce(OH)2.33Cl0.67)=-17.7
-------------------------------------------------------------------------------
Ce+++      ix  none   25°C  0.0  U        K1=0.48        1951MSa  (4599)  22
*******************************************************************************
ClO4-                  HL    Perchlorate      CAS 7001-90-3  (287)
Perchlorate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      sp  NaClO4 27°C 1.14M U TIH    K1=0.08        1956SWb  (6173)  23
K1=0.38(18.2 C), 0.26(22.5 C), 0.08(26.6 C), -0.12(32.3 C), -0.55(40.2 C).
DH(K1)=-71 kJ mol-1, DS=-240?  At I=5.11 M: K1=-0.06(18 C), -0.82(40 C).
-------------------------------------------------------------------------------
Ce+++      sp  none   25°C  0.0  U   H    K1=1.91        1955HBa  (6174)  24
I=0 corr.  DH(K1)=-49.4 kJ mol-1, DS=130 J K-1 mol-1
*******************************************************************************
F-                     HL    Fluoride         CAS 7644-39-3  (201)
Fluoride;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      ix  oth/un 25°C 0.02M C T H    K1=3.29   B2= 5.48  2004LMa  (6787)  25
Medium: 0.025 M HNO3. Applying Pitzer parameters: at I=0, K1=8.90.
Data for 5 to 45 C. DH(K1)=10.5 kJ mol-1, DH(B2)=23.8.
-------------------------------------------------------------------------------
Ce+++      ISE NaClO4 25°C  0.0  C  I     K1=3.86        2000LBa  (6788)  26
Method: Fluoride ISE. Values calc. from data for I=0.015-0.70 M NaClO4.
At I=0.70 M, K1=2.905.
-------------------------------------------------------------------------------
Ce+++      dis NaClO4 25°C  1.0M U  I     K1=0.87        1999ATa  (6789)  27
Method: back extraction of 141Ce into toluene/HDEHP. Data for 0-0.353 mol
fraction (n) MeOH/H2O.  At n=0.268, K1=0.93; at n=0.309, K1=0.94
-------------------------------------------------------------------------------
Ce+++      ix  KNO3   25°C 0.02M C        K1=3.13   B2= 5.95  1999SBc  (6790)  28
Medium: 0.025 M HNO3. Additional method: ICP-MS.
Assumed K1(HF) = 3.03, derived from literature values.
-------------------------------------------------------------------------------
```

```
Ce+++      dis NaClO4 25°C 0.68M U        K1=2.76   B2=4.60   1993LBb  (6791)  29
-------------------------------------------------------------------------------
Ce+++      ISE none   25°C  0.0  C   H    K1=2.90   B2=6.57   1989MJa  (6792)  30
                                          Kso=-16.1
Also by conductivity and radiometry. DH(Kso)=53.0 kJ mol-1; DS=-130.
-------------------------------------------------------------------------------
Ce+++      ISE R4N.X  25°C 0.50M C        K1=2.90   B2=6.57   1989MJb  (6793)  31
-------------------------------------------------------------------------------
Ce+++      sol R4N.X  23°C 0.50M C        K1=3.00   B2= 5.01  1986MJb  (6794)  32
                                          Kso(CeF3)=-16.66
Method: radiometry (141Ce) and F ion selective electrode. Medium:
0.50 M NH4NO3. By potentiometry, Kso=-16.06; by conductivity, Kso=-16.07.
-------------------------------------------------------------------------------
Ce+++      ISE NaCl   25°C 1.00M C        K1=2.708       1985BBb  (6795)  33
-------------------------------------------------------------------------------
Ce+++      dis NaCl   25°C 1.00M U                       1982BKa  (6796)  34
                                          B(CeF(OH))=9.72
                                          B(CeF2(OH))=12.23
                                          B(CeF(OH)2)=16.54
-------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 1.00M U    M                  1981KTb  (6797)  35
                                          K(CeEDTA+F)=1.62
                                          K(Ce(EDTA)F+F)=0.30
-------------------------------------------------------------------------------
Ce+++      dis NaCl   25°C 1.00M U        K1=2.46   B2=4.74   1980BKa  (6798)  36
-------------------------------------------------------------------------------
Ce+++      oth NaClO4 25°C 0.10M U        K1=3.24        1973MSg  (6799)  37
method:electromigration or transference number
-------------------------------------------------------------------------------
Ce+++      dis NaClO4 25°C 0.50M U        K1=3.15   B2=5.96   1967LNa  (6800)  38
-------------------------------------------------------------------------------
Ce+++      gl  oth/un   ?   dil  U                       1967SDa  (6801)  39
                                          K(CeF+H2O=CeFOH+H)=-6.5
                                          K(CeF2+H2O=CeF2OH+H)=-6.4
-------------------------------------------------------------------------------
Ce+++      dis NaClO4 25°C  1.0M U   H    K1=2.72        1967WCa  (6802)  40
By redox: K1=2.81; by calorimetry: DH(K1)=20.1 kJ mol-1, DS=121.2 J K-1 m-1
-------------------------------------------------------------------------------
Ce+++      con none   25°C  0.0  U                       1959WPa  (6803)  41
                                          Kso(CeF3)=-15.0
By solubility Kso=-15.1
-------------------------------------------------------------------------------
Ce+++      con NaClO4 25°C 0.50M U  I     K1=3.11        1957KHa  (6804)  42
                                          K(Ce+HF=CeF+H)=0.20
At I=0 corr K1=3.99
-------------------------------------------------------------------------------
Ce+++      ix  none   25°C  0.0  U        K1=4.00        1951MSa  (6805)  43
*******************************************************************************
I-                     HL    Iodide           CAS 10034-85-2  (20)
Iodide;
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	ix	NaClO4	25°C	0.50M	U		K1=<-1.4	1951MSa (7931)	44

IO3- HL Iodate CAS 7782-68-5 (1257)
Iodate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	dis	NaClO4	25°C	0.10M	U		K1=1.22	1973CBd (8500)	45
Ce+++	sol	none	25°C	0.0	U		Kso(CeL3)=-9.50	1953NAa (8501)	46
Ce+++	con	none	25°C	0.0	U		Kso(CeL3(H2O)2)=-9.46	1923BOa (8502)	47

MoO4-- H2L Molybdate (443)
Molybdate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	con	oth/un	25°C	.001M	U		K1=4.42	1968DKc (8716)	48

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	oth/un	20°C	0.10M	U		B(CeHL)=9.25 B(Ce2L)=9.96	1989SBb (8770)	49

NH2SO3- H2L Sulfamate CAS 5329-14-6 (452)
Sulfamate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	sp	oth/un	25°C	dil	U		K1=1.3	1955HBa (8798)	50

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	cal	NaClO4	25°C	2.0M	C	IH	K1=-0.16	1998BMb (9606)	51

DH(K1)=2.9 kJ mol-1. From Pitzer extrapolation to I=0.0, K1=0.69,
DH(K1)=0.6 kJ mol-1

```
Ce+++      con non-aq 25°C 100%  C                        1991IAa  (9607)  52
                                        K3=2.41
Medium: hexamethylphosphortriamide.
-------------------------------------------------------------------------------
Ce+++      dis oth/un 25°C  2.0M U        K1=0.38        1973CDd  (9608)  53
Medium: NH4SCN
-------------------------------------------------------------------------------
Ce+++      oth oth/un  0°C  var  U        K1=0.23   B2=0.07   1973NIb  (9609)  54
Method: Raman spectra
-------------------------------------------------------------------------------
Ce+++      kin KNO3   25°C  var  U                         1970MGb  (9610)  55
                                        *K2=-0.14
                                        *K3=-1.5
                                        *K4=-2.2
Medium: HNO3
-------------------------------------------------------------------------------
Ce+++      oth NaClO4 30°C  1.0M U        K1=0.46        1968SRa  (9611)  56
Method: dilatometry,densimetry.
-------------------------------------------------------------------------------
Ce+++      dis NaClO4 25°C  1.0M U        K1=0.21        1965CSb  (9612)  57
Medium: HClO4
-------------------------------------------------------------------------------
Ce+++      dis NaClO4 25°C  2.0M U    M   K1=1.04   B2=1.51   1958FKa  (9613)  58
Medium: HClO4. Kd(Ce+3L+3TBP(in C6H6)=CeL3(TBP)3(in C6H6))=0
-------------------------------------------------------------------------------
Ce+++      dis oth/un 20°C  var  U                         1955SPa  (9614)  59
Medium:HL. Kd(2H+CeL4+2L=H2CeL6(in Et2O))=-1.28
-------------------------------------------------------------------------------
Ce+++      ix  KNO3   25°C  var  U        K1=0.4         1951CMa  (9615)  60
*******************************************************************************
N2H4                    L    Hydrazine        CAS 302-01-2  (2117)
Hydrazine; H2N.NH2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      gl  oth/un 18°C 3.00M U        K1=2.78   B2=5.42   1978AMa (10077)  61
                                        K3 1.67
*******************************************************************************
OH-                     HL    Hydroxide          (57)
Hydroxide;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C  0.0  C  IH                   2000KBa (11096)  62
                                        *K1=-8.34
In 0.7 M NaClO4, *K1=-8.65. DH(*K1)=57 kJ mol-1.
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 50°C 3.00M C                        1988CPa (11097)  63
                                        *B(1,1)=-9.13
                                        *B(1,2)=-9.45
```

```
                                        *B(3,5)=-35.60
-------------------------------------------------------------------------------
Ce+++      dis NaCl   25°C 1.00M U        K1=6.61   B2=11.79  1981BKa (11098)  64
-------------------------------------------------------------------------------
Ce+++      con NaClO4 25°C 1.00M U                          1978KDa (11099)  65
                                        *K1=-8.1
                                        *B2=-16.3
                                        *B3=-26.0
                                        *B(3,5)=-32.8
-------------------------------------------------------------------------------
Ce+++      oth KNO3   25°C 0.01M U  I     K1=10.6   B2=20.3   1972SSf (11100)  66
Data also for NH4ClO4 at I=0.005(K1=10.6;B2=19.4).
method:electrical migration or transference number
-------------------------------------------------------------------------------
Ce+++      gl  oth/un   ?   dil  U                          1967SDa (11101)  67
                                        *K1=9.29
Temp: tp. One solution
-------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C .005M U                          1965SSf (11102)  68
                                        *K1=-4.2?
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 3.00M U                          1964BNa (11103)  69
                                        *B(3,5)=-35.75
Medium: 3 M LiClO4
-------------------------------------------------------------------------------
Ce+++      sol none   25°C  0.0  U                         1959ASc (11104)  70
                                        Kso(Ce(OH)3)=-21.20
-------------------------------------------------------------------------------
Ce+++      gl  none     ?   0.0  U                         1957MOa (11105)  71
                                        Kso=-24.40
-------------------------------------------------------------------------------
Ce+++      con oth/un 25°C  var  U                          1955BSb (11106)  72
                                        Kso(Ce(OH)3)=-23
-------------------------------------------------------------------------------
Ce+++      gl  oth/un 25°C  var  U                          1946MOa (11107)  73
                                        *K1(Ce(H2O)6)=ca.-9
-------------------------------------------------------------------------------
Ce+++      gl  oth/un 25°C  var  U                          1944MKa (11108)  74
                                        Kso(Ce(OH)3)=-19.8
-------------------------------------------------------------------------------
Ce+++      gl  oth/un 25°C  dil  U                          1938OKa (11109)  75
                                        Kso(Ce(OH)3)=-20.2
*******************************************************************************
PO4---                 H3L    Phosphate        CAS 7664-38-2  (176)
Phosphate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      sol none   25°C  0.0  M                         1997LBd (13121)  76
                                        Kso(CePO4)=-26.27
```

Calculated from data for 0.10 M HClO4 solution.

Ce+++ dis NaClO4 25°C 0.68M C I K1=8.84 1991BLb (13122) 77
Method: distribution of 144Ce between 0.68 m NaClO4 and tributyl phosphate
Calculated for I=0, K1=11.73. Conditional constant at I=0.68, K1=8.33.

Ce+++ sp oth/un 90°C 0.0 M T H 1983LKb (13123) 78
K(Ce+H2L)=3.45
K(Ce+2H2L)=4.45

Ce+++ sp oth/un 23°C 0.10M U 1978LKa (13124) 79
K(Ce+H2PO4)=2.65
K(Ce+2H2PO4)=3.45

Ce+++ ix R4N.X 25°C 0.20M U I 1966BEc (13125) 80
K(Ce+H2L)=1.52
Medium: NH4ClO4. B=2.33 (I=0 corr)

Ce+++ sol oth/un 20°C var U 1963UKa (13126) 81
Kso(CeL)=-23.7 to -22.8
Kso(CeL0.9(OH)0.3)=-22.2

Ce+++ gl oth/un 20°C dil U 1961CAa (13127) 82
Kso(CeL)=-21.3

Ce+++ ix none 25°C 0.0 U K1=18.53 1950MSa (13128) 83

****

PW11O39------- H7L (2467)
alpha-Heteromonophospho-polytungstate;

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

---

Ce+++ sp NaNO3 25°C 0.60M U B2=16.6 1978SOa (13401) 84

****

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

---

Ce+++ gl KCl 25°C 0.50M U 1989APd (13565) 85
K(Ce+H2L)=3.79

Ce+++ ix none 25°C 0.0 U K1=17.15 1950MSa (13566) 86

****

P2W17O61---------- Polytungstate (2102)
alpha-Heterodiphospho-polytungstate (usually alpha1 isomer)

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

---

Ce+++ nmr oth/un 23°C 0.15M C 2002SOa (13708) 87

K(Ce(P2W17O61)+proline)=0.65
Method: 1H nmr. Self medium in D2O.
By 31P nmr, K(2Ce(P2W17O61)=(Ce(P2W17O61))2)=0.16.

Ce+++ sp NaNO3 25°C 0.60M U B2=17.7 1978SOa (13709) 88
****
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
---
Ce+++ gl KNO3 25°C 0.10M U T H B2=8.2 1974KRa (13845) 89
K(Ce+2HL)=6.2
K(Ce+2HL)=6.5 and B2=8.4 (35 C), K(Ce+2HL)=6.1 and B2=8.1 (45 C)
DH(Ce+2HL)=-11 kJ mol-1; DH(B2)=-10

Ce+++ sp NaCl 25°C 0.30M U K2=3.88 1960GIa (13846) 90
****
S-- H2L Sulfide CAS 7783-06-4 (705)
Sulfide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ oth none 25°C 0 U 1988LIa (14330) 91
Kso(Ce2S3)=-23.3
*Kso(Ce2S3)=28.7
Derived from thermodynamic data and K(H+S=HS)=17.3.

Ce+++ oth none 25°C 0.0 U 1952GGc (14331) 92
Kso(Ce2L3)=-10.22
From thermodynamic data
****
SCN- HL Thiocyanate CAS 463-56-9 (106)
Thiocyanate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ dis NaClO4 25°C 5.0M U T K1=0.59 1974KCa (14841) 93
K1=0.44(10 C)

Ce+++ dis R4N.X 25°C 2.0M U K1=-0.30 B2=0.20 1973CDd (14842) 94
Medium: NH4NO3

Ce+++ ix NaClO4 ? 5.0M U I K1=0.10 1962LYb (14843) 95
B3=-0.28
In 0.5 M NH4ClO4 K1=0.59. At I=0 corr K1=1.54. Method: cation exchange
****
SO3-- H2L Sulfite CAS 7782-99-2 (801)
Sulfite;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      ix  none   25°C  0.0  U        K1=8.04        1950MSa (15434)  96
*******************************************************************************
SO4--                 H2L    Sulfate          CAS 7664-93-9  (15)
Sulfate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      sol oth/un 25°C 0.66M C        K1=1.94        2004SBb (16034)  97
Method: solubility of BaSO4 in 0.117 m CeCl3 solution.
Calculated for I=0, K1=3.61.
-------------------------------------------------------------------------------
Ce+++      dis NaCl   25°C 1.00M U        K1=1.57        1980BKb (16035)  98
                                         B3=3.29
-------------------------------------------------------------------------------
Ce+++      gl  oth/un 25°C 0.60M U T                       1979KSa (16036)  99
                                         K(CeHSO4)=0.30
-------------------------------------------------------------------------------
Ce+++      oth oth/un 15°C  var  U T H    K1=3.58        1974QAa (16037) 100
Method:ultrasonic absorption. Medium: Ce2(SO4)3. K1=3.62(25 C); 3.64(32 C)
DH(K1)=17.5 kJ mol-1
-------------------------------------------------------------------------------
Ce+++      con oth/un 25°C  0.0  U        K1=3.67        1973FPb (16038) 101
-------------------------------------------------------------------------------
Ce+++      cal oth/un 25°C  0.0  U   H                    1969FPa (16039) 102
DH(K1)=15.8 kJ mol-1
-------------------------------------------------------------------------------
Ce+++      cal oth/un 25°C  0.0  U   H    K1=3.48   B2=5.23   1969IEa (16040) 103
DH(K1)=14.5 kJ mol-1, DH(K2)=6.69; DS(K1)=115.5 J K-1 mol-1, DS(K2)=56.1
-------------------------------------------------------------------------------
Ce+++      oth NaClO4 30°C  1.0M U        K1=1.76        1968SRa (16041) 104
Method: dilatometry,densimetry. Dv1=15.1 cm3
-------------------------------------------------------------------------------
Ce+++      ISE NaClO4 25°C  2.0M U   H    K1=1.24        1967CCd (16042) 105
By calorimetry: DH(K1)=17.8 kJ mol-1, DS=83.6 J K-1 mol-1
-------------------------------------------------------------------------------
Ce+++      dis NaClO4 55°C  2.0M U T H    K1=1.62   B2=2.24   1967CCd (16043) 106
K1=1.11(0 C), 1.30(25 C), 1.52(40 C); B2=1.53(0 C), 1.99(25 C), 2.13(40 C).
DH(K1)=17.6 kJ mol-1, DS=83.6 J K-1 mol-1
-------------------------------------------------------------------------------
Ce+++      dis NaClO4 25°C 0.55M U        K1=1.94   B2=2.88   1967LNa (16044) 107
I=0.5-0.6,  By cation exchange: K1=1.95, B2=2.84
-------------------------------------------------------------------------------
Ce+++      con oth/un 25°C  0.0  U        K1=3.72        1966ERa (16045) 108
-------------------------------------------------------------------------------
Ce+++      oth oth/un   ?  0.10M U T                     1964LAb (16046) 109
                                         K1in/K1=-0.9
Method:infrared spectra.   Medium:Ce2L3
-------------------------------------------------------------------------------
```

```
Ce+++      ix  NaClO4 25°C 0.50M U        K1=1.75   B2=2.90   1962BLc (16047) 110
--------------------------------------------------------------------------------
Ce+++      sol oth/un 20°C  0.0  U        K1=2.92        1954KOb (16048) 111
--------------------------------------------------------------------------------
Ce+++      con oth/un 25°C  0.0  U        K1=3.59        1954SJa (16049) 112
--------------------------------------------------------------------------------
Ce+++      sp  NaClO4 25°C  1.0M U  IH    K1=1.25        1953NAa (16050) 113
DH(K1)=15.2 kJ mol-1, DS=74.5 J K-1 mol-1. At I=0 corr.: K1=3.37,
DH(K1)=19.6, DS=130.5
--------------------------------------------------------------------------------
Ce+++      ix  NaClO4 20°C  1.0M U        K1=1.63   B2=2.34   1952FRc (16051) 114
                                         K3=0.74
--------------------------------------------------------------------------------
Ce+++      ix  NaClO4 25°C 0.50M U  I     K1=1.78        1951CMa (16052) 115
Method:cation exchange, K1=1.92(I=0)
********************************************************************************
S2O3--                 H2L    Thiosulfate      CAS 73686-28-7  (177)
Thiosulfate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      con oth/un 32°C  var  U                         1950DUa (16809) 116
                                         B(Ce2L3)=9.68
********************************************************************************
SeO3--                 H2L    Selenite         CAS 7783-00-8  (2391)
Selenite;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      sol oth/un 20°C  var  U                         1957CTa (17043) 117
                                         Kso(Ce2L3)=-24.43
********************************************************************************
WO4--                  H2L    Tungstate        CAS 13783-36-3  (445)
Tungstate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      oth oth/un 16°C 0.10M U                         1971MTb (17430) 118
                                         K'=4.90
K': 3Ce(3+) + 4HW6O21(5-) = 3CeW8O28(5-) + 4H. Method: paper electrophoresis
********************************************************************************
CH2O2                   HL    Formic acid      CAS 64-18-6  (37)
Methanoic acid; H.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      ix  oth/un 25°C  1.0M U        K1=1.65        1962TSa (17598) 119
********************************************************************************
C2HO2Cl3                HL    Trichloroacetic  CAS 76-03-9  (1205)
Trichloroethanoic acid; Cl3C.COOH
```

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      cal NaClO4 25°C 2.00M U        K1=0.26        1980ECa (18327) 120
********************************************************************************
C2H2O2Cl2              HL                    CAS 79-43-6  (1282)
Dichloroethanoic acid; Cl2CH.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      cal NaClO4 25°C 2.00M U        K1=0.66        1980ECa (18392) 121
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 20°C 0.10M U        K1=2.39   B2=4.17   1964PSd (18417) 122
                                          K3=0.9
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      ix  R4N.X  25°C 0.05M C        K1=5.04   B2= 9.67  2001SBf (18823) 123
                                          K(Ce+HL)=2.43
Medium: 0.05 M NH4NO3. At I=0, K1=5.97, B2=10.86.
--------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C  1.0M U    M                  1988KTa (18824) 124
                                          K(Ce(edta)+L)=2.70
--------------------------------------------------------------------------------
Ce+++      dis NaClO4 25°C 0.68M C        K1=4.50   B2= 7.97  1987CBc (18825) 125
                                          B3=10.2
Method: distribution of 139Ce between 0.68 m NaClO4 and tributyl phosphate
--------------------------------------------------------------------------------
Ce+++      oth oth/un 25°C 0.10M U        K1=4.90   B2=8.26   1971STe (18826) 126
Method : electrical migration or transference number
--------------------------------------------------------------------------------
Ce+++      sol NaClO4 20°C 1.00M U        K1=4.49   B2=7.91   1969GGa (18827) 127
                                          B3=10.30
                                          B4=11.75
--------------------------------------------------------------------------------
Ce+++      sol KNO3   20°C  2.0M U        K1=6.05   B2=8.82   1957BDd (18828) 128
                                          Kso=-25.5
--------------------------------------------------------------------------------
Ce+++      sol oth/un 25°C  0.0  U        K1=6.52   B2=10.48  1951CMb (18829) 129
                                          K3=0.82
********************************************************************************
C2H3O2Cl               HL    Chloroacetic     CAS 79-11-8  (34)
```

Chloroethanoic acid; ClCH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	cal	NaClO4	25°C	2.00M	U		K1=0.98	1980ECa (19356)	130

****

C2H4N4S HL CAS 16691-43-3 (9032)
3-Amino-5-mercapto-1,2,4-triazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KNO3	25°C	0.10M	C		K1=4.05	2003AHa (19497)	131

****

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
Ce+++	gl	oth/un	20°C	dil	U		K1=5.207 B2= 9.96 B3=14.236	1989GMd (19910)	132
Ce+++	dis	NaClO4	25°C	1.0M	C		B2=2.57 B3=2.72	1981MSb (19911)	133

Method: competitive extraction with thenoyltrifluoroacetone in CCl4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	EMF	diox/w	?	50%	U	I	K1=3.04 B2=4.90 B3=6.51	1971MCb (19912)	134

Medium: 0-70% dioxan, 0.5 M NaClO4. 0%: K1=1.88, B2=3.08. 40%: K1=2.96, B2=4.07, B3=5.57

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	dis	NaClO4	25°C	2.00M	U	T	K1=1.70	1970CSd (19913)	135

K1(2.1C)=1.49, K1(46.6C)=1.74

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	EMF	alc/w	?	60%	U	I	K1=2.58 B2=4.70 B3=6.15 B4=7.16 B5=7.66	1970MCa (19914)	136

Medium: 0-80% EtOH, 2 M NaClO4. 0%: K1=1.81, B2=2.97, B3=3.46, B4=3.87. 40%: K1=2.50, B2=4.11, B3=5.41, B4=6.45.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	oth	oth/un	?	?	U		B3=3.31	1967MBa (19915)	137

Method : paper electrophoresis

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	cal	NaClO4	25°C	2.0M	C	H		1964GRa (19916)	138

DH(K1)=8.753 kJ mol-1, DS(K1)=61.9 J K-1 mol-1; DH(B2)=15.33, DS(B2)=104; DH(B3)=21.4, DS(B3)=133.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaClO4	20°C	0.10M	U		K1=2.09 B2=3.53	1962KPa (19917)	139

```
Ce+++      EMF NaClO4 20°C  2.0M U        K1=1.68   B2=2.69   1958SOb (19918) 140
                                         B3=3.13
                                         B4=3.18
Method: quinhydrone electrode
--------------------------------------------------------------------------------
Ce+++      ix  NaClO4 20°C  1.0M U        K1=1.68   B2=2.65   1953FRc (19919) 141
                                         K3=0.58
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=5.96   B2=11.12  1996PJa (20302) 142
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.52        1986LSb (20303) 143
                                         K(Ce(EDTA)+L)=3.47
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 20°C 0.10M U                       1964PKa (20304) 144
                                         K(Ce+HL)=1.99
                                         K(CeHL+HL)=1.04
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C  2.0M U T                     1962BCa (20305) 145
                                         K(Ce+HL)=1.43
                                         K(CeHL+HL)=0.7
--------------------------------------------------------------------------------
Ce+++      gl  KCl    30°C 0.10M U                       1962CTa (20306) 146
                                         K(Ce+HL)=2.28
                                         K(CeHL+HL)=2.36
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      EMF NaClO4 25°C    2M C TIH  R K1=2.30   B2= 4.01  2003PLa (20501) 147
                                         B3=5.14
                                         B4=5.5
IUPAC Recommended values.  Data for metal complexes for all aliphatic
hydroxycarboxylic acids evaluated critically.
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=5.83   B2=10.68  1996PJa (20502) 148
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.63        1986LSb (20503) 149
                                         K(Ce(EDTA)+L)=3.47
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.67        1985LSf (20504) 150
                                         K(Ce(edta)+L)=3.52
--------------------------------------------------------------------------------
Ce+++      ix  R4N.X  20°C 0.10M C T      K1=1.77   B2= 2.65  1983JUa (20505) 151
```

Method: ion exchange using 141Ce tracer. Medium: 0.10 M NH4Cl.
At 30 C, K1=1.86, B2=2.87.

Ce+++ gl NaNO3 32°C 0.10M U 1980PPf (20506) 152
K(Ce+HL=CeL+H)=-1.37
*K(CeL)=-6.38
K(Ce+2HL=CeL2+2H)=-2.29
*K(CeL2)=-5.95

Ce+++ cal NaClO4 25°C 2.0M C H 1964GRa (20507) 153
DH(K1)=-3.39 kJ mol-1, DS(K1)=34 J K-1 mol-1; DH(B2)=-6.690, DS(B2)=54.0;
DH(B3)=-9.489, DS(B3)=66.1; DH(B4)=-12.5, DS(B4)=63.2.

Ce+++ gl NaClO4 20°C 0.10M U K1=2.695 B2=4.55 1964PKb (20508) 154
B3=5.4

Ce+++ gl KCl 30°C 0.10M U K1=2.84 B2=5.29 1962CTa (20509) 155

Ce+++ gl NaClO4 25°C 2.0M U K1=2.27 B2=4.01 1961CCa (20510) 156
K3=1.11

Ce+++ ix NaClO4 20°C 0.20M U K1=2.43 B2=4.11 1960SVa (20511) 157
B3=5.3

Ce+++ EMF NaClO4 20°C 2.0M U K1=2.35 B2=4.02 1959SOb (20512) 158
B3=5.15
B4=5.5
B5=5.3

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

---

Ce+++ gl NaClO4 25°C 0.20M U K1=4.42 B2= 7.94 1996PJa (21506) 159

Ce+++ gl KNO3 25°C 0.20M U M K1=6.10 1990LSb (21507) 160
K(Ce(phen)+L)=5.87

Ce+++ gl NaClO4 25°C 0.20M U K1=4.42 B2= 7.94 1987PPa (21508) 161

Ce+++ gl NaClO4 25°C 0.20M U M K1=5.38 1986LSb (21509) 162
K(Ce(EDTA)+L)=4.32

Ce+++ gl NaClO4 25°C 0.20M U M K1=5.38 1985LSe (21510) 163
K(Ce(edta)+L)=4.32.

Ce+++ gl NaClO4 30°C 0.2M U T K1=4.46 1977MSf (21511) 164

```
Ce+++      dis NaClO4 25°C  2.0M U T H  T                1968TCa (21512) 165
                                       K(Ce+HL)=0.53
K=0.34(0 C), 0.70(40 C), 0.76(55 C). DH=13.8 kJ mol-1, DS=58.5 J K-1 mol-1
--------------------------------------------------------------------------------
Ce+++      gl  KCl    30°C 0.10M U      T K1=3.40   B2=6.40   1962CTa (21513) 166
********************************************************************************
C2H5NO2                HL    Acetohydroxamic  CAS 546-88-3  (2766)
Acetohydroxamic acid, N-Hydroxyacetamide; CH3.CO.NHOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaCl   31°C 0.15M U  I     K1=6.35   B2=11.63  1992SKa (21805) 167
                                       K3=5.10
Also data for 25 and 50% v/v EtOH/H2O.
********************************************************************************
C2H6N2O                 L    Acethydrazide    CAS 1068-57-1  (2566)
Ethanoic acid hydrazide, Acetylhydrazine; CH3.CO.NH.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 20°C 0.10M U                         1974PJa (21965) 168
                                       K(CeL+A)=3.31
HA=pentane-2,4-dione
********************************************************************************
C2H6OS                 HL                    CAS 60-24-2  (841)
2-Mercaptoethanol; HS.CH2.CH2.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U T      K1=5.62          1981SKb (22063) 169
Temp range 15-35. K1 at 15 = 5.85; K1 at 45 = 5.31
********************************************************************************
C2H6OS                 L    DMSO             CAS 67-68-5  (329)
Dimethylsulfoxide; (CH3)2.SO
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      sp  non-aq 25°C 100%  U                         1992MBb (22093) 170
                                       K8=1.3
                                       K9=0.7
                                       K10=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
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 22°C 0.10M U                         1972MCd (22140) 171
                                       K(CeH-1L+H)=8.00
```

****

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
Ce+++	nmr	NaClO4	25°C	2.00M	U	H	K1=1.59		1980CCa	(24045) 172

DH=-4.47 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
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.11		1986LSb	(24410) 173
							K(Ce(EDTA)+L)=3.28			
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.11		1985LSf	(24411) 174
							K(Ce(edta)+L)=3.26			
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.11		1984LSd	(24412) 175
							K(Ce(edta)+L)=3.28			
Ce+++	dis	NaClO4	25°C	1.0M	C		K1=3.17	B2= 4.84	1981MSb	(24413) 176

Method: competitive extraction with thenoyltrifluoroacetone in CCl4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	NaClO4	25°C	0.10M	U		K1=4.21		1972DCc	(24414) 177
Ce+++	gl	NaClO4	25°C	1.00M	U		K1=3.23	B2=5.23	1971DGa	(24415) 178
							B(CeHL)=6.38			
							B(CeHL2)=9.30			
Ce+++	gl	KNO3	25°C	0.10M	U		K1=3.83	B2=6.17	1968PFa	(24416) 179

****

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
Ce+++	gl	KCl	25°C	0.20M	U		K1=3.68		1973LPb	(24622) 180

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	20°C	50%	U		K1=4.90		1971MAf	(24639) 181

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
Ce+++	gl	diox/w	20°C	50%	U		K1=6.22	B2=11.51	1971MAf (24801)	182

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
Ce+++	gl	NaNO3	25°C	0.10M	U		K1=2.18	B2=3.56	1977SCa (24988)	183
Ce+++	EMF	diox/w	25°C	50%	U	I	K1=3.10	B2=5.17	1971MCc (24989)	184
								B3=6.11		
Ce+++	gl	NaClO4	25°C	2.0M	U		K1=1.67	B2=2.67	1965CGa (24990)	185
Ce+++	gl	NaClO4	20°C	0.10M	U		K1=2.05	B2=3.28	1964PKa (24991)	186

Medium: 0-70% dioxan, 0.5 M NaClO4. 0%: K1=1.85, B2=2.95, B3=3.01
70%: B2=6.29, B3=8.05

****

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
Ce+++	gl	NaClO4	25°C	0.20M	U		K1=5.99	B2=11.23	1996PJa (25130)	187
Ce+++	gl	NaClO4	25°C	2.00M	U				1968CMa (25131)	188
							K(Ce+HL)=1.36			

****

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
Ce+++	gl	NaClO4	25°C	2.00M	U				1968CMa (25201)	189
							K(Ce+HL)=1.57			
Ce+++	gl	KCl	30°C	0.10M	U				1962CTa (25202)	190
							K(Ce+HL)=2.41			
							K(CeHL+HL)=2.48			

****

C3H6O3 HL CAS 81598-26-7 (2521)

3-Hydroxypropanoic acid; HO.CH2.CH2.COOH

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

```
Ce+++      gl  NaClO4 25°C 2.00M U        K1=1.57        1969JCc (25260) 191
--------------------------------------------------------------------------
Ce+++      gl  KCl    30°C 0.10M U        K1=2.61   B2=5.21   1962CTa (25261) 192
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=6.32   B2=11.99  1996PJa (25413) 193
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.74        1986LSb (25414) 194
                                         K(Ce(EDTA)+L)=3.43
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.78        1985LSf (25415) 195
                                         K(Ce(edta)+L)=3.48
--------------------------------------------------------------------------
Ce+++      gl  KNO3   30°C 0.10M U                       1983MPc (25416) 196
                                         K(Ce+HL=CeL+H)=-0.58
                                         *K(CeL)=-5.30
                                         K(Ce+2HL=CeL2+2H)=-1.65
                                         *K(CeL2)=-4.55
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=2.49   B2=4.06   1964DVa (25417) 197
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 20°C 0.10M U        K1=2.756  B2=4.72   1964PKb (25418) 198
                                         B3=5.95
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C  2.0M U        K1=2.33   B2=4.10   1961CCa (25419) 199
                                         K3=1.11
--------------------------------------------------------------------------
Ce+++      ix  NaClO4 20°C 0.20M U        K1=2.43   B2=4.11   1960SVa (25420) 200
                                         B3=5.3
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 20°C 0.10M U        K1=2.06   B2=3.06   1964PKa (25594) 201
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=4.29   B2= 7.78  1996PJa (26144) 202
--------------------------------------------------------------------------
Ce+++      gl  NaCl   37°C 0.15M U    M   K1=3.01        1991DWb (26145) 203
                                         B(CeH2L(Glu))=22.73
```

```
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.20M U    M   K1=5.98        1990LSb (26146) 204
                                          K(Ce(phen)+L)=5.70
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=4.29   B2= 7.78  1987PPa (26147) 205
--------------------------------------------------------------------------------
Ce+++      vlt KCl    25°C  1.0M C T      K1=6.10        1986KHd (26148) 206
Method: polarography. Medium pH 2.70. Data for 25-40 C.
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=6.03        1986LSb (26149) 207
                                          K(Ce(EDTA)+L)=4.40
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=6.03        1985LSe (26150) 208
K(Ce(edta)+L)=4.40.
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=6.03        1984LSd (26151) 209
                                          K(Ce(edta)+L)=4.40
********************************************************************************
C3H7NO2                HL    B-Alanine        CAS 107-95-9  (575)
3-Aminopropanoic acid; H2N.CH2.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=5.90        1986LSb (26448) 210
                                          K(Ce(EDTA)+L)=4.37
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=5.90        1984LSd (26449) 211
                                          K(Ce(edta)+L)=4.37
--------------------------------------------------------------------------------
Ce+++      gl  KCl    30°C 0.10M U      T K1=2.63        1962CTa (26450) 212
********************************************************************************
C3H7NO2S              H2L    Cysteine         CAS 52-90-4  (96)
2-Amino-3-mercaptopropanoic acid; H2N.CH(CH2.SH)COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaNO3  15°C 0.10M U T      K1=13.50  B2=20.50  1984IDa (26757) 213
At 30 C, K1=13.40, K2=6.90.
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 20°C  0.0  U T H    K1=6.379  B2=12.57  1980SDc (26758) 214
Extrapolated from data for I=0.10-1.0 M. Data for 35 and 45 C.
DH(K1)=-20.8 kJ mol-1, DS=51 J K-1 mol; DH(K2)=-10.3, DS=84.
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M M    M   K1=5.21        1996AEa (27119) 215
Data for ternary complexes with dipicolinic acid.
```

Ce+++ gl NaClO4 25°C 0.20M U K1=4.86 B2= 8.99 1996PPa (27120) 216

Ce+++ gl NaNO3 25°C 0.10M M I M K1=4.69 1995KDd (27121) 217
K(Ce(egta)+L)=3.48
Data for 0.15 and 0.05 M NaNO3. At I=0, K1=4.94, K(Ce(egta)+L)=3.72.

Ce+++ EMF KCl 22°C 0.10M U K1=4.57 1968RPa (27122) 218
****
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
---
Ce+++ gl NaClO4 22°C 0.10M U 1972MCd (27671) 219
K(CeH-1L+H)=8.05
****
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
---
Ce+++ gl NaClO4 22°C 0.10M U 1972MCd (27723) 220
K(CeH-1L+H)=7.95
****
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
---
Ce+++ gl KNO3 25°C 0.10M U K1=12.48 B2=22.01 2002KAa (28553) 221
K(Ce+HL)=5.77
K(Ce+2HL)=8.88
****
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
---
Ce+++ cal NaClO4 25°C 0.10M U H K1=2.72 B2=4.13 1976OCa (28638) 222
DH(K1)=7.5 kJ mol-1, DS=77 J K-1 mol-1; DH(B2)=13.1, DS=119

Ce+++ gl NaClO4 25°C 0.10M C H K1=2.720 B2= 4.13 1976OCb (28639) 223
By calorimetry: DH(K1)=7.45 kJ mol-1, DS(K1)=77.0 J K-1 mol-1.
DH(B2)=13.1, DS(B2)=119.
****
C4H4N2 L Pyridazine CAS 289-80-5 (1484)
1,2-Diazine, Pyridazine; cyclo(-N:N.CH:CH.CH:CH-)

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

---
Ce+++ nmr non-aq 25°C 100% C H 2004MBa (28772) 224
K(CeA3+L)=1.41
K'(CeB3+L)=4.26
1H nmr in d- toluene. DH(K)=-35 kJ mol-1, DS=-90 J K-1 mol-1; DH(K')=-72, DS=-163. A: t-butyl-cyclopentadiene; B: trimethylsilyl-cyclopentadiene.
****
C4H4N2 L Pyrimidine CAS 289-95-2 (4247)
1,3-Diazine, pyrimidine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ nmr non-aq 25°C 100% C H 2004MBa (28776) 225
K(CeA3+L)=0.04
K'(CeB3+L)=2.72
1H nmr in d- toluene. DH(K)=-29 kJ mol-1, DS=-96 J K-1 mol-1; DH(K')=-63, DS=-161. A: t-butyl-cyclopentadiene; B: trimethylsilyl-cyclopentadiene.
****
C4H4N2 L Pyrazine CAS 290-37-9 (620)
1,4-Diazine, Pyrazine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ nmr non-aq 25°C 100% C H 2004MBa (28790) 226
K(CeA3+L)=-0.36
K'(CeB3+L)=2.15
1H nmr in d- toluene. DH(K)=-28 kJ mol-1, DS=-101 J K-1 mol-1; DH(K')=-51, DS=-131. A: t-butyl-cyclopentadiene; B: trimethylsilyl-cyclopentadiene.
****
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
---
Ce+++ gl oth/un 25°C 0.10M U K1=2.910 1987TSb (28884) 227
****
C4H4N2O3 H2L Barbituric acid CAS 67-52-7 (2818)
2,4,6-Trihydroxypyrimidine; C4HN2(OH)3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl oth/un 25°C 0.10M U T H K1=3.49 1987TSb (28908) 228
30 C:K=3.11; 35 C: 2.91. DH=-100.6 kJ mol-1, DS=-271 J K-1 mol-1
****
C4H4O4 H2L Maleic acid CAS 110-16-7 (111)
cis-Butenedioic acid; HOOC.CH:CH.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaClO4 25°C 0.20M U M K1=4.35 1986LSb (29053) 229

K(Ce(EDTA)+L)=4.26

Ce+++ gl NaClO4 25°C 0.20M U M K1=4.39 1985LSf (29054) 230
K(Ce(edta)+L)=4.33

****

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
Ce+++	gl	NaClO4	25°C	0.10M	U		K1=2.80		1973CDc (29181)	231

****

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
Ce+++	gl	NaClO4	25°C	0.50M	M		K1=3.21	B2=5.80	1991MOa (29263)	232

****

C4H5NO5 H2L (7375)
Oxalohydroxamic acid; HOOC.CO.CH2.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	KNO3	25°C	0.1M	M		K1=9.75	B2=18.77	1989LWa (29312)	233
							K3=8.23			

****

C4H6O2 HL Crotonic acid CAS 107-93-7 (2990)
But-2-enoic acid; CH3.CH:CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.50		1986LSb (29712)	234
							K(Ce(EDTA)+L)=3.07			
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.53		1985LSf (29713)	235
							K(Ce(edta)+L)=3.12			
Ce+++	vlt	KCl	25°C	1.0M	C T H		K1=2.76		1983KCa (29714)	236

Method: polarography. Medium pH 2.75. Data for 35 C. DH and DS values.

****

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
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.86		1986LSb (29952)	237
							K(Ce(EDTA)+L)=3.61			
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.90		1985LSf (29953)	238

```
                                        K(Ce(edta)+L)=3.67
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.86        1984LSd (29954) 239
                                        K(Ce(edta)+L)=3.61
--------------------------------------------------------------------------------
Ce+++      dis NaClO4 25°C  1.0M C        K1=2.18   B2= 4.40  1981MSb (29955) 240
Method: competitive extraction with thenoyltrifluoroacetone in CCl4.
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.20M U        K1=3.77   B2=5.76   1975PLa (30118) 241
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 1.00M U        K1=2.66   B2=4.49   1973DGa (30211) 242
                                       B(CeHL)=5.36
                                       B(CeHL2)=7.66
********************************************************************************
C4H6O4S               H3L    Thiomalic acid   CAS 70-49-5  (109)
2-Mercaptosuccinic acid, 2-Sulfanyl-1,4-butanedioic acid; HOOC.CH(SH).CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=6.29   B2=11.70  1996PJa (30322) 243
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=4.41        1986LSb (30323) 244
                                        K(Ce(EDTA)+L)=4.27
--------------------------------------------------------------------------------
Ce+++      gl  KCl    30°C 0.10M U                       1962CTa (30324) 245
                                        K(Ce+HL)=3.22
                                        K(CeHL+HL)=2.88
                                        K(Ce(HL)2+HL)=2.53
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C  0.1M U        K1=4.32        2004SGa (30599) 246
                                        K(Ce+HL)=2.09
--------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.10M U        K1=4.48        2003SBa (30600) 247
                                        K(Ce+HL)=2.09
--------------------------------------------------------------------------------
```

```
Ce+++      gl  NaClO4 25°C 0.20M U        K1=5.23   B2= 9.98  1996PJa (30601) 248
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=4.10        1986LSb (30602) 249
                                         K(Ce(EDTA)+L)=3.46
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=4.14        1985LSf (30603) 250
                                         K(Ce(edta)+L)=3.52
-------------------------------------------------------------------------------
Ce+++      EMF KCl    25°C 0.20M U        K1=4.11        1964DAb (30604) 251
-------------------------------------------------------------------------------
Ce+++      gl  KCl    30°C 0.10M U        K1=5.00   B2=8.28   1962CTa (30605) 252
                                         K3=2.75
*******************************************************************************
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
-------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C  1.0M U    M                  1988KTa (30856) 253
                                         K(Ce(edta)+L)=2.04
-------------------------------------------------------------------------------
Ce+++      cal NaClO4 25°C  1.0M C   H                  1963GRd (30857) 254
DH(K1)=-1.68 kJ mol-1, DS(K1)=92.9 J K-1 mol-1; DH(B2)=-5.314, DS(B2)=153;
DH(B3)=-7.381, DS(B3)=190.
-------------------------------------------------------------------------------
Ce+++      EMF NaClO4 20°C 1.00M U        K1=5.16   B2=8.92   1963GTa (30858) 255
                                         B3=11.23
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
-------------------------------------------------------------------------------
Ce+++      ix  NaClO4 25°C 0.10M U        B2=6.03        1980OOa (31214) 256
                                         K(Ce+2HL)=3.89
                                         K(Ce+HL+L)=5.60
-------------------------------------------------------------------------------
Ce+++      gl  KCl    24°C 0.20M U        K1=3.09        1966DDa (31215) 257
-------------------------------------------------------------------------------
Ce+++      EMF oth/un 25°C  var  U        K1=3.84   B2=6.72   1966PBb (31216) 258
                                         K(2Ce+L)=5.80
                                         K(Ce+H-1L)=11.42
Method: H electrode
-------------------------------------------------------------------------------
Ce+++      gl  oth/un 25°C 0.30M U                       1965BRg (31217) 259
                                         K(Ce+HL)=2.54
-------------------------------------------------------------------------------
Ce+++      gl  NaNO3  25°C 0.10M U        K1=5.5    B2=8.40   1965SSi (31218) 260
                                         K(2Ce+2L)=10.8
```

```
                                          K(2Ce+3L)=14.7
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M C    M                    2003AHa (31828) 261
                                          K(CeL+A)=3.69
HA is 3-amino-5-mercapto-1,2,4-triazole.
--------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M M    M   K1=8.70          1996AEa (31829) 262
Data for ternary complexes with dipicolinic acid.
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=5.72   B2=11.16  1996PJa (31830) 263
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=5.72   B2=11.16  1996PPa (31831) 264
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=5.77          1986LSb (31832) 265
                                          K(Ce(EDTA)+L)=4.71
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 30°C 0.10M U        K1=4.77   B2=8.91   1984YLa (31833) 266
--------------------------------------------------------------------------
Ce+++      dis NaClO4 25°C  1.0M C        K1=2.08   B2= 3.38  1981MSb (31834) 267
Method: competitive extraction with thenoyltrifluoroacetone in CCl4.
--------------------------------------------------------------------------
Ce+++      gl  KCl    30°C 0.10M U        K1=5.13   B2=8.78   1962CTa (31835) 268
                                          K3=2.75
--------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.10M U        K1=5.2    B2=9.80   1961BLb (31836) 269
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  KCl    25°C  1.0M U    M                    1988KTa (32205) 270
                                          K(Ce(edta)+L)=3.20
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=6.41   B2=11.29  1988VSc (32206) 271
                                          K(Ce(HEDTA)+L)=4.42
                                          K(Ce(CDTA)+L)=4.27
                                          K(Ce(DTPA)+L)=3.72
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=6.41   B2=11.29  1987VSb (32207) 272
                                          K(Ce(nta)+L)=5.49
                                          K(Ce(edta)+L)=4.17
--------------------------------------------------------------------------
Ce+++      sp  oth/un 25°C 0.02M U        K1=6.55   B2=10.82  1979TKb (32208) 273
--------------------------------------------------------------------------
```

```
Ce+++      gl  alc/w  25°C  1.0M U  I     K1=6.45   B2=11.80  1976TBb (32209) 274
                                          K(Ce+3L)=15.4
Medium:1 M LiCl in 60% MeOH/H2O v/v; in 100%H2O K1=5.37;B2=9.59; B3=13.0
Also data for EtOH, Dioxane, Acetone mixed solvents
--------------------------------------------------------------------------------
Ce+++      cal KNO3   20°C 0.10M U   HM                 1971GKb (32210) 275
                                          K(CeA+L)=3.11
DH(CeA+L)=-6.69 kJ mol-1, DS=36.8 J K-1 mol-1.  DH(CeAL)=-19.00, DS=300.4
H4A=EDTA
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U    M   K1=6.18   B2=10.71  1962THa (32211) 276
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
--------------------------------------------------------------------------------
Ce+++      gl  diox/w 20°C  50%  U        K1=7.56   B2=13.98  1971MAf (32530) 277
Medium: 50% v/v dioxan, 0.1 M NaClO4
********************************************************************************
C4H8N2O3               HL    Asparagine       CAS 70-47-3  (17)
2-Aminobutanedioic acid 4-amide; H2N.CH(CH2.CO.NH2).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M M    M   K1=5.14        1996AEa (32685) 278
Data for ternary complexes with dipicolinic acid.
--------------------------------------------------------------------------------
Ce+++      vlt KCl    25°C  1.0M C T      K1=3.52        1986KHd (32686) 279
Method: polarography. Medium pH 2.70. Data for 25-40 C.
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 30°C 0.10M U        K1=3.53   B2=5.88   1984YLa (32687) 280
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 30°C  0.2M U        K1=3.78        1977MSf (32688) 281
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U        B2=7.09        1973TSc (32689) 282
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 30°C 0.10M U T H    K1=3.60   B2=6.17   1980SBb (33019) 283
                                          K3=2.50
DH=-34.54 kJ mol-1. Further data available for T=40. Alternative method:
Conductivity.
********************************************************************************
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
---
Ce+++ oth KNO3 25°C 0.10M U K1=10.2 1971LSc (33101) 284
K(Ce+HL)=4.08
Method: electrical migration or transference number
****
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
---
Ce+++ gl NaClO4 25°C 2.00M U H K1=1.62 B2=2.72 1965CGa (33221) 285
By calorimetry: DH(K1)=13.9 kJ mol-1,DS=77.7 J K-1 mol-1; DH(K2)=10.8, DS=57

Ce+++ gl NaClO4 25°C 0.50M U K1=1.79 B2=2.32 1964SPa (33222) 286
****
C4H8O2 HL CAS 107-92-6 (1118)
n-Butanoic acid; CH3.CH2.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ cal KCl 25°C 1.0M U K1=2.77 B2= 4.53 2003ASa (33333) 287
K3=1.25

Ce+++ EMF diox/w 25°C 60% U I K1=3.44 B2=5.93 1971MSi (33334) 288
B3=7.57
Medium: 0-70% dioxan, 0.5 M NaClO4. K1(0%)=1.73, B2=2.62, B3=3.12.
K1(40%)=2.65, B2(40%)=4.57, B3(40%)=5.18; B2(70%)=6.43, B3=9.23
****
C4H8O2S HL CAS 2935-90-2 (1147)
Methyl-3-mercaptopropionate; HS.CH2.CH2.CO2.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl KNO3 25°C 0.10M U T H K1=2.32 1975SBa (33369) 289
K(CeL+3OH)=1.28
DH=-33.3 kJ mol-1 and DS=-42.7 J mol-1 K-1.
Values available when T=35 and 45 and also via conductivity.
****
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
---
Ce+++ oth oth/un 25°C 0.10M U K1=2.61 B2=4.20 1971SHb (33449) 290
B3=5.70
Method: electrical migration or transference number

Ce+++ ix NaClO4 25°C 1.0M U K1=2.36 B2=3.96 1967LNa (33450) 291

B3=4.7
B4=5.6
By distribution: K1=2.37, B2=3.93

Ce+++ gl NaClO4 25°C 0.20M U K1=2.55 B2=4.08 1964DVa (33451) 292
K3=1.4

Ce+++ gl NaClO4 20°C 0.10M U K1=2.80 B2=4.74 1964PKb (33452) 293
B3=5.95

Ce+++ gl NaClO4 25°C 0.50M U K1=2.37 B2=4.01 1964SPa (33453) 294

Ce+++ gl NaClO4 25°C 2.0M U K1=2.43 B2=4.32 1961CCa (33454) 295
K3=1.00

Ce+++ ix NaClO4 20°C 0.20M U K1=2.43 B2=4.34 1960SVa (33455) 296
B3=5.3

****

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

---

Ce+++ gl KNO3 25°C 0.10M C K1=2.83 B2=4.88 1975PFb (33675) 297
K3=1.38

****

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

---

Ce+++ gl NaClO4 25°C 0.50M U K1=2.61 B2=4.45 1964SPa (33692) 298
B3=5.98

****

C4H9NO2 HL 2-Aminobutyric CAS 2835-81-6 (571)
2-Aminobutanoic acid; CH3.CH2.CH(NH2).COOH

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

---

Ce+++ gl KNO3 25°C 0.10M U T K1=4.67 1978SSb (33911) 299

****

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

---

Ce+++ gl NaClO4 25°C 0.20M U K1=4.89 B2= 8.87 1996PPa (34292) 300

Ce+++ gl KCl 20°C 0.10M U K1=3.7 1970RPa (34293) 301

****

C4H10N2O4S HL ACES CAS 7365-82-4 (7488)
N-(2-Acetamido)-2-aminoethanesulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl KNO3 25°C 0.10M C K1=3.42 2001AAb (34625) 302
*K(CeL)=-6.08
K(2Ce(OH)L=Ce2(OH)2L2)=10.13
****
C4H11O4P HL (4276)
Diethylphosphoric acid; (C2H5O)2.PO.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ oth oth/un 25°C U K1=1.36 1971MGb (35254) 303
Estimated
****
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
---
Ce+++ EMF NaClO4 25°C 100% C H K1=5.58 B2= 9.12 2000CDa (35768) 304
Medium: DMF, 0.10 M Et4N[CF3SO3]. Method: Ag/Ag+ electrode.
By calorimetry: DH(K1)=-54.0, DH(B2)=-102.3 kJ mol-1.
****
C4H14N2O6P2 H2L EDDPO CAS 1733-49-9 (2435)
1,2-Diaminoethane-N,N'-bis(methylenephosphonic) acid; (H2O3P.CH2.NH.CH2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ oth oth/un 25°C 0.10M U 1971SHb (35872) 305
K(Ce+HL)=11.78
K(Ce+H2L)=7.08
K(Ce+H3L)=6.00
Method: electrical migration or transference number
****
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
---
Ce+++ cal NaClO4 25°C 0.10M U H K1=3.10 B2=4.40 1978COa (35938) 306
DH(K1)=3.42 kJ mol-1, DS=70.6; DH(K2)=4.39, DS=39.7
****
C5H4NO2Cl H2L CAS 53223-89-9 (5916)
5-Chloropyridine-2,3-diol;

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

---
Ce+++ gl diox/w 35°C 50% U K1=7.15 1984SSd (36031) 307
****
C5H5N L Pyridine CAS 110-86-1 (31)
Pyridine, Azine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ nmr non-aq 25°C 100% C H 2004MBa (36597) 308
K(CeA3+L)=0.90
K'(CeB3+L)=3.7
1H nmr in d- toluene. DH(K)=-36 kJ mol-1, DS=-104 J K-1 mol-1; DH(K')=-64, DS=-145. A: t-butyl-cyclopentadiene; B: trimethylsilyl-cyclopentadiene.
****
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
---
Ce+++ gl diox/w 25°C 50% U K1=7.33 1970GDa (36782) 309
Medium: 50% dioxan, 0.1 M NaClO4
****
C5H6OS HL CAS 98-02-2 (4309)
Furfurylmercaptan; C4H3O.CH2.SH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl alc/w 25°C 50% U T K1=5.10 1973SSf (37344) 310
K3=4.56
Medium: 50% EtOH, 0.1 M NaClO4
K1(35 C)=5.03, K1(45 C)=4.97, K3(35 C)=4.52, K3(45 C)=4.49
****
C5H6O4 H2L Citraconic acid CAS 498-23-7 (3021)
Citraconic acid; CH3.C(COOH):CH.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaClO4 25°C 0.20M U M K1=4.93 1986LSb (37358) 311
K(Ce(EDTA)+L)=3.99

Ce+++ gl NaClO4 25°C 0.20M U M K1=4.98 1985LSf (37359) 312
K(Ce(edta)+L)=4.01

Ce+++ vlt KCl 25°C 1.0M C T H K1=3.82 1983KCa (37360) 313
Method: polarography. Medium pH 2.75. Data for 35 C. DH and DS values.
****
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

```
--------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.20M U        K1=2.78        1989MFa (37412) 314
                                          K(Ce+HL)=1.78
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.94        1986LSb (37413) 315
                                          K(Ce(EDTA)+L)=3.74
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.98        1985LSf (37414) 316
                                          K(Ce(edta)+L)=3.76
--------------------------------------------------------------------------------
Ce+++      sol oth/un 25°C  1.0M U        K1=3.91        1984KPf (37415) 317
in 1.0 M HCl
--------------------------------------------------------------------------------
Ce+++      vlt KCl    25°C  1.0M C T H    K1=3.50        1983KCa (37416) 318
Method: polarography. Medium pH 2.75. Data for 35 C. DH and DS values.
********************************************************************************
C5H7NO3                HL                          (4313)
Isonitrosoacetylacetone; HO.N:CH.CO.CH2.CO.CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  diox/w 20°C  50%  U        K1=3.96   B2=6.96   1971MAf (37522) 319
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
--------------------------------------------------------------------------------
Ce+++      gl  diox/w 20°C  50%  U        K1=5.05   B2=9.16   1971MAf (37699) 320
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 20°C    ?  U    M                    1973TZa (37927) 321
                                          K(Ce(EDTA)+L)=3.48
--------------------------------------------------------------------------------
Ce+++      gl  alc/w    ?   50%  U  I     K1=6.26        1971KOa (37928) 322
Medium: 5-80% MeOH, 0.005 CeCl3, 0.005 HL. K1(5%)=5.24, K1(80%)=7.38
--------------------------------------------------------------------------------
Ce+++      gl  oth/un 30°C 0.10M U        K1=5.09   B2=8.4    1960GFa (37929) 323
                                          K3=2.9
--------------------------------------------------------------------------------
Ce+++      gl  oth/un 20°C  0.0  U T H    K1=5.30   B2=9.27   1955IFb (37930) 324
                                          K3=3.38
DH(K1)=0 kJ mol-1, DS=100; DH(K2)=-4, DS=75. 10 C: K1=5.32, K2=4.08, K3=3.35
30 C: K1=5.28, K2=3.98, K3=3.38; 40 C: K1=5.35, K2=3.93
--------------------------------------------------------------------------------
```

```
Ce+++      gl  diox/w 30°C  75%  U        K1=9.86   B2=18.39  1953UFd (37931) 325
                                         K3=6.91
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.20M U        K1=4.11        1989ZPa (38238) 326
In 70.4% v/v EtOH/H2O: K1 = 6.14
********************************************************************************
C5H8O4                H2L    Glutaric acid    CAS 110-94-1  (420)
Pentanedioic acid; HOOC.CH2.CH2.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.81        1986LSb (38311) 327
                                         K(Ce(EDTA)+L)=3.08
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.85        1985LSf (38312) 328
                                         K(Ce(edta)+L)=3.12
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.81        1984LSd (38313) 329
                                         K(Ce(edta)+L)=3.08
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  KCl    24°C 0.20M U        K1=3.41        1966DDa (38417) 330
********************************************************************************
C5H9NO2                HL    Proline          CAS 147-85-3  (44)
Pyrrolidine-2-carboxylic acid; C4H8N.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U T H    K1=4.87        1984SGb (38603) 331
35 C, K1=4.79; 45 C, 4.73. DH=-19.1 kJ mol-1, DS=29.4 J K-1 mol-1
--------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.10M U T H    K1=6.00        1973SCf (38604) 332
Data for 35 C. DH(K1)=12 kJ mol-1, DS(K1)=156 J K-1 mol-1.
--------------------------------------------------------------------------------
Ce+++      EMF KCl    20°C 0.10M U        K1=5.66        1967RPa (38605) 333
--------------------------------------------------------------------------------
Ce+++      ix  KCl    20°C 0.10M U        K1=5.65   B2=8.8    1967RPa (38606) 334
********************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  NaCl   37°C 0.15M U        K1=3.85        1997GMa (38721) 335
--------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.10M U T H    K1=4.90        1973SCf (38722) 336
Data for 35 C. DH(K1)=53 kJ mol-1, DS(K1)=271 J K-1 mol-1.
**************************************************************************
C5H9NO4               H2L    Glutamic acid    CAS 56-86-0  (22)
2-Aminopentanedioic acid; H2N.CH(CH2.CH2.COOH)COOH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M C    M                   2003AHa (39073) 337
                                        K(CeL+A)=3.45
HA is 3-amino-5-mercapto-1,2,4-triazole.
--------------------------------------------------------------------------
Ce+++      gl  NaCl   37°C 0.15M U        K1=3.81        1991DWb (39074) 338
**************************************************************************
C5H10NO7P             H4L    PMIDA            CAS 5994-61-6  (2433)
N-(Phosphonomethyl)iminodiethanoic acid; H2O3P.CH2.N(CH2.COOH)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce+++      sp  KCl    25°C 0.10M U         K1=12.8        1981KKe (39672) 339
                                        K(CeL+H)=4.5
                                        K(Ce+HL)=6.6
                                        K(CeHL+HL)=3.69
**************************************************************************
C5H10N2O3              HL    Glutamine        CAS 56-85-9  (18)
2-Aminopentanedioic acid 5-amide; H2N.CH(CH2.CH2.CO.NH2)COOH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce+++      vlt KCl    25°C  1.0M C T      K1=3.72        1986KHd (39813) 340
Method: polarography. Medium pH 2.70. Data for 25-40 C.
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 30°C  0.2M U        K1=3.95        1977MSf (39814) 341
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U        B2=7.09        1973TSb (39815) 342
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U        K1=2.51   B2=4.23   1969PCa (40248) 343
                                        K3=1.20
**************************************************************************
C5H10O3                HL                     CAS 4026-18-0  (422)
2-Hydroxy-3-methylbutanoic acid; CH3.CH2.C(OH)(CH3).COOH
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	ix	NaClO4	20°C	0.20M	U		K1=2.23	B2=3.50	1960SVa (40270)	344
							B3=4.78			

****

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
Ce+++	gl	KNO3	25°C	0.10M	C		K1=2.81	B2=4.81	1975PFb (40308)	345
							K3=1.15			

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	cal	none	25°C	0.0	U	H	K1=0.64	1993MLa (40348)	346

DH(K1)=-11.0 kJ mol-1, TDS=-7.3

****

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
Ce+++	gl	NaClO4	25°C	0.20M	U		K1=5.42	B2=10.28	1996PPa (40690)	347
Ce+++	gl	KNO3	25°C	0.20M	U	M	K1=5.92		1990LSb (40691)	348
							K(Ce(phen)+L)=5.78			
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=6.05		1986LSb (40692)	349
							K(Ce(EDTA)+L)=5.33			
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=6.05		1985LSe (40693)	350

K(Ce(edta)+L)=5.83.

Ce+++	gl	KCl	25°C	0.10M	U	T	K1=3.96	1974BFa (40694)	351
Ce+++	gl	KCl	25°C	0.10M	U	T H	K1=5.02	1973SCf (40695)	352

Data for 35 C. DH(K1)=35 kJ mol-1, DS(K1)=214 J K-1 mol-1.

****

C5H11NO2S HL Methionine CAS 63-68-3 (42)
2-Amino-4-(methylthio)butanoic acid; H2N.CH(CH2.CH2.S.CH3)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	NaClO4	25°C	0.20M	U		K1=4.93	B2= 9.03	1996PPa (41081)	353

```
Ce+++      gl  NaNO3  25°C 0.10M M  I M   K1=4.74        1995KDd (41082) 354
                                          K(Ce(egta)+L)=3.52
Data for 0.15 and 0.05 M NaNO3. At I=0, K1=4.93, K(Ce(egta)+L)=3.76.
-------------------------------------------------------------------------------
Ce+++      gl  KCl    20°C 0.10M U        K1=4.4         1970RPa (41083) 355
*******************************************************************************
C6H3N3O7               HL    Picric acid      CAS 88-89-1  (593)
2,4,6-Trinitrophenol; HO.C6H2(NO2)3
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      sp  oth/un 21°C 0.40M U        K1=1.05        1955BKa (42100) 356
                                         B3=3.09
Medium:0.2-0.9(some EtOH)
*******************************************************************************
C6H4N2O5               HL                    CAS 50-28-5  (505)
2,4-Dinitrophenol; HO.C6H3(NO2)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      gl  KCl    21°C 0.10M U        K1=1.0         1978KYb (42224) 357
-------------------------------------------------------------------------------
Ce+++      sp  oth/un 21°C 0.40M U        K1=1.05        1955BKa (42225) 358
Medium:0.2-0.7(some EtOH)
*******************************************************************************
C6H4N2O5               HL                    CAS 329-71-5  (1941)
2,6-Dinitrophenol; HO.C6H3(NO2)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      gl  KCl    21°C 0.10M U        K1=1.6         1978KYb (42246) 359
*******************************************************************************
C6H4O6                H4L                    CAS 5678-48-2  (871)
Tetrahydroxy-1,4-benzoquinone;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      EMF NaClO4 30°C 0.10M U        K1=6.10   B2=8.40   1981HIa (42324) 360
*******************************************************************************
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
-------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.20M U    M   K1=4.16        1987LSc (42504) 361
K(Ce(nta)+L)=3.35, K(Ce(edta)+L)=3.65.
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.50M U        K1=3.31   B2=6.25   1977GGb (42505) 362
                                         B3=8.48
-------------------------------------------------------------------------------
```

```
Ce+++      gl  KNO3   25°C 0.10M U        K1=3.69   B2=6.84   1968PIa (42506) 363
                                         K3=2.52
                                         K4=1.60
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C  2.0M U        K1=3.63   B2=5.73   1965YCa (42507) 364
-------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U        K1=3.74   B2=6.56   1964THb (42508) 365
                                         B3=9.5
*******************************************************************************
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
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=1.98        1973FDa (42664) 366
*******************************************************************************
C6H5NO3                HL    2-Nitrophenol    CAS 88-75-5  (510)
2-Nitrohydroxybenzene; HO.C6H4.NO2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      gl  KCl    21°C 0.10M U        K1=2.4         1978KYb (42734) 367
*******************************************************************************
C6H5NO3                HL    4-Nitrophenol    CAS 100-02-7  (454)
4-Nitrohydroxybenzene; HO.C6H4.NO2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      gl  KCl    21°C 0.10M U        K1=1.1         1978KYb (42798) 368
*******************************************************************************
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
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C  2.0M U        K1=2.71        1965YCa (42830) 369
*******************************************************************************
C6H5NO4               H2L    4-Nitrocatechol  CAS 3316-09-4  (890)
1,2-Dihydroxy-4-nitrobenzene; O2N.C6H3(OH)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      gl  NaNO3  25°C  0.0  U    M   K1=9.34        1996KDb (42920) 370
                                         K(Ce(egta)+L)=5.35
Extrapolated from data for I=0.05-0.15 M NaNO3.
-------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U        K1=8.24   B2=14.35  1981BDa (42921) 371
*******************************************************************************
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
-------------------------------------------------------------------------------
Ce+++      sp  KCl    25°C 0.10M M  I     K1=5.82        1989PEa (42949) 372
*******************************************************************************
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
-------------------------------------------------------------------------------
Ce+++      sp  KCl    25°C 0.10M U        K1=4.90        1987PLa (43105) 373
*******************************************************************************
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
-------------------------------------------------------------------------------
Ce+++      sp  KCl    25°C 0.10M U        K1=4.92        1987PLa (43147) 374
*******************************************************************************
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
-------------------------------------------------------------------------------
Ce+++      gl  NaNO3  25°C  0.0  U    M   K1=9.48        1996KDb (43736) 375
                                          K(Ce(egta)+L)=5.48
Extrapolated from data for I=0.05-0.15 M NaNO3.
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U         K1=9.18        1996PJa (43737) 376
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=8.65        1986LSb (43738) 377
                                          K(Ce(EDTA)+L)=6.50
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=8.74        1985LSf (43739) 378
                                          K(Ce(edta)+L)=6.61
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 28°C 0.20M U    M   K1=8.65        1982LSa (43740) 379
                                          K(Ce(edta)+L)=6.50
-------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.05M M  I     K1=9.96   B2=19.05  1981BDc (43741) 380
Also data for I=0.2 and 0.35 M. At I=0, K1=10.40, K2=9.50.
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U T       K1=9.77   B2=18.26  1979NDa (43742) 381
At 45 C, K1=8.77, K2=7.80. Medium ionic strength not stated.
*******************************************************************************
C6H6O2                H2L    Resorcinol       CAS 108-46-3  (3645)
1,3-Dihydroxybenzene; HO.C6H4.OH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
```

```
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=4.55        1986LSb (43875) 382
                                         K(Ce(EDTA)+L)=2.20
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=4.59        1985LSf (43876) 383
                                         K(Ce(edta)+L)=2.24
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 28°C 0.20M U    M   K1=4.55        1982LSa (43877) 384
                                         K(Ce(edta)+L)=2.20
**************************************************************************
C6H6O3                H3L    Pyrogallol       CAS 87-66-1  (696)
1,2,3-Trihydroxybenzene; C6H3(OH)3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=9.75        1996PJa (43955) 385
**************************************************************************
C6H6O3                H3L    Phloroglucinol   CAS 6099-90-7  (2525)
1,3,5-Trihydroxybenzene; C6H3(OH)3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.75        1986LSb (44012) 386
                                         K(Ce(EDTA)+L)=2.40
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.79        1985LSf (44013) 387
                                         K(Ce(edta)+L)=2.44
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 28°C 0.20M U    M   K1=3.75        1982LSa (44014) 388
                                         K(Ce(edta)+L)=2.40
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      sp  KCl    25°C 0.10M C  I     K1=5.556       1987PEa (44200) 389
In 0.086 M KCl, K1=5.596.
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U TIH    K1=13.59  B2=26.13  1980BDd (44416) 390
Data for I=0.05-0.2 M and for I=0.10 M (35 C). Also DH and DS values.
**************************************************************************
C6H7N                   L    beta-Picoline    CAS 108-99-6  (324)
3-Methylpyridine; C5H4N.CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

Ce+++ nmr non-aq 25°C 100% C H 2004MBa (44693) 391
K(CeA3+L)=1.04
K'(CeB3+L)=3.90
1H nmr in d- toluene. DH(K)=-39 kJ mol-1, DS=-110 J K-1 mol-1; DH(K')=-66, DS=-147. A: t-butyl-cyclopentadiene; B: trimethylsilyl-cyclopentadiene.
****
C6H7NO2 HL CAS 19365-01-6 (6771)
1-Methyl-3-hydroxy-2-pyridinone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl KCl 25°C 0.10M U K1=6.07 B2=11.00 2000XRa (45024) 392
B3=14.6
****
C6H7N3O L Isonicotinic hy CAS 54-85-3 (1267)
Pyridine-4-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaClO4 15°C 0.10M U K1=8.9 1980ZMa (45124) 393
****
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
---
Ce+++ gl KCl 25°C 0.20M U I K1=3.44 1989ZPa (45464) 394
In 70.4% v/v EtOH/H2O: K1 = 5.18
****
C6H8O6S H3L CAS 99-68-3 (3692)
(Carboxymethylthio)butanedioic acid; HOOC.CH(S.CH2.COOH).CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaClO4 25°C 0.10M U TIH K1=4.76 B2=8.27 1986AJc (45688) 395
DH(K1)=-4.3 kJ mol-1, DS=67.7 J K-1 mol-1; DH(K2)=-5.1, DS=51.0

Ce+++ gl NaClO4 30°C 0.10M U IH K1=4.76 B2=8.27 1983ASa (45689) 396
DH(K1)=-4.4 kJ mol-1, DH(K2)=5.2
****
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
---
Ce+++ vlt KNO3 25°C 0.10M U 1999ATa (46052) 397
K1eff=6.0
Method: ion transfer voltammetry at water/nitrobenzene interface.
Medium: 0.10 M LiNO3, pH 5.8

```
--------------------------------------------------------------------------------
Ce+++      ix  NaCl   25°C 0.10M U        K1=6.70   B2=11.21  1972OOa (46053) 398
                                          K(Ce+HL)=5.10
                                          K(Ce+2HL)=7.94
--------------------------------------------------------------------------------
Ce+++      oth oth/un 25°C 0.10M U        K1=7.40   B2=10.40  1971STe (46054) 399
                                          K(CeL+HL)=2.40
Constants obtained by survey of literature data
--------------------------------------------------------------------------------
Ce+++      gl  oth/un 25°C 0.50M U        K1=8.82   B2=12.23  1966NUa (46055) 400
--------------------------------------------------------------------------------
Ce+++      sol NaClO4 25°C 0.10M U        K1=7.38         1966SSg (46056) 401
                                          Kso=-10.78
--------------------------------------------------------------------------------
Ce+++      ix  oth/un 25°C 0.14M U                        1947TMa (46057) 402
                                          K(Ce+H2L)=3.2
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      ISE NaClO4 25°C 0.10M C  I     K1=10.57         1997LBb (46723) 403
Method: Cu ISE and competitive complexation by Cu. Data for 0.1-5.0 M.
At I=0.0 M, K1=12.44.
--------------------------------------------------------------------------------
Ce+++      sp  KCl    25°C 0.10M U        K1=11.10  B2=18.80  1981KKe (46724) 404
--------------------------------------------------------------------------------
Ce+++      ISE KNO3   25°C 0.10M C        K1=10.68         1980NSf (46725) 405
Competitive method using Cd ion-selective electrode.
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   20°C  1.0M C        K2=7.27          1978GHb (46726) 406
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.50M U        K1=10.18         1977GGb (46727) 407
--------------------------------------------------------------------------------
Ce+++      cal KNO3   20°C 0.10M U   HM                   1971GKb (46728) 408
                                          K(CeL+A)=4.72
H3A=EDTA. DH(CeA+L)=-23.93 kJ mol-1, DS=8.8 J K-1 mol-1.
DH(CeAL)=-36.2 kJ mol-1, DS=272 J K-1 mol-1
--------------------------------------------------------------------------------
Ce+++      oth oth/un 20°C 0.10M U        K1=10.98  B2=18.43  1971SHb (46729) 409
                                          K(Ce+L+HL)=12.0
Method: electrical migration or transference number
--------------------------------------------------------------------------------
Ce+++      gl  oth/un 20°C 0.20M U                        1970VMa (46730) 410
                                          B(CeL(OH))=5.79
--------------------------------------------------------------------------------
Ce+++      ix  R4N.X  25°C 0.10M U        K1=10.60  B2=17.90  1968EAa (46731) 411
Medium: NH4ClO4
--------------------------------------------------------------------------------
```

```
Ce+++      dis oth/un 20°C 0.10M U        K1=8.45        1968MTa (46732) 412
Method: paper electrophoresis
--------------------------------------------------------------------------------
Ce+++      gl  KCl    20°C 0.10M U        K1=10.70  B2=18.68  1965ANb (46733) 413
--------------------------------------------------------------------------------
Ce+++      ix  oth/un 19°C 0.10M U        K1=10.97  B2=20.85  1965VAb (46734) 414
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U T H  T K1=10.83  B2=18.67  1962MFb (46735) 415
15 C: K1=10.85, K2=7.94; 20 C: 10.83, 7.88; 30 C: 10.87, 7.85; 35 C: 10.86,
7.76; 40 C: 10.91, 7.73. DH(K1)=5.2 kJ mol-1,DS=225; DH(K2)=-12.8,DS=105
--------------------------------------------------------------------------------
Ce+++      vlt KNO3   20°C 0.10M U                       1957NOa (46736) 416
                                        B(Ce2L3)=36.0
--------------------------------------------------------------------------------
Ce+++      vlt KNO3   20°C 0.10M U        K1=10.71       1956SGa (46737) 417
--------------------------------------------------------------------------------
Ce+++      gl  oth/un   ?  .001M U        B2=8.1         1948SBa (46738) 418
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      EMF KCl    20°C 0.10M U        K1=4.6         1968RPb (47534) 419
--------------------------------------------------------------------------------
Ce+++      EMF oth/un   ?     ?  U        K1=4.46        1967RPb (47535) 420
--------------------------------------------------------------------------------
Ce+++      ix  oth/un   ?     ?  U        K1=4.30        1967RPb (47536) 421
********************************************************************************
C6H10N2O5              H2L    ADA              CAS 26239-55-4  (2747)
N-(2-Acetamido)iminodiethanoic acid; H2N.CO.CH2.N(CH2.COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M C    M   K1=6.76        2003AHa (47841) 422
                                           K(CeL+A)=3.59
HA is 3-amino-5-mercapto-1,2,4-triazole.
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M M    M   K1=6.08        1996AEa (47842) 423
Data for ternary complexes with dipicolinic acid
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U        K1=2.511  B2=4.34   1966PRb (47985) 424
                                           K3=1.08
********************************************************************************
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
Ce+++	oth	NaClO4	25°C	0.10M	U		K1=4.38		1984AFa (48332)	425

Laser excitation spectroscopy, competition method.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	NaClO4	25°C	1.00M	C	H	K1=4.64	B2=7.89	1974GGa (48333)	426
							B3=8.83			
							B(CeHL2)=9.49			

****

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
Ce+++	gl	NaClO4	25°C	0.10M	U	M	K1=4.45		1997PPb (48469)	427
							K(Ce(edta)+L)=3.97			

****

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
Ce+++	gl	KNO3	20°C	1.00M	U		K1=7.9	B2=14.12	1974CMd (48696)	428
							K(CeL2(OH)+H)=10.50			
Ce+++	oth	KNO3	15°C	0.10M	U				1972SHb (48697)	429
							K(Ce+HL)=7.80			
							K(Ce+2HL)=12.50			

Method: electrical migration or transference number

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	oth	oth/un	25°C	0.10M	U		K1=7.8	B2=12.5	1971SHb (48698)	430

Method: electrical migration or transference number

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	ix	R4N.X	25°C	0.10M	U		K1=8.50	B2=14.97	1969EBa (48699)	431

Medium: NH4ClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	oth	NaNO3	20°C	0.10M	U	M	K1=8.4	B2=15.00	1966JMc (48700)	432

Method: paper electrophoresis. Ternary complexes with HEDTA

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	vlt	KCl	25°C	0.10M	U		B2=14.12		1965DTa (48701)	433
Ce+++	gl	KNO3	25°C	0.10M	U		K1=8.46	B2=15.02	1963TLa (48702)	434

****

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

```
Ce+++      gl  R4N.X  25°C 0.10M C        K1=7.48        1988CCb (49225) 435
-------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U        K1=7.48   B2=12.40  1962THb (49226) 436
*******************************************************************************
C6H12O3                HL                          (3662)
2-Hydroxy-2-methylpentanoic acid; (Methylpropylglycolic acid)
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      EMF NaClO4 25°C  1.0M U        K1=2.21   B2=3.87   1964EVa (49479) 437
                                         K3=1.03
                                         K4=0.81
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
-------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U        K1=3.08   B2=5.02   1979PPa (49490) 438
                                         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
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.16        1986LSb (49702) 439
                                         K(Ce(EDTA)+L)=2.46
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=3.19        1985LSf (49703) 440
                                         K(Ce(edta)+L)=2.49
-------------------------------------------------------------------------------
Ce+++      oth oth/un 20°C 0.10M U        K1=3.64        1967MMe (49704) 441
Method: paper electrophoresis
*******************************************************************************
C6H13NO2               HL    Isoleucine       CAS 73-32-5  (424)
2-Amino-3-methylpentanoic acid; CH3.CH2.CH(CH3).CH(NH2).COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ce+++      gl  NaNO3  25°C 0.10M M    M   K1=5.45        1996KDd (49899) 442
                                         *K(CeL)=-8.46
                                         *K(Ce(OH)L)=-8.93
                                         K(Ce(egta)+L)=3.65
Data for 0.05-0.15 M NaNO3. At I=0, K1=5.67, K(Ce(egta)+L)=3.78.
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=5.48   B2= 9.25  1987PPa (49900) 443
*******************************************************************************
C6H13NO2               HL    Leucine          CAS 61-90-5  (47)
```

2-Amino-4-methylpentanoic acid; H2N.CH(CH2.CH(CH3)2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	NaNO3	25°C	0.10M	M	M	K1=5.42		1996KDd (50061)	444
							*K(CeL)=-8.48			
							*K(Ce(OH)L)=-8.94			
							K(Ce(egta)+L)=3.60			
Data for 0.05-0.15 M NaNO3. At I=0, K1=5.60, K(Ce(egta)+L)=3.77.										
Ce+++	gl	KNO3	25°C	0.20M	U	M	K1=5.35		1990LSb (50062)	445
							K(Ce(phen)+L)=5.28			
Ce+++	gl	NaClO4	25°C	0.20M	U		K1=5.03	B2= 8.94	1987PPa (50063)	446
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=5.84		1986LSb (50064)	447
							K(Ce(EDTA)+L)=4.59			
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=5.84		1985LSe (50065)	448
K(Ce(edta)+L)=4.59.										
Ce+++	gl	KCl	25°C	0.10M	U	T H	K1=4.69		1973SCf (50066)	449
Data for 35 C. DH(K1)=40 kJ mol-1, DS(K1)=225 J K-1 mol-1.										

****

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
Ce+++	gl	NaNO3	25°C	0.10M	M	M	K1=5.38		1996KDd (50171)	450
							*K(CeL)=-8.52			
							*K(Ce(OH)L)=-9.96			
							K(Ce(egta)+L)=3.57			
Data for 0.05-0.15 M NaNO3. At I=0, K1=5.55, K(Ce(egta)+L)=3.76.										
Ce+++	gl	NaClO4	22°C	0.10M	M	M	K1=4.68	B2=9.22	1991DTa (50172)	451
							B3=12.75			
							K(CeA+L)=9.30			
H4A=trans-cyclohexane-1,2-diaminotetraethanoic acid. Definitions wrong?										

****

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
Ce+++	gl	KNO3	20°C	0.10M	U		K1=5.32	B2=9.03	1982RFa (50341)	452
Ce+++	gl	NaClO4	20°C	0.10M	U	T	K1=5.45	B2= 9.46	1981SGd (50342)	453
Data for 20-40 C. At 30 C: K1=5.30, K2=3.91										

```
Ce+++      gl  KCl    30°C 0.10M U        K1=5.09   B2=8.84   1973MSe (50343) 454
--------------------------------------------------------------------------------
Ce+++      gl  alc/w  20°C  50%  U  I     K1=6.45        1970KRa (50344) 455
Medium: 0-80% MeOH, 0.03 M KCl. K1(0%)=5.22; K1(20%)=5.76; K1(80%)=7.42
--------------------------------------------------------------------------------
Ce+++      oth NaNO3  20°C 0.10M U        K1=7.5    B2=13.10  1966JMc (50345) 456
Method: paper electrophoresis
********************************************************************************
C6H13NO4S              HL    MES              CAS 4432-31-9  (7807)
4-Morpholineethanesulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M C        K1=3.36        2001AAb (50430) 457
                                         *K(CeL)=-5.74
                                         K(2Ce(OH)L=Ce2(OH)2L2)=9.42
********************************************************************************
C6H13NO5               HL    Tricine          CAS 5704-04-1  (1239)
N-(Tris(hydroxymethyl)methyl)glycine; (HO.CH2)3C.NH.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M C        K1=5.40        2003AHa (50501) 458
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M M  I     K1=5.41   B2=10.55  1997EAa (50502) 459
Also values in 40% w/w ethanol, DMF, dioxane, acetonitrile.
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  NaCl   37°C 0.15M U    M   K1=3.21        1997GMa (50573) 460
                                         B(CeHL)=10.76
                                         B(CeH2AL)=24.50
Ligand is DL-citrulline. HA is L-hydroxyproline.
********************************************************************************
C6H14N2O2              HL    Lysine           CAS 56-87-1  (41)
2,6-Diaminohexanoic acid; H2N.(CH2)4.CH(NH2)COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 20°C 0.10M U T H    K1=6.42        1983SDa (50818) 461
30 C: K1=6.3 , 40 C: 6.16. DH=-21.8 kJ mol-1
--------------------------------------------------------------------------------
Ce+++      gl  KCl    20°C 0.10M U        K1=2.6         1970RPa (50819) 462
********************************************************************************
C6H14N4O2              HL    Arginine         CAS 74-79-3  (40)
2-Amino-5-guanidopentanoic acid; H2N.CH((CH2)3.NH.C(:NH)(NH2)COOH
--------------------------------------------------------------------------------
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KCl	20°C	0.10M	U		K1=2.7	1970RPa (51004)	463

****

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
Ce+++	oth	oth/un	25°C	0.10M	U		K1=21.10 K(Ce+HL)=17.45 K(Ce+H2L)=13.91 K(Ce+H3L)=10.38 K(Ce+H4L)=5.29	1971SHb (52324)	464
							K(Ce+H5L)=4.51. Method: electrical migration or transference number		
Ce+++	dis	R4N.X	20°C	0.10M	U		K1=13.75	1970TIa (52325)	465
							Method: chromatography. Medium: NH4Cl		

****

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
Ce+++	gl	NaNO3	25°C	0.10M	U	I M	K1=4.98 *K(CeL)=-7.54 K(Ce(egta)+L)=4.67	1996KDc (52470)	466
							Data for 0.05 and 0.15 M NaNO3. At I=0, K1=5.36, *K(CeL)=-7.73, K(Ce(egta)+L)=5.04.		
Ce+++	gl	oth/un	24°C	0.20M	U		K1=4.83	1972PSd (52471)	467
							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
Ce+++	gl	KNO3	25°C	0.10M	M	M	K1=5.50	1996AEa (52757)	468
							Data for ternary complexes with aspartic acid, serine, asparagine and N-(2-acetamido)iminodiacetic acid		
Ce+++	cal	NaClO4	25°C	0.50M	C	H		1963GRd (52758)	469
							DH(K1)=-14.84 kJ mol-1, DS(K1)=109 J K-1 mol-1; DH(B2)=-29.87, DS(B2)=174; DH(B3)=-43.08, DS(B3)=213.		
Ce+++	EMF	oth/un	20°C	0.50M	U		K1=8.34 B2=14.42 K3=4.38	1961GRa (52759)	470

****

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
Ce+++	gl	KNO3	25°C	0.10M	U		K1=6.56 B2=11.76 K3=4.36	1969CMb (53668)	471

****

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
Ce+++	vlt	KCl	26°C	1.0M	C		K1=4.1	1981CPc (53824)	472

Method: polarography.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaNO3	25°C	0.10M	U		K1=1.89 B2=3.71	1977SCa (53825)	473

****

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
Ce+++	gl	NaNO3	25°C	0.10M	U	I M	K1=7.66 *K(CeL)=-8.00 K(Ce(egta)+L)=5.45	1996KDc (54173)	474

Data for 0.05 and 0.15 M NaNO3. At I=0, K1=7.96, *K(CeL)=-8.12, K(Ce(egta)+L)=5.77.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	alc/w	24°C	20%	C	M	K(Ce(ada)+L)=2.96	1996MIa (54174)	475

Medium: 20% w/w EtOH/H2O, 0.10 M KNO3.
ada: N-(acetamido)-iminodiethanoic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	alc/w	25°C	40%	U	M	K1=7.55 K(Ce(EDTA)+L)=7.35	1986LSb (54175)	476

Medium: 40% v/v EtOH/H2O, 0.2 M NaClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=7.63 K(Ce(edta)+L)=7.39	1985LSf (54176)	477

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	vlt	KCl	26°C	1.0M	C		K(Ce+HL)=3.6 K(Ce+2HL)=7.2	1981CPc (54177)	478

Method: polarography.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KCl	30°C	0.10M	U		K1=2.66	1962CTa (54178)	479

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	con	oth/un	29°C	?	U		K(Ce+3HL)=7.61(?)	1960BSa (54179)	480

```
Ce+++      gl  KCl    30°C 0.10M U                        1960BSa (54180) 481
                                        K(Ce+HL)=2.66
********************************************************************************
C7H6O4                H3L    Resorcylic acid  CAS 89-86-1  (876)
2,4-Dihydroxybenzoic acid, b-Resorcylic acid; C6H3(OH)2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M T K1=6.21           1986LSb (54518) 482
                                        K(Ce(EDTA)+L)=4.13
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=6.21           1985LSd (54519) 483
                                        K(Ce(edta)+L)=4.13
                                        B(Ce(edta)L)=15.96
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=6.23           1985LSf (54520) 484
                                        K(Ce(edta)+L)=4.19
********************************************************************************
C7H6O4                H3L    Protocatechuic   CAS 99-50-3  (875)
3,4-Dihydroxybenzoic acid; C6H3(OH)2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U        K1=10.08          1996PJa (54663) 485
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=8.15           1986LSb (54664) 486
                                        K(Ce(EDTA)+L)=4.44
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=8.15           1985LSd (54665) 487
                                        K(Ce(edta)+L)=4.44
                                        B(Ce(edta)L)=16.27
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.20M U    M   K1=8.23           1985LSf (54666) 488
                                        K(Ce(edta)+L)=4.51
--------------------------------------------------------------------------------
Ce+++      vlt KCl    26°C  1.0M C                         1981CPc (54667) 489
                                        K(Ce+2H2L)=6.28
Method: polarography.
********************************************************************************
C7H6O5S               H2L                    CAS 632-25-7  (4436)
2-Carboxybenzenesulfonic acid; HOOC.C6H4.SO3H
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.20M U        K1=2.1            1973DPa (54777) 490
********************************************************************************
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
```

Ce+++ gl KNO3 20°C 0.10M U T K1=7.40 1982DBa (54957) 491

Ce+++ gl NaClO4 20°C 1.0M U K1=6.03 B2=10.91 1972CBb (54958) 492

Ce+++ sp NaClO4 20°C 0.10M U K1=6.83 B2=12.40 1968KTb (54959) 493
K(Ce+HL)=1.93

****

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

---

Ce+++ gl alc/w 24°C 20% C M K1=2.645 1996MIa (55211) 494
K(Ce(ada)+L)=3.44
Medium: 20% w/w EtOH/H2O, 0.10 M KNO3.
ada: N-(acetamido)-iminodiethanoic acid.

Ce+++ gl NaNO3 25°C 0.10M M I M K1=3.46 1995KDc (55212) 495
K(Ce(egta)+L)=2.74
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=3.83, K(Ce(egta)+L)=3.17.

Ce+++ gl alc/w 25°C 0.20M U M K1=2.45 1986LSb (55213) 496
K(Ce(EDTA)+L)=2.25

Ce+++ gl KCl 30°C 0.10M U K1=3.18 1962CTa (55214) 497

****

C7H7NO2 HL Salicylamide CAS 65-45-2 (3155)
2-Hydroxybenzamide; HO.C6H4.CO.NH2

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

---

Ce+++ gl diox/w 30°C 50% U T H K1=5.68 B2=10.43 1973PSc (55326) 498
Medium: 50% dioxane/H2O, 0.3 M KNO3. DH and DS values reported.
Data for 40 C.

****

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

---

Ce+++ gl KCl 25°C 0.20M U K1=2.27 1977EBa (55373) 499

****

C7H7NO2 HL CAS 495-18-1 (184)
Benzohydroxamic acid; C6H5.CO.NH.OH

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

---

Ce+++ gl diox/w 35°C 50% A K1=9.50 B2=17.51 1977AKa (55495) 500
K3=7.00

****

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
Ce+++	gl	KNO3	25°C	0.1M	M		K1=10.14 B2=19.23 K3=8.46	1989LWa (55589)	501

****

C7H7NO5S H2L CAS 3577-63-7 (3181)
5-Sulfoanthranilic acid; (5-sulfo-2-aminobenzoic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaNO3	25°C	0.10M	M	I M	K1=3.38 K(Ce(egta)+L)=2.52	1995KDc (55676)	502

Data for 0.05 and 0.15 M NaNO3. At I=0, K1=3.75, K(Ce(egta)+L)=2.79.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KCl	25°C	0.20M	M T	H	K1=7.87 K(Ce+OH+L)=14.95	1991BPb (55684)	503

DH(K1)=-103 kJ mol-1, DS(K1)=-194 J K-1 mol-1. DH(Ce(OH)L)=-252
DS(Ce(OH)L)=-557. Also data for 35, 45 and 55 C.

****

C7H8N2O2 L CAS 15513-52-7 (5516)
3-Nitro-2,6-dimethylpyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaNO3	25°C	0.50M	C		K1=-0.15	1984ERa (55899)	504

****

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
Ce+++	gl	NaNO3	25°C	0.0	U	M	K1=9.61 K(Ce(egta)+L)=5.61	1996KDb (56063)	505

Extrapolated from data for I=0.05-0.15 M NaNO3.

****

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
Ce+++	sp	KCl	25°C	0.10M	M	I	K1=5.78	1986PLb (56123)	506

****
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
---
Ce+++ sp KCl 25°C 0.10M M I K1=5.53 1986PLb (56142) 507
****
C7H9N L 3,5-Lutidine (323)
3,5-Dimethylpyridine; C5H3N.(CH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ nmr non-aq 25°C 100% C H 2004MBa (56286) 508
K(CeA3+L)=1.08
K'(CeB3+L)=4.20
1H nmr in d- toluene. DH(K)=-40 kJ mol-1, DS=-115 J K-1 mol-1; DH(K')=-80, DS=-192. A: t-butyl-cyclopentadiene; B: trimethylsilyl-cyclopentadiene.
****
C7H9NO3S HL CAS 87655-41-2 (5520)
2,6-Dimethylpyridine-3-sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaNO3 25°C 0.50M C K1=-0.15 1984ERa (56451) 509
****
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
---
Ce+++ gl KNO3 25°C 0.10M U K1=5.69 B2=10.19 1963THb (56802) 510
****
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
---
Ce+++ gl KNO3 25°C 0.1M U K1=7.93 1982KKc (56840) 511
****
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
---
Ce+++ gl KNO3 20°C 0.10M U K1=11.50 B2=19.41 1974RMg (56907) 512
****
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
-------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.15M M T H    K1=3.50        1979SKd (57116) 513
Data for 35 and 45 C. At 35 C, K1=3.60, DH(K1)=20.9 kJ mol-1,
DS(K1)=138 J K-1 mol-1.
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C  1.0M U        K1=1.99   B2=3.48   1967STd (57257) 514
*************************************************************************
C7H12O4                HL                      CAS 96740-23-7  (2249)
1,5-Dimethoxy-pent-2,4-dione, CH3.O.CH2.CO.CH2.CO.CH2.O.CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  diox/w 24°C  50%  U        K1=5.1         1979ACa (57290) 515
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U        K1=3.78   B2=6.32   1968PFa (57359) 516
*************************************************************************
C7H13NO5              H2L                        (8081)
4-Hydroxy-2-aminopentane-1,5-dioic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  KCl    20°C  0.1M U        K1=5.11        1978KPe (57554) 517
Data for threo isomer. For erythro isomer: K1=4.92
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      gl  KNO3   20°C 0.10M U        K1=7.84   B2=14.16  1980RPa (57608) 518
*************************************************************************
C7H14N2O3              HL    Gly-Val          CAS 7963-21-9  (973)
Glycyl-valine; H2N.CH2.CO.NH.CH(CH(CH3)2).COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  KNO3   30°C 0.15M U T H    K1=3.62        1980SKe (57753) 519
Data for 20 and 40 C. DH(K1)=6.22 kJ mol-1, DS(K1)=90.4 J K-1 mol-1.
Ligand is glycyl-DL-valine.
```

****
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
---
Ce+++ EMF NaClO4 25°C 1.0M U K1=2.23 B2=3.57 1965TVa (57858) 520
K3=1.31
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
---
Ce+++ gl NaClO4 25°C 0.10M C K1=1.91 B2=3.02 1976SPa (57870) 521
****
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
---
Ce+++ gl KNO3 20°C 0.10M U K1=4.91 B2=8.52 1982RFa (57932) 522
****
C7H15NO5S HL MOPSO CAS 68399-77-9 (1967)
3-(N-Morpholino)-2-hydroxypropane sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl KNO3 25°C 0.10M C K1=3.31 2001AAb (57992) 523
*K(CeL)=-5.80
K(2Ce(OH)L=Ce2(OH)2L2)=9.54
****
C8H2O4Cl4 H2L CAS 632-58-6 (3214)
Tetrachlorophthalic acid; Cl4.C6(COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl oth/un 20°C 0.10M U 1960WKa (58389) 524
Kso=4.01
****
C8H5N5O6 H3L Murexide (453)
Purpuric acid (Murexide is ammonium salt);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ sp non-aq 25°C 100% C K1=4.95 2003ZRa (58493) 525
Medium: DMSO.

Ce+++ sp KNO3 12°C 0.10M U 1965GEa (58494) 526

K(Ce+H2L)=3.65

****

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
Ce+++	gl	alc/w	22°C	80%	U		K1=5.94	B2=11.09	1995MTa (58607)	527
							K3=3.76			

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

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	alc/w	24°C	20%	C	M	K1=3.74		1996MIa (58953)	528
							K(Ce(ada)+L)=4.67			

Medium: 20% w/w EtOH/H2O, 0.10 M KNO3.
ada: N-(acetamido)-iminodiethanoic acid.

Ce+++	gl	NaNO3	25°C	0.10M	M	I M	K1=4.27		1995KDb (58954)	529
							K(Ce(egta)+L)=3.97			

Data for 0.05 and 0.15 M NaNO3. At I=0, K1=4.59, K(Ce(egta)+L)=4.24.

Ce+++	gl	alc/w	25°C	40%	U	M	K1=4.37		1986LSb (58955)	530
							K(Ce(EDTA)+L)=3.48			

Medium: 40% v/v EtOH/H2O, 0.2 M NaClO4

Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.41		1985LSf (58956)	531
							K(Ce(edta)+L)=3.51			

Ce+++	gl	NaNO3	25°C	0.10M	U		K1=3.45	B2=5.25	1977SCa (58957)	532

Ce+++	gl	NaClO4	30°C	0.10M	U		K1=3.96	B2=7.12	1966KPb (58958)	533

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	20°C	50%	U		K1=5.80	B2=10.88	1971MAf (59097)	534

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

****

C8H7NO3 HL (7376)
benzoylhydroxamic acid; C6H5COCONHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	KNO3	25°C	0.1M	M		K1=8.44	B2=16.11	1989LWa (59125)	535

K3=7.01

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	alc/w	25°C	20%	M	I	K1=5.51		1994KDa (59214)	536

Medium: 20% v/v EtOH/H2O, 0.10 M NaNO3. Also data for 0.05 and 0.15 M NaNO3. At I=0 (20% v/v), K1=5.86, *K(CeL)=-8.93, *K(Ce(OH)L)=-9.20.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	20°C	50%	U		K1=6.46	B2=12.10	1971MAf (59332)	537

Medium: 50% dioxan, 0.1 M NaClO4

****

C8H8O2 HL 2-Acetylphenol CAS 118-93-4 (1888)
2-Hydroxyacetophenone; HO.C6H4.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	alc/w	25°C	20%	M	I	K1=6.15		1994KDa (59458)	538

Medium: 20% v/v EtOH/H2O, 0.10 M NaNO3. Also data for 0.05 and 0.15 M NaNO3. At I=0 (20% v/v), K1=6.45, *K(CeL)=-8.86, *K(Ce(OH)L)=-9.41.

****

C8H8O2 HL CAS 583-80-2 (3191)
beta-Methyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	sp	alc/w	?	3%	U		K1=6.42		1967GDb (59593)	539

Medium: 3% EtOH, 0.2 M NaClO4

****

C8H8O2S HL 2-Thenoylaceton CAS 3151-27-2 (3224)
2-Thenoylacetone, 1-(2'-Thienyl)butane-1,3-dione; C4H3S.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	30°C	75%	U		K1=10.05	B2=19.45	1953UFd (59637)	540

K3=7.74

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	alc/w	25°C	20%	M	I			1994KDa (59675)	541

K(Ce+HL)=5.96
Medium: 20% v/v EtOH/H2O, 0.10 M NaNO3. Also data for 0.05 and 0.15 M NaNO3. At I=0 (20% v/v), K1=6.28, *K(CeHL)=-8.79, *K(Ce(OH)HL)=-9.21.

****

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
Ce+++	gl	alc/w	25°C	42%	U		K1=2.6		1983PMa (59723)	542

****

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
Ce+++	cal	alc/w	25°C	60%	U	H			1996YLa (59815)	543
							K(CeL+Phen)=3.15			

Medium: 60% v/v MeoH/H2O. Phen: 1,10-phenanthroline.
DH=-3.22 kJ mol-1, DS=49.5 J K-1 mol-1.

Ce+++	gl	NaClO4	25°C	2.0M	U	T	K1=2.17		1972DCb (59816)	544
Ce+++	gl	KNO3	25°C	1.0M	U	I	K1=2.03	B2=3.53	1967PNb (59817)	545

At I=0.1: K1=2.34, K2=1.8

Ce+++	gl	NaClO4	25°C	1.0M	U		K1=2.24	B2=3.75	1966TVa (59818)	546
							K3=1.27			
							K4=0.64			

****

C8H8O3 HL CAS 148-52-8 (3193)
3-Methoxysalicylaldehyde; CH3O.C6H3(OH).CHO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	NaNO3	25°C	0.10M	M	I M	K1=4.356		1995KDd (59928)	547
							K(Ce(egta)+L)=2.767			

Data for 0.15 and 0.05 M NaNO3. At I=0, K1=4.594, K(Ce(egta)+L)=3.049.

****

C8H8O4 H3L CAS 480-66-0 (8525)
2,4,6-Trihydroxyacetophenone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	25°C	50%	M		K1=3.39		1978AGc (60052)	548

Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.

****

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
Ce+++	gl	diox/w	35°C	50%	U		K1=4.13	B2=7.41	1971MAa (60083)	549

Medium: 50% dioxan, 0.1 M NaClO4

****

C8H9NO2 HL CAS 4389-45-1 (3226)

3-Methyl-2-aminobenzoic acid; CH3.C6H3(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	NaNO3	25°C	0.10M	M	I M	K1=4.79		1995KDc (60232)	550
							K(Ce(egta)+L)=4.49			

Data for 0.05 and 0.15 M NaNO3. At I=0, K1=5.10, K(Ce(egta)+L)=4.61.

****

C8H9NO2 HL CAS 5330-97-2 (6248)

Phenylacetohydroxamic acid; C6H5.CH2.CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	KNO3	30°C	0.10M	C	M	K1=5.54	B2=10.70	1987RSc (60338)	551
							K3=4.40			
							K(Ce(hedta)+L)=3.99			

hedta is N-hydroxyethyldiaminoethane-N,N',N'-triethanoic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	KNO3	20°C	0.10M	M	T	K1=5.62	B2=10.85	1986RSc (60339)	552
							K3=4.48			

Data for 20-50 C. At 30 C, K1=5.54, K2=5.16, K3=4.40.

****

C8H9NO4 H2L (4520)

Dehydroethanoic acid oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	35°C	50%	U				1971MAa (60489)	553
							K(Ce+HL)=3.95			
							K(Ce+2HL)=7.08			

Medium: 50% dioxan, 0.01 M NaClO4

****

C8H9N3O2 L CAS 7254-31-4 (1266)

Acylnicotinoyl hydrazide; C5H4N.CO.NH.NH.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	NaClO4	25°C	0.10M	U		K1=12.65	B2=23.90	1980ZMa (60565)	554

****

C8H9N3O7 H2L Uramildiacetic CAS 13055-06-5 (185)

5-Amino-2,4,6-trioxo-1,3-perhydrodiazimino-N,N-diethanoic acid;

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

```
Ce+++      gl  oth/un 20°C  0.0  U        K2=10          1948SBa (60629) 555
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  alc/w  22°C  20%  U        K1=4.30   B2=7.61   1988ZTa (60844) 556
                                         K3=2.96
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  KCl    30°C 0.10M C        K1=5.97   B2=10.07  1996SZa (60864) 557
For the -5-en-2-exo isomer, K1=6.19, B2=11.04.
**************************************************************************
C8H11NO9P2           H5L                    CAS 147608-63-7  (8924)
[(2-Hydroxy-5-nitro-1,3-phenylene)bis(methylene)]bisphosphonic acid;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U        K1=12.1        2002BBh (61231) 558
                                         B(CeHL)=19.89
                                         B(CeH2L)=24.7
                                         B(CeH3L)=26.5
                                         B(CeH-1L)=1.3
B(CeH-2L)=-10.2. By spectrophotometry, K1=12.04, B(CeHL)=20.22, B(CeH2L)=
25.42, B(CeH3L)=27.99, B(CeH-1L)=2.38, B(CeH-2L)=-7.72.
**************************************************************************
C8H11O7ClP2          H5L                    CAS 147608-64-8  (8925)
[(5-Chloro-2-hydroxy-1,3-phenylene)bis(methylene)]bisphosphonic acid;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U        K1=12.04       2002BBh (61315) 559
                                         B(CeHL)=19.8
                                         B(CeH2L)=24.81
                                         B(CeH-1L)=3.2
                                         B(CeH-2L)=-7.6
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  alc/w  20°C  50%  C TIH    K2=4.90        1987EAa (61431) 560
                                         K3=3.18
DH(K1)=-43.72 kJ mol-1
```

```
--------------------------------------------------------------------------------
Ce+++      gl  oth/un 25°C 0.10M U        K1=2.480       1987TSb (61432) 561
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   20°C 0.10M U        K1=11.58  B2=16.08  1975DPa (61495) 562
--------------------------------------------------------------------------------
Ce+++      vlt KNO3   25°C 0.10M U        K1=10.68       1972GBd (61496) 563
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U        K1=10.76       1972GBd (61497) 564
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   20°C 0.10M U        K1=8.77   B2=14.93  1974RMg (61760) 565
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   20°C 0.10M U        K1=10.48  B2=17.63  1974RMg (61784) 566
********************************************************************************
C8H13NO6S             H3L                        (5675)
2-Mercapto-1-aminoethane-N,N,S-triethanoic acid; HOOC.CH2.S.CH2.CH2.N(CH2COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U        K1=8.07        1975POa (61819) 567
                                         K(Ce+HL)=2.47
********************************************************************************
C8H14O2                HL                       CAS 7307-04-2  (3208)
5,5-Dimethylhexane-2,4-dione; CH3.CO.CH2.CO.C(CH3)3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  diox/w 30°C  75%  U        K1=10.60  B2=20.80  1953UFd (62045) 568
                                         B3=29.30
********************************************************************************
C8H18N2O4S             HL    HEPES            CAS 7365-45-9  (2786)
4-(2-Hydroxyethyl)-1-piperazine-ethanesulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M C        K1=3.40        2001AAb (62874) 569
```

*K(CeL)=-5.25
K(2Ce(OH)L=Ce2(OH)2L2)=8.63
****
C8H18N2O10P2 H6L EDDADPO CAS 2310-83-0 (2436)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-dimethylphosphonic acid;
(-CH2.N(CH2.COOH)(CH2.PO3H2))2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ ix oth/un 20°C 0.10M U K1=18.48 1965TIc (62897) 570
****
C8H18N2O10P2 H6L CAS 2310-83-0 (5667)
1,2-Diaminoethane-N,N-diethanoic-N',N'-dimethylphosphonic acid;
(HOOC.CH2)2NCH2CH2N(CH2.PO3H2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ ix R4N.X 20°C 0.10M U K1=16.70 1970TIc (62918) 571
K(Ce+HL)=11.51
K(Ce+H2L)=8.66
****
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
---
Ce+++ dis oth/un 26°C 0.10M C I 1992SNc (63177) 572
K(Ce+5HL(org)=CeL3(HL)2(org)+3H)=15.1. Method: extraction of 144Ce from
HNO3 solution into CFC-112. For extraction into benzene, K=2.0.

Ce+++ kin oth/un 25°C ? U K1=2.12 1971MGb (63178) 573

Ce+++ dis oth/un 20°C ? U K1=1.48 1961SSa (63179) 574
****
C8H22N2O6P2 H4L EDDIPH CAS 13516-59-1 (1355)
Diaminoethane-N,N'-di(isopropylphosphonic)acid;(CH2.NH.C(CH3)2.PO3H2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ oth oth/un 25°C 0.10M U K1=17.20 1971SHb (63351) 575
K(Ce+HL)=13.34
K(Ce+H2L)=8.86
K(Ce+H3L)=6.29
Method : electrical migration or transference number
****
C8H24N2O12P4S H8L CAS 33424-58-7 (2648)
1,7-Diaza-4-thiaheptane-1,1,7,7-tetra(methylphosphonic acid);
S(CH2.CH2.N(CH2.PO3H2)2)2

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

```
-------------------------------------------------------------------------
Ce+++      ix  KCl    20°C 0.10M U        K1=12.07       1971TIa (63484) 576
                                          K(Ce+HL)=9.80
Method: cation exchange
*************************************************************************
C8H24N2O13P4          H8L                     CAS 25007-19-4  (2647)
1,7-Diaza-4-oxaheptane-1,1,7,7-tetra(methylphosphonic acid);
O(CH2.CH2.N(CH2.PO3H2)2)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      dis oth/un 20°C 0.10M U        K1=14.74       1969TIa (63492) 577
Method: chromatography
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      gl  diox/w 35°C  75%  U        K1=6.35   B2=11.75  1971MAb (63558) 578
                                          K3=4.70
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
-------------------------------------------------------------------------
Ce+++      sp  diox/w 20°C  50%  U        K1=2.41   B2=3.35   1977MBb (63603) 579
*************************************************************************
C9H6NOCl               HL                      CAS 130-16-5  (1268)
5-Chloro-8-hydroxyquinoline;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  diox/w 25°C  60%  U                         1973SCd (63659) 580
                                          B3=21.69
Medium: 60% dioxan, 0.1 M NaClO4
*************************************************************************
C9H6NO4BrS            H2L                     CAS 3062-37-1  (3889)
7-Bromo-8-hydroxyquinoline-5-sulfonic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U        K1=4.81   B2=9.00   1973MAa (63691) 581
                                          K3=3.6
*************************************************************************
C9H6N2O3               HL                      CAS 5437-99-0  (3865)
5-Nitro-8-hydroxyquinoline;
-------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  diox/w 25°C  60%  U                        1973SCd (63861) 582
                                        B3=16.95
Medium: 60% dioxan, 0.1 M NaClO4
*************************************************************************
C9H7NO                  HL    Oxine            CAS 148-24-3  (504)
8-Hydroxyquinoline (8-quinolinol);
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  diox/w 25°C  60%  U                        1973SCd (64240) 583
                                        Beta3=22.98
Medium: 60% dioxan, 0.1 M NaClO4
-------------------------------------------------------------------------
Ce+++      gl  diox/w 30°C  50%  U        K1=8.64   B2=16.53  1970GMb (64241) 584
Medium: 50% dioxan, 0.3 M NaClO4
-------------------------------------------------------------------------
Ce+++      gl  diox/w 25°C  50%  U        K1=9.15   B2=17.13  1952JFa (64242) 585
*************************************************************************
C9H7NO2                 HL                       CAS 1127-45-3  (4614)
8-Hydroxyquinoline-N-oxide;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  diox/w 30°C  50%  U        K1=6.76        1970GMb (64400) 586
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
-------------------------------------------------------------------------
Ce+++      EMF KNO3   20°C 0.10M U   HM                   1971GKb (64526) 587
                                        K(CeA+L)=3.80
By calorimetry, DH(CeA+L)=-18.72 kJ mol-1, DS=-8.77 J K-1 mol-1.
DH(CeAL): DH=-31.01, DS=272.1.    H4A=EDTA
-------------------------------------------------------------------------
Ce+++      gl  oth/un 25°C  0.0  U   H    K1=6.05   B2=11.05  1958FOb (64527) 588
                                        K3=3.9
DH(K1)=-15.5 kJ mol-1, DS=63 J K-1 mol-1; DH(K2)=-17.6, DS=38; DH(K3)=-19.2,
DS=13
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      sp  NaNO3  25°C 0.10M C        K1=7.44        1985OHb (64698) 589
                                        K(Ce+HL)=4.08
```

K(CeL+H)=6.08

****

C9H8N2O4S2 HL CAS 219931-32-5 (8394)
3-Phenylsulfonamidorhodanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	sp	alc/w	30°C	20%	C	T H	K1=7.47	B2=14.47	1998EGa (64829)	590

Medium: 20% v/v EtOH/H2O, 0.10 M KCl. Also data for 35 and 45 C.
DH and DS values reported

****

C9H8O2 HL CAS 140-10-3 (3245)
trans-Cinnamic acid; C6H5.CH:CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	vlt	KCl	25°C	1.0M	C	T H	K1=2.91		1983KCa (64869)	591

Method: polarography. Medium pH 2.75. Data for 35 C. DH and DS values.

****

C9H8O4 H2L CAS 97652-17-0 (3855)
3-Carboxy-4-methyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	sp	NaClO4	?	0.20M	U		K1=7.20		1967GDc (64934)	592
							K(Ce+L+H)=9.85			
Ce+++	gl	NaClO4	25°C	0.20M	U		K1=7.42	B2=13.14	1966GDa (64935)	593
							K3=3.34			

****

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
Ce+++	gl	KCl	30°C	0.10M	U		K1=4.18		1996SZa (64971)	594

****

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
Ce+++	gl	KCl	30°C	0.10M	C		K1=3.96	B2=6.82	1996SZa (65567)	595

For the -2,5-dien-2-exo isomer, K1=4.18.

****

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

Ce+++ gl NaClO4 24°C 0.10M U K1=4.22 1986ZBa (65582) 596
K(Ce+HL)=1.63
****
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
---
Ce+++ gl KCl 30°C 0.10M U K1=5.12 B2= 7.96 1996SZa (65599) 597
****
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
---
Ce+++ gl KCl 30°C 0.10M C K1=5.12 B2=7.96 1996SZa (65614) 598
****
C9H10O8 H4L CAS 3724-52-5 (1264)
cis-1,2,3,4-Cyclopentanetetracarboxylic acid; C5H6.(COOH)4

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaClO4 30°C 0.20M U T K1=9.80 1979NSb (65640) 599
K1=9.90 when T=40.
K1=10.00 when T=50.
****
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
---
Ce+++ gl NaCl 25°C 0.15M U H K1=2.95 1992ZNa (65927) 600
By calorimetry: DH(K1)=-0.42 kJ mol-1, DS(K1)=55.07 J K-1 mol-1.

Ce+++ gl KCl 20°C 0.10M U K1=3.52 1968RPb (65928) 601
****
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
---
Ce+++ vlt KCl 25°C 1.0M C T 1986KHc (66212) 602
K(Ce+HL)=3.52
Method: polarography. Medium pH 2.70. Also data for 35 C.

Ce+++ gl KNO3 25°C 0.10M U 1977SAb (66213) 603
K(Ce+HL)=4.17
At 35 C, I=0: K(Ce+HL)=4.65
****
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
Ce+++	ISE	KNO3	25°C	0.10M	U		K1=11.74	1983KBd (66731)	604

Hg-electrode.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KNO3	25°C	0.10M	U		K1=9.72 B2=16.37	1968TKe (66881)	605

****

C9H14N3O8P H2L CMP-5 CAS 63-37-6 (1243)
Cytidine-5'-monophosphoric acid, Cytidilic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KNO3	25°C	0.10M	C	M	K1=4.80	2001AAb (67251)	606
							*K(CeL)=-6.37		
							K(2Ce(OH)L=Ce2(OH)2L2)=9.50		
							B(CeLA)=8.93		
							B(CeLB)=8.13		

B(CeLC)=9.28, B(CeLD)=8.84. HA=MOPSO, HB=MES, HC=ACES and HD=HEPES.

****

C9H14O7P2 H5L CAS 147608-61-5 (7128)
Hydroxy-4-methylbenzene-2,6-di(methylphosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaClO4	25°C	0.10M	U		K1=11.36	2002BBh (67366)	607
							B(CeHL)=20.16		
							B(CeH2L)=26.54		
							B(CeH3L)=29.4		
							B(CeH-1L)=0.5		

B(CeH-2L)=-12.0.

****

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
Ce+++	gl	KNO3	20°C	0.10M	U		K1=10.15 B2=17.27	1974RMg (67404)	608

****

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

```
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U        K1=3.96   B2=6.62   1968PFa (67768) 609
********************************************************************************
C9H28N3O15P5          10L    DTPPH            CAS 15827-60-8  (2921)
Diethylenetriamine-N,N,N',N",N"-penta(methylphosphonic acid);
H2O3PCH2.N(CH2CH2.N(CH2PO3H2)2)2  H
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M M                          1987ZGa (68405) 610
                                       K(Ce+H2L)=7.71
--------------------------------------------------------------------------------
Ce+++      dis KCl    20°C 0.10M U                          1968TIa (68406) 611
                                       K(Ce+H4L)=9.11
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  alc/w  22°C  80%  U        K1=5.87   B2=11.20  1995MTa (68422) 612
                                       K3=4.42
Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      sp  KCl    25°C 0.10M M  I     K1=4.16          1976PEa (68573) 613
********************************************************************************
C10H7NO2               HL                     CAS 132-53-6  (2524)
2-Nitroso-1-naphthol;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U        K1=5.57   B2=10.66  1982LPc (68641) 614
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 30°C 0.10M U        K1=2.48   B2=4.71   1969DNc (68701) 615
********************************************************************************
C10H7NO2               HL                     CAS 86-59-9  (873)
Quinoline-8-carboxylic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Ce+++      gl  NaClO4 30°C 0.10M U        K1=2.48        1969DNc (68756) 616
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.10M M        K1=4.09   B2=7.76   1979LSb (68807) 617
**************************************************************************
C10H7NO5S             H2L                        (4766)
1-Nitroso-2-hydroxynaphthalene-6-sulfonic acid;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce+++      sp  KCl    25°C 0.10M C        K1=4.17        1973PMb (68839) 618
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.10M U  I     K1=2.70        1967MAi (68880) 619
K1=3.79(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
--------------------------------------------------------------------------
Ce+++      sp  KCl    25°C 0.10M M        K1=5.04        1978PPb (68940) 620
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.10M U        K1=4.42        1968MAe (69003) 621
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  alc/w  22°C  80%  U        K1=6.56   B2=12.46  1995MTa (69137) 622
                                         K3=5.48
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
-------------------------------------------------------------------------
Ce+++      nmr non-aq 21°C 100%  U   HM                  2001RNa (69532) 623
                                       K(CeI3+L)=0.60
                                       K(CeI3L+L)=1.89
Medium: pyridine. At -40 C K(CeI3L2+L)=-0.10. DH(CeI3+L)=-20 kJ mol-1,
DS=-55 J K-1 mol-1; DH(CeI3L+L)=-10, DS=3; DH(CeI3L2+L)=-11, DS=-48.
-------------------------------------------------------------------------
Ce+++      gl  NaNO3  25°C 0.50M U        K1=0.9         1979HJa (69533) 624
*************************************************************************
C10H8N2O2S2             L                          (7069)
3-Benzamidorhodanine; C6H5.CO.NH.C3H2NS2:O
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  alc/w  25°C  20%  U T H    K1=7.70   B2=13.60  1994BSd (69693) 625
                                       K3=4.02
Medium: 20% v/v EtOH/H2O, 0.1 M KCl. Also at 35 C, 45 C.
DH(K1)=-19 kJ mol-1, DH(K2)=-14, DH(K3)=-11
*************************************************************************
C10H8O2               H2L                      CAS 92-44-4  (1658)
2,3-Dihydroxynaphthalene;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  NaClO4 20°C 0.10M U    M                   1973PAc (69765) 626
                                       K(CeA+L)=6.15, H4A=EDTA
*************************************************************************
C10H8O8S2             H4L    Chromotropic ac  CAS 148-25-4  (1875)
1,8-Dihydroxynaphthalene-3,6-disulfonic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  NaClO4 20°C 0.10M M T H    K1=7.38         1978AKb (69936) 627
Data for 40 C. DH(K1)=-28.7 kJ mol-1, DS(K1)=32 J K-1 mol-1.
*************************************************************************
C10H9NO                HL    8-OH-Quinaldine  CAS 826-81-3  (998)
2-Methyl-8-hydroxyquinoline;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  diox/w 25°C  50%  U        K1=7.71         1954JFa (70045) 628
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      sp  alc/w  25°C 100%  U                       1989OKb (70344) 629
                                       K1eff=4.06
```

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
Ce+++	sp	diox/w	25°C	10%	U		K1=8.57		1973KSd (70356)	630

Medium: 10% dioxan, 0.1 M KNO3

****

C10H10O2 HL Benzoylacetone CAS 93-91-4 (197)
1-Phenylbutane-1,3-dione; C6H5.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	dis	NaClO4	20°C	0.10M	U		K1=6.17 K3=4.89	B2=12.10	1969EVa (70715)	631
Ce+++	gl	diox/w	30°C	75%	U		K1=10.09 K3=7.62	B2=19.42	1953UFe (70716)	632

****

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
Ce+++	gl	NaClO4	25°C	0.10M	M		K1=4.16	B2=7.58	1977HCb (70846)	633

By distribution methods, K1=4.16, K2=3.45

****

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
Ce+++	ix	R4N.X	25°C	0.10M	U		K1=8.34	B2=15.68	1969EBa (71252)	634

Medium: 0.1 M NH4ClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	KNO3	25°C	0.10M	U		K1=8.30	B2=14.74	1964THa (71253)	635

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	sp	alc/w	?	3%	U		K1=6.53		1967GDb (71574)	636

Medium: 3% EtOH, 0.2 M NaClO4

****

C10H14N2O3 HL (7691)
1-Methyl-3-hydroxy-4-(N-propylamido)-2(1H)-pyridinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KCl	25°C	0.10M	U		B2=11.12 B3=15.8 B4=19.7	2000XRa (72073)	637

****

C10H14N5O7P H2L AMP-5 CAS 18422-05-4 (842)
Adenosine-5'-monophosphoric acid, 5-Adenylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KNO3	25°C	0.10M	C	M	K1=4.25 *K(CeL)=-5.50 K(2Ce(OH)L=Ce2(OH)2L2)=8.89 B(CeLA)=8.74 B(CeLB)=7.78	2001AAb (72449)	638

B(CeLC)=8.38, B(CeLD)=7.79. HA=MOPSO, HB=MES, HC=ACES and HD=HEPES.

****

C10H14N5O8P H3L GMP-5 CAS 85-32-5 (2947)
Guanosine-5'-monophosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KNO3	25°C	0.10M	C	M	K1=5.16 *K(CeL)=-5.61 K(2Ce(OH)L=Ce2(OH)2L2)=9.22 B(CeLA)=9.68 B(CeLB)=8.99	2001AAb (72587)	639

B(CeLC)=9.74, B(CeLD)=9.40. HA=MOPSO, HB=MES, HC=ACES and HD=HEPES.

****

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
Ce+++	gl	KNO3	20°C	0.10M	U		K1=12.81	1975DPa (73115)	640
Ce+++	vlt	KNO3	25°C	0.10M	U		K1=12.67	1971BGb (73116)	641

****

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
Ce+++	cal	NaClO4	25°C	0.10M	C	H		1987YJa (73632)	642

DH(K1)=-11.7 kJ mol-1, DS(K1)=257 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KCl	25°C	1.0M	U		K(CeL+H)=1.73	1984BKc (73633)	643

Ce+++	gl	NaNO3	25°C	0.50M	U	I	K1=15.65	1984KKb	(73634) 644
Ce+++	gl	NaClO4	25°C	0.20M	U		K1=11.83	1984LSd	(73635) 645
Ce+++	gl	NaClO4	28°C	0.20M	U		K1=9.62	1982LSa	(73636) 646
Ce+++	gl	NaClO4	20°C	0.02M	U	M	K(CeL+PO4)=2.6	1982MPd	(73637) 647
Ce+++	vlt	KNO3	20°C	0.10M	U		K1=16.14	1978NLb	(73638) 648
Ce+++	gl	NaClO4	25°C	0.50M	U		K1=15.04	1977GGb	(73639) 649
Ce+++	gl	KCl	25°C	1.00M	U		K2=3.20 K(CeL+HL)=1.87 K(2CeL+L)=5.32	1976BKa	(73640) 650
Ce+++	sp	KCl	25°C	0.10M	U		K2=3.20 K(2CeL+L)=5.32 K(CeL+HL)=1.87	1975BKa	(73641) 651
Ce+++	EMF	KCl	25°C	0.10M	U	T	K(CeL+H)=2.04	1974BKb	(73642) 652
Ce+++	gl	KCl	25°C	1.0M	C		K2=3.20 K(CeL+HL)=1.87 K(2CeL+L=Ce2L3)=5.32	1974BKe	(73643) 653
Ce+++	gl	KNO3	25°C	0.10M	U	T M	K(CeL+HA)=2.90 K(CeL+A)=4.25 K(CeL+A)=4.30	1973TRb	(73644) 654
Also at 2, 35 and 45 C, H5A=tripolyphosphoric acid. K(CeL+B)=4.3, H4B=ATP. Also at 2 (K=4.5), 35 (K=4.4) and 45 C (K=4.2)									
Ce+++	sp	KCl	25°C	0.10M	U		K(CeL+H)=1.83	1972BKb	(73645) 655
Ce+++	oth	KNO3	25°C	0.10M	U		K1=16.03 K(Ce+HL)=8.10 K(Ce+OH+L)=18.56	1972SHc	(73646) 656
Method: electrical migration or transference number									
Ce+++	kin	oth/un	25°C	0.50M	U		K1=16.80	1971DCa	(73647) 657
Ce+++	oth	oth/un	25°C	?	U		K1=16.02	1969PJa	(73648) 658
Method: paper electrophoresis. Medium: pH=1.86									
Ce+++	ix	R4N.X	22°C	0.50M	U		K1=15.49	1962TIa	(73649) 659

```
Ce+++      ix  KCl    25°C 0.10M U   H    K1=15.45       1959BDb (73650) 660
DH(K1)=-2.0 kJ mol-1, DS=289 J K-1 mol-1
--------------------------------------------------------------------------------
Ce+++      cal KNO3   20°C 0.10M U   H                   1958SRa (73651) 661
DH(K1)=-10.1 kJ mol-1, DS=271 J K-1 mol-1
--------------------------------------------------------------------------------
Ce+++      EMF oth/un 20°C 0.01M U        K1=15.81       1955WSa (73652) 662
--------------------------------------------------------------------------------
Ce+++      gl  KCl    20°C 0.10M U  I   T K1=15.80       1954SGa (73653) 663
In 0.1 M KNO3 K1=16.00
--------------------------------------------------------------------------------
Ce+++      gl  KCl    20°C 0.10M U      T K1=15.39       1953WSa (73654) 664
By polarography K1=15.6
--------------------------------------------------------------------------------
Ce+++      gl  KCl    20°C 0.10M U        K1=16.05       1952VIa (73655) 665
********************************************************************************
C10H16N5O13P3         H4L    ATP              CAS 56-65-5  (403)
Adenosine-5'-triphosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M C    M                   1999BIa (74706) 666
                                        K(CeL2+His)=6.10
                                        K(CeL2+Pro)=4.82
                                        K(CeL2+Asn)=4.18
                                        K(CeL2+Gln)=3.73
K(CeL2+Asp)=8.58, K(CeL2+Glu)=7.48.
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 20°C 0.20M U T H    K1=7.00   B2=10.59  1993VLa (74707) 667
                                        K(Ce(nta)+L)=3.85
                                        K(Ce(edta)+L)=3.71
Data for 30, 40 C. DH(K1)=14.4 kJ mol-1, DS(K1)=183 J K-1 mol-1.  DH(K2)=
15.3, DS(K2)=121; DH(Ce(nta)+L)=19.2, DS=139; DH(Ce(edta)+L)=14.3, DS=120.
--------------------------------------------------------------------------------
Ce+++      kin oth/un 25°C 0.05M C        K1=6.46        1983MCc (74708) 668
Method: inhibition of the hexokinase reaction, pH 8.0 (0.05 M TAPS).
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   35°C 0.10M U    M                   1972TRc (74709) 669
                                        K(Ce(EDTA)+L)=4.4
********************************************************************************
C10H17N3O6S           H3L    Glutathione      CAS 70-18-8  (333)
Glutamyl-cysteinyl-glycine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U TIH    K1=7.020       2003GSb (75113) 670
Values for 0.05-0.2 M NaClO4, 15-45 C and 10-30% MeOH/H2O, 20% EtOH/H2O,
20% DMF/H2O. At I=0, K1=8.220. DH(K1)=-38.4 kJ mol-1, DS(K1)=-29.
********************************************************************************
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
Ce+++	gl	NaClO4	25°C	0.50M	U		K1=13.56	1977GGb (75342)	671
Ce+++	gl	KNO3	25°C	0.10M	U	M	K(CeL+A)=3.50 K(CeL+B)=4.07 K(CeL+C)=3.60	1963TLb (75343)	672

H2A=iminodiethanoic acid, H2B=hydroxyethyliminodiethanoic acid,
H2C=diaminoethane-N,N'-diethanoic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	EMF	oth/un	20°C	0.10M	U		K1=14.45	1962PMa (75344)	673
Ce+++	gl	KNO3	15°C	0.10M	U	T H	K1=14.25	1961MFb (75345)	674

K1=14.19(20 C), 14.11(25 C), 14.07(30 C), 14.12(35 C), 14.05(40 C)
DH(K1)=-12.8 kJ mol-1(25C), DS=227 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KCl	25°C	0.10M	U		K1=14.08	1956SPa (75346)	675

****

C10H18O4 H2L Sebacic acid CAS 111-20-6 (3308)
Decanedioic acid; HOOC.(CH2)8.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	oth/un	20°C	0.10M	U		Kso=-24.38	1960WKa (75600)	676

****

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
Ce+++	gl	KNO3	25°C	0.10M	U	T H	K1=3.21	1981SKg (75686)	677

Data for 35 and 45 C. DH(K1)=2.76 kJ mol-1, DS(K1)=70.6 J K-1 mol-1.

****

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
Ce+++	cal	non-aq	25°C	100%	U	H	K1=4.62	1993LLa (75979)	678

Medium: MeCN. DH(K1)=-38.3 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	dis	non-aq	25°C	100%	U		B2=8.11	1990NIa (75980)	679

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

****

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
Ce+++	ISE	non-aq	25°C	100%	C		K1=5.15		1986BDa (76441)	680

Medium: propylene carbonate, 0.1 M Et4NClO4

****

C11H8O2S2 HL CAS 1138-14-3 (3352)

Di-2-thenoylmethane; C4H3S.CO.CH2.CO.C4H3S

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	30°C	75%	U		K1=10.65	B2=20.85	1953UFd (76986)	681
							K3=8.87			

****

C11H8O3 H2L CAS 86-48-6 (1129)

1-Hydroxy-2-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	KNO3	30°C	0.05M	U	I	K1=8.63	B2=16.20	1976SSb (77008)	682
Ce+++	gl	diox/w	25°C	75%	U		K1=4.73		1975DJa (77009)	683

****

C11H8O3 L CAS 1133-72-8 (2614)

2-Aceto-1,3-indandione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	mixed	22°C	60%	U		K1=3.67	B2=5.96	1979JMa (77026)	684
							K3=2.91			

Medium: 60% acetone/H2O

****

C11H8O3 H2L CAS 2083-08-1 (1131)

2-Hydroxy-1-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	25°C	75%	U		K1=4.97		1975DJa (77060)	685

****

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
Ce+++	gl	KNO3	20°C	0.10M	U	T H	K1=8.67	B2=16.54	1977SKc (77118)	686

Further data at 30, 40 C. DH(B2)=-84.9 kJ mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	25°C	75%	U		K1=5.08		1975DJa (77119)	687

****

C11H8O3S HL CAS 32267-05-3 (3353)

2-Furoyl-2-thenoylmethane; C4H3O.CO.CH2.CO.C4H3S

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	30°C	75%	U		K1=10.60	B2=20.41	1953UFd (77157)	688
							K3=8.17			

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	35°C	50%	U		K1=3.32	B2=5.84	1971MAa (77171)	689

Medium: 50% dioxan, 0.01 M NaClO4

****

C11H8O4 HL CAS 6724-42-1 (6183)
8-Formyl-7-hydroxy-4-methyl-2H-1-benzopyran-2-one; CHO.C9H3O(:O)(CH3)(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	30°C	50%	U	TI M	K1=4.68	B2=8.18	1985ECa (77197)	690
							K3=2.30			

20 C: K1=4.99, K2=3.91, K3=2.61; 40C: K1=4.38, K2=3.12, K3=2.01

****

C11H8O4 HL CAS 94147-09-8 (3348)
Difuroylmethane; C4H3O.CO.CH2.CO.C4H3O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	30°C	75%	U		K1=10.61	B2=20.20	1953UFd (77212)	691
							K3=7.87			

****

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
Ce+++	gl	NaClO4	25°C	0.10M	C		K1=7.34	B2=12.46	1979LAb (77221)	692
							K(Ce+HL)=1.41			

****

C11H9NO2 HL CAS 92609-55-3 (4827)
5-Acetyl-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	25°C	60%	U				1973SCd (77328)	693
							B3=19.83			

Medium: 60% dioxan, 0.1 M NaClO4

****

C11H9NO4 H2L CAS 4321-82-7 (4829)

3-Acetyl-4-hydroxycoumarin oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	diox/w	35°C	50%	U		1971MAa (77414)		694
							K(Ce+HL)=3.16		
							K(Ce+2HL)=5.52		

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
Ce+++	sp	NaNO3	25°C	0.10M	C		K1=9.61	1984OHa (77530)	695
							K(La+HL)=3.78		
							*K(LaHL)=-6.47		

Medium pH 4.8-6.3.

****

C11H11NO6 H3L CAS 1147-65-5 (425)
N-(2'-Carboxyphenyl)iminodiethanoic acid; HOOC.C6H4.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	ix	R4N.X	25°C	0.10M	U		K1=8.69	1969EBa (77824)	696

Medium: NH4ClO4

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaClO4	25°C	0.10M	U	TIH	B2=12.45	1986GSb (78015)	697

35 C: B2=12.72; 45 C:B2=13.00. DH(B2)=-49.9 kJ mol-1, DS=82 J K-1 mol-1

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KCl	25°C	0.10M	U	T H	K1=4.56	1976BFc (78192)	698

For 55C K1= 4.06

Ce+++	gl	KCl	20°C	0.10M	U		K1=4.55	1968RPb (78193)	699

By potentiometry: K1=4.6

****

C11H13NO3 H2L CAS 67777-63-3 (8480)
N-[1-(2-Hydroxyphenyl)ethylidene]-beta-alanine;

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

```
------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U TI     K1=7.82   B2=14.07  1978MSj (78524) 700
Also data for 30 and 35 C and 0.01 and 0.05 M NaClO4.
******************************************************************************
C11H13NO4S             HL                      CAS 58943-48-9  (1411)
N-Acetylacetonylidene-orthanilic acid; HO3S.C6H4.N:C(CH3).CH2.CO.CH3
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ce+++      EMF NaClO4 25°C 0.10M U        K1=17.50       1982MSc (78589) 701
******************************************************************************
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
------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M C        K1=12.01  B2=20.76  1989YSa (78616) 702
                                         K(Ce+HL)=5.45
                                         K(Ce+2HL)=11.48
------------------------------------------------------------------------------
Ce+++      gl  KNO3   20°C 0.10M U        K1=12.68  B2=21.05  1983MSc (78617) 703
******************************************************************************
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
------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U        K1=6.00   B2=10.07  1964THa (78878) 704
******************************************************************************
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
------------------------------------------------------------------------------
Ce+++      gl  KNO3   20°C 0.10M U        K1=11.64       1981NSc (79266) 705
------------------------------------------------------------------------------
Ce+++      EMF KNO3   25°C 0.10M U        K1=14.74       1980KBc (79267) 706
------------------------------------------------------------------------------
Ce+++      vlt KNO3   20°C 0.10M U        K1=16.64       1978NLb (79268) 707
------------------------------------------------------------------------------
Ce+++      vlt KNO3   20°C 0.10M U        K1=16.79       1964ICb (79269) 708
******************************************************************************
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
------------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M U        K1=8.77        1976GKd (79359) 709
******************************************************************************
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
Ce+++	ix	KNO3	20°C	0.10M	U	H	K1=11.75		1971AWa (79427)	710
							K(CeL+H)=4.55			

DH=15.0 kJ mol-1, DS=275 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	KNO3	20°C	0.10M	U		K1=11.75		1964LAa (79428)	711
							K(CeL+H)=4.55			

****

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
Ce+++	gl	KNO3	25°C	0.10M	M		K1=12.08		1986PLc (79546)	712

****

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
Ce+++	gl	KNO3	25°C	0.10M	U		K1=9.54		1976GKd (79591)	713

****

C11H22O5 L 16-Crown-5 CAS 55477-28-8 (1592)
1,4,7,10,13-Pentaoxacyclohexadecane; cyclo(-(O.CH2.CH2)5.CH2.CH2-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	cal	non-aq	25°C	100%	U	H	K1=2.49		1993LLa (79850)	714

Medium: MeCN. DH(K1)=-35.4 kJ mol-1.

****

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
Ce+++	gl	alc/w	22°C	80%	U		K1=6.34	B2=11.59	1995MTa (80179)	715
							K3=5.18			

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
Ce+++	sp	non-aq	25°C	100%	C	H	K1=1.88	B2= 2.50	2002KNc (80418)	716

Medium: N,N-dimethylformamide, 0.20 M Et4NClO4. By calorimetry: DH(K1)=
-17.4 kJ mol-1, DH(B2)=-36. Alternative model: K1=1.50, DH(K1)=-26.5.

****
C12H9NO2Se HL (4951)
Picolinoyl-2-acetoselenophene; C5H4N.CO.CH2.CO.C4H3Se

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ dis NaClO4 20°C 0.10M U K1=9.24 B2=17.38 1969EVa (80575) 717
K3=7.03
2nd method: spectrophotometry.
****
C12H11N3OS HL (6787)
2-Hydroxy-1-naphthaldehyde thiosemicarbazone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 20°C 75% U I K1=7.10 B2=12.45 1992SSc (80886) 718
Medium: 75% v/v dioxan/H2O; 0.1 M NaClO4
****
C12H11N3O2 HL CAS 50536-09-5 (6323)
2-Hydroxy-1-naphthaldehyde-semicarbazone; HO.C10H6.CH:N.NH.CO.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 20°C 75% U I K1=7.914 B2=14.395 1992SSc (80914) 719
Medium: 75% v/v dioxan/H2O; 0.1 M NaClO4
****
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
---
Ce+++ sp NaClO4 25°C 0.50M U K1=1.958 1987MSa (80962) 720
****
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
---
Ce+++ gl alc/w 22°C 0.1M U K1=6.12 B2=11.52 2000TBb (81068) 721
K3=4.00
Medium: 0.1 M NaClO4 in 70% v/v EtOH/H2O
****
C12H12N4O2 HL AHMP CAS 62201-49-4 (7697)
4-(4-Acetophenyl)hydrazono-3-methyl-2-pyrazolin-5-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl alc/w 25°C 50% U T H K1=6.72 B2=13.32 1999EEa (81126) 722
Medium: 50%(v/v) EtOH/H2O, 0.10 M KCl. DH(K1)=-41.9 kJ mol-1
DS(K1)=-12.1 J K-1 mol-1; DH(K2)=-40.97 kJ mol-1, DS(K2)=-11.1J K-1mol-1.

****
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
---
Ce+++ sp NaClO4 25°C 0.50M U K1=2.073 1987MSa (81192) 723
****
C12H16N2O8 H4L (6460)
1,4-Diaminobut-2-yne-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH2.CC.CH2.N(CH2.COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl KCl 25°C 0.10M U 1979TSa (81602) 724
K(Ce+HL)=5.08
****
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
---
Ce+++ dis R4N.X 25°C 0.12M C K1=2.42 1998SUa (81693) 725
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
---
Ce+++ gl KNO3 25°C 0.10M C K1=5.43 1988YSa (81806) 726
****
C12H18N2O8 H2L CAS 93031-52-8 (5829)
1,4-Dioxa-7,10-diazayclododecane-5,12-dione-7,10-diethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl R4N.X 25°C 0.10M C K1=5.55 1988CCb (81832) 727
****
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
---
Ce+++ EMF KNO3 25°C 0.10M U K1=12.87 1985SGa (81856) 728

Ce+++ EMF KNO3 25°C 0.10M U K1=14.16 1980SGb (81857) 729
****
C12H18N2O8 H4L (8011)

trans-1,4-Diaminobuten-2-N,N,N',N'-tetraethanoic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KCl	20°C	0.10M	U		K1=8.57 K(Ce+HL)=6.08 K(CeL+Ce)=4.6	1976TTb (81892)	730

****

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
Ce+++	vlt	KNO3	20°C	0.10M	U		K1=17.15	1968NLa (82021)	731

****

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
Ce+++	gl	KNO3	20°C	0.10M	U		K1=7.49	1975DPa (82059)	732
Ce+++	gl	KNO3	25°C	0.10M	U		K1=7.23	1973GBd (82060)	733

****

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
Ce+++	vlt	KNO3	20°C	0.10M	U		K1=15.35	1976NKa (82128)	734

****

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
Ce+++	vlt	R4N.X	30°C	0.01M	C		K1=15.00	1981GMh (82159)	735

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

****

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
Ce+++	vlt	KNO3	20°C	0.10M	U		K1=17.21	1966NSb (82287)	736
Ce+++	oth	KNO3	20°C	0.10M	U		K1=18.5	1965JMb (82288)	737

Method: electrophoresis

****

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
Ce+++	oth	KNO3	20°C	0.10M	U		K1=16	1965JMb (82387)	738

Method: electrophoresis

****

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
Ce+++	gl	KNO3	25°C	0.10M	C		K1=13.47	1985TPa (82449)	739

****

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
Ce+++	EMF	KNO3	20°C	0.10M	U		K1=16.69	1962MMc (82525)	740
Ce+++	ix	R4N.X	22°C	0.50M	U		K1=17.87	1962TIa (82526)	741

****

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
Ce+++	vlt	KNO3	20°C	0.10M	C		K1=16.05	1978NLa (82670)	742

****

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
Ce+++	vlt	KNO3	20°C	0.10M	U		K1=10.18	1985LBc (82693)	743

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	sp	NaCl	25°C	0.10M	C			1990BSe (82730)	744
							K(Ce+HL)=3.2		

****

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
---
Ce+++ gl R4N.X 25°C 0.10M C K1=11.31 1998CCb (83079) 745
****
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
---
Ce+++ sp non-aq 25°C 100% C K1=2.20 2003ZRa (83303) 746
Medium: DMSO. Method: competition with murexide.

Ce+++ dis R4N.X 25°C 0.12M C K1=1.21 1998SUa (83304) 747
Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
---
Ce+++ dis non-aq 25°C 100% U 1993INa (83305) 748
B(CePL)=7.07
B(CePL2)=8.71
K is the equilibrium constant for extraction of the metal picrate (P) into CH2Cl2. For extraction from D2O, B=7.57 and 9.20.

Ce+++ cal non-aq 25°C 100% U IH K1=4.50 1993LLa (83306) 749
Medium: MeCN. DH(K1)=-43.0 kJ mol-1. In MeOH K1=3.57, DH(K1)=10.6

Ce+++ dis non-aq 25°C 100% U B2=8.71 1990NIa (83307) 750
B2=extraction eq.constant: M+3P+2(S)=ML2P3(S); solvent(S)=CH2Cl2, P=picrate
---
Ce+++ sp alc/w 25°C 100% U 1989OKb (83308) 751
K1eff=3.67
At pH 3.4 by competition with 18-crown-6. Medium: MeOH, 0.03 M Et4NClO4

Ce+++ cal alc/w 25°C 100% U H K1=3.57 1977ILb (83309) 752
Medium: Methanol. DH=10.6 kJ mol-1.
****
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
---
Ce+++ gl R4N.X 25°C 0.10M U K1=14.06 1996BJa (84152) 753
K(Ce+HL)=10.37
K(Ce+H2L)=5.01
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
Ce+++	gl	NaNO3	25°C	0.20M	C		K1=7.51		1991KKa (84323)	754
Ce+++	gl	NaCl	20°C	0.10M	C		K1=9.8		1988SJb (84324)	755

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
Ce+++	gl	alc/w	22°C	80%	U		K1=5.43	B2=10.27	1995MTa (84450)	756
							K3=3.89			

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

C13H8O3 H2L CAS 18931-22-1 (2913)
peri-Dihydroxynaphthindenone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	sp	alc/w	25°C	50%	U		K1=9.38		1982HMa (84501)	757

C13H9FO2S HL CAS 43191-66-8 (6154)
1-(2'-Thienyl)-3"-fluoro-2"-hydroxyphenyl)-prop-1-one-2-ene;
C4H3S.CH:CH.CO.C6H3(OH)F

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	NaClO4	30°C	0.10M	U		K1=4.24		1989SHa (84512)	758

C13H9N2O4Cl HL CAS 36016-30-5 (182)
N-(4-Chlorophenyl)-3-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4Cl).OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	35°C	50%	A		K1=7.24	B2=12.98	1977AKa (84601)	759
							K3=4.69			

C13H10O2S HL CAS 10471-74-6 (3405)
Benzoyl-2-thenoylmethane; C6H5.CO.CH2.CO.C4H3S

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	30°C	75%	U		K1=11.02	B2=21.59	1953UFd (84986)	760
							K3=9.07			

C13H10O3 HL CAS 5910-23-6 (3399)
Benzoyl-2-furoylmethane; C6H5.CO.CH2.CO.C4H3O

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

---
Ce+++ gl diox/w 30°C 75% U K1=10.82 B2=21.03 1953UFd (85002) 761
K3=8.40
****
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
---
Ce+++ gl alc/w 25°C 70% U K1=11.36 B2=21.11 1995IFa (85040) 762
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
---
Ce+++ gl diox/w 35°C 50% A K1=10.49 B2=19.49 1977AKa (85140) 763
K3=7.96
****
C13H11NO5S H2L CAS 23117-22-8 (6287)
N-Benzoyl-4-hydroxylaminobenzene sulfonic acid; C6H5.CO.N(OH).C6H4HSO3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaNO3 30°C 0.50M U K1=4.79 B2=8.71 1976GMc (85221) 764
B3=11.47
****
C13H11NS HL CAS 42152-36-3 (8401)
2-[(Phenylmethylene)amino]benzenethiol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl alc/w 25°C 70% U K1=9.22 B2=17.69 1995IFa (85225) 765
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
---
Ce+++ gl diox/w 30°C 75% U K1=8.12 B2=14.94 1988ESb (85240) 766
****
C13H12N2O3S HL (6203)
Salicylidenesulfanilamide, 4-(N-(2-Hydroxybenzylene))aminosulanilamide;
H2NSO2C6H4N:CHC6H4OH

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  oth/un 25°C 0.10M U        K1=12.820      1987KSc (85355) 767
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      EMF alc/w  20°C  50%  U        K1=3.20        1971MAc (85407) 768
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
-------------------------------------------------------------------------
Ce+++      EMF alc/w  20°C  50%  U        K1=1.50        1971MAc (85453) 769
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
-------------------------------------------------------------------------
Ce+++      gl  diox/w 30°C  75%  U        K1=10.27  B2=19.87  1988ESb (85604) 770
*************************************************************************
C13H15NO6              H3L                       (4999)
2-Benzylnitrilotriethanoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      oth oth/un 25°C 0.10M U        K1=11.2   B2=18.87  1962HKa (85735) 771
*************************************************************************
C13H19NO3              H2L                       (2031)
2-(1-(2-Hydroxyphenyl)-ethylimine)-3-methylbutanoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U TIH    K1=9.25   B2=15.70  1980SSc (86052) 772
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M C        K1=9.51        1982PPd (86190) 773
                                        K(Ce+HL)=6.34
*************************************************************************
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
Ce+++	vlt	KNO3	20°C	0.10M	U		K1=17.13	1974NLa (86223)	774

****

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
Ce+++	gl	KNO3	20°C	0.10M	U		K1=10.65	1981NSc (86250)	775

****

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
Ce+++	vlt	KNO3	20°C	0.10M	U		K1=16.98	1968NLb (86278)	776

****

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
Ce+++	gl	KNO3	25°C	0.10M	C		K1=14.26 K(Ce+HL)=8.89	1985PLa (86299)	777

****

C13H26O5 L (6410)

15,15-Dimethyl-1,4,7,10,13-pentaoxacyclohexadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	cal	non-aq	25°C	100%	C	H	K1=2.60	1998LBc (86468)	778

Medium: acetonitrile. DH(K1)=-11.92 kJ mol-1, DS(K1)=2.9 J K-1 mol-1.

****

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

1,2-Dihyhroxyanthraquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	oth/un	25°C	0.10M	U		K1=11.67	1981EIa (86638)	779

****

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
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=10.06	1987VSa (86718)	780

K(Ce(cdta)+L)=5.32, K(Ce(dtpa)+L)=5.20.

Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=10.06 K(Ce(edta)+L)=7.97 B(Ce(edta)L)=19.80	1984LSe (86719) 781

****

C14H9NO3 HL CAS 116-85-8 (1020)
1-Amino-4-hydroxyanthraquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Ce+++	sp	oth/un	30°C	?	U		K1=9.29	1972JAa (86793) 782

****

C14H10NO2F HL CAS 87221-43-0 (6155)
1-(2'-Pyridyl)-3-(3-fluoro-2-hydroxyphenyl)-prop-1-one-2-ene;
C5H4N.CH:CH.CO.C6H3(OH)F

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Ce+++	gl	NaClO4	30°C	0.10M	U		K1=4.10	1989SHa (86882) 783

****

C14H11NO4 HL (2727)
Salicylidene-4-amino salicylic acid; HO.C6H4.CH:N.C6H3(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Ce+++	gl	alc/w	27°C	40%	M		K1=10.79 B2=17.37	1993MRa (86978) 784

Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.

****

C14H11NO5 H4L CAS 245062-92-4 (8423)
4-[(E)-[(2,4-Dihydroxyphenyl)methylene]amino-2-hydroxybenzoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Ce+++	gl	alc/w	27°C	40%	M		K1=9.78 B2=16.00	1993MRa (86983) 785

Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.

****

C14H11N5O8S2 H5L CAS 1105-53-9 (5084)
1,5-Bis(2-hydroxy-5-sulfophenyl)-3-cyanoformazan;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Ce+++	gl	NaNO3	20°C	0.10M	U		K1=13.08	1971SEa (87018) 786

****

C14H12NO2Br HL CAS 13664-21-6 (6243)
N-(4-Tolyl)-4'-bromobenzohydroxamic acid; Br.C6H4.CO.N(C6H4.CH3).OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Ce+++	gl	diox/w	25°C	50%	U	T H	K1=9.25 B2=17.19	1983AGb (87045) 787

K3=6.75
35 C: K1=8.74, K2=7.25, K3=6.24
****
C14H12NO2Cl HL CAS 32939-57-4 (6242)
N-(4-Tolyl)-4'-chlorobenzohydroxamic acid; Cl.C6H4.CO.N(C6H4.CH3).OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 25°C 50% U T H K1=9.28 B2=17.06 1983AGb (87071) 788
K3=6.77
35 C: K1=8.76 K2=7.38, K3=6.28
****
C14H12NO2F HL CAS 13664-15-8 (6241)
N-(4-Tolyl)-4'-fluorobenzohydroxamic acid; F.C6H4.CO.N(C6H4.CH3).OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 25°C 50% U T H K1=9.56 B2=17.64 1983AGb (87080) 789
K3=7.06
35 C: K1=9.07 K2=7.57, K3=6.57
****
C14H12N2O2 HL (6311)
4-Hydroxy-3-formyl-2'-methylazobenzene; (HO)(CHO)C6H3.N:N.C6H4.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl alc/w 28°C 60% U K1=5.27 B2=9.13 1976WPb (87175) 790
B3=12.60
Data also for 4'-methyl analogue. K1=4.97, K2=4.88, B3=12.32
****
C14H12N2O4 HL CAS 29556-26-1 (6244)
N-(4-Tolyl)-4'-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4.CH3).OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 25°C 50% U T H K1=8.96 B2=16.42 1983AGb (87241) 791
K3=6.45
35 C: K1=8.45, K2=6.95, K3=5.95
****
C14H12N2O4 HL CAS 854-7-78-9 (183)
N-2-Tolyl-3-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4.CH3).OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 35°C 50% A K1=8.60 B2=15.70 1977AKa (87249) 792
K3=6.08
****
C14H12N2O4 HL (179)
N-3-Tolyl-3-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4.CH3).OH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  diox/w 35°C  50%  A        K1=8.75   B2=15.98  1977AKa (87260) 793
                                         K3=6.20
*************************************************************************
C14H12N2O4             HL                     CAS 85407-74-5  (180)
N-4-Tolyl-2-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4.CH3).OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  diox/w 35°C  50%  A        K1=9.01   B2=16.52  1977AKa (87273) 794
                                         K3=6.81
*************************************************************************
C14H12N2O4             HL                     (221)
N-4-Tolyl-3-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4.CH3).OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      EMF diox/w 35°C  50%  U        K1=9.01   B2=16.52  1977AKa (87286) 795
                                         K3=6.81
*************************************************************************
C14H13NO2              HL                     CAS 1503-92-0  (1817)
N-(4-Tolyl)benzohydroxamic acid; C6H5.CO.N(C6H4.CH3).OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  diox/w 25°C  50%  U T H    K1=9.75   B2=18.00  1983AGb (87443) 796
                                         K3=7.25
35 C: K1=9.25, K2=7.78, K3=6.74
*************************************************************************
C14H13NO4S            H2L                     (3660)
2-Aminobenzenesulfonic acid 2-hydroxyacetophenone Schiff base;
HSO3.C6H4.N:C(CH3).C6H4.OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M U T H    K1=4.67   B2= 8.42  1978GKb (87573) 797
Data for 25-35 C and I=0.01-0.10 M. At I=0.0 M, DH(K1)=51.0 kJ mol-1,
DS(K1)=330 J K-1 mol-1.
*************************************************************************
C14H15N2O3Cl          H2L                     (8285)
5,5'-Dimethylcyclohexane-2-(2'-hydroxy-4'-chlorophenyl)hydrazono-1,3-dione;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  mixed  30°C 0.10M U T H    K1=11.04  B2=20.12  1988TRb (87715) 798
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water
*************************************************************************
C14H16N2O2S            HL                     CAS 189231-67-2  (8475)
2-Thiophenylhydrazodimedone;
```

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  diox/w 25°C  75%  C T H    K1=13.29  B2=24.93  1997EIa (87864) 799
Medium: 75% v/v dioxane/H2O, 0.10 M KNO3. Data for 10-40 C. DH(K1)=-6.16
kJ mol-1, DS(K1)=-6.32 J K-1 mol-1; DH(K2)=-6.05, DS(K2)=-7.74.
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  mixed  30°C 0.10M U T H    K1=11.48  B2=21.04  1988TRb (87882) 800
Medium: 0.1 M KNO3 in 75% v/v isopropanol/water
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  R4N.X  25°C 0.10M C        K1=2.97        1990CBe (88144) 801
********************************************************************************
C14H20O5               L    Benzo15-crown-5  CAS 14098-44-3  (608)
2,3-Benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      dis non-aq 25°C 100%  U        B2=7.88        1990NIa (88245) 802
B2=extraction eq.constant: M+3P+2(S)=ML2P3(S); solvent(S)=CH2Cl2, P=picrate
--------------------------------------------------------------------------------
Ce+++      ISE R4N.X  25°C 0.10M C        K1=2.30        1986XJa (88246) 803
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      dis R4N.X  25°C 0.12M C        K1=1.98        1998SUa (88389) 804
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
--------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C  1.0M U         K1=6.50        1987CMe (88438) 805
                                          K(CeHL+H)=5.92
                                          K(CeL+H)=8.42
********************************************************************************
```

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
Ce+++	gl	KCl	25°C	1.0M	U		K1=7.64 K(CeHL+H)=6.20 K(CeL+H)=7.30	1987CMe (88453)	806

****
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
Ce+++	kin	KCl	25°C	0.10M	U		K(CeL+H)=3.96	2000SBa (88600)	807
Ce+++	gl	KCl	25°C	1.0M	U		K1=16.97 K(CeL+H)=2.28	1987CMe (88601)	808
Ce+++	gl	KCl	25°C	1.00M	U		K1=16.97	1984MFa (88602)	809
Ce+++	sp	KCl	25°C	0.10M	U		K2=5.4	1981KKf (88603)	810
Ce+++	gl	NaClO4	25°C	0.50M	U		K1=15.89	1977GGb (88604)	811
Ce+++	oth	oth/un	25°C	0.10M	U		K1=16.68 K(Ce+HL)=7.90	1971SHb (88605)	812

Method: electrical migration or transference number.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	oth	KCl	20°C	0.10M	U		K1=16.67 K(Ce+HL)=2.93	1967SMa (88606)	813

Method: ionic migration. Medium: (KCl,HCl).

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	vlt	KNO3	20°C	0.10M	U		K1=16.76	1954SGa (88607)	814

****
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
Ce+++	gl	KCl	25°C	1.0M	U		K1=7.36 K(CeHL+H)=5.40 K(CeL+H)=7.78	1987CMe (88833)	815

****
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

```
Ce+++      gl  KCl    25°C  1.0M U        K1=7.5          1987CMe (88849) 816
                                          K(CeHL+H)=5.84
                                          K(CeL+H)=7.3
-------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 1.00M U        K1=7.5          1984MFb (88850) 817
*******************************************************************************
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
-------------------------------------------------------------------------------
Ce+++      gl  R4N.X  25°C 0.10M C        K1=7.40         1988CCb (88876) 818
*******************************************************************************
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
-------------------------------------------------------------------------------
Ce+++      cal KNO3   25°C 0.10M C T                      1988MIa (89170) 819
DH(K1)=-25.75 kJ mol-1, DS=304.2 J mol-1 K-1. Also data for 283 and 313 K
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C  1.0M C    M                  1987LBa (89171) 820
                                          K(CeL+H)=1.54
By kinetics, K(CeL+Pb)=1.28, K(CeY+Cu)=0.70.
-------------------------------------------------------------------------------
Ce+++      cal NaClO4 25°C 0.10M C   H                   1987YJa (89172) 821
DH(K1)=-16.2 kJ mol-1, DS(K1)=338 J K-1 mol-1.
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.10M M        K1=19.96        1987ZGa (89173) 822
-------------------------------------------------------------------------------
Ce+++      sp  oth/un 25°C 0.10M C T H    K1=20.34        1983SPb (89174) 823
DH1=-32 kJ/mol
-------------------------------------------------------------------------------
Ce+++      cal NaClO4 25°C 0.50M U   H                   1977CGc (89175) 824
DH(K1)=-29.9 kJ mol-1
-------------------------------------------------------------------------------
Ce+++      gl  NaClO4 25°C 0.50M U        K1=19.09        1977GGb (89176) 825
-------------------------------------------------------------------------------
Ce+++      sp  oth/un   ?     ?  U        K1=19.8         1971PVb (89177) 826
-------------------------------------------------------------------------------
Ce+++      oth oth/un 25°C 0.10M U        K1=21.20        1971SHb (89178) 827
                                          K(Ce+HL)=12.10
Method: electrical migration or transference number.
-------------------------------------------------------------------------------
Ce+++      cal KNO3   27°C 0.10M U   H                   1968CLd (89179) 828
DH(K1)=-24.2 kJ mol-1
-------------------------------------------------------------------------------
Ce+++      oth KNO3   25°C 0.10M U        K1=21.2         1968LFb (89180) 829
Method: electromigration
-------------------------------------------------------------------------------
```

```
Ce+++      EMF KNO3   25°C 0.10M U        K1=20.5        1962MTc (89181) 830
--------------------------------------------------------------------------------
Ce+++      EMF KCl    20°C 0.10M U        K1=20.40       1959ANd (89182) 831
                                          K(CeL+H) < 3
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      vlt KNO3   20°C 0.10M U        K1=14.77       1969NDc (89505) 832
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      vlt KNO3   20°C 0.10M U        K1=17.11       1974NLa (89526) 833
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 1.00M U    M                    1976BKa (89567) 834
                                          K(CeEDTA+L)=3.1
                                          K(CeEDTA+HL)=3.3
                                          K(2CeEDTA+L)=6.9
--------------------------------------------------------------------------------
Ce+++      oth oth/un 25°C 0.10M U         K1=13.73       1971SHb (89568) 835
                                          K(Ce+HL)=9.73
                                          K(Ce+H2L)=4.30
                                          K(Ce+H3L)=4.60
Method: electrical migration or transference number.
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  KNO3   20°C 0.10M U        K1=17.02       1968NLb (89629) 836
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  R4N.X  25°C 0.10M C        K1=9.95        1988CCb (89647) 837
```

****

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
Ce+++	gl	KNO3	25°C	0.10M	U		K1=11.27 K(Ce+HL)=6.83	1984TPa (89725)	838

****

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
Ce+++	gl	NaNO3	25°C	0.0	U		K1=15.92	1996KDb (89844)	839
Extrapolated from data for I=0.05-0.15 M NaNO3.									
Ce+++	gl	NaNO3	25°C	0.10M	U	I	K1=15.75	1996KDc (89845)	840
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=15.92.									
Ce+++	gl	NaNO3	25°C	0.10M	M		K1=15.75	1996KDd (89846)	841
Data for 0.05-0.15 M NaNO3. At I=0, K1=15.92.									
Ce+++	gl	NaNO3	25°C	0.10M	M	I	K1=15.75	1995KDb (89847)	842
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=15.92.									
Ce+++	gl	NaNO3	25°C	0.10M	M	I	K1=15.75	1995KDc (89848)	843
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=15.92.									
Ce+++	gl	NaNO3	25°C	0.10M	M	I	K1=15.754	1995KDd (89849)	844
Data for 0.15 and 0.05 M NaNO3. At I=0, K1=15.925.									
Ce+++	gl	KCl	25°C	1.0M	U	M	K2=1.51 K(CeL+ida)=1.3	1985KBb (89850)	845
Ce+++	EMF	KNO3	20°C	0.10M	U		K1=15.70	1962MMc (89851)	846

****

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
Ce+++	gl	KNO3	25°C	0.10M	C		K1=16.73	1985TPa (90096)	847

****

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
Ce+++	cal	R4N.X	25°C	0.10M	U	H		1995MMb (90179)	848

Medium: NMe4NO3. DH(K1)=-12.6 kJ mol-1, DS=251 J K-1 mol-1.

Ce+++ gl R4N.X 25°C 0.10M M K1=10.89 1986COb (90180) 849

****

C14H26N4O6 H3L DOTRA (6701)

1,4,7,10-Tetraazacyclododecane-1,4,7-triethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	sp	R4N.X	25°C	0.10M	C		K1=19.7 K(CeL+H)=1.25	1993KCa (90245)	850

Medium: Me4NCl. K(CeL+H) determined in 1.0 M NaCl.

****

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
Ce+++	gl	R4N.X	25°C	0.10M	C		K1=6.84	1988CCc (90476)	851

****

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
Ce+++	gl	R4N.X	25°C	0.10M	U		K1=13.45 K(Ce+HL)=9.73 K(Ce+H2L)=5.29	1996BJa (90760)	852

Medium: 0.1 M Me4NCl

****

C14H37O12O12P4 H8L (6910)

N'-Hexyl-diethylenetriamine-N,N,N",N"-tetra(methylenephosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaClO4	25°C	0.10M	M		K(Ce+HL)=6.67	1987ZGa (90932)	853

****

C15H11NO4 HL CAS 1776-18-7 (955)

3-Phenyl-1-(2'-hydroxy-5'-nitrophenyl)-2-propen-1-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	alc/w	35°C	70%	U		K1=6.03 B2=11.96	1982SLb (91075)	854

****

C15H11O2Br HL CAS 1218-20-0 (954)

3-Phenyl-1-(2'-hydroxy-5'-bromophenyl)-2-propen-1-one;

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

```
Ce+++      gl  alc/w  35°C  70%  U        K1=6.89        1982SLb (91368) 855
********************************************************************************
C15H11O2Cl             HL                      CAS 1218-24-2  (953)
3-Phenyl-1-(2'-hydroxy-5'-chlorophenyl)-2-propen-1-one;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  alc/w  35°C  70%  U        K1=6.74   B2=13.16  1982SLb (91385) 856
--------------------------------------------------------------------------------
Ce+++      gl  alc/w  35°C  70%  U        K1=6.74   B2=13.16  1980SLb (91386) 857
********************************************************************************
C15H12OS               HL                        (1261)
mono-Thiodibenzoylmethane; C6H5.CO.CH2.CS.C6H5
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  NaClO4 30°C 0.05M U        K1=7.00   B2=13.42  1979VMa (91489) 858
                                         K3=5.84
********************************************************************************
C15H12O2               HL    Diphenylacac     CAS 120-46-7  (362)
1,3-Diphenylpropane-1,3-dione, Dibenzoylmethane; C6H5.CO.CH2.CO.C6H5
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  diox/w 30°C  75%  U        K1=10.99  B2=21.53  1953UFd (91542) 859
                                         K3=8.85
********************************************************************************
C15H12O2               HL                      CAS 1214-47-7  (951)
3-Phenyl-1-(2'-hydroxyphenyl)-2-propen-1-one, 2'-hydroxychalkone;
C6H5.CH:CH.CO.C6H4.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  alc/w  35°C  70%  U        K1=7.49   B2=14.76  1982SLb (91578) 860
Medium: 70% EtOH, 0.1 M KNO3
--------------------------------------------------------------------------------
Ce+++      gl  alc/w  35°C  70%  U        K1=7.49   B2=14.76  1980SLb (91579) 861
********************************************************************************
C15H15NO2              HL                        (1167)
N-(4-Tolyl)-4'-tolylhydroxamic acid; CH3.C6H4.CO.N(C6H4.CH3)OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  diox/w 25°C  50%  U T H    K1=10.00  B2=18.50  1983AGb (91841) 862
                                         K3=7.50
35 C: K1=9.51, K2=8.00, K3=7.00
********************************************************************************
C15H15NO3              HL                        (6240)
N-4-Tolyl-4'-methoxybenzohydroxamic acid; CH3O.C6H4.CO.N(C6H4.CH3).OH
--------------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce+++      gl  diox/w 25°C  50%  U T H    K1=10.14  B2=18.78  1983AGb (91863) 863
                                         K3=7.65
35 C: K1=9.65, K2=8.15, K3=7.16
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      gl  mixed  30°C 0.10M U T H    K1=11.71  B2=21.82  1988TRb (92016) 864
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
-------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M C        K1=11.28       1978MPb (92147) 865
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      sp  non-aq 25°C 100%  M        K1=7.6    B2=14.30  1997RPb (92279) 866
                                         B3=22.0
Medium: acetonitrile.
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      gl  KNO3   25°C 0.10M C        K1=18.25       1989SPa (92389) 867
                                        K(Ce+HL)=12.25
*************************************************************************
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
-------------------------------------------------------------------------
Ce+++      gl  KCl    25°C 0.10M C        K1=18.30       2000SBb (92427) 868
*************************************************************************
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
-------------------------------------------------------------------------
```

```
Ce+++      gl  KCl    25°C 0.10M C        K1=17.19       2000SBb (92442) 869
**************************************************************************
C15H36N3O9P3          H3L                        (6749)
1,4,7-Triazacyclononane-N,N'N''-tris(methylenephosphonatemonoethylester)
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce+++      gl  R4N.X  25°C 0.10M C        K1=9.5         1992LRa (92611) 870
**************************************************************************
C16H9NO5               HL                         (6257)
1-Anthraquinonyloxamic acid; C14H7O2.NH.CO.COOH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce+++      sp  none   25°C  0.0  U        K1=4.9    B2=14.50  1979ISa (92635) 871
Data also for 4-nitro analogue
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      kin oth/un 25°C 0.02M U        K1=4.54        1972GSe (92648) 872
**************************************************************************
C16H12N2O3             HL                      CAS 49747-16-2  (8340)
7-Hydroxy-4-methyl-8-(phenylazo)coumarin;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce+++      gl  alc/w  25°C  60%  U        K1=8.74   B2=16.26  1992IOa (92978) 873
Medium: 60% v/v EtOH/H2O, 0.1 M NaCl. Data for a range of aryl-substituted
derivatives.
**************************************************************************
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
--------------------------------------------------------------------------
Ce+++      gl  NaCl   25°C 0.10M U        K1=10.74  B2=20.56  1997IHa (93111) 874
                                         B3=29.50
Also data for the 4'-bromo-, 4'-fluoro-, 4'-nitro-, 4'-methoxy-, 4'-di-
methylamino-, 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
--------------------------------------------------------------------------
Ce+++      gl  diox/w 30°C  75%  M        K1=6.27        1987ESa (93125) 875
**************************************************************************
```

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
Ce+++	gl	NaClO4	30°C	0.10M	U			1976NDa (93187)	876
							K(Ce+H2L=CeH2L)=5.35		
							K(CeHL+H)=7.81		
							K(CeL+H)=10.70		

****

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
Ce+++	sp	oth/un	20°C	0.10M	U			1971SSd (93250)	877
							K(Ce+H2L)=8.47		

****

C16H14N2O5 H2L (7017)
4-Hydroxy-1-carboxy-7-dimethylaminophenoxaz-3-one methyl ester;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	sp	alc/w	25°C	10%	U	I		1979KRb (93437)	878
							B3=19.08		

Medium: 10% w/w EtOH/H2O, 0.1 M NaClO4. In 30%: B3=20.12

****

C16H14O2 HL CAS 1775-98-0 (952)
3-Phenyl-1-(2'-hydroxy-5'-methylphenyl)-2-propen-1-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	alc/w	35°C	70%	U		K1=7.72	B2=14.82	1982SLb (93528)	879

Medium: 70% EtOH, 0.1 M KNO3

****

C16H14O3 HL CAS 3327-24-0 (956)
3-(4''-Methoxyphenyl)-1-(2'-hydroxyphenyl)-2-propen-1-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	alc/w	35°C	70%	U		K1=7.38	B2=14.26	1982SLb (93563)	880
Ce+++	gl	alc/w	35°C	70%	U		K1=7.38	B2=14.26	1980SLb (93564)	881

****

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
Ce+++	con	non-aq	25°C	100%	C		K1=6.04	B2= 7.83	2003GNa (93650)	882

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
Ce+++	gl	diox/w	30°C	75%	U		K1=9.89	B2=16.28	1988ESb (93771)	883

****
C16H18N4 L CAS 172665-46-2 (7699)
N,N'-Dimethyl-1,10-phenanthroline-2,9-dimethanamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	NaClO4	25°C	0.10M	U		K1=6.84	B(CeHL)=14.22	2001WZa (93839)	884

Also data for the N,N'-diethyl, isopropyl, butyl and isobutyl derivatives.
****
C16H18N4O4 H2L CAS 161563-39-9 (8399)
1,3-Phenylenediamine bisazoacetylacetone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	25°C	50%	U		K1=5.76	B2=10.41	1997MAb (93857)	885

Medium: 50% v/v dioxan/H2O, 0.10 M NaClO4. For the 1,4-phenylenediamine derivative, K1=6.6, K2=5.56.
****
C16H18N4O4 H2L CAS 161563-40-2 (8400)
1,3-Phenylenediamine bisazobenzoylacetone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	diox/w	25°C	50%	U		K1=5.10	B2= 8.96	1997MAb (93864)	886

Medium: 50% v/v dioxan/H2O, 0.10 M NaClO4. For the 1,4-phenylenediamine derivative, K1=5.38, K2=4.11.
****
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
Ce+++	vlt	KNO3	20°C	0.10M	U		K1=15.96	1969NDb (94034)	887

****
C16H22O6 L (6733)
4'-Acetyl-2,3-benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	dis	non-aq	25°C	100%	U			B(Ce+3P+2L)=7.58	1993INa (94247)	888

By solvent extraction into dichloromethane. B is the extraction constant
Ce(aq)+picrate(aq)+L(org)=CeL2P3(org).
****
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
Ce+++	dis	R4N.X	25°C	0.12M	C		K1=1.84	1998SUa (94474)	889

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
Ce+++	gl	R4N.X	25°C	0.10M	C		K1=8.44	1988CCb (94565)	890

****
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
Ce+++	sp	KCl	25°C	0.08M	U		K1=10.5	1994FCa (94664)	891

****
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
Ce+++	sp	KCl	25°C	0.08M	U		K1=14.1	1994FCa (94680)	892

****
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
Ce+++	gl	KNO3	20°C	0.10M	U		K1=11.54	1969NDc (94707)	893

****
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
Ce+++	vlt	KNO3	20°C	0.10M	U		K1=14.77	1969NDc (94733)	894

****
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
Ce+++	vlt	KNO3	20°C	0.10M	U		K1=17.05	1979MBd (94759)	895

****

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
Ce+++	gl	R4N.X	25°C	0.10M	U		K1=24.6	1998BFa (94883)	896
							K(CeL+H)=1.9		

Medium: 0.1 M NMe4Cl.

Ce+++	gl	NaCl	25°C	1.00M	C			1994TBa (94884)	897
							K(Ce+H2L)=4.5		

Ce+++	sp	NaCl	37°C	1.0M	C		K1=21.6	1994TBb (94885)	898

Ce+++	kin	NaClO4	25°C	3.0M	C			1987BLb (94886)	899
							K(Ce+H2L)=3.30		

****

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
Ce+++	cal	R4N.X	25°C	0.10M	U	H		1995MMb (95030)	900

Medium: NMe4NO3. DH(K1)=-32.6 kJ mol-1, DS=125 J K-1 mol-1.

Ce+++	gl	R4N.X	25°C	0.10M	U		K1=12.27	1983CRb (95031)	901

****

C16H32O7 L (6411)
15-(2,5-Dioxahexyl)-15-methyl-1,4,7,10,13-pentaoxacyclohexadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	cal	non-aq	25°C	100%	U	H	K1=3.18	1993LLa (95381)	902

Medium: MeCN. DH(K1)=-21.1 kJ mol-1.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	dis	oth/un	20°C	0.10M	C			1992SNb (95506)	903

Extraction of 144Ce from 0.10 M LiNO3/HNO3 medium into 90% CFC-112/benzene
K(Ce+4HL(org)=CeL3(HL)(org)+3H)=1.67

****

C16H41N3O12P4 H8L (6911)

N'-Octyl-diethylenetriamine-N,N,N",N"-tetra(methylenephosphonic acid);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaClO4 25°C 0.10M M 1987ZGa (95667) 904
K(Ce+HL)=6.31
****
C17H12NO3Cl HL (6197)
8-Formyl-7-hydroxy-4-methyl-2H-[1]-benzopyran-2-one-4-chloroanil;
Cl.C6H4.N:CH.C9H3O(OH)(CH3)(:O)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 30°C 70% U K1=4.83 B2=8.59 1987ECa (95688) 905
B3=11.33
****
C17H12N2O5 HL (6198)
8-Formyl-7-hydroxy-4-methyl-2H-[1]-benzopyran-2-one-4-nitroanil;
NO2.C6H4.N:CH.C9H3O(OH)(CH3)(:O)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 30°C 70% U K1=4.68 B2=8.31 1987ECa (95705) 906
B3=11.05
****
C17H13NO3 HL CAS 98399-88-3 (6195)
8-Formyl-7-hydroxy-4-methyl-2H-[1]-benzopyran-2-one-anil;
C6H5.N:CH.C9H3O(CH3)(OH)(:O)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 30°C 70% U K1=5.37 B2=9.75 1987ECa (95736) 907
B3=12.80
****
C17H13NO4 H2L CAS 216243-24-2 (8612)
5,7-Dihydroxy-2-methyl-6-[(phenylimino)methyl]-4H-1-benzopyran-4-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl alc/w 25°C 70% U TIH K1=7.04 B2=12.64 1998ISd (95752) 908
Medium: 70% v/v EtOH/H2O, 0.106 M NaCl. Data for 60-100% EtOH/H2O,
0.15-0.03 M NaCl and 0-55 C. At 25 C, I=0 M: K1=8.52, B2=15.51. DH and DS.
****
C17H13NO5 H3L CAS 216243-25-3 (8613)
5,7-Dihydroxy-6-[[(2-hydroxyphenyl)imino]methyl]-2-methyl-4H-1-benzopyran-4-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl alc/w 25°C 70% U TIH K1=7.34 B2=13.85 1998ISd (95755) 909
Medium: 70% v/v EtOH/H2O, 0.106 M NaCl. Data for 60-100% EtOH/H2O,

0.15-0.03 M NaCl and 0-55 C. At 25 C, I=0 M: K1=8.64, B2=16.55. DH and DS.
****
C17H13N4O3 HL (5927)
1-Phenyl-3-methyl-4-(2'-carboxyphenylhydrazo)-5-pyrazolone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 30°C 75% M K1=15.53 B2=28.57 1987ESa (95762) 910
****
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
---
Ce+++ dis NaClO4 20°C 0.10M U K1=6.54 B2=12.09 1969EVa (95874) 911
K3=4.46
****
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
---
Ce+++ gl diox/w 30°C 75% M K1=7.90 B2=15.20 1987ESa (96003) 912
****
C17H16N2O3S2 L CAS 127335-83-5 (6849)
Sulfafurazole thiophene-2-aldehyde Schiff base; C4H3S.CH:N.C6H4.SO2.NH.C4HO(CH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl oth/un 25°C 0.10M U T K1=4.97 1990TSa (96035) 913
30 C: K=4.80, 35 C: K=4.65
****
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
---
Ce+++ gl alc/w 22°C 0.1M U K1=5.60 B2=10.55 2000TBb (96281) 914
K3=3.67
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
---
Ce+++ sp NaNO3 25°C 0.10M C K1=7.90 1988OHa (96415) 915
K(Ce+HL)=2.60
****

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
---
Ce+++ cal non-aq 25°C 100% C H 1993LLb (96529) 916
K(CeNO3+L)=3.95
Medium: acetonitrile. DH(CeNO3+L)=-39.62 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
---
Ce+++ gl KNO3 25°C 0.10M U K1=8.08 1984TPa (96567) 917
K(Ce+HL)=5.33
****
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
---
Ce+++ sp KCl 25°C 0.10M C K1=18.8 2000STb (96697) 918
****
C17H32N4O7 H3L CAS 120041-08-9 (6702)
10-Hydroxypropyl-1,4,7,10-tetraazacyclododecane-1,4,7-triethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ sp R4N.X 25°C 0.10M C K1=21.2 1993KCa (96712) 919
K(CeL+H)=1.04
Medium: Me4NCl. K(CeL+H) determined in 1.0 M NaCl.
****
C18H13NO4 H3L CAS 698-51-6 (8424)
2-Hydroxy-4-[[2-hydroxy-1-naphthalenyl)methylene]amino]benzoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl alc/w 27°C 40% M K1=7.20 B2=12.40 1993MRa (96896) 920
Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.
****
C18H13NO6 H3L CAS 216243-28-6 (8614)
5,7-Dihydroxy-6-[[(2-carboxyphenyl)imino]methyl]-2-methyl-4H-1-benzopyran-4-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl alc/w 25°C 70% U TIH K1=5.63 B2=10.45 1998ISd (96899) 921
Medium: 70% v/v EtOH/H2O, 0.106 M NaCl. Data for 60-100% EtOH/H2O,
0.15-0.03 M NaCl and 0-55 C. At 25 C, I=0 M: K1=7.12, B2=13.48. DH and DS.
****

C18H13N5O3S4 HL CAS 683787-43-1 (9097)
4-[(4-Oxo-3-phenyl-2-thioxo-5-thiazolidinyl)azo]-N-2-thiazolyl-benzenesulfonamide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl alc/w 25°C 30% U T H K1=7.60 B2=12.20 2003EEa (96903) 922
Medium: 30% v/v EtOH/H2O, 0.10 M KCl. Data for 25-45 C. DH(K1)=35 kJ mol-1
DS=262 J K-1 mol-1. DH(K2)=59, DS=286. Protonation constants not reported.
****
C18H15NO3 HL (6196)
8-Formyl-7-hydroxy-4-methyl-2H-[1]-benzopyran-2-one 4-methylanil;
CH3.C6H4.N:CH.C9H3O(OH)(CH3)(O)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 30°C 70% U K1=6.23 B2=11.59 1987ECa (96992) 923
B3=15.61
****
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
---
Ce+++ gl diox/w 30°C 75% U K1=9.68 B2=18.07 1988ESb (97165) 924
****
C18H22N4O7 H2L (7693)
1,5-Bis[carbamoyl-4-(1-methyl-3-hydroxy-2(1H)-pyridinone)]-2-oxapentane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl KCl 25°C 0.10M U K1=11.4 B2=20.90 2000XRa (97551) 925
B(CeHL)=24.1
****
C18H25N3O8 H4L BEATA CAS 87732-99-8 (5600)
N,N-Bis(2-aminoethyl)aniline-N',N',N'',N''-tetraethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl KNO3 25°C 0.10M C K1=13.91 1985TPa (97649) 926
****
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
---
Ce+++ gl non-aq 25°C 100% U K1=3.62 1982MDa (97802) 927
Medium: propylene carbonate
****
C18H29NO4 L CAS 207603-17-6 (9000)

7-(Phenylmethyl)-1,4,10,13-tetraoxa-7-azacyclohexadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ cal non-aq 25°C 100% C H K1=2.43 1998LBc (97875) 928
Medium: acetonitrile. DH(K1)=-41.09 kJ mol-1, DS(K1)=-91.4 J K-1 mol-1.
****
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
---
Ce+++ gl R4N.X 25°C 0.10M C K1=8.57 1988CCb (97905) 929
****
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
---
Ce+++ vlt R4N.X 30°C 0.01M C K1=19.60 1981GMh (98016) 930
Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.

Ce+++ sp oth/un ? ? U K1=19.20 1969HGa (98017) 931
B(Ce2L)=15.45
****
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
---
Ce+++ gl NaNO3 25°C 0.20M C K1=13.12 1991KKa (98195) 932
****
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
---
Ce+++ gl R4N.X 25°C 0.10M C K1=6.85 1988CCc (98333) 933
****
C18H34N4O9 H3L DO3A-B (7301)
10-[2,3-Dihydroxy-(1-hydroxymethyl)-propyl]-1,4,7,10-tetraazacyclododecane-1,4,7-tr
iethanoic ac.;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaCl 25°C 0.10M C I K1=17.8 1996TKa (98375) 934
In 0.1 M Me4NCl K=19.7
****
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
--------------------------------------------------------------------------------
Ce+++      ISE non-aq 25°C 100%  U   H    K1=14.20       1984GBa (98529) 935
Extrap.from higher T. 0.1 M (ET)4NH4ClO4. DH=-76.5 kJ mol-1;DS=15 J K-1 m-1.
In propylene carbonate.
--------------------------------------------------------------------------------
Ce+++      gl  alc/w  25°C  95%  C        K1=8.4         1981ANa (98530) 936
Medium: 95% MeOH, 0.1 M Me4NCl
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      gl  R4N.X  25°C 0.10M U        K1=7.68        1996BJa (98888) 937
Medium: 0.1 M Me4NCl
********************************************************************************
C19H10O5Br4S          H2L    Bromophenol Blu  CAS 115-39-9  (2109)
3,3',5,5'-Tetrabromophenolsulfonephthalein, Bromophenol blue
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  KCl    21°C 0.10M U        K1=1.5         1978KYb (98985) 938
********************************************************************************
C19H14N6O3S3           HL                      CAS 364325-73-5  (9096)
4-[(4-Oxo-3-phenyl-2-thioxo-5-thiazolidinyl)azo]-N-2-pyrimidinyl-benzenesulfonamide
;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  alc/w  25°C  30%  U T H    K1=8.22   B2=13.49  2003EEa (99068) 939
Medium: 30% v/v EtOH/H2O, 0.10 M KCl. Data for 25-45 C. DH(K1)=38 kJ mol-1
DS=283 J K-1 mol-1. DH(K2)=36, DS=222. Protonation constants not reported.
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      sp  diox/w 20°C  20%  C                      1987ZJa (99130) 940
                                        K22=15.84
--------------------------------------------------------------------------------
Ce+++      con oth/un 25°C 0.10M U        K1=4.18   B2=8.31   1981EIc (99131) 941
********************************************************************************
C19H15N5O4S3           HL                      CAS 403480-96-6  (9095)
N-(5-Methyl-3-isoxazolyl)-4-[(4-oxo-3-phenyl-2-thioxo-5-thiazolidinyl)azo]-benzenes
ulfonamide;
--------------------------------------------------------------------------------
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	alc/w	25°C	30%	U	T H	K1=7.54	B2=12.11	2003EEa (99146)	942

Medium: 30% v/v EtOH/H2O, 0.10 M KCl. Data for 25-45 C. DH(K1)=35 kJ mol-1 DS=263 J K-1 mol-1. DH(K2)=38, DS=216. Protonation constants not reported.

****

C19H24N4O6 H2L CAS 165543-95-3 (7692)
1,5-Bis[carbamoyl-4-(1-methyl-3-hydroxy-2(1H)-pyridinone)]-pentane

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	gl	KCl	25°C	0.10M	U		B2=21.6	B(CeHL)=24.9	2000XRa (99380)	943

****

C19H31NO5 L CAS 63281-62-9 (7946)
16-Phenylmethyl-1,4,7,10,13-pentaoxa-16-azacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	cal	non-aq	25°C	100%	C	H		K(CeNO3+L)=3.46	1993LLb (99444)	944

Medium: acetonitrile. DH(CeNO3+L)=-81.71 kJ mol-1.

****

C20H14N2O5S H3L Solochrome 6B CAS 3564-14-5 (3507)
1-(1-Hydroxy-2-naphthylazo)-2-naphthol-4-sulfonic acid, Mordant Black3, Eriochrome blue-black B;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	sp	oth/un	?	?	U		K1=5.72		1972CBc (99645)	945

****

C20H14N2O5S H3L EriochrBluBlk R CAS 2538-85-4 (3508)
3-Hydroxy-4-(2-hydroxy-1-naphthylazo)naphthalene-1-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ce+++	sp	alc/w	?	98%	U			K(?)=5.2	1968RAa (99687)	946

Medium: 98% EtOH

****

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
Ce+++	sp	NaClO4	25°C	0.10M	C		K1=5.60		1979PLb (99707)	947

****

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
Ce+++	gl	KNO3	20°C	0.10M	U		K1=17.16 K(CeL+H)=5.95 K(CeHL+H)=5.44	1985SNb (99989)	948

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
Ce+++	sp	non-aq	25°C	100%	C		K1=1.95	2003ZRa (100090)	949
Medium: DMSO. Method: competition with murexide.									
Ce+++	cal	non-aq	25°C	100%	C	H	K1=2.34	1998LHa (100091)	950
Medium: acetonitrile. DH(K1)=10.13 kJ mol-1.									
Ce+++	gl	oth/un	25°C	0.0	U	H	K1=4.61	1991HJa (100092)	951

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
Ce+++	dis	R4N.X	25°C	0.12M	C		K1=2.01	1998SUa (100277)	952
Medium: 0.12 M Et4NBr. Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaNO3	25°C	0.20M	C		K1=14.16	1991KKa (100532)	953

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
Ce+++	sp	KCl	25°C	0.08M	U		K1=15.5	1994FCa (100552)	954

C20H36O6 L DiCy-18-crown-6 CAS 16069-36-6 (1653)
2,3:11,12-Dicyclohexyl-1,4,7,10,13,16-hexaoxacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	sp	non-aq	25°C	100%	C		K1=2.00	2003ZRa (100631)	955

Medium: DMSO. Method: competition with murexide.
****
C20H48N4O8P4 H4L (6569)
1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetrakis(methyleneethylphospinic acid);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl KNO3 25°C 0.10M C K1=15.80 1991LSc (100993) 956
****
C21H17N5 L (7365)
2,6-Bis(1-methylbenzimidazol-2-yl)pyridine

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl non-aq 25°C 100% C 1997PBa (101083) 957
K3=6.0
Medium: CH3CN; 0.1 M Et4NClO4
****
C21H18N6O3S3 HL CAS 364325-74-6 (9094)
N-(4,6-Dimethyl-2-pyrimidinyl)-4-[(4-oxo-3-phenyl-2-thioxo-5-thiazolidinyl)azo]-ben
zenesulfonamid

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl alc/w 25°C 30% U T H K1=7.90 B2=12.60 2003EEa (101120) 958
Medium: 30% v/v EtOH/H2O, 0.10 M KCl. Data for 25-45 C. DH(K1)=40 kJ mol-1
DS=287 J K-1 mol-1. DH(K2)=33, DS=202. Protonation constants not reported.
****
C21H18N6O5S3 HL CAS 412024-79-4 (9093)
N-(5,6-Dimethoxy-4-pyrimidinyl)-4-[(4-oxo-3-phenyl-2-thioxo-5-thiazolidinyl)azo]-be
nzenesulfonami

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl alc/w 25°C 30% U T H K1=8.62 B2=15.45 2003EEa (101124) 959
Medium: 30% v/v EtOH/H2O, 0.10 M KCl. Data for 25-45 C. DH(K1)=34 kJ mol-1
DS=280 J K-1 mol-1. DH(K2)=34, DS=244. Protonation constants not reported.
****
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
---
Ce+++ sp oth/un ? ? U K1=13.62 1971SSi (101540) 960
****
C22H17N4O14ClP2S2 H8L ClPhosphonazo 3 CAS 1914-99-4 (2577)
2,7-Bis((4-chloro-2-phosphophenyl)azo)chromotropic acid;

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

---
Ce+++ sp NaClO4 25°C 1.00M U K1=9.54 1977MNa (101578) 961
****
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
---
Ce+++ sp oth/un rt 0.10M C 2004LLa (101610) 962
K1eff=4.44
B2eff=9.35
B(2,2)eff=13.59
Method: spectral deconvolution. Medium: 0.1 M chloroacetate buffer, pH 3.5

Ce+++ sp oth/un 25°C var U I 1997HRb (101611) 963
K1(eff)=7.633
B(CeLCl)eff=8.264
B(CeL2Cl)eff=13.465
Conditional constants in chloride medium at pH 3.3. Also data in sulfate
and perchlorate media. K(Ce+Cl)=2.282.

Ce+++ sp oth/un 20°C ? U 1972SSi (101612) 964
K(Ce+H4L)=14.88
****
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
---
Ce+++ gl R4N.X 25°C 0.10M C K1=11.1 1993YTa (101973) 965
****
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"-disulfo
nic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ dis R4N.X 25°C 0.12M C K1=2.27 1998SUa (102073) 966
Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
****
C22H29N3O12 H6L CAS 362606-74-4 (8226)
N,N'-[2-[[Bis(carboxymethyl)amino]methyl]-2-phenyl-1,3-propanediyl]bis[N-(carboxyme
thyl)-glycine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl R4N.X 25°C 0.10M C K1=11.14 2001VSa (102086) 967
K(CeL+H)=6.90

K(CeHL+H)=4.53
K(CeH2L+2H)=7.30
Medium: 0.10 M Me4NCl.
****
C22H30N4 L CAS 250790-21-7 (7943)
N,N'-Bis(1,1-dimethylethyl)-1,10-phenanthroline-2,9-dimethanamine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaClO4 25°C 0.10M U K1=7.55 2001WZa (102110) 968
B(CeHL)=14.88
Also data for the N,N'-diethyl, isopropyl, butyl and isobutyl derivatives.
****
C22H37N5O14 H7L CAS 3234-59-1 (2425)
Tetraethylenepentamineheptaethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ vlt R4N.X 30°C 0.01M C K1=19.62 1981GMh (102318) 969
Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.

Ce+++ sp none 20°C 0.0 C B2=14.14 1975HKb (102319) 970
****
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
---
Ce+++ gl diox/w 30°C 75% U K1=9.82 B2=17.51 1988ESb (102588) 971
****
C23H23NO5 L CAS 218619-58-0 (7808)
Dibenzo-pyridino-18-crown-6;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ sp non-aq 25°C 100% C K1=1.89 2003ZRa (102656) 972
Medium: DMSO. Method: competition with murexide.
****
C24H16O16S8 H8L CAS 237770-97-7 (8854)
25,26,27,28-Tetrahydroxy-2,8,14,20-tetrathiacalix[4]arene-5,11,17,23-tetrasulfonic
acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ cal oth/un 25°C 0.01M C H K1=3.41 2004LWa (102865) 973
Medium: 0.01 M HCl. DH(K1)=7.0 kJ mol-1, DS(K1)=88.9 J K-1 mol-1.
****
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
---
Ce+++ dis R4N.X 25°C 0.12M C K1=2.39 1998SUa (103189) 974
Medium: 0.12 M Et4NBr.
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid
****
C24H42N6O12 H6L (6546)
1,4,7,10,13,16-Hexaazacyclooctadecane-N,N',N",N"',N"",N""'-hexaethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaNO3 25°C 0.20M C K1=19.59 1991KKa (103372) 975
K(Ce+H2L)=15.60
****
C26H23N5O2 HL (5918)
Hippuric monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 30°C 75% U K1=11.08 B2=21.47 1985RSb (103876) 976
****
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
---
Ce+++ gl R4N.X 25°C 0.10M C K1=12.26 1993YTa (103959) 977
****
C27H24N4O L BAHP (1023)
Benzoylacetone-monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 30°C 75% U K1=7.52 1983RSa (104380) 978
****
C27H42O15 H3L (OEOAcAcOE)3 CAS 62888-29-3 (2255)
1,4,10,13,16,22,25,28,34-Nonaoxacyclohexatriaconta-6,8,18,20,30,32-hexaone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl diox/w 24°C 50% U K1=11.4 1979ACa (104598) 979
****
C28H36N2O14S2 L CAS 84162-07-2 (7948)
15,15'-Dithiobis[2,3,5,6,8,9,11,12-octahydro-16-nitro-1,4,7,10,13-benzopentaoxacycl
opentadecin]

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

```
--------------------------------------------------------------------------------
Ce+++      sp  non-aq 25°C 100%  C T H                  1997LQa (104787) 980
                                        K(CeNO3+L)=2.87
Medium: acetonitrile. Data for 20-35 C. DH(CeNO3+L)=12.71 kJ mol-1.
********************************************************************************
C28H40O6               L                     CAS 29471-17-8  (1262)
2,3:11,12-Bis(4'-tert-butylbenzo)-1,4,7,10,13,16-hexaoxacyclooctadecane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      gl  non-aq 25°C 100%  U        K1=4.95        1980MDb (104835) 981
                                        Medium: Propylene carbonate.
Medium: propylene carbonate
********************************************************************************
C28H40O10              L    DiBz-30-crown10  CAS 104946-67-0  (1776)
2,3:17,18-Dibenzo-1,4,7,10,13,16,19,22,25,28-decaoxacyclotriaconta-2,17-diene;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      ISE non-aq 25°C 100%  U        K1=4.10        1982MDa (104874) 982
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
--------------------------------------------------------------------------------
Ce+++      gl  diox/w 30°C  75%  U  I     K1=8.35        1983RRa (105399) 983
In 75% MeOH: K1=6.75; 75% DMF: 5.63
********************************************************************************
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
--------------------------------------------------------------------------------
Ce+++      sp  oth/un 25°C    ?  U                   1962TOa (105460) 984
                                        K(?)=5.5
Acetate buffer
********************************************************************************
C36H32O24S4           H8L                   CAS 171798-10-0  (9139)
25,26,27,28-Tetrakis(hydroxycarbonylmethoxy)calix[4]arene-5,11,17,23-tetrasulfonic
acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce+++      cal oth/un 25°C 0.01M C   H    K1=3.82        2004LWa (106225) 985
Medium: 0.01 M HCl. DH(K1)=5.1 kJ mol-1, DS(K1)=90.3 J K-1 mol-1.
********************************************************************************
C36H54O12              L                     (6732)
```

1,8-Dioxooctamethylenebis(4'-2,3-benzo-1,4,7,10,13-pentaoxacyclopentadecane);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ dis non-aq 25°C 100% U 1993INa (106420) 986
B(Ce+3P+2L)=8.83
By solvent extraction into dichloromethane. B is the extraction constant
Ce(aq)+picrate(aq)+L(org)=CeL2P3(org).
****
C37H33N5O4 L (7366)
2,6-Bis(1-(3,5-dimethoxybenzyl)benzimidazol-2-yl)pyridine

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl non-aq 25°C 100% C K2=4.8 1997PBa (106546) 987
K3=2.9
Medium: CH3CN; 0.1 M Et4NClO4
****
C37H44N2O13S H6L MeThymol Blue (428)
3,3'-Bis(N,N-di(carboxymethyl)aminomethyl)thymolsulfonephthalein;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce+++ gl NaClO4 30°C 0.10M U 1980NAb (106589) 988
K(Ce+H3L)=4.05
K(Ce+H2L)=6.15
K(CeH2L+H)=5.04
Also data for CeHnL(OH) species
****
e- HL Electron (442)
Electron;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce++++ EMF NaClO4 -5°C 6.50M U 1990ZIa (390) 989
E(e+Ce=Ce+++)= 1.755 V
Medium: HClO4

Ce++++ EMF mixed 25°C 20% U I 1970ZLa (391) 990
K=ca.20.8(1.21-1.25V)
In 20% v/v acetic acid/H2O; K:Ce(IV)+e=Ce(III); 0% AcOH: K=ca.21.2(1.25-1.26 V). 50%: ca.19.8(1.16-1.18V). 70%: 17.9(1.06V). 80%: 11.7(0.69V)

Ce++++ EMF NaClO4 25°C 1.0M U H 1960COe (392) 991
K(CeOH+H+e)=28.68(1696.6 mV)
K(Ce+e)=29.47(1743.1 mV)
Medium:HClO4. DH(CeOH+H+e)=-171.5 kJ mol-1, DS=-26.8 J K-1 mol-1
DH(Ce+e)=-120.9, DS=158

Ce++++ cal NaClO4 25°C 0.50M U H 1958FOa (393) 992

Medium:HClO4. DH(Ce+e)=-158.5 kJ mol-1

Ce++++ EMF oth/un 25°C 1.0M U I 1951VEa (394) 993
K(Ce+e)=24.4(1443 mV)
Medium:H2SO4. In 0.5 M H2SO4 K=24.7(1461 mV)

Ce++++ EMF NaClO4 25°C 2.40M U I 1943SKa (395) 994
K(Ce+e)=29.3(1731 mV)
Medium:HClO4. In 0.2 M: K=27.7(1640 mV)

Ce++++ EMF oth/un 25°C 4.0M U I 1938SGa (396) 995
K(Ce+e)=24.0(1420 mV)
Medium:H2SO4. In 2 M H2SO4: K=24.2(1430 mV). Data also in HNO3, HClO4, HCl

---

Ce++++ EMF oth/un 25°C 0.50M U TI 1936NGa (397) 996
K(Ce+e)=27.22(1609.5 mV)
Medium:0.5 to 2 M HNO3. At 0 C: K=29.55(1601 mV)

Ce++++ EMF oth/un 25°C 2.50M U 1927LEa (398) 997
K(Ce+e)=1.00(59 mV)

****

AsO2- HL Arsenite CAS 14102-45-5 (2616)
Arsenite; As(OH)4- or AsO2-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sp	NaClO4	2°C	1.0M	U	T H	K'(CeOH+HL+H=CeHL)=2.55 K"(CeOH+HL=CeL)=2.03	1971ESa	(1082) 998

K'=2.40,K"=2.04(5.1 C); 2.24,2.04(8.4 C); 2.22,2.11(11.1 C). 1.68,2.16(25 C corr). DH(K')=-59.4 kJ mol-1, DH(K")=9.2

****

CrO4-- H2L Chromate CAS 7738-94-5 (2382)
Chromate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sp	NaClO4	25°C	1.0M	U		K1=10	1954TKa	(6478) 999

Medium: HClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sp	NaClO4	25°C	1.0M	U		K1=10	1954TKa	(6479)1000

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sp	NaClO4	20°C	2.0M	U		K(CeOH+HF=CeOHF+H)=4.61 K(CeOHF+HF=CeF2)=3.49	1977MKa	(6806)1001

Ce++++ sp oth/un 25°C 3.80M U K1=8.16 1968BUa (6807)1002
Medium: H2SO4

****

H2PO2- HL Hypophosphite CAS 6303-21-5 (6304)
Hypophosphite;

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

---

Ce++++ kin oth/un 33°C 0.80M U K1=1.2 1967MGb (7637)1003
Medium: 0.5-0.1M H2SO4, 30-35 C

****

IO3- HL Iodate CAS 7782-68-5 (1257)
Iodate;

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

---

Ce++++ sol oth/un 23°C 5.60M U 1974PMb (8503)1004
Kso(CeL4(s))=-17.4
medium:H(NO3,ClO4)

****

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

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

---

Ce++++ sol oth/un 25°C dil U 1974LOa (8597)1005
Kso(Ce(HIO6)(H2O)3)=-6.34

****

MoO4-- H2L Molybdate (443)
Molybdate;

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

---

Ce++++ oth oth/un 25°C dil U 1959MKb (8717)1006
Ks(Ag8CeMo12O42)=-35.08
Ks: to give 8Ag+CeMo12O42. Method: tyndallometry

****

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

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

---

Ce++++ sp KNO3 0°C var U K1=-0.85 1973LMb (9616)1007
Medium: HNO3, [NO3]=(55.51/[H2O])

Ce++++ sp NaClO4 23°C 3.56M U K1=0.33 1965PFa (9617)1008
Medium: HClO4

Ce++++ dis NaClO4 ? 2.0M U K1=0.78 B2=1.20 1964SVa (9618)1009

```
                                        B3=1.34
                                        B4=1.24
                                        B5=1.07
                                        Kd(Ce+5L+H+TBP(org))=1.81
--------------------------------------------------------------------------------
Ce++++     sp  NaClO4   ?   6.0M U        K1=-0.24  B2=-0.48  1963LKb  (9619)1010
                                        B3=-0.72
                                        B4=-0.96
                                        B5=-1.22
                                        B6=-1.46
Medium: HClO4. All Kn assumed equal ?
--------------------------------------------------------------------------------
Ce++++     sp  NaClO4 25°C  5.0M U  I                   1959TUa  (9620)1011
                                        K3=0.23
                                        B(CeH-1L) < 2.23
                                        K(Ce(OH)L+L+H)=0.0
At I=3: B(CeH-1L)=2.23, K(Ce(OH)L+L+H)=-0.22
********************************************************************************
OH-                    HL    Hydroxide          (57)
Hydroxide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce++++     kin NaClO4 30°C  var  U T                   1982IMa (11110)1012
                                        *K1=-1.27
                                        *K2=0.70
--------------------------------------------------------------------------------
Ce++++     sp  R4N.X  22°C 1.00M U    M                1981TPa (11111)1013
                                        K(CeA3=CeA3(OH)+H)=-0.12
                                        K(CeA3+OH)=13.9
A=SO4--
--------------------------------------------------------------------------------
Ce++++     kin KNO3   25°C 1.00M U                     1973WSa (11112)1014
                                        *K1=1.0
Medium: HNO3
--------------------------------------------------------------------------------
Ce++++     sp  NaClO4 25°C 1.00M U T H                 1971ESa (11113)1015
                                        *K1=0.81
                                        *K2=-0.92
DH(*K1)=69.9 kJ mol-1, DH(*K2)=31.4.
*K1=0.08, *K2=-1.28(7.6 C); *K1=0.26, *K2=-1.09(12.6 C)
--------------------------------------------------------------------------------
Ce++++     sp  NaClO4 19°C 1.00M U T                   1971ESa (11114)1016
                                        *K1=0.48
                                        *K2=-1.01
At 30.8 C, *K1=1.05, *K2=-0.80
--------------------------------------------------------------------------------
Ce++++     gl  NaNO3  25°C 3.00M U                     1967DAa (11115)1017
                                        *B(2,3)=-1.68
                                        *B(2,4)=-2.29
```

```
--------------------------------------------------------------------------------
Ce++++     sp  NaClO4 25°C    ?  U                        1966OSa (11116)1018
                                        *K1=-0.7
Medium: 0.9-1.7M NaClO4.
--------------------------------------------------------------------------------
Ce++++     kin oth/un 54°C 6.18M U                       1962DGa (11117)1019
                                        K(2Ce(IV)=Ce(IV)2)=1.26
Medium:HNO3
--------------------------------------------------------------------------------
Ce++++     EMF NaClO4 25°C  2.0M U T                     1960BNa (11118)1020
                                        *K2=-0.82
*K1=0.9(1.6 C), 1.15(15 C,estimated); *K2=-1.1(1.6 C)
--------------------------------------------------------------------------------
Ce++++     dis oth/un 30°C 5.50M U                       1957BGa (11119)1021
                                        K(2Ce(IV)=Ce(IV)2)=1.23
Medium:HNO3; K(Ce(III)+Ce(IV)=Ce(III)Ce(IV))=0.3. Method: redox
--------------------------------------------------------------------------------
Ce++++     gl  oth/un 17°C  var  U                       1957TEa (11120)1022
                                        Kso=-50.6
Kso: K(Ce(OH)4(s)=Ce+4OH); Method:also solubility
--------------------------------------------------------------------------------
Ce++++     EMF oth/un 25°C  var  U                       1955BSb (11121)1023
                                        Kso(CeO(OH)2)=-24
--------------------------------------------------------------------------------
Ce++++     sp  NaClO4 25°C  2.0M U T H                   1951HRa (11122)1024
                                        *K1=0.72
                                        K(2CeOH=Ce2(OH)2)=1.22
DH(*K1)=64.9 kJ mol-1 DS=232 J K-1 m-1; DH(K)=-67, DS=-202.1; *K1=-0.06(5 C)
0.32(15 C), 1.18(35 C); K=2.04(5 C), 1.62(15 C), 0.49(35 C)
--------------------------------------------------------------------------------
Ce++++     oth NaClO4 23°C  1.0M U                      1948HSa (11123)1025
                                        K(2Ce(OH)=Ce2(OH)2)=1.70
                                        K(CeOH+Ce(OH)2)=2.00
                                        K(2Ce(OH)2=Ce2(OH)4)=1.70
Medium:HClO4. Method:photochemical
--------------------------------------------------------------------------------
Ce++++     EMF NaClO4 25°C  var  U                       1943SKa (11124)1026
                                        *K2=-0.22
********************************************************************************
PO4---                H3L    Phosphate        CAS 7664-38-2  (176)
Phosphate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce++++     gl  oth/un 23°C 3.25M U                       1978LKa (13129)1027
                                        K(Ce+3H2PO4)=13.08
--------------------------------------------------------------------------------
Ce++++     gl  oth/un 20°C  dil  U                       1961CAa (13130)1028
                                        Kso(Ce3L4)=-90.1 ?
********************************************************************************
```

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
Ce++++	sp	oth/un	25°C	3.80M	U		K(Ce+H2L)=9.12	1968BUa (13567)	1029

Medium:3 H2SO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sol	NaClO4	25°C	0.10M	U		K1=18.19	1967MSc (13568)	1030

Kso(CeL(H2O)9)=-23.16

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sol	NaClO4	25°C	0.10M	U		K1=18.04 K(CeL(s)=CeL)=-5.0	1967MSi (13569)	1031

Other models proposed. Solid=CeP2O7(H2O)9

****

P3O9--- H3L CAS 13566-25-1 (235)
Cyclotrimetaphosphate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	ix	NaClO4	21°C	0.50M	U		K1=3.73	1979KWa (13949)	1032

K1=3.62 by spectrophotometry

****

P4O12---- H4L CAS 13598-74-8 (234)
Cyclotetrametaphosphate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	ix	NaClO4	21°C	0.50M	U		K1=6.65	1979KWa (13999)	1033

K1=5.79 by spectrophotometry

****

P6O18------ H6L (233)
Cyclohexametaphosphate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	ix	NaClO4	21°C	0.50M	U		K1=9.66	1979KWa (14070)	1034

K1=7.00 by spectrophotometry

****

P8O24-------- H8L (232)
Cyclooctametaphosphate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	ix	NaClO4	21°C	0.50M	U		K1=10.97	1979KWa (14082)	1035

****

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

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce++++     kin NaClO4 25°C  5.0M U                         1970MGc (16053)1036
                                        B(CeL2+HL)=0.53
Medium: LiClO4
--------------------------------------------------------------------------
Ce++++     kin oth/un 35°C 0.10M U                         1967MGb (16054)1037
                                        K3=1.17
--------------------------------------------------------------------------
Ce++++     sp  oth/un 19°C  var  U        K1=2.6    B2=2.2    1965BBf (16055)1038
--------------------------------------------------------------------------
Ce++++     sp  oth/un 20°C  var  U                         1963BKa (16056)1039
                                        K(CeL2+HL)=-0.2
                                        K(HCeL3+H2L)=0.3
--------------------------------------------------------------------------
Ce++++     sp  NaClO4 25°C 5.90M U T H    K1=4.78   B2=8.34   1963BLa (16057)1040
                                        K3=1.88
DH(K1)=-26.3 kJ mol-1, DH(K2)=28.4, DH(K3)=34.7
--------------------------------------------------------------------------
Ce++++     kin oth/un 25°C  var  U                         1960MGa (16058)1041
                                        K(CeL+HL=CeL2+H)=2.07
--------------------------------------------------------------------------
Ce++++     sp  NaClO4 25°C  2.0M U                         1951HRa (16059)1042
                                        *K1=3.54
                                        *K2=2.30
                                        *K3=1.30
**************************************************************************
WO4--                  H2L    Tungstate        CAS 13783-36-3  (445)
Tungstate;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce++++     oth oth/un 16°C 0.10M U                         1971MTb (17431)1043
                                        K'=4.79
K': 3Ce(4+) + 4HW6O21(5-) = 3CeW8O28(4-) + 4H. Method: paper electrophoresis
**************************************************************************
CH4O                     L    Methyl alcohol   CAS 67-56-1  (597)
Methanol; CH3.OH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ce++++     EMF NaClO4 20°C 1.72M U        K1=0.8          1980IDa (17877)1044
**************************************************************************
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
--------------------------------------------------------------------------
Ce++++     kin oth/un 25°C 0.20M U    M                    1968TRb (18830)1045
                                        K(CeAL2+H2L=CeL2A2+2H)=3.26
```

A=SO4. Medium: H2SO4

****

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
Ce++++	sp	NaClO4	25°C	0.80M	U			1968WFa	(19920)1046
							K(CeOH+HL)=-0.41		
							K(2CeOH+HL=CeOCeL+H)=1.43		
							K(3CeOH+HL=Ce3O3(HL)+3H)=5.21		

****

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
Ce++++	kin	NaClO4	25°C	1.50M	U	T H		1977AMb	(20513)1047
							K(Ce+HL)=1.35		
							K(CeOH+HL)=2.08		

****

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
Ce++++	vlt	NaClO4	20°C	2.0M	U			1964TRa	(21514)1048
							K(Ce+H2L=CeL+2H)=0.95		
							K(CeL+H2L=CeL2+2H)=-0.46		
							K(CeL2+H2L)=CeL3+2H)=-0.92		
							K(CeL3+H2L)=CeL4+2H)=1.19(?)		

****

C2H6O L Ethanol CAS 64-17-5 (1913)

Ethanol; CH3.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	EMF	NaClO4	20°C	1.72M	U		K1=0.66	1980IDa	(22025)1049

****

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
Ce++++	kin	NaClO4	18°C	1.50M	U	T		1977AMa	(24417)1050
							Kout(Ce+H2L)=0.35		

****

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
-------------------------------------------------------------------------
Ce++++     gl  oth/un 18°C       C                        2000VSb (25421)1051
                                          K(CeOH+L-1H=Ce(OH)L-1H)=14.97
Medium: 2.0 M (NH4)2SO4
-------------------------------------------------------------------------
Ce++++     kin NaClO4 25°C 1.50M U T H                    1977AMb (25422)1052
                                          K(Ce+HL)=1.18
                                          K(CeOH+HL)=2.28
DH(CeOH+HL=CeL) = -54 kJ mol-1, DS=-136 J K-1 mol-1
*************************************************************************
C3H8O                   L    n-Propanol       CAS 71-23-8  (1914)
1-Propanol; CH3.CH2.CH2.OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce++++     EMF NaClO4 20°C 1.72M U        K1=0.69         1980IDa (27643)1053
*************************************************************************
C3H8O                   L    isoPropanol      CAS 67-63-0  (2024)
2-Propanol; CH3.CH(OH).CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce++++     EMF NaClO4 50°C 1.72M U        K1=-0.18        1980IDa (27645)1054
*************************************************************************
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
-------------------------------------------------------------------------
Ce++++     EMF NaClO4 20°C 1.72M U        K1=1.4          1980IDa (27672)1055
*************************************************************************
C3H8O2                  L    Dihydroxypropan  CAS 504-63-2  (130)
Propane-1,3-diol; HO.CH2.CH2.CH2.OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ce++++     EMF NaClO4 20°C 1.72M U        K1=0.9          1980IDa (27692)1056
-------------------------------------------------------------------------
Ce++++     kin NaClO4 20°C  2.0M U        K1=1.80         1979PMa (27693)1057
                                          K(Ce(OH)+L=CeH-1L)=1.46
                                          K(CeL=CeH-1L+H)=0.78
*************************************************************************
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
-------------------------------------------------------------------------
Ce++++     sp  oth/un 22°C  2.0M U                        2005VSa (27724)1058
                                          K[Ce(OH)+ H-2L]=22.43
```

Medium:(NH4)2SO4
****
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
---
Ce++++ gl oth/un 18°C C 2000VSb (30606)1059
K(CeOH+L-1H=Ce(OH)L-1H)=18.39
Medium: 2.0 M (NH4)2SO4
Also for 27 C K=18.42

Ce++++ sp R4N.X 20°C 1.0M U K1=12.2 1974VPa (30607)1060
Medium: NH4NO3
****
C4H6O6 H2L DL-Tartaric acd CAS 133-37-9 (94)
DL-Tartaric acid,DL-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce++++ sp oth/un 22°C C 2000VSc (31015)1061
K(CeOH+L-2H=Ce(OH)L-2H)=27.76
Medium: 2.0 M (NH4)2SO4; Temperature 22-28 C
K[2CeOH+L-2H=(CeOH)2L-2H]=28.63; found at pH 0.62-3.18 (bad data!!! K.Pop)
****
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
---
Ce++++ kin NaClO4 25°C 1.50M U T H 1977AMb (33456)1062
K(Ce+HL)=1.60
K(CeOH+HL=CeL)=2.57
****
C4H10O L n-Butanol CAS 71-36-3 (1915)
1-Butanol; CH3.CH2.CH2.CH2.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce++++ sp NaClO4 ? 1.70M U K1=1.20 1965OSb (34649)1063
Medium: HClO4
****
C4H10O L Butan-2-ol CAS 15892-23-6 (3572)
sec-Butyl alcohol; C2H5.CH(OH)CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ce++++ sp NaClO4 ? 1.70M U K1=1.04 1965OSb (34654)1064
Medium: HClO4
****

C4H10O HL t-Butanol CAS 75-65-0 (1740)
tert-Butanol, (CH3)3C.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sp	NaClO4	?	1.60M	U		K1=1.12	1965OSb	(34656)1065

Medium: HClO4

****

C4H10O2 L Dihydroxybutane CAS 107-88-0 (131)
Butane-1,3-diol; CH3.CH(OH).CH2.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	kin	NaClO4	20°C	2.0M	U		K1=1.86	1979PMa	(34664)1066
							K(Ce(OH)+L=CeH-1L)=1.41		
							K(CeL=CeH-1L+H)=0.70		

****

C4H10O2 L Dihydroxybutane CAS 110-63-4 (132)
Butane-1,4-diol; HO.(CH2)4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	kin	NaClO4	20°C	2.0M	U		K1=1.76	1979PMa	(34665)1067
							K(Ce(OH)+L=CeH-1L)=1.38		
							K(CeL=CeH-1L+H)=0.76		

****

C4H10O3 L CAS 111-46-6 (3579)
2,2'-Oxydiethanol; (HO.CH2.CH2)2.O (Diethylene glycol)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sp	NaClO4	?	1.70M	U		K1=1.60	1965OSb	(34700)1068

Medium: HClO4

****

C5H12O2 L Methoxybutanol CAS 2517-43-3 (129)
3-Methoxybutane-1-ol; CH3.CH(OCH3).CH2.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	kin	NaClO4	20°C	2.0M	U		K1=1.27	1979PMa	(41643)1069
							K(Ce(OH)+L=CeH-1L)=1.02		
							K(CeL=CeH-1L+H)=0.90		

****

C5H12O2 L Pentanediol CAS 111-29-5 (127)
Pentane-1,5-diol; HO.(CH2)5.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	kin	NaClO4	25°C	2.0M	U		K1=0.90	1979PMa	(41644)1070
							K(Ce(OH)+L=CeH-1L)=1.54		

K(CeL=CeH-1L+H)=1.81

****

C5H12O5 L Xylitol CAS 87-99-0 (2139)

Xylitol; HO.CH2.HCOH.HOCH.HCOH.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sp	oth/un	22°C	2.0M	U			2005VSa	(41684)1071
							K[Ce(OH)+ H-2L]=22.47		

Medium:(NH4)2SO4

****

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
Ce++++	EMF	oth/un	25°C	0.50M	U		K1=11.84 B2=22.32	1966NUa	(46058)1072

****

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
Ce++++	sp	KNO3	25°C	1.0M	U		K1=18.26	1976VPa	(46739)1073
Ce++++	sp	R4N.X	20°C	0.50M	U	I	K1=18.64	1971PMc	(46740)1074

Medium: (NH4)2SO4 pH=3.5. K1(I=1.0)=18.68

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sp	R4N.X	?	1.00M	U		K1=17.9	1969MBg	(46741)1075

Medium: (NH4)2SO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sp	R4N.X	20°C	1.00M	U		K1=18.68	1969MBg	(46742)1076

Medium: (NH4)2SO4 pH=3.5

****

C6H14O2 L Hexanediol CAS 629-11-8 (117)

Hexane-1,6-diol; HO.(CH2)6.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	kin	NaClO4	15°C	2.0M	U		K1=1.18	1979PMa	(51035)1077
							K(Ce(OH)+L=CeH-1L)=1.23		
							K(CeL=CeH-1L+H)=1.24		

****

C6H14O6 L Glucitol CAS 50-70-4 (2878)

D-Sorbitol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sp	oth/un	22°C	2.0M	U			2005VSa	(51101)1078
							K[Ce(OH)+ H-2L]=22.50		

Medium:(NH4)2SO4

****

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
Ce++++	sp	oth/un	30°C	?	U			1970DDb	(52472)1079
							K(Ce+HL)=3.77		

****

C7H5NO5 H2L Nitrosalicylic CAS 96-97-9 (148)

2-Hydroxy-5-nitrobenzoic acid; HO.C6H3(NO2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	sp	oth/un	30°C	0.10M	U			1971KHb	(53044)1080
							K(Ce+H2L=CeL+2H)=3.25		

****

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
Ce++++	sp	oth/un	25°C	2.0M	C			2000VSd	(57392)1081
							K(Ce(OH)+L)=14.93		

Medium: (NH4)2SO4

****

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
Ce++++	kin	NaClO4	18°C	1.50M	U	T H		1977AMb	(59819)1082
							K(Ce+HL)=1.88		
							K(CeOH+HL=CeL)=2.81		

****

C10H14N2O3 HL (7691)

1-Methyl-3-hydroxy-4-(N-propylamido)-2(1H)-pyridinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	oth	KCl	25°C	0.10M	U			2000XRa	(72074)1083
							B4=40.9		

K values calculated from a thermodynamic cycle.

****

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

```
Ce++++     sp  NaClO4 20°C  1.0M U        K1=18.43       1972YPa (73656)1084
pH=2. By Job's method, K1=19.03
--------------------------------------------------------------------------------
Ce++++     sp  oth/un 20°C  1.0M U        K1=26.4        1971PMc (73657)1085
Medium: 1.0 M (NH4)2SO4, pH=2
--------------------------------------------------------------------------------
Ce++++     sp  R4N.X  20°C  1.0M U        K1=24.42       1968MMa (73658)1086
--------------------------------------------------------------------------------
Ce++++     sp  NaClO4 25°C  1.0M U        K1=24.2        1965BRc (73659)1087
                                         K(CeL+OH)=11.2
complex unstable
********************************************************************************
C13H10N2O6S           H2L    MordentYellow10  CAS 21542-82-5  (1390)
5-(4'-Sulfophenylazo)salicylic acid; HO3S.C6H4.N:N.C6H3(OH).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce++++     gl  oth/un 20°C 0.10M M T H    K1=9.3    B2=17.70  1978MBe (84938)1088
Medium: 0.10 M KClO4. Data for 44 C. DH and DS values reported.
********************************************************************************
C13H17N3O               L    Aminopyrine        (2030)
1-Phenyl-2,3-dimethyl-4-dimethylamino-5-pyrazolone, Dimethylaminoantipyrine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ce++++     sp  oth/un 25°C  2.0M U                         1999VNa (85999)1089
                                         K(Ce(OH)+2L)=14.91
Medium:( NH4)2SO4
********************************************************************************
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
--------------------------------------------------------------------------------
Ce++++     EMF oth/un   ?  0.10M U        K1=10.52  B2=15.13  1972GBc (86720)1090
********************************************************************************
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
--------------------------------------------------------------------------------
Ce++++     sp  NaClO4 20°C  1.0M U        K1=30.66       1972YPa (89183)1091
pH=0.7.  Also K1=30.16
--------------------------------------------------------------------------------
Ce++++     sp  oth/un 20°C  1.0M U        K1=34.10       1971PMc (89184)1092
Medium: (NH4)2SO4.  pH=1.4
--------------------------------------------------------------------------------
Ce++++     sp  oth/un   ?   1.0M U        K1=34.1        1970MMb (89185)1093
********************************************************************************
C14H24N2O8            H4L    HMDTA            CAS 1633-00-7  (920)
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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
Ce++++	sp	R4N.X	20°C	0.20M	U		K1=26.0	1978SPb (89569)	1094

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	dis	oth/un	?	0.10M	U		B4=51.6	1970VEa (91543)	1095

****

C16H11N2O8ClS2 H4L Solochrome FN CAS 25747-11-9 (8527)
6-[(5-Chloro-2-hydroxy-3-sulfophenyl)azo]-5-hydroxy-1-naphthalenesulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	gl	oth/un	20°C	0.10M	M T H		K1=16.1 B2=27.50	1978MBe (92777)	1096

Medium: 0.10 M KClO4. Data for 44 C. DH and DS values reported.

****

C18H22N4O7 H2L (7693)
1,5-Bis[carbamoyl-4-(1-methyl-3-hydroxy-2(1H)-pyridinone)]-2-oxapentane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	gl	KCl	25°C	0.10M	U		B2=40.6	2000XRa (97552)	1097

****

C19H24N4O6 H2L CAS 165543-95-3 (7692)
1,5-Bis[carbamoyl-4-(1-methyl-3-hydroxy-2(1H)-pyridinone)]-pentane

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	oth	KCl	25°C	0.10M	U		B2=41.9	2000XRa (99381)	1098

K value calculated from a thermodynamic cycle.

****

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
Ce++++	gl	oth/un	20°C	0.10M	M T H		K1=13.4 B2=19.30	1978MBe (99561)	1099

Medium: 0.10 M KClO4. Data for 44 C. DH and DS values reported.

****

C20H14N2O5S H3L Solochrome 6B CAS 3564-14-5 (3507)
1-(1-Hydroxy-2-naphthylazo)-2-naphthol-4-sulfonic acid, Mordant Black3, Eriochrome blue-black B;

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

---
Ce++++ gl oth/un 20°C 0.10M M T H K1=13.9 B2=22.10 1978MBe (99646)1100
Medium: 0.10 M KClO4. Data for 44 C. DH and DS values reported.

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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
R or IUP=R signifies EVALUATION RATING = Recommended by IUPAC

END