

## SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 1100 experiments for

(no ligands specified)

2 metals : Ce<sup>+++</sup>, Ce<sup>++++</sup>

(no references specified)

(no experimental details specified)

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e- HL Electron (442)

Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ce <sup>+++</sup>	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

Ce <sup>+++</sup>	oth	none	25°C	0.0	U				1952LAb (388)	2
								K(Ce+3e)=-125.9(-2480 mV)		
Ce <sup>+++</sup>	oth	none	25°C	0.0	U				1952SMb (389)	3
								K(Ce+3e)=-118.4(-2335 mV)		

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

Bromide;

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

Medium: HClO4

Ce <sup>+++</sup>	ix	none	25°C	0.0	U			K1=0.38	1951MSa (1818)	5
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CO<sub>3</sub>-- H<sub>2</sub>L Carbonate CAS 465-79-6 (268)

Carbonate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ce <sup>+++</sup>	gl	NaClO4	25°C	0.70M	C			K1=5.53	2004LBb (3162)	6
								K(Ce+HCO <sub>3</sub> =CeHCO <sub>3</sub> )=1.26		

Medium: 0.70 m NaClO4. Calculated for I=0, K1=7.06, B2=11.76,  
K(Ce+HCO<sub>3</sub>=CeHCO<sub>3</sub>)=2.31, K(Ce+HL=CeL+H)=-3.27, K(Ce+2HL=CeL<sub>2</sub>+2H)=-8.90

Ce <sup>+++</sup>	dis	NaClO4	25°C	0.70M	C	I		K1=5.33 B2= 9.24	1998LBb (3163)	7
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Method: H<sub>2</sub>O/tributylphosphate distribution and ICP-mass spectrometry.  
Values calculated for I=0.0 M, K1=7.31, B2=12.32

Ce <sup>+++</sup>	dis	NaClO4	25°C	0.70M	C			K1=5.27 B2=9.37	1993LBa (3164)	8
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$$K(\text{Ce}+\text{HL})=1.74$$

-----  
 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

$$K(\text{Ce}2\text{L}3(\text{s})+6\text{H}=2\text{Ce}+3\text{CO}2(\text{g})+3\text{H}2\text{O})=21.80$$

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C6N6Fe---- H4L (2191)  
 Hexacyanoferrate (II); Fe(II)(CN)6----

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

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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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<sup>-1</sup>, DH(Ce(phen)Cl)=3.2,  
 DH(Ce(phen)Cl2)=17, DH(Ce(phen)Cl3)=23, DH(Ce(phen)2Cl)=-16.

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Ce+++	dis	NaClO4	25°C	1.0M	U	I	K1=-0.04	1999ATa (4590)	13
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 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.

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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<sup>-1</sup>, DH(K2)=11.1, DH(K3)=16  
 DH(K4)=120, DS(K1)=118, DS(K2)=79, DS(K3)=79 J K<sup>-1</sup> mol<sup>-1</sup>

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Ce+++	sol	NaClO4	25°C	?	U		K1=0.47	1982MAa (4593)	16
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 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;  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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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.  
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Ce+++	dis	NaClO4	25°C	0.68M	U	K1=2.76	B2=4.60	1993LBb	(6791)	29
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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<sup>-1</sup>; DS=-130.

Ce+++	ISE	R4N.X	25°C	0.50M	C	K1=2.90	B2=6.57	1989MJb	(6793)	31
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Ce+++	sol	R4N.X	23°C	0.50M	C	K1=3.00	B2= 5.01	1986MJb	(6794)	32
						Kso(CeF3)=-16.66				

Method: radiometry (<sup>141</sup>Ce) 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
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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
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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
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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 <sup>-1</sup> , DS=121.2 J K <sup>-1</sup> m <sup>-1</sup>										

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
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I-	HL	Iodide	CAS 10034-85-2	(20)
Iodide;				

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ce+++      ix  NaCl04 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 NaCl04 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      1923B0a (8502) 47
*****
Mo04--      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
*****
Mo12042U----- 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      1989SBb (8770) 49
                        B(Ce2L)=9.96
*****
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 NaCl04 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
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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	KN03	25°C	var	U				1970MGB	(9610)	55
							*K2=-0.14				
							*K3=-1.5				
							*K4=-2.2				
Medium: HNO3											
Ce+++	oth	NaCl04	30°C	1.0M	U		K1=0.46		1968SRa	(9611)	56
Method: dilatometry,densimetry.											
Ce+++	dis	NaCl04	25°C	1.0M	U		K1=0.21		1965CSb	(9612)	57
Medium: HCl04											
Ce+++	dis	NaCl04	25°C	2.0M	U	M	K1=1.04	B2=1.51	1958FKa	(9613)	58
Medium: HCl04. 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	KN03	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	NaCl04	25°C	0.0	C	IH			2000KBa	(11096)	62
							*K1=-8.34				
In 0.7 M NaCl04, *K1=-8.65. DH(*K1)=57 kJ mol-1.											
Ce+++	gl	NaCl04	50°C	3.00M	C				1988CPa	(11097)	63
							*B(1,1)=-9.13				
							*B(1,2)=-9.45				

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                                *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
*****
P04---      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(CeP04)=-26.27

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Calculated from data for 0.10 M HClO<sub>4</sub> solution.

-----  
 Ce+++ dis NaClO<sub>4</sub> 25°C 0.68M C I K<sub>1</sub>=8.84 1991BLb (13122) 77  
 Method: distribution of <sup>144</sup>Ce between 0.68 m NaClO<sub>4</sub> and tributyl phosphate  
 Calculated for I=0, K<sub>1</sub>=11.73. Conditional constant at I=0.68, K<sub>1</sub>=8.33.  
 -----

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

Ce+++ sp oth/un 23°C 0.10M U 1978LKa (13124) 79  
 K(Ce+H<sub>2</sub>PO<sub>4</sub>)=2.65  
 K(Ce+2H<sub>2</sub>PO<sub>4</sub>)=3.45  
 -----

Ce+++ ix R4N.X 25°C 0.20M U I 1966BEc (13125) 80  
 K(Ce+H<sub>2</sub>L)=1.52  
 Medium: NH<sub>4</sub>ClO<sub>4</sub>. B=2.33 (I=0 corr)  
 -----

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

Ce+++ gl oth/un 20°C dil U 1961CAa (13127) 82  
 K<sub>so</sub>(CeL)=-21.3  
 -----

Ce+++ ix none 25°C 0.0 U K<sub>1</sub>=18.53 1950MSa (13128) 83  
 \*\*\*\*\*  
 PW11039----- H7L (2467)  
 alpha-Heteromonophospho-polytungstate;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	sp	NaNO <sub>3</sub>	25°C	0.60M	U		B <sub>2</sub> =16.6	1978SOa (13401)	84
*****									
		P207----	H4L	Pyrophosphate		CAS 2466-09-3		(198)	
Diphosphate; from (HO)2PO.0.PO(OH)2									

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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+H <sub>2</sub> L)=3.79		

-----

Ce+++ ix none 25°C 0.0 U K<sub>1</sub>=17.15 1950MSa (13566) 86  
 \*\*\*\*\*  
 P2W17061----- 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  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	KNO3	25°C	0.10M	U T H		B2=8.2 K(Ce+2HL)=6.2	1974KR a (13845)	89
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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  
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Ce+++ sp NaCl 25°C 0.30M U K2=3.88 1960GIa (13846) 90  
\*\*\*\*\*

S-- H2L Sulfide CAS 7783-06-4 (705)  
Sulfide;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	oth	none	25°C	0	U		Kso(Ce2S3)=-23.3 *Kso(Ce2S3)=28.7	1988LIa (14330)	91
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Derived from thermodynamic data and K(H+S=HS)=17.3.  
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Ce+++	oth	none	25°C	0.0	U		Kso(Ce2L3)=-10.22	1952GGc (14331)	92
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From thermodynamic data

\*\*\*\*\*

SCN- HL Thiocyanate CAS 463-56-9 (106)  
Thiocyanate;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	dis	NaClO4	25°C	5.0M	U T		K1=0.59	1974KCa (14841)	93
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K1=0.44(10 C)  
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Ce+++	dis	R4N.X	25°C	2.0M	U		K1=-0.30 B2=0.20	1973CDd (14842)	94
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Medium: NH4NO3  
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Ce+++	ix	NaClO4	?	5.0M	U I		K1=0.10 B3=-0.28	1962LYb (14843)	95
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In 0.5 M NH4ClO4 K1=0.59. At I=0 corr K1=1.54. Method: cation exchange

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S03-- 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
*****									
S04--		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 B3=3.29	1980BKb (16035)	98
Ce+++	gl	oth/un	25°C	0.60M	U T		K(CeHSO4)=0.30	1979KSa (16036)	99
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	NaCl04	30°C	1.0M	U		K1=1.76	1968SRa (16041)	104
Method: dilatometry,densimetry. Dv1=15.1 cm3									
Ce+++	ISE	NaCl04	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	NaCl04	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	NaCl04	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		K1in/K1=-0.9	1964LAb (16046)	109
Method:infrared spectra. Medium:Ce2L3									

Ce+++ ix NaCl04 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 1954K0b (16048) 111

Ce+++ con oth/un 25°C 0.0 U K1=3.59 1954SJa (16049) 112

Ce+++ sp NaCl04 25°C 1.0M U IH K1=1.25 1953NAa (16050) 113  
DH(K1)=15.2 kJ mol<sup>-1</sup>, DS=74.5 J K<sup>-1</sup> mol<sup>-1</sup>. At I=0 corr.: K1=3.37,  
DH(K1)=19.6, DS=130.5

Ce+++ ix NaCl04 20°C 1.0M U K1=1.63 B2=2.34 1952FRc (16051) 114  
K3=0.74

Ce+++ ix NaCl04 25°C 0.50M U I K1=1.78 1951CMa (16052) 115

Method:cation exchange, K1=1.92(I=0)

S203-- 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

Se03-- 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

W04-- 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+) + 4HW6021(5-) = 3CeW8028(5-) + 4H. Method: paper electrophoresis

CH202 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

C2H02Cl3 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									
Ce+++	cal	NaClO4	25°C	2.00M	U		K1=0.66	1980ECa (18392)	121
*****									
C2H2O3		HL					CAS 298-12-4	(1142)	
Glyoxylic acid; OHC.COOH									
Ce+++	gl	NaClO4	20°C	0.10M	U		K1=2.39 B2=4.17 K3=0.9	1964PSd (18417)	122
*****									
C2H2O4		H2L					CAS 144-62-7	(24)	
Ethanedioic acid; (COOH)2									
Ce+++	ix	R4N.X	25°C	0.05M	C		K1=5.04 B2= 9.67 K(Ce+HL)=2.43	2001SBf (18823)	123
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 B3=10.2	1987CBc (18825)	125
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 B3=10.30 B4=11.75	1969GGa (18827)	127
Ce+++	sol	KNO3	20°C	2.0M	U		K1=6.05 B2=8.82 Kso=-25.5	1957BDd (18828)	128
Ce+++	sol	oth/un	25°C	0.0	U		K1=6.52 B2=10.48 K3=0.82	1951CMb (18829)	129
*****									
C2H3O2Cl		HL					CAS 79-11-8	(34)	

Chloroethanoic acid; ClCH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	cal	NaClO <sub>4</sub>	25°C	2.00M	U		K1=0.98	1980ECa (19356)	130
*****									
C <sub>2</sub> H <sub>4</sub> N <sub>4</sub> S		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	KNO <sub>3</sub>	25°C	0.10M	C		K1=4.05	2003AHa (19497)	131
*****									
C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>		HL		Acetic acid			CAS 64-19-7	(36)	
Ethanoic acid; CH <sub>3</sub> .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	NaClO <sub>4</sub>	25°C	1.0M	C		B2=2.57 B3=2.72	1981MSb (19911)	133
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Method: competitive extraction with thenoyltrifluoroacetone in CCl<sub>4</sub>.

Ce+++	EMF	diox/w	?	50%	U	I	K1=3.04 B2=4.90 B3=6.51	1971MCb (19912)	134
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Medium: 0-70% dioxan, 0.5 M NaClO<sub>4</sub>. 0%: K1=1.88, B2=3.08. 40%: K1=2.96, B2=4.07, B3=5.57

Ce+++	dis	NaClO <sub>4</sub>	25°C	2.00M	U	T	K1=1.70	1970CSd (19913)	135
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K1(2.1C)=1.49, K1(46.6C)=1.74

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
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Medium: 0-80% EtOH, 2 M NaClO<sub>4</sub>. 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.

Ce+++	oth	oth/un	?	?	U		B3=3.31	1967MBa (19915)	137
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Method : paper electrophoresis

Ce+++	cal	NaClO <sub>4</sub>	25°C	2.0M	C	H		1964GRa (19916)	138
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DH(K1)=8.753 kJ mol<sup>-1</sup>, DS(K1)=61.9 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=15.33, DS(B2)=104; DH(B3)=21.4, DS(B3)=133.

Ce+++	gl	NaClO <sub>4</sub>	20°C	0.10M	U		K1=2.09 B2=3.53	1962KPa (19917)	139
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Method: quinhydrone electrode

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Ce+++ ix R4N.X 20°C 0.10M C T K1=1.77 B2= 2.65 1983JUa (20505) 151

Method: ion exchange using  $^{141}\text{Ce}$  tracer. Medium: 0.10 M  $\text{NH}_4\text{Cl}$ .  
At 30 C,  $K_1=1.86$ ,  $B_2=2.87$ .

Ce+++      gl    KN03    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<sup>-1</sup>, DS(K1)=34 J K<sup>-1</sup> mol<sup>-1</sup>; 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+++      g1   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+++ g1 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	1959S0b (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
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Ce+++ gl NaCl04 25°C 0.20M U K1=4.42 B2= 7.94 1996PJa (21506) 159

Ce+++      gl    KN03    25°C 0.20M U      M    K1=6.10      1990LSb (21507) 160  
K(Ce(phen)+L)=5.87

Ce+++ gl NaCl04 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 NaCl04 25°C 0.20M U M K1=5.38 1985LSe (21510) 163  
K(Ce(edta)+L)=4.32.

Ce+++      gl    NaCl04 30°C    0.2M U      T K1=4.46      1977MSf (21511) 164

Ce+++ dis NaCl04 25°C 2.0M U T H T 1968TCa (21512) 165  
 $K(\text{Ce}+\text{HL})=0.53$   
 $K=0.34(0^\circ\text{C}), 0.70(40^\circ\text{C}), 0.76(55^\circ\text{C})$ .  $\text{DH}=13.8\text{ kJ mol}^{-1}$ ,  $\text{DS}=58.5\text{ J K}^{-1}\text{ mol}^{-1}$

-----  
 Ce+++ gl KCl 30°C 0.10M U T  $K_1=3.40$  B2=6.40 1962CTa (21513) 166  
 \*\*\*\*\*  
 C2H5NO2 HL Acetohydroxamic CAS 546-88-3 (2766)  
 Acetohydroxamic acid, N-Hydroxyacetamide;  $\text{CH}_3\text{CO.NHOH}$

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaCl	31°C	0.15M	U	I	$K_1=6.35$ B2=11.63	1992SKa (21805)	167

 $K_3=5.10$

Also data for 25 and 50% v/v EtOH/H2O.  
 \*\*\*\*\*  
 C2H6N2O L Acethydrazide CAS 1068-57-1 (2566)  
 Ethanoic acid hydrazide, Acetylhydrazine;  $\text{CH}_3\text{CO.NH.NH}_2$

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaCl04	20°C	0.10M	U		$K(\text{CeL}+\text{A})=3.31$	1974PJa (21965)	168

HA=pentane-2,4-dione  
 \*\*\*\*\*  
 C2H6OS HL CAS 60-24-2 (841)  
 2-Mercaptoethanol;  $\text{HS.CH}_2\text{CH}_2\text{OH}$

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaCl04	25°C	0.10M	U	T	$K_1=5.62$	1981SKb (22063)	169

 Temp range 15-35.  $K_1$  at 15 = 5.85;  $K_1$  at 45 = 5.31

-----  
 C2H6OS L DMSO CAS 67-68-5 (329)  
 Dimethylsulfoxide;  $(\text{CH}_3)_2\text{SO}$

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	sp	non-aq	25°C	100%	U		$K_8=1.3$ $K_9=0.7$ $K_{10}=0.4$	1992MBb (22093)	170

Medium: MeCN. Method: FT-IR and Raman spectroscopy  
 \*\*\*\*\*  
 C2H6O2 L Ethyleneglycol CAS 107-21-1 (924)  
 1,2-Dihydroxyethane (Ethane-1,2-diol);  $\text{HO.CH}_2\text{CH}_2\text{OH}$

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaCl04	22°C	0.10M	U		$K(\text{CeH}-1\text{L}+\text{H})=8.00$	1972MCd (22140)	171



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C3H4O3                      HL      Pyruvic acid      CAS 127-17-3 (1152)  
2-Oxopropanoic acid; CH<sub>3</sub>.CO.COOH

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

Ce+++            nmr NaClO<sub>4</sub> 25°C 2.00M U    H      K<sub>1</sub>=1.59            1980CCa (24045) 172  
DH=-4.47 kJ mol<sup>-1</sup>. Alternative method: Calorimetry.

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C3H4O4                      H2L      Malonic acid      CAS 141-82-2 (79)  
Propanedioic acid; CH<sub>2</sub>(COOH)<sub>2</sub>

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

Ce+++            gl    NaClO<sub>4</sub> 25°C 0.20M U      M      K<sub>1</sub>=4.11            1986LSb (24410) 173  
K(Ce(EDTA)+L)=3.28

Ce+++            gl    NaClO<sub>4</sub> 25°C 0.20M U      M      K<sub>1</sub>=4.11            1985LSf (24411) 174  
K(Ce(edta)+L)=3.26

Ce+++            gl    NaClO<sub>4</sub> 25°C 0.20M U      M      K<sub>1</sub>=4.11            1984LSd (24412) 175  
K(Ce(edta)+L)=3.28

Ce+++            dis NaClO<sub>4</sub> 25°C 1.0M C            K<sub>1</sub>=3.17    B<sub>2</sub>= 4.84    1981MSb (24413) 176  
Method: competitive extraction with thenoyltrifluoroacetone in CCl<sub>4</sub>.

Ce+++            gl    NaClO<sub>4</sub> 25°C 0.10M U            K<sub>1</sub>=4.21            1972DCc (24414) 177

Ce+++            gl    NaClO<sub>4</sub> 25°C 1.00M U            K<sub>1</sub>=3.23    B<sub>2</sub>=5.23    1971DGa (24415) 178  
B(CeHL)=6.38  
B(CeHL<sub>2</sub>)=9.30

Ce+++            gl    KNO<sub>3</sub>    25°C 0.10M U            K<sub>1</sub>=3.83    B<sub>2</sub>=6.17    1968PFa (24416) 179

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

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

Ce+++            gl    KCl      25°C 0.20M U            K<sub>1</sub>=3.68            1973LPb (24622) 180

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C3H5NO<sub>2</sub>                      HL                      (4234)  
Isonitrosoacetone; CH<sub>3</sub>.CO.CH:N.OH, anti-Pyruvic aldehyde oxime

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

Ce+++            gl    diox/w 20°C 50% U            K<sub>1</sub>=4.90            1971MAf (24639) 181  
Medium: 50% dioxan, 0.1 M NaClO<sub>4</sub>

\*\*\*\*\*

C3H6N<sub>2</sub>O<sub>2</sub>                      L      Methylglyoxime      CAS 2140-03-6 (2981)

Methylglyoxime; CH<sub>3</sub>.C(:N.OH).CH:N.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	diox/w	20°C	50%	U		K1=6.22 B2=11.51	1971MAf (24801)	182
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Medium: 50% dioxan, 0.1 M NaClO<sub>4</sub>

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C<sub>3</sub>H<sub>6</sub>O<sub>2</sub> HL Propionic acid CAS 79-09-4 (35)  
Propanoic acid; CH<sub>3</sub>.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	NaNO <sub>3</sub>	25°C	0.10M	U		K1=2.18 B2=3.56	1977SCa (24988)	183
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Ce+++	EMF	diox/w	25°C	50%	U	I	K1=3.10 B2=5.17 B3=6.11	1971MCc (24989)	184
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Medium: 0-70% dioxan, 0.5 M NaClO<sub>4</sub>. 0%: K1=1.85, B2=2.95, B3=3.01  
70%: B2=6.29, B3=8.05

Ce+++	gl	NaClO <sub>4</sub>	25°C	2.0M	U		K1=1.67 B2=2.67	1965CGa (24990)	185
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Ce+++	gl	NaClO <sub>4</sub>	20°C	0.10M	U		K1=2.05 B2=3.28	1964PKa (24991)	186
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C<sub>3</sub>H<sub>6</sub>O<sub>2</sub>S H<sub>2</sub>L Thiolactic acid CAS 79-42-5 (366)  
2-Mercaptopropanoic acid; CH<sub>3</sub>.CH(SH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	NaClO <sub>4</sub>	25°C	0.20M	U		K1=5.99 B2=11.23	1996PJ a (25130)	187
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Ce+++	gl	NaClO <sub>4</sub>	25°C	2.00M	U		K(Ce+HL)=1.36	1968CMa (25131)	188
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C<sub>3</sub>H<sub>6</sub>O<sub>2</sub>S H<sub>2</sub>L CAS 107-96-0 (437)  
3-Mercaptopropanoic acid; HS.CH<sub>2</sub>.CH<sub>2</sub>.COOH

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

Ce+++	gl	NaClO <sub>4</sub>	25°C	2.00M	U		K(Ce+HL)=1.57	1968CMa (25201)	189
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Ce+++	gl	KCl	30°C	0.10M	U		K(Ce+HL)=2.41 K(CeHL+HL)=2.48	1962CTa (25202)	190
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C<sub>3</sub>H<sub>6</sub>O<sub>3</sub> HL CAS 81598-26-7 (2521)  
3-Hydroxypropanoic acid; HO.CH<sub>2</sub>.CH<sub>2</sub>.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			

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-----
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+++      g1    NaNO3    25°C   0.10M   M   I   M   K1=4.69      1995KDd (27121) 217

$$K(\text{Ce}(\text{egta})+\text{L})=3.48$$

Data for 0.15 and 0.05 M NaNO<sub>3</sub>. At I=0, K<sub>1</sub>=4.94, K(Ce(egta)+L)=3.72.

Ce+++      EMF KCl      22°C 0.10M U      K1=4.57      1968RPa (27122) 218

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C3H802	L	Propyleneglycol	CAS 57-55-6	(2025)
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Propan-1,2-diol;  $\text{CH}_3.\text{CH}(\text{OH}).\text{CH}_2(\text{OH})$

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

Ce+++      gl    NaClO4 22°C 0.10M U      1972Mcd (27671) 219

$$K(\text{CeH}-1\text{L}+\text{H})=8.05$$

\*\*\*\*\*

C3H8O3	L	Glycerol	CAS 56-81-5 (2707)
--------	---	----------	--------------------

Propane-1,2,3-triol;  $\text{HO}\cdot\text{CH}_2\cdot\text{CH}(\text{OH})\cdot\text{CH}_2\cdot\text{OH}$

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

Ce+++      gl    NaCl04 22°C 0.10M U                          1972MCd (27723) 220

$$K(\text{CeH}-1\text{L}+\text{H})=7.95$$

\*\*\*\*\*

C3H12N09P3                      H6L            NTPA                      CAS 6419-19-8    (2920)

Nitrilotris(methylenephosphonic acid);  $N(CH_2PO_3H_2)_3$

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

$$K(\text{Ce}+\text{HL})=5.77$$
$$K(\text{Ce}+2\text{HL})=8.88$$

\*\*\*\*\*

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 19760Ca (28638) 222

DH(K1)=7.5 kJ mol<sup>-1</sup>, DS=77 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=13.1, DS=119

Ce+++      gl   NaCl04 25°C 0.10M C    H      K1=2.720   B2= 4.13   19760Cb (28639) 223

By calorimetry:  $\Delta H(K1) = 7.45 \text{ kJ mol}^{-1}$ ,  $\Delta S(K1) = 77.0 \text{ J K}^{-1} \text{ mol}^{-1}$ .

$$DH(B2)=13.1, \quad DS(B2)=119.$$

\*\*\*\*\*

C4H4N2	L	Pyridazine	CAS 289-80-5	(1484)
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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.

\*\*\*\*\*

C4H4N2O5S 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 NaCl04 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; H00C.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; H00C.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      1991M0a (29263)   232

\*\*\*\*\*

C4H5NO5                      H2L                      (7375)  
Oxalohydroxamic acid; H00C.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; H00C.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; H00C.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; H00C.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; H00C.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      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; H00C.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; HOOCH<sub>2</sub>CH<sub>2</sub>OCOOH

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<sup>-1</sup>, DS(K1)=92.9 J K<sup>-1</sup> mol<sup>-1</sup>; 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; HOOCH(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 198000a (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

$$K(2\text{Ce}+3\text{L})=14.7$$

\*\*\*\*\*

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	K(CeL+A)=3.69	2003AHa (31828)	261
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 K(Ce(EDTA)+L)=4.71	1986LSb (31832)	265
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 K3=2.75	1962CTa (31835)	268

Ce+++      gl      KCl      25°C    0.10M    U                      K1=5.2      B2=9.80      1961BLb (31836)    269

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C4H7NO4                      H2L      IDA                      CAS 142-73-4    (118)  
Iminodiethanoic acid; HN(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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<sup>-1</sup>, DS=36.8 J K<sup>-1</sup> mol<sup>-1</sup>. 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.CO.OH

-----  
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<sup>-1</sup>. Further data available for T=40. Alternative method:

Conductivity.

\*\*\*\*\*

C4H8N2O4 H2L CAS 39156-77-9 (3008)

Hydrazine-N,N-diethanoic acid; H2N.N(CH2.CO.OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	oth	KN03	25°C	0.10M	U		K1=10.2 K(Ce+HL)=4.08	1971LSc (33101)	284

Method: electrical migration or transference number

\*\*\*\*\*

C4H8O2 HL Isobutyric acid CAS 79-31-2 (573)  
2-Methylpropanoic acid; CH<sub>3</sub>.CH(CH<sub>3</sub>).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaCl04	25°C	2.00M	U	H	K1=1.62 B2=2.72	1965CGa (33221)	285

By calorimetry: DH(K1)=13.9 kJ mol<sup>-1</sup>, DS=77.7 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=10.8, DS=57

Ce+++	gl	NaCl04	25°C	0.50M	U		K1=1.79 B2=2.32	1964SPa (33222)	286
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C4H8O2 HL CAS 107-92-6 (1118)  
n-Butanoic acid; CH<sub>3</sub>.CH<sub>2</sub>.CH<sub>2</sub>.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 K3=1.25	2003ASa (33333)	287

Ce+++	EMF	diox/w	25°C	60%	U	I	K1=3.44 B2=5.93 B3=7.57	1971MSi (33334)	288
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Medium: 0-70% dioxan, 0.5 M NaCl04. 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.CH<sub>2</sub>.CH<sub>2</sub>.CO<sub>2</sub>.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KN03	25°C	0.10M	U	T H	K1=2.32 K(CeL+30H)=1.28	1975SBa (33369)	289

DH=-33.3 kJ mol<sup>-1</sup> and DS=-42.7 J mol<sup>-1</sup> K<sup>-1</sup>.

Values available when T=35 and 45 and also via conductivity.

\*\*\*\*\*

C4H8O3 HL CAS 594-61-6 (81)  
2-Hydroxy-2-methylpropanoic acid; (CH<sub>3</sub>)<sub>2</sub>C(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	oth	oth/un	25°C	0.10M	U		K1=2.61 B2=4.20 B3=5.70	1971SHb (33449)	290

Method: electrical migration or transference number

Ce+++	ix	NaCl04	25°C	1.0M	U		K1=2.36 B2=3.96	1967LNa (33450)	291
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B3=4.7

B4=5.6

By distribution: K1=2.37, B2=3.93

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaCl04	25°C	0.20M	U		K1=2.55 K3=1.4	B2=4.08	1964DVa (33451) 292

Ce+++	gl	NaCl04	20°C	0.10M	U		K1=2.80 B3=5.95	B2=4.74	1964PKb (33452) 293
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Ce+++	gl	NaCl04	25°C	0.50M	U		K1=2.37	B2=4.01	1964SPa (33453) 294
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Ce+++	gl	NaCl04	25°C	2.0M	U		K1=2.43 K3=1.00	B2=4.32	1961CCa (33454) 295
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Ce+++	ix	NaCl04	20°C	0.20M	U		K1=2.43 B3=5.3	B2=4.34	1960SVa (33455) 296
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C4H8O4 HL CAS 21620-60-0 (2326)

2,3-Dihydroxy-2-methylpropanoic acid; HO.CH2.C(OH)(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KNO3	25°C	0.10M	C		K1=2.83 K3=1.38	B2=4.88	1975PFb (33675) 297

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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	NaCl04	25°C	0.50M	U		K1=2.61 B3=5.98	B2=4.45	1964SPa (33692) 298

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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	NaCl04	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
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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
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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
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Ce+++	oth	oth/un	25°C	U	K1=1.36	1971Mgb (35254)	303
Estimated							

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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
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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<sup>-1</sup>.

\*\*\*\*\*

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
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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

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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
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Ce+++ cal NaClO4 25°C 0.10M U H K1=3.10 B2=4.40 1978COa (35938) 306  
 DH(K1)=3.42 kJ mol<sup>-1</sup>, DS=70.6; DH(K2)=4.39, DS=39.7

\*\*\*\*\*

C5H4N02Cl H2L CAS 53223-89-9 (5916)  
5-Chloropyridine-2,3-diol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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 Ce+++ gl diox/w 35°C 50% U K1=7.15 1984SSd (36031) 307  
 \*\*\*\*\*

C5H5N L Pyridine CAS 110-86-1 (31)  
 Pyridine, Azine;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	nmr	non-aq	25°C	100%	C	H		2004MBa (36597) 308	
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K(CeA3+L)=0.90  
 K'(CeB3+L)=3.7

1H nmr in d- toluene. DH(K)=-36 kJ mol<sup>-1</sup>, DS=-104 J K<sup>-1</sup> mol<sup>-1</sup>; 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
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Ce+++	gl	diox/w	25°C	50%	U		K1=7.33	1970GDa (36782) 309	
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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
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Ce+++	gl	alc/w	25°C	50%	U	T	K1=5.10 K3=4.56	1973SSf (37344) 310	
-------	----	-------	------	-----	---	---	--------------------	---------------------	--

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

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Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.93 K(Ce(EDTA)+L)=3.99	1986LSb (37358) 311	
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Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.98 K(Ce(edta)+L)=4.01	1985LSf (37359) 312	
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Ce+++	vlt	KCl	25°C	1.0M	C	T	H	K1=3.82	1983KCa (37360) 313
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Method: polarography. Medium pH 2.75. Data for 35 C. DH and DS values.  
 \*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ethylpropanedioic acid;  $\text{HOOC} \cdot \text{CH}(\text{C}_2\text{H}_5) \cdot \text{COOH}$

In 70.4% v/v EtOH/H<sub>2</sub>O: K<sub>1</sub> = 6.14

\*\*\*\*\*

Pentanedioic acid;  $\text{HOOC} \cdot \text{CH}_2 \cdot \text{CH}_2 \cdot \text{CH}_2 \cdot \text{COOH}$

$$K(\text{Ce}(\text{EDTA})+\text{L})=3.08$$
$$K(\text{Ce}(\text{edta})+\text{L})=3.12$$
$$K(\text{Ce}(\text{edta})+\text{L})=3.08$$

\*\*\*\*\*

2,3,4-Trihydroxypentanedioic acid, Trihydroxyglutaric acid;  $\text{HOOC} \cdot (\text{CH}(\text{OH}))_3 \cdot \text{COOH}$

\*\*\*\*\*

Pyrrolidine-2-carboxylic acid; C4H8N.COOH

35 C,  $K_1=4.79$ ; 45 C, 4.73.  $\Delta H=-19.1 \text{ kJ mol}^{-1}$ ,  $\Delta S=29.4 \text{ J K}^{-1} \text{ mol}^{-1}$

Data for 35 C. DH(K1)=12 kJ mol<sup>-1</sup>, DS(K1)=156 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

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
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Data for 35 C. DH(K1)=53 kJ mol<sup>-1</sup>, DS(K1)=271 J K<sup>-1</sup> mol<sup>-1</sup>.

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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		K(CeL+A)=3.45	2003AHa (39073)	337

HA is 3-amino-5-mercapto-1,2,4-triazole.

Ce+++	gl	NaCl	37°C	0.15M	U		K1=3.81	1991DWb (39074)	338
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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 K(CeL+H)=4.5 K(Ce+HL)=6.6 K(CeHL+HL)=3.69	1981KKe (39672)	339

\*\*\*\*\*

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
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Ce+++	gl	NaClO4	25°C	0.10M	U		B2=7.09	1973TSb (39815)	342
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C5H10O3                      HL                      CAS 3739-30-8    (3612)

2-Hydroxy-2-methylbutanoic acid, Methylene glycolic acid; CH3.CH2.C(OH)(CH3)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KNO3	25°C	0.10M	U		K1=2.51    B2=4.23 K3=1.20	1969PCa (40248)	343

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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 B3=4.78	1960SVa (40270)	344
*****									
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 K3=1.15	1975PFb (40308)	345
*****									
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 K(Ce(phen)+L)=5.78	1990LSb (40691)	348
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=6.05 K(Ce(EDTA)+L)=5.33	1986LSb (40692)	349
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





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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;
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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;
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-----
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
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-----
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.
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-----
Ce+++      gl  NaClO4 25°C 0.20M U          K1=9.18      1996PJ a (43737) 376
-----

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-----
Ce+++      gl  NaClO4 25°C 0.20M U      M      K1=8.65      1986LSb (43738) 377
                      K(Ce(EDTA)+L)=6.50
-----

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-----
Ce+++      gl  NaClO4 25°C 0.20M U      M      K1=8.74      1985LSf (43739) 378
                      K(Ce(edta)+L)=6.61
-----

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-----
Ce+++      gl  NaClO4 28°C 0.20M U      M      K1=8.65      1982LSa (43740) 379
                      K(Ce(edta)+L)=6.50
-----

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-----
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.
-----

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-----
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.
*****

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C6H6O2          H2L    Resorcinol          CAS 108-46-3 (3645)
1,3-Dihydroxybenzene; HO.C6H4.OH
-----

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

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Ce+++ gl NaCl04 25°C 0.20M U M K1=4.55 1986LSb (43875) 382  
K(Ce(EDTA)+L)=2.20

Ce+++ gl NaCl04 25°C 0.20M U M K1=4.59 1985LSf (43876) 383  
K(Ce(edta)+L)=2.24

Ce+++ gl NaCl04 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 NaCl04 25°C 0.20M U K1=9.75 1996PJ a (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 NaCl04 25°C 0.20M U M K1=3.75 1986LSb (44012) 386  
K(Ce(EDTA)+L)=2.40

Ce+++ gl NaCl04 25°C 0.20M U M K1=3.79 1985LSf (44013) 387  
K(Ce(edta)+L)=2.44

Ce+++ gl NaCl04 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

C6H7NO2 HL CAS 19365-01-6 (6771)  
1-Methyl-3-hydroxy-2-pyridinone;

Ce+++      g1   KCl      25°C 0.10M U      K1=6.07      B2=11.00      2000XRa (45024) 392  
B3=14.6

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

C6H8O4                      H2L                      CAS 2583-25-7 (958)  
2-Allylpropanedioic acid;  $\text{HOOC} \cdot \text{CH}(\text{CH}_2 \cdot \text{CH} : \text{CH}_2) \cdot \text{COOH}$

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

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

Ce+++ g1 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

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

Method: ion transfer voltammetry at water/nitrobenzene interface.  
Medium: 0.10 M LiNO<sub>3</sub>, pH 5.8



-----  
 Ce+++ ix NaCl 25°C 0.10M U K1=6.70 B2=11.21 197200a (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)  
 Nitritotriethanoic 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<sup>-1</sup>, DS=8.8 J K<sup>-1</sup> mol<sup>-1</sup>.  
 DH(CeAL)=-36.2 kJ mol<sup>-1</sup>, DS=272 J K<sup>-1</sup> mol<sup>-1</sup>  
 -----

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 <sup>-1</sup> , DS=225; DH(K2)=-12.8, DS=105								
Ce+++	vlt	KNO3	20°C	0.10M	U	B(Ce2L3)=36.0	1957NOa (46736)	416
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 K(CeL+A)=3.59	2003AHa (47841) 422
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 K3=1.08	1966PRb (47985) 424
*****								
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.										

Ce+++	gl	NaClO4	25°C	1.00M	C	H		K1=4.64 B3=8.83 B(CeHL2)=9.49	1974GGa (48333)	426
-------	----	--------	------	-------	---	---	--	-------------------------------------	-----------------	-----

\*\*\*\*\*  
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 K(Ce(edta)+L)=3.97	1997PPb (48469)	427
-------	----	--------	------	-------	---	---	--	-------------------------------	-----------------	-----

\*\*\*\*\*  
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 K(CeL2(OH)+H)=10.50	1974CMd (48696)	428
-------	----	------	------	-------	---	--	--	---	-----------------	-----

Ce+++	oth	KNO3	15°C	0.10M	U			K(Ce+HL)=7.80 K(Ce+2HL)=12.50	1972SHb (48697)	429
-------	-----	------	------	-------	---	--	--	----------------------------------	-----------------	-----

Method: electrical migration or transference number

Ce+++	oth	oth/un	25°C	0.10M	U			K1=7.8      B2=12.5	1971SHb (48698)	430
Method: electrical migration or transference number										

Ce+++	ix	R4N.X	25°C	0.10M	U			K1=8.50      B2=14.97	1969EBa (48699)	431
Medium: NH4ClO4										

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										

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)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaNO3	25°C	0.10M	M	M	K1=5.42 *K(CeL)=-8.48 *K(Ce(OH)L)=-8.94 K(Ce(egta)+L)=3.60	1996KDd (50061)	444
Data for 0.05-0.15 M NaNO3. At I=0, K1=5.60, K(Ce(egta)+L)=3.77.									
Ce+++	gl	KN03	25°C	0.20M	U	M	K1=5.35 K(Ce(phen)+L)=5.28	1990LSb (50062)	445
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 K(Ce(EDTA)+L)=4.59	1986LSb (50064)	447
Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=5.84 K(Ce(edta)+L)=4.59.	1985LSe (50065)	448
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 *K(CeL)=-8.52 *K(Ce(OH)L)=-9.96 K(Ce(egta)+L)=3.57	1996KDd (50171)	450
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 B3=12.75 K(CeA+L)=9.30	1991DTa (50172)	451
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	KN03	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 1970KR a (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<sup>-1</sup>

-----  
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
*****									
C6H20N2012P4		H8L		EDTPA			CAS 1429-50-1	(434)	
Ethane-1,2-bis(iminobis(methylenephosphonic acid)); ((H2O3PCH2)2NCH2.)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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									
*****									
C7H4N207		H2L					CAS 609-99-4	(400)	
3,5-Dinitrosalicylic acid; (O2N)2.C6H2(OH).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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									
*****									
C7H5N04		H2L		Dipicolinic aci			CAS 449-83-2	(418)	
2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	KN03	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 <sup>-1</sup> , DS(K1)=109 J K <sup>-1</sup> mol <sup>-1</sup> ; 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
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*****									
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

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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   NaCl04 25°C 0.20M U      M T K1=6.21      1986LSb (54518) 482  
K(Ce(EDTA)+L)=4.13

-----  
Ce+++      gl   NaCl04 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   NaCl04 25°C 0.20M U      M    K1=6.23      1985LSf (54520) 484  
K(Ce(edta)+L)=4.19

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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   NaCl04 25°C 0.20M U      K1=10.08      1996PJa (54663) 485

-----  
Ce+++      gl   NaCl04 25°C 0.20M U      M    K1=8.15      1986LSb (54664) 486  
K(Ce(EDTA)+L)=4.44

-----  
Ce+++      gl   NaCl04 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   NaCl04 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.

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C7H6O5S      H2L      CAS 632-25-7 (4436)  
2-Carboxybenzenesulfonic acid; H00C.C6H4.S03H

-----  
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

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C7H6O6S      H3L      CAS 5965-83-3 (399)  
5-Sulfosalicylic acid, 2-Hydroxy-5-sulfobenzoic; H03S.C6H3(OH).COOH

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

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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

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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

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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<sup>-1</sup>, DS(K1)=-194 J K<sup>-1</sup> mol<sup>-1</sup>. 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<sup>-1</sup>, DS=-115 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K')=-80,  
DS=-192. A: t-butyl-cyclopentadiene; B: trimethylsilyl-cyclopentadiene.

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C7H9NO3S HL CAS 87655-41-2 (5520)  
2,6-Dimethylpyridine-3-sulfonic acid;

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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

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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

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C7H11NO6 H3L (2926)  
2-Aminobutanoic-N-propane-1,3-dioic acid; HOOC.CH(C2H5).NH.CH(COOH)2

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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

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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

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C7H12N2O3 HL Gly-Pro CAS 704-15-4 (257)  
Glycyl-proline; H2N.CH2.CO.NC4H7.COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	KNO3	25°C	0.15M	M T H		K1=3.50	1979SKd (57116)	513
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Data for 35 and 45 C. At 35 C, K1=3.60, DH(K1)=20.9 kJ mol<sup>-1</sup>, DS(K1)=138 J K<sup>-1</sup> mol<sup>-1</sup>.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	NaClO4	25°C	1.0M	U		K1=1.99 B2=3.48	1967STd (57257)	514
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C7H12O4		HL					CAS 96740-23-7	(2249)	
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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
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Ce+++	gl	diox/w	24°C	50%	U		K1=5.1	1979ACa (57290)	515
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C7H12O4		H2L					CAS 510-20-3	(482)	
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Diethylpropanedioic acid (Diethylmalonic acid); HOOC.C(C2H5)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	KNO3	25°C	0.10M	U		K1=3.78 B2=6.32	1968PFa (57359)	516
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C7H13NO5		H2L					(8081)		
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4-Hydroxy-2-aminopentane-1,5-dioic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	KCl	20°C	0.1M	U		K1=5.11	1978KPe (57554)	517
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Data for threo isomer. For erythro isomer: K1=4.92

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C7H13NO6		H2L					CAS 32013-58-4	(6079)	
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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
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Ce+++	gl	KNO3	20°C	0.10M	U		K1=7.84 B2=14.16	1980RPa (57608)	518
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C7H14N2O3		HL		Gly-Val			CAS 7963-21-9	(973)	
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Glycyl-valine; H2N.CH2.CO.NH.CH(CH(CH3)2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	KNO3	30°C	0.15M	U T H		K1=3.62	1980SKe (57753)	519
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Data for 20 and 40 C. DH(K1)=6.22 kJ mol<sup>-1</sup>, DS(K1)=90.4 J K<sup>-1</sup> mol<sup>-1</sup>.  
Ligand is glycyl-DL-valine.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	EMF	NaClO4	25°C	1.0M	U		K1=2.23 B2=3.57 K3=1.31	1965TVa (57858)	520

Method: quinhydrone electrode

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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 *K(CeL)=-5.80 K(2Ce(OH)L=Ce2(OH)2L2)=9.54	2001AAb (57992)	523

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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		Kso=4.01	1960WKa (58389)	524

\*\*\*\*\*

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
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K(Ce+H2L)=3.65

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C8H5O2F3S                      HL        TTA                      CAS 326-91-0 (165)  
4,4,4-Trifluoro-1-(2-thienyl)butane-1,3-dione; F3C.CO.CH2.CO.C4H3S

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	alc/w	22°C	80%	U		K1=5.94    B2=11.09 K3=3.76	1995MTa (58607)	527

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 K(Ce(ada)+L)=4.67	1996MIa (58953)	528

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 K(Ce(egta)+L)=3.97	1995KDb (58954)	529
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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 K(Ce(EDTA)+L)=3.48	1986LSb (58955)	530
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Medium: 40% v/v EtOH/H2O, 0.2 M NaClO4

Ce+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.41 K(Ce(edta)+L)=3.51	1985LSf (58956)	531
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Ce+++	gl	NaNO3	25°C	0.10M	U		K1=3.45    B2=5.25	1977SCa (58957)	532
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Ce+++	gl	NaClO4	30°C	0.10M	U		K1=3.96    B2=7.12	1966KPb (58958)	533
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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

\*\*\*\*\*

C8H7O2Cl1 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

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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.

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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Ce+++ sp alc/w ? 3% U K1=6.42 1967GDb (59593) 539  
Medium: 3% EtOH, 0.2 M NaClO4

\*\*\*\*\*

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

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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



$$K(\text{Ce}+\text{HL})=5.96$$

Medium: 20% v/v EtOH/H<sub>2</sub>O, 0.10 M NaNO<sub>3</sub>. Also data for 0.05 and 0.15 M NaNO<sub>3</sub>. At I=0 (20% v/v), K<sub>1</sub>=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; CH<sub>3</sub>O.C<sub>6</sub>H<sub>4</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	alc/w	25°C	42%	U		K <sub>1</sub> =2.6	1983PMa (59723)	542

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	cal	alc/w	25°C	60%	U	H		1996YLa (59815)	543

$$K(\text{CeL}+\text{Phen})=3.15$$

Medium: 60% v/v MeOH/H<sub>2</sub>O. Phen: 1,10-phenanthroline.  
DH=-3.22 kJ mol<sup>-1</sup>, DS=49.5 J K<sup>-1</sup> mol<sup>-1</sup>.

Ce+++	gl	NaClO <sub>4</sub>	25°C	2.0M	U	T	K <sub>1</sub> =2.17	1972DCb (59816)	544
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Ce+++	gl	KNO <sub>3</sub>	25°C	1.0M	U	I	K <sub>1</sub> =2.03 B <sub>2</sub> =3.53	1967PNb (59817)	545
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At I=0.1: K<sub>1</sub>=2.34, K<sub>2</sub>=1.8

Ce+++	gl	NaClO <sub>4</sub>	25°C	1.0M	U		K <sub>1</sub> =2.24 B <sub>2</sub> =3.75 K <sub>3</sub> =1.27 K <sub>4</sub> =0.64	1966TVa (59818)	546
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C8H8O3 HL CAS 148-52-8 (3193)  
3-Methoxysalicylaldehyde; CH<sub>3</sub>O.C<sub>6</sub>H<sub>3</sub>(OH).CHO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaNO <sub>3</sub>	25°C	0.10M	M	I M	K <sub>1</sub> =4.356	1995KDd (59928)	547

$$K(\text{Ce}(\text{egta})+\text{L})=2.767$$

Data for 0.15 and 0.05 M NaNO<sub>3</sub>. At I=0, K<sub>1</sub>=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		K <sub>1</sub> =3.39	1978AGc (60052)	548

Medium: 50% v/v dioxane/H<sub>2</sub>O, 0.10 M NaClO<sub>4</sub>.

\*\*\*\*\*

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
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Ce+++	gl	NaNO3	25°C	0.10M	M	I M	K1=4.79 K(Ce(egta)+L)=4.49	1995KDc (60232)	550
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Data for 0.05 and 0.15 M NaNO3. At I=0, K1=5.10, K(Ce(egta)+L)=4.61.

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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
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Ce+++	gl	KNO3	30°C	0.10M	C	M	K1=5.54 B2=10.70 K3=4.40 K(Ce(hedta)+L)=3.99	1987RSc (60338)	551
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hedta is N-hydroxyethyldiaminoethane-N,N',N'-triethanoic acid.

Ce+++	gl	KNO3	20°C	0.10M	M	T	K1=5.62 B2=10.85 K3=4.48	1986RSc (60339)	552
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Data for 20-50 C. At 30 C, K1=5.54, K2=5.16, K3=4.40.

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C8H9NO4 H2L (4520)  
Dehydroethanoic acid oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	diox/w	35°C	50%	U		K(Ce+HL)=3.95 K(Ce+2HL)=7.08	1971MAa (60489)	553
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Medium: 50% dioxan, 0.01 M NaClO4

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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
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Ce+++	gl	NaClO4	25°C	0.10M	U		K1=12.65 B2=23.90	1980ZMa (60565)	554
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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
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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.

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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.

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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

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

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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  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ce+++	gl	KNO3	20°C	0.10M	U			K1=11.58 B2=16.08	1975DPa (61495)	562
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Ce+++	vlt	KNO3	25°C	0.10M	U			K1=10.68	1972GBd (61496)	563
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Ce+++	gl	KNO3	25°C	0.10M	U			K1=10.76	1972GBd (61497)	564
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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
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Ce+++	gl	KNO3	20°C	0.10M	U			K1=8.77 B2=14.93	1974RMg (61760)	565
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C8H13NO6 H3L (5681)  
 2-Aminobutanoic-N,N-diethanoic acid; CH3CH2CH(COOH)N(CH2COOH)2  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ce+++	gl	KNO3	20°C	0.10M	U			K1=10.48 B2=17.63	1974RMg (61784)	566
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C8H13NO6S H3L (5675)  
 2-Mercapto-1-aminoethane-N,N,S-triethanoic acid; HOOCC(CH2)2S(CH2)2N(CH2COOH)2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ce+++	gl	NaClO4	25°C	0.10M	U			K1=8.07 K(Ce+HL)=2.47	1975POa (61819)	567
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C8H14O2 HL CAS 7307-04-2 (3208)  
 5,5-Dimethylhexane-2,4-dione; CH3.CO.CH2.CO.C(CH3)3  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ce+++	gl	diox/w	30°C	75%	U			K1=10.60 B2=20.80 B3=29.30	1953UFd (62045)	568
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C8H18N2O4S HL HEPES CAS 7365-45-9 (2786)  
 4-(2-Hydroxyethyl)-1-piperazine-ethanesulfonic acid;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ce+++	gl	KNO3	25°C	0.10M	C			K1=3.40	2001AAb (62874)	569
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\*K(CeL)=-5.25

K(2Ce(OH)L=Ce2(OH)2L2)=8.63

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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

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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

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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

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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

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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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Ce+++ ix KCl 20°C 0.10M U K1=12.07 1971TIa (63484) 576  
K(Ce+HL)=9.80

Method: cation exchange

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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 B3=21.69 1973SCd (63659) 580

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;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	diox/w	25°C	60%	U		B3=16.95	1973SCd (63861)	582

Medium: 60% dioxan, 0.1 M NaClO4

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C9H7NO	HL	Oxine	CAS 148-24-3	(504)
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8-Hydroxyquinoline (8-quinolinol);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	diox/w	25°C	60%	U		Beta3=22.98	1973SCd (64240)	583

Medium: 60% dioxan, 0.1 M NaClO4

Ce+++	gl	diox/w	30°C	50%	U	K1=8.64	B2=16.53	1970GMB (64241)	584
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Medium: 50% dioxan, 0.3 M NaClO4

Ce+++	gl	diox/w	25°C	50%	U	K1=9.15	B2=17.13	1952JFa (64242)	585
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C9H7NO2	HL		CAS 1127-45-3	(4614)
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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

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C9H7NO4S	H2L	Sulfoxine	CAS 84-88-8	(448)
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8-Hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	EMF	KN03	20°C	0.10M	U	HM		1971GKb (64526)	587

K(CeA+L)=3.80

By calorimetry, DH(CeA+L)=-18.72 kJ mol<sup>-1</sup>, DS=-8.77 J K<sup>-1</sup> mol<sup>-1</sup>.

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	1958F0b (64527)	588
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K3=3.9

DH(K1)=-15.5 kJ mol<sup>-1</sup>, DS=63 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-17.6, DS=38; DH(K3)=-19.2, DS=13

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C9H7N3O2S	H2L	TAR	CAS 2246-46-0	(707)
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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	19850Hb (64698)	589

K(Ce+HL)=4.08

$$K(\text{CeL}+\text{H})=6.08$$

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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

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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.

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

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

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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.

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C9H10O4 H2L CAS 3853-88-1 (5687)  
endo-cis-Bicyclo-[2,2,1]-5-hepten-2,3-dicarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Method: polarography. Medium pH 2.70. Also data for 35 C.

At 35 C, I=0:  $K(\text{Ce}+\text{HL})=4.65$

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2,3-Diaminopropanoic-N,N'-di-1,3-propanedioic acid;  
(HOOC)2CH.NH.CH(COOH).CH2.NH.CH(COOH)2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	ISE	KNO3	25°C	0.10M	U		K1=11.74	1983KBd (66731)	604
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Hg-electrode.

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	KNO3	25°C	0.10M	U		K1=9.72 B2=16.37	1968TKe (66881)	605
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C9H14N3O8P	H2L	CMP-5	CAS 63-37-6	(1243)
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Cytidine-5'-monophosphoric acid, Cytidilic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	KNO3	25°C	0.10M	C	M	K1=4.80	2001AAb (67251)	606
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\*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.

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	NaClO4	25°C	0.10M	U		K1=11.36	2002BBh (67366)	607
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B(CeHL)=20.16

B(CeH2L)=26.54

B(CeH3L)=29.4

B(CeH-1L)=0.5

B(CeH-2L)=-12.0.

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C9H15NO6	H3L	(7177)
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2-Aminopentanoic-N,N-diethanoic acid; C3H7C(COOH)N(CH2COOH)2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	KNO3	20°C	0.10M	U		K1=10.15 B2=17.27	1974RMg (67404)	608
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C9H16O4	H2L	CAS 1636-27-7	(485)
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Dipropylpropanedioic acid (Di-n-propylmalonic acid);

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++ gl NaClO4 30°C 0.10M U K1=2.48 1969DNc (68756) 616  
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C10H7NO5S H2L CAS 14090-74-5 (2676)  
1-Nitroso-2-hydroxynaphthalene-7-sulfonic acid;

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

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

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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;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Ce+++ gl KCl 25°C 0.10M U K1=4.42 1968MAe (69003) 621  
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C10H7O2F3 HL CAS 326-06-7 (196)  
3-Benzoyl-1,1,1-trifluoroacetone; CF3.CO.CH2.CO.C6H5

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

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

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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
							(7069)		
C10H8N2O2S2 L 3-Benzamidorhodanine; C6H5.CO.NH.C3H2NS2:0									

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 K3=4.02	1994BSd (69693)	625
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
							CAS 1823-44-5 (4780)		
C10H9N3OS HL 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

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C10H9N3OS HL CAS 60321-26-8 (4671)

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

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

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

Medium: 10% dioxan, 0.1 M KNO3

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

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

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

Ce+++ dis NaClO4 20°C 0.10M U K1=6.17 B2=12.10 1969EVa (70715) 631  
K3=4.89

-----  
Ce+++ gl diox/w 30°C 75% U K1=10.09 B2=19.42 1953UFe (70716) 632  
K3=7.62

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C10H10O6 H2L CAS 5411-14-3 (2394)

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

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

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C10H12N2O4 H2L CAS 16598-05-3 (967)

2-Pyridylmethyliminodiethanoic acid; C5H4N.CH2.N(CH2.COOH)2

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Ce+++ ix R4N.X 25°C 0.10M U K1=8.34 B2=15.68 1969EBa (71252) 634  
Medium: 0.1 M NH4ClO4

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Ce+++ gl KNO3 25°C 0.10M U K1=8.30 B2=14.74 1964THa (71253) 635

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C10H12O2 HL CAS 1946-74-3 (202)

3-Isopropyltropolone;

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

Medium: 3% EtOH, 0.2 M NaClO4

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C10H14N2O3 HL (7691)

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

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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;									
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;									
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									
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;									
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.									
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. H4B=ATP. Also at 2 (K=4.5), 35 (K=4.4) and 45 C (K=4.2)								K(CeL+B)=4.3,	
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<sup>-1</sup>, DS=289 J K<sup>-1</sup> mol<sup>-1</sup>

Ce+++ cal KNO3 20°C 0.10M U H 1958SRa (73651) 661  
DH(K1)=-10.1 kJ mol<sup>-1</sup>, DS=271 J K<sup>-1</sup> mol<sup>-1</sup>

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 1993VL a (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<sup>-1</sup>, DS(K1)=183 J K<sup>-1</sup> mol<sup>-1</sup>. 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

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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<sup>-1</sup>, 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
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Ce+++	gl	NaCl04	25°C	0.50M	U			K1=13.56	1977GGb (75342)	671
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Ce+++	gl	KNO3	25°C	0.10M	U	M			1963TLb (75343)	672
-------	----	------	------	-------	---	---	--	--	-----------------	-----

K(CeL+A)=3.50

K(CeL+B)=4.07

K(CeL+C)=3.60

H2A=iminodiethanoic acid, H2B=hydroxyethyliminodiethanoic acid,

H2C=diaminoethane-N,N'-diethanoic acid

Ce+++	EMF	oth/un	20°C	0.10M	U			K1=14.45	1962PMa (75344)	673
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Ce+++	gl	KNO3	15°C	0.10M	U	T H		K1=14.25	1961MFb (75345)	674
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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<sup>-1</sup>(25C), DS=227 J K<sup>-1</sup> mol<sup>-1</sup>

Ce+++	gl	KCl	25°C	0.10M	U			K1=14.08	1956SPa (75346)	675
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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				1960WKa (75600)	676
-------	----	--------	------	-------	---	--	--	--	-----------------	-----

Kso=-24.38

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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<sup>-1</sup>, DS(K1)=70.6 J K<sup>-1</sup> mol<sup>-1</sup>.

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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<sup>-1</sup>.

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

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C10H22O5                      L      Tetraglyme              CAS 143-24-8    (121)

2,5,8,11,14-Pentaoxapentadecane; (CH3.O.CH2.CH2.O.CH2.CH2.)20

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-----
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
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-----
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;
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-----
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;
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-----
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;
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-----
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);
-----

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-----
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
-----
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 K3=8.17	1953UFd (77157)	688

\*\*\*\*\*

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; CH0.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 K3=2.30	1985ECa (77197)	690

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 K3=7.87	1953UFd (77212)	691

\*\*\*\*\*

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 K(Ce+HL)=1.41	1979LAb (77221)	692

\*\*\*\*\*

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		B3=19.83	1973SCd (77328)	693

Medium: 60% dioxan, 0.1 M NaClO4

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

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

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C11H9N3O2	H2L	PAR	CAS 1141-59-9	(636)
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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	19840Ha (77530)	695
-------	----	-------	------	-------	---	--	---------	-----------------	-----

K(La+HL)=3.78

\*K(LaHL)=-6.47

Medium pH 4.8-6.3.

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C11H11NO6	H3L	CAS 1147-65-5	(425)
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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

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C11H12N2O2	HL	CAS 103314-23-4	(6182)
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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

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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
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By potentiometry: K1=4.6

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C11H13NO3	H2L	CAS 67777-63-3	(8480)
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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

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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

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C11H18N2O8 H4L CAS 38539-29-0 (2573)

1,3-Diaminopropane-N,N'-di(1,4-butanedioic acid)

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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

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C11H18N2O8 H4L CAS 4408-81-5 (923)

1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((H<sub>2</sub>OC.CH<sub>2</sub>)<sub>2</sub>N.CH<sub>2</sub>.)<sub>2</sub>.CH<sub>2</sub>

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

Ce+++	ix	KNO <sub>3</sub>	20°C	0.10M	U	H	K <sub>1</sub> =11.75 K(CeL+H)=4.55	1971AWa (79427)	710
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DH=15.0 kJ mol<sup>-1</sup>, DS=275 J K<sup>-1</sup> mol<sup>-1</sup>

Ce+++	gl	KNO <sub>3</sub>	20°C	0.10M	U		K <sub>1</sub> =11.75 K(CeL+H)=4.55	1964LAa (79428)	711
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C11H18N2O9 H4L HDPTA CAS 3148-72-9 (431)

1,3-Diamino-2-hydroxypropane-N,N,N',N'-tetraethanoic acid;

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

Ce+++	gl	KNO <sub>3</sub>	25°C	0.10M	M		K <sub>1</sub> =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	KNO <sub>3</sub>	25°C	0.10M	U		K <sub>1</sub> =9.54	1976GKd (79591)	713
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C11H22O5 L 16-Crown-5 CAS 55477-28-8 (1592)

1,4,7,10,13-Pentaoxacyclohexadecane; cyclo(-(O.CH<sub>2</sub>.CH<sub>2</sub>)<sub>5</sub>.CH<sub>2</sub>.CH<sub>2</sub>-)

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

Ce+++	cal	non-aq	25°C	100%	U	H	K <sub>1</sub> =2.49	1993LLa (79850)	714
-------	-----	--------	------	------	---	---	----------------------	-----------------	-----

Medium: MeCN. DH(K<sub>1</sub>)=-35.4 kJ mol<sup>-1</sup>.

C12H7O2F7 L (6994)

1-Heptafluoropropyl-3-phenylpropane-1,3-dione; C<sub>3</sub>F<sub>7</sub>.CO.CH<sub>2</sub>.CO.C<sub>6</sub>H<sub>5</sub>

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

Ce+++	gl	alc/w	22°C	80%	U		K <sub>1</sub> =6.34 B <sub>2</sub> =11.59 K <sub>3</sub> =5.18	1995MTa (80179)	715
-------	----	-------	------	-----	---	--	--	-----------------	-----

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

C12H8N2 L Phenanthroline CAS 66-71-7 (144)

1,10-Phenanthroline;

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

Ce+++	sp	non-aq	25°C	100%	C	H	K <sub>1</sub> =1.88 B <sub>2</sub> = 2.50	2002KNc (80418)	716
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Medium: N,N-dimethylformamide, 0.20 M Et<sub>4</sub>NClO<sub>4</sub>. By calorimetry: DH(K<sub>1</sub>)=-17.4 kJ mol<sup>-1</sup>, DH(B<sub>2</sub>)=-36. Alternative model: K<sub>1</sub>=1.50, DH(K<sub>1</sub>)=-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	NaCl04	20°C	0.10M	U		K1=9.24 B2=17.38 K3=7.03	1969EVa (80575)	717

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 NaCl04

\*\*\*\*\*

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 NaCl04

\*\*\*\*\*

C12H12NO3Cl HL (1055)  
2-Chloro-4-dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H3Cl.CH:CH.CO.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	sp	NaCl04	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 K3=4.00	2000TBb (81068)	721

Medium: 0.1 M NaCl04 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<sup>-1</sup>  
DS(K1)=-12.1 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-40.97 kJ mol<sup>-1</sup>, DS(K2)=-11.1J K<sup>-1</sup>mol<sup>-1</sup>.



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*****
C12H13NO3          HL                      (1054)
4-Dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H4.CH:CH.CO.COOH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ce+++      sp  NaCl04 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          K(Ce+HL)=5.08  1979TSa (81602) 724
*****
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
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\*\*\*\*\*  
 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
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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 <sup>-1</sup> . 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 <sup>-1</sup> .									

\*\*\*\*\*

C12H28N2O9P2		H4L					(7242)		
1,4,10-Trioxa-7,13-diazacyclopentadecane-7,13-diylldimethylenediphosphonic 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
*****									
C13H502F13S		L					(6997)		
1-(2-Thienyl)-3-tridecafluorohexylpropane-1,3-dione; C6F13.CO.CH2.CO.C4H3S									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	alc/w	22°C	80%	U		K1=5.43 B2=10.27 K3=3.89	1995MTa (84450)	756
Medium: 0.1 M NaClO4 in 80% (v/v) EtOH/H2O.									

\*\*\*\*\*

C13H803		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
*****									
C13H9F02S		HL					CAS 43191-66-8	(6154)	
1-(2'-Thienyl)-3"-fluoro-2"-hydroxyphenyl)-prop-1-one-2-ene; C4H3S.CH:CH.CO.C6H3(OH)F									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	NaClO4	30°C	0.10M	U		K1=4.24	1989SHa (84512)	758
*****									
C13H9N204Cl		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 K3=4.69	1977AKa (84601)	759
*****									
C13H1002S		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 K3=9.07	1953UFd (84986)	760
*****									
C13H1003		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
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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
*****									
C13H15N06		H3L						(4999)	
2-Benzylnitritotriethanoic 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
*****									
C13H19N03		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	KN03	25°C	0.10M	C		K1=9.51 K(Ce+HL)=6.34	1982PPd (86190)	773
*****									
C13H22N2O8		H4L						CAS 1198-14-7 (5004)	

1,2-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCCH<sub>2</sub>)<sub>2</sub>NCH<sub>2</sub>CH(C<sub>3</sub>H<sub>7</sub>)N(CH<sub>2</sub>COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ce+++	vlt	KNO <sub>3</sub>	20°C	0.10M	U			K1=17.13	1974NL a (86223)	774
*****										
C <sub>13</sub> H <sub>22</sub> N <sub>2</sub> O <sub>8</sub>				H <sub>4</sub> L				(7164)		
2,4-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCCH <sub>2</sub> ) <sub>2</sub> NCH(CH <sub>3</sub> )CH <sub>2</sub> CH(CH <sub>3</sub> )N(CH <sub>2</sub> COOH) <sub>2</sub>										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ce+++	gl	KNO <sub>3</sub>	20°C	0.10M	U			K1=10.65	1981NS c (86250)	775
*****										
C <sub>13</sub> H <sub>22</sub> N <sub>2</sub> O <sub>8</sub>				H <sub>4</sub> L				(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	KNO <sub>3</sub>	20°C	0.10M	U			K1=16.98	1968NL b (86278)	776
*****										
C <sub>13</sub> H <sub>22</sub> N <sub>2</sub> O <sub>9</sub>				H <sub>4</sub> L	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	KNO <sub>3</sub>	25°C	0.10M	C			K1=14.26 K(Ce+HL)=8.89	1985PL a (86299)	777
*****										
C <sub>13</sub> H <sub>26</sub> O <sub>5</sub>				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	1998LB c (86468)	778
Medium: acetonitrile. DH(K1)=-11.92 kJ mol <sup>-1</sup> , DS(K1)=2.9 J K <sup>-1</sup> mol <sup>-1</sup> . *****										
C <sub>14</sub> H <sub>8</sub> O <sub>4</sub>				H <sub>2</sub> L	Alizarin			CAS 72-48-0	(1058)	
1,2-Dihydroxyanthraquinone;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ce+++	gl	oth/un	25°C	0.10M	U			K1=11.67	1981EI a (86638)	779
*****										
C <sub>14</sub> H <sub>8</sub> O <sub>7</sub> S				H <sub>3</sub> L	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	NaClO <sub>4</sub>	25°C	0.20M	U	M		K1=10.06	1987VS a (86718)	780



Ce+++      gl   NaClO<sub>4</sub> 25°C 0.20M U      M      K<sub>1</sub>=10.06      1984LSe (86719) 781  
K(Ce(edta)+L)=7.97  
B(Ce(edta)L)=19.80

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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C14H10N02F 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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

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-sulfohenyl)-3-cyanoformazan;

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

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

\*\*\*\*\*

C14H12N02Cl 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 K3=6.77	1983AGb (87071)	788

35 C: K1=8.76 K2=7.38, K3=6.28

\*\*\*\*\*

C14H12N02F 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 K3=7.06	1983AGb (87080)	789

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 B3=12.60	1976WPb (87175)	790

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 K3=6.45	1983AGb (87241)	791

35 C: K1=8.45, K2=6.95, K3=5.95

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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 K3=6.08	1977AKa (87249)	792

\*\*\*\*\*

C14H12N2O4 HL (179)

N-3-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=8.75 B2=15.98 K3=6.20	1977AKa (87260)	793

\*\*\*\*\*

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 K3=6.81	1977AKa (87273)	794

\*\*\*\*\*

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 K3=6.81	1977AKa (87286)	795

\*\*\*\*\*

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 K3=7.25	1983AGb (87443)	796

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<sup>-1</sup>, DS(K1)=330 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

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

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	diox/w	25°C	75%	C T H		K1=13.29 B2=24.93	1997EIa (87864)	799
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Medium: 75% v/v dioxane/H2O, 0.10 M KNO3. Data for 10-40 C. DH(K1)=-6.16 kJ mol<sup>-1</sup>, DS(K1)=-6.32 J K<sup>-1</sup> mol<sup>-1</sup>; 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
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Ce+++	gl	mixed	30°C	0.10M	U T H		K1=11.48 B2=21.04	1988TRb (87882)	800
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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
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Ce+++	gl	R4N.X	25°C	0.10M	C		K1=2.97	1990CBe (88144)	801
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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
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Ce+++	dis	non-aq	25°C	100%	U		B2=7.88	1990NIa (88245)	802
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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
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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
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Ce+++	dis	R4N.X	25°C	0.12M	C		K1=1.98	1998SUa (88389)	804
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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
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Ce+++	gl	KCl	25°C	1.0M	U		K1=6.50	1987CMe (88438)	805
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K(CeHL+H)=5.92

K(CeL+H)=8.42

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C14H22N2O8                      H4L      cis-1,4-CDTA      CAS 92681-25-9    (2848)  
 cis-1,4-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

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
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Ce+++	gl	KCl	25°C	1.00M	U			K1=16.97	1984MFa (88602)	809
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Ce+++	sp	KCl	25°C	0.10M	U			K2=5.4	1981KKf (88603)	810
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Ce+++	gl	NaCl04	25°C	0.50M	U			K1=15.89	1977GGb (88604)	811
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Ce+++	oth	oth/un	25°C	0.10M	U			K1=16.68 K(Ce+HL)=7.90	1971SHb (88605)	812
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Method: electrical migration or transference number.

Ce+++	oth	KCl	20°C	0.10M	U			K1=16.67 K(Ce+HL)=2.93	1967SMa (88606)	813
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Method: ionic migration. Medium: (KCl,HCl).

Ce+++	vlt	KN03	20°C	0.10M	U			K1=16.76	1954SGa (88607)	814
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 C14H22N2O8                      H4L      trans-1,3-CDTA      CAS 92681-24-8    (2849)  
 trans-1,3-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

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
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Ce+++ gl KCl 25°C 1.0M U K1=7.5 1987CMe (88849) 816  
 K(CeHL+H)=5.84  
 K(CeL+H)=7.3

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 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;

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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<sup>-1</sup>, DS=304.2 J mol<sup>-1</sup> K<sup>-1</sup>. Also data for 283 and 313 K

-----  
 Ce+++ gl NaClO4 25°C 1.0M C M K(CeL+H)=1.54 1987LBa (89171) 820  
 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<sup>-1</sup>, DS(K1)=338 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
 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<sup>-1</sup>

-----  
 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<sup>-1</sup>

-----  
 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; (H00CCH2)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; ((H00C.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;  
(H00CCH2)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.CO0H)CH2.CO0C2H5)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	KN03	25°C	0.10M	U		K1=11.27 K(Ce+HL)=6.83	1984TPa (89725)	838

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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 KN03 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	KN03	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<sup>-1</sup>, DS=251 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
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 1993KCa (90245) 850  
K(CeL+H)=1.25

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-diylldimethylenediphosphonic 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 1996BJa (90760) 852  
K(Ce+HL)=9.73  
K(Ce+H2L)=5.29

Medium: 0.1 M Me4NCl

\*\*\*\*\*  
C14H37O12N2P4 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 K1=6.67 1987ZGa (90932) 853  
K(Ce+HL)=6.67  
\*\*\*\*\*

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  
\*\*\*\*\*

C15H1102Cl 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  
\*\*\*\*\*

C15H120S HL (1261)  
mono-Thiodibenzoylmethane; C6H5.CO.CH2.CS.C6H5

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

Ce+++ gl NaCl04 30°C 0.05M U K1=7.00 B2=13.42 1979VMa (91489) 858  
K3=5.84  
\*\*\*\*\*

C15H1202 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  
\*\*\*\*\*

C15H1202 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  
\*\*\*\*\*

C15H15N02 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  
\*\*\*\*\*

C15H15N03 HL (6240)  
N-4-Tolyl-4'-methoxybenzohydroxamic acid; CH3O.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	25°C	50%	U T H		K1=10.14 B2=18.78 K3=7.65	1983AGb	(91863) 863

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-Benzylldiaminoethane-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 B3=22.0	1997RPb	(92279) 866

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 K(Ce+HL)=12.25	1989SPa	(92389) 867

\*\*\*\*\*

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

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
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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(methylenephosphonate monoethylester)

-----  
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-naphthalylldisulfonic acid;

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

Ce+++      gl    NaCl04 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 NaCl04. In 30%: B3=20.12

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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

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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

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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			1993INa (94247)	888

B(Ce+3P+2L)=7.58

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
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Ce+++	dis	R4N.X	25°C	0.12M	C		K1=1.84	1998SUa (94474)	889
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Medium: 0.12 M Et4NBr.

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

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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
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Ce+++	gl	R4N.X	25°C	0.10M	C		K1=8.44	1988CCb (94565)	890
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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
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Ce+++	sp	KCl	25°C	0.08M	U		K1=10.5	1994FCa (94664)	891
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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
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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
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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
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Ce+++	vlt	KNO3	20°C	0.10M	U		K1=14.77	1969NDc (94733)	894
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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 K(CeL+H)=1.9	1998BFa (94883)	896
Medium: 0.1 M NMe4Cl.									
Ce+++	gl	NaCl	25°C	1.00M	C		K(Ce+H2L)=4.5	1994TBa (94884)	897
Ce+++	sp	NaCl	37°C	1.0M	C		K1=21.6	1994TBb (94885)	898
Ce+++	kin	NaClO4	25°C	3.0M	C		K(Ce+H2L)=3.30	1987BLb (94886)	899
*****									
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 <sup>-1</sup> , DS=125 J K <sup>-1</sup> mol <sup>-1</sup> .									
Ce+++	gl	R4N.X	25°C	0.10M	U		K1=12.27	1983CRb (95031)	901
*****									
C16H32O7		L					(6411)		
15-(2,5-Dioxaheptyl)-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 <sup>-1</sup> .									
*****									
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
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Ce+++	gl	NaCl04	25°C	0.10M	M				1987ZGa (95667)	904
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K(Ce+HL)=6.31

C17H12N03Cl 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
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Ce+++	gl	diox/w	30°C	70%	U			K1=4.83 B2=8.59 B3=11.33	1987ECa (95688)	905
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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
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Ce+++	gl	diox/w	30°C	70%	U			K1=4.68 B2=8.31 B3=11.05	1987ECa (95705)	906
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C17H13N03 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
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Ce+++	gl	diox/w	30°C	70%	U			K1=5.37 B2=9.75 B3=12.80	1987ECa (95736)	907
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C17H13N04 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
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Ce+++	gl	alc/w	25°C	70%	U	TIH		K1=7.04 B2=12.64	1998ISd (95752)	908
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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.

C17H13N05 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
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Ce+++	gl	alc/w	25°C	70%	U	TIH		K1=7.34 B2=13.85	1998ISd (95755)	909
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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 K3=4.46	1969EVa (95874)	911

\*\*\*\*\*

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.C4H0(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-carboxylic 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 K3=3.67	2000TBb (96281)	914

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 K(Ce+HL)=2.60	19880Ha (96415)	915

\*\*\*\*\*

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<sup>-1</sup>.

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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Ce+++ gl KNO3 25°C 0.10M U K1=8.08 1984TPa (96567) 917

K(Ce+HL)=5.33

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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Ce+++ sp KCl 25°C 0.10M C K1=18.8 2000STb (96697) 918

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

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

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C18H13NO4 H3L CAS 698-51-6 (8424)  
2-Hydroxy-4-[[2-hydroxy-1-naphthalenyl)methylene]amino]benzoic acid;

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

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C18H13NO6 H3L CAS 216243-28-6 (8614)  
5,7-Dihydroxy-6-[[2-carboxyphenyl)imino]methyl]-2-methyl-4H-1-benzopyran-4-one;

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

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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<sup>-1</sup>  
 DS=262 J K<sup>-1</sup> mol<sup>-1</sup>. DH(K2)=59, DS=286. Protonation constants not reported.

C18H15N03 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 B3=15.61	1987ECa (96992)	923

C18H16N2O3 HL (5560)  
 2-(2-Acetylphenylhydrazon)-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 B(CeHL)=24.1	2000XRa (97551)	925

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

C18H29N04 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
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Ce+++	cal	non-aq	25°C	100%	C H		K1=2.43	1998LBc (97875)	928
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Medium: acetonitrile. DH(K1)=-41.09 kJ mol<sup>-1</sup>, DS(K1)=-91.4 J K<sup>-1</sup> mol<sup>-1</sup>.

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C18H30N2O11		H2L					CAS 93049-99-1	(5832)	
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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
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Ce+++	gl	R4N.X	25°C	0.10M	C		K1=8.57	1988CCb (97905)	929
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C18H30N4O12		H6L			TTHA		CAS 869-52-3	(694)	
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Triethylenetetraaminehexaethanoic acid;((HOOCH<sub>2</sub>)<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>2</sub>COOH)<sub>2</sub>)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	vlt	R4N.X	30°C	0.01M	C		K1=19.60	1981GMh (98016)	930
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Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.

Ce+++	sp	oth/un	?	?	U		K1=19.20	1969HGa (98017)	931
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B(Ce2L)=15.45

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C18H32N4O8		H4L			TETA		CAS 60239-22-7	(1019)	
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1,4,8,11-Tetraazacyclotetradecane-1,4,8,11-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	NaNO3	25°C	0.20M	C		K1=13.12	1991KKa (98195)	932
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C18H34N2O8		H2L					CAS 68670-15-5	(5851)	
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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
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Ce+++	gl	R4N.X	25°C	0.10M	C		K1=6.85	1988CCc (98333)	933
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C18H34N4O9		H3L			D03A-B		(7301)		
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10-[2,3-Dihydroxy-(1-hydroxymethyl)-propyl]-1,4,7,10-tetraazacyclododecane-1,4,7-triethanoic ac.;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce+++	gl	NaCl	25°C	0.10M	C I		K1=17.8	1996TKa (98375)	934
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In 0.1 M Me4NCl K=19.7

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C18H36N2O6		L			Cryptand 2,2,2		CAS 23978-09-8	(514)	
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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-diylldimethylenediphosphonic acid bis(Et-ester);									
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									
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 ;									
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.									
*****									
C19H15N08			H4L			Alizarin Comp.	CAS 3952-78-1 (671)		
(3,4-Dihydroxy-2-anthraquinonyl-methyl)iminodiethanoic acid;									
Ce+++	sp	diox/w	20°C	20%	C		K22=15.84	1987ZJa (99130)	940
*****									
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]-benzenesulfonamide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	alc/w	25°C	30%	U T H		K1=7.54 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 <sup>-1</sup> DS=263 J K <sup>-1</sup> mol <sup>-1</sup> . 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									
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;									
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 <sup>-1</sup> .									
*****									
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;									
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;									
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;									
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

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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
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Medium: acetonitrile. DH(K1)=10.13 kJ mol<sup>-1</sup>.

Ce+++	gl	oth/un	25°C	0.0	U	H	K1=4.61	1991HJa (100092)	951
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C20H24O12S2 H2L CAS 172985-47-6 (7820)  
2,3:11,12-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,11-diene-4',4''-disulfonic acid;

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

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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

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C20H35N5O10 H3L (6623)  
1,4,7-Tris(carboxymethyl)-13,16-dioxa-1,4,7,10,19-pentaazacycloheneicosa-9,20-dione ;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	sp	KCl	25°C	0.08M	U		K1=15.5	1994FCa (100552)	954

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

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



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Medium: CH<sub>3</sub>CN; 0.1 M Et<sub>4</sub>NClO<sub>4</sub>

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ce+++ sp NaClO4 25°C 1.00M U K1=9.54 1977MNa (101578) 961  
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C22H18N4O14As2S2 H8L Arsenazo III CAS 1668-00-4 (1148)  
2,7-Bis(2'-arsonophenylazo)chromotropic acid;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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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.  
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Ce+++ sp oth/un 20°C ? U 1972SSi (101612) 964  
K(Ce+H4L)=14.88  
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C22H26N4O10 H4L BAPTA (7230)  
1,2-Bis(o-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;  
(HOOCCCH2)2NCH(OC6H4NH2)2

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Ce+++ gl R4N.X 25°C 0.10M C K1=11.1 1993YTa (101973) 965  
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C22H28O13S2 H2L DSDB21C7 CAS 204931-02-2 (7821)  
2,3:11,12-Dibenzo-1,4,7,10,13,16,19-heptaoxacycloheicosa-2,11-diene-4',4''-disulfo  
nic acid;

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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  
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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.

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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 B(CeHL)=14.88	2001WZa (102110)	968

Also data for the N,N'-diethyl, isopropyl, butyl and isobutyl derivatives.

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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
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C23H18N2O3 HL (5561)  
2-(2-Acetylphenylhydrazon)-1,3-diphenyl-prop-1,3-dione;  
C6H5.CO.C(CO.C6H5):N.NH.C6H4.COCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce+++	gl	diox/w	30°C	75%	U		K1=9.82 B2=17.51	1988ESb (102588)	971

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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.

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C24H16O16S8 H8L CAS 237770-97-7 (8854)  
25,26,27,28-Tetrahydroxy-2,8,14,20-tetrathiacalix[4]arene-5,11,17,23-tetrasulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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<sup>-1</sup>, DS(K1)=88.9 J K<sup>-1</sup> mol<sup>-1</sup>.

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C24H32O14S2 H2L CAS 204931-03-3 (7822)  
2,3:11,12-Dibenzo-1,4,7,10,13,16,19,22-octaaxacyclotetracos-2,14-diene-4',4"-disul

fonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ce+++	dis	R4N.X	25°C	0.12M	C			K1=2.39	1998SUa (103189)	974
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Medium: 0.12 M Et4NBr.  
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid  
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C24H42N6O12		H6L						(6546)		
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1,4,7,10,13,16-Hexaazacyclooctadecane-N,N',N'',N''',N''',N''''-hexaethanoic acid;

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

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

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
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\*\*\*\*\*  
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                      (OE0AcAcOE)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<sup>-1</sup>.

\*\*\*\*\*

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"-sulfonic acid;

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

Ce+++ sp oth/un 25°C ? U 1962T0a (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<sup>-1</sup>, DS(K1)=90.3 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

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 K3=2.9	1997PBa (106546)	987
-------	----	--------	------	------	---	--	--	------------------	------------------	-----

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			K(Ce+H3L)=4.05 K(Ce+H2L)=6.15 K(CeH2L+H)=5.04	1980NAb (106589)	988
-------	----	--------	------	-------	---	--	--	---	------------------	-----

Also data for CeHnL(OH) species

\*\*\*\*\*

e- HL Electron (442)  
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ce++++	EMF	NaClO4	-5°C	6.50M	U				1990Zla (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<sup>-1</sup>, DS=-26.8 J K<sup>-1</sup> mol<sup>-1</sup>  
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<sup>-1</sup>

-----  
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 1971ESa (1082) 998  
K'(CeOH+HL+H=CeHL)=2.55  
K''(CeOH+HL=CeL)=2.03

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<sup>-1</sup>, 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

-----  
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 1977MKa (6806)1001  
K(CeOH+HF=CeOHF+H)=4.61  
K(CeOHF+HF=CeF2)=3.49

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

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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=S04--

-----  
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<sup>-1</sup>, 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 19660Sa (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<sup>-1</sup> DS=232 J K<sup>-1</sup> m<sup>-1</sup>; 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

\*\*\*\*\*

P04--- 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+3H2P04)=13.08

-----  
Ce++++ gl oth/un 20°C dil U 1961CAa (13130)1028  
Kso(Ce3L4)=-90.1 ?

\*\*\*\*\*

P207---- H4L Pyrophosphate CAS 2466-09-3 (198)  
Diphosphate; from (HO)2PO.O.PO(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ce++++	sp	oth/un	25°C	3.80M	U		K(Ce+H2L)=9.12	1968BUa (13567)	1029
--------	----	--------	------	-------	---	--	----------------	-----------------	------

Medium:3 H2SO4

Ce++++	sol	NaCl04	25°C	0.10M	U		K1=18.19	1967MSc (13568)	1030
--------	-----	--------	------	-------	---	--	----------	-----------------	------

Kso(CeL(H2O)9)=-23.16

Ce++++	sol	NaCl04	25°C	0.10M	U		K1=18.04	1967MSi (13569)	1031
--------	-----	--------	------	-------	---	--	----------	-----------------	------

K(CeL(s)=CeL)=-5.0

Other models proposed. Solid=CeP207(H2O)9

\*\*\*\*\*  
P309--- H3L CAS 13566-25-1 (235)  
Cyclotrimetaphosphate;

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

Ce++++	ix	NaCl04	21°C	0.50M	U		K1=3.73	1979Kwa (13949)	1032
--------	----	--------	------	-------	---	--	---------	-----------------	------

K1=3.62 by spectrophotometry

\*\*\*\*\*  
P4012---- H4L CAS 13598-74-8 (234)  
Cyclotetrametaphosphate;

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

Ce++++	ix	NaCl04	21°C	0.50M	U		K1=6.65	1979Kwa (13999)	1033
--------	----	--------	------	-------	---	--	---------	-----------------	------

K1=5.79 by spectrophotometry

\*\*\*\*\*  
P6018----- H6L (233)  
Cyclohexametaphosphate;

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

Ce++++	ix	NaCl04	21°C	0.50M	U		K1=9.66	1979Kwa (14070)	1034
--------	----	--------	------	-------	---	--	---------	-----------------	------

K1=7.00 by spectrophotometry

\*\*\*\*\*  
P8024----- H8L (232)  
Cyclooctametaphosphate;

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

Ce++++	ix	NaCl04	21°C	0.50M	U		K1=10.97	1979Kwa (14082)	1035
--------	----	--------	------	-------	---	--	----------	-----------------	------

\*\*\*\*\*  
S04-- 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		B(CeL2+HL)=0.53	1970MGc (16053)	1036
Medium: LiClO4									
Ce++++	kin	oth/un	35°C	0.10M	U		K3=1.17	1967MGB (16054)	1037
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		K(CeL2+HL)=-0.2 K(HCeL3+H2L)=0.3	1963BKa (16056)	1039
Ce++++	sp	NaClO4	25°C	5.90M	U T H		K1=4.78 B2=8.34 K3=1.88	1963BLa (16057)	1040
DH(K1)=-26.3 kJ mol <sup>-1</sup> , DH(K2)=28.4, DH(K3)=34.7									
Ce++++	kin	oth/un	25°C	var	U		K(CeL+HL=CeL2+H)=2.07	1960MGa (16058)	1041
Ce++++	sp	NaClO4	25°C	2.0M	U		*K1=3.54 *K2=2.30 *K3=1.30	1951HRa (16059)	1042

\*\*\*\*\*

W04-- 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		K'=4.79	1971MTb (17431)	1043
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									

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$$K(\text{CeOH}+\text{HI})=-0,11$$
$$K(2\text{CeOH} + \text{HL} = \text{CeO} + \text{CeL} + \text{H}) = 1.43$$

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$$K(C_{\theta+H}) = 1.35$$
$$K(\text{CeOH}+\text{HL})=2.08$$

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$$K(Ce+H_2O=CeO+2H)=0.95$$
$$K(\text{CeL} + \text{H}_2\text{L} = \text{CeL}_2 + 2\text{H}) = -0.46$$
$$K(\text{CeL}_3 + \text{H}_2\text{L}) = \text{CeL}_4 + 2\text{H} = 1.19(?)$$

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$$K_{out}(Ce+H_2I) = 0.35$$

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ce++++	gl	oth/un	18°C		C			2000VSb (25421)	1051
							$K(\text{CeOH}+\text{L}-1\text{H}=\text{Ce}(\text{OH})\text{L}-1\text{H})=14.97$		
Medium: 2.0 M (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>									
Ce++++	kin	NaClO <sub>4</sub>	25°C	1.50M	U	T H		1977AMb (25422)	1052
							$K(\text{Ce}+\text{HL})=1.18$		
							$K(\text{CeOH}+\text{HL})=2.28$		
DH(CeOH+HL=CeL) = -54 kJ mol <sup>-1</sup> , DS=-136 J K <sup>-1</sup> mol <sup>-1</sup>									
*****									
C3H8O		L		n-Propanol			CAS 71-23-8	(1914)	
1-Propanol; CH <sub>3</sub> .CH <sub>2</sub> .CH <sub>2</sub> .OH									
Ce++++	EMF	NaClO <sub>4</sub>	20°C	1.72M	U		K <sub>1</sub> =0.69	1980IDa (27643)	1053
*****									
C3H8O		L		isoPropanol			CAS 67-63-0	(2024)	
2-Propanol; CH <sub>3</sub> .CH(OH).CH <sub>3</sub>									
Ce++++	EMF	NaClO <sub>4</sub>	50°C	1.72M	U		K <sub>1</sub> =-0.18	1980IDa (27645)	1054
*****									
C3H8O <sub>2</sub>		L		Propyleneglycol			CAS 57-55-6	(2025)	
Propan-1,2-diol; CH <sub>3</sub> .CH(OH).CH <sub>2</sub> (OH)									
Ce++++	EMF	NaClO <sub>4</sub>	20°C	1.72M	U		K <sub>1</sub> =1.4	1980IDa (27672)	1055
*****									
C3H8O <sub>2</sub>		L		Dihydroxypropan			CAS 504-63-2	(130)	
Propane-1,3-diol; HO.CH <sub>2</sub> .CH <sub>2</sub> .CH <sub>2</sub> .OH									
Ce++++	EMF	NaClO <sub>4</sub>	20°C	1.72M	U		K <sub>1</sub> =0.9	1980IDa (27692)	1056
Ce++++	kin	NaClO <sub>4</sub>	20°C	2.0M	U		K <sub>1</sub> =1.80	1979PMa (27693)	1057
							$K(\text{Ce}(\text{OH})+\text{L}=\text{CeH}-1\text{L})=1.46$		
							$K(\text{CeL}=\text{CeH}-1\text{L}+\text{H})=0.78$		
*****									
C3H8O <sub>3</sub>		L		Glycerol			CAS 56-81-5	(2707)	
Propane-1,2,3-triol; HO.CH <sub>2</sub> .CH(OH).CH <sub>2</sub> .OH									
Ce++++	sp	oth/un	22°C	2.0M	U			2005VSa (27724)	1058
							$K[\text{Ce}(\text{OH})+\text{H}-2\text{L}]=22.43$		

Medium:( NH4)2SO4

\*\*\*\*\*

C4H6O5                      H2L      Malic acid                      CAS 617-48-1    (393)  
2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; H00C.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
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Medium: NH4NO3

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C4H6O6                      H2L      DL-Tartaric acid                      CAS 133-37-9    (94)  
DL-Tartaric acid,DL-2,3-Dihydroxybutanedioic acid; H00C.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	19650Sb (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	19650Sb (34654)	1064

Medium: HClO4

\*\*\*\*\*

C4H100 HL t-Butanol CAS 75-65-0 (1740)  
tert-Butanol, (CH3)3C.OH

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

Ce++++ sp NaCl04 ? 1.60M U K1=1.12 19650Sb (34656)1065  
Medium: HCl04

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C4H1002 L Dihydroxybutane CAS 107-88-0 (131)  
Butane-1,3-diol; CH3.CH(OH).CH2.CH2.OH

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

Ce++++ kin NaCl04 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

\*\*\*\*\*  
C4H1002 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 NaCl04 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

\*\*\*\*\*  
C4H1003 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 NaCl04 ? 1.70M U K1=1.60 19650Sb (34700)1068  
Medium: HCl04

\*\*\*\*\*  
C5H1202 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 NaCl04 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

\*\*\*\*\*  
C5H1202 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 NaCl04 25°C 2.0M U K1=0.90 1979PMa (41644)1070  
K(Ce(OH)+L=CeH-1L)=1.54



$$K(\text{CeL}=\text{CeH}-1\text{L}+\text{H})=1.81$$

\*\*\*\*\*

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

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

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

Ce++++            sp   oth/un 22°C    2.0M U                                      2005VSA (41684)1071

$$K[\text{Ce}(\text{OH})+\text{H}-2\text{L}]=22.47$$

Medium: (NH4)2SO4

\*\*\*\*\*

C6H8O7                      H3L      Citric acid                      CAS 77-92-9    (95)

2-Hydroxypropane-1,2,3-tricarboxylic acid; HOOCCCH2.CH(OH)(COOH).CH2COOH

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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

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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

Ce++++            sp   R4N.X    ?    1.00M U                      K1=17.9                      1969MBG (46741)1075

Medium: (NH4)2SO4

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

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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

$$K(\text{Ce}(\text{OH})+\text{L}=\text{CeH}-1\text{L})=1.23$$

$$K(\text{CeL}=\text{CeH}-1\text{L}+\text{H})=1.24$$

\*\*\*\*\*

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

D-Sorbitol;

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

Ce++++            sp   oth/un 22°C    2.0M U                                      2005VSA (51101)1078

$$K[\text{Ce}(\text{OH})+\text{H}-2\text{L}]=22.50$$

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Medium:  $(\text{NH}_4)_2\text{SO}_4$

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K values calculated from a thermodynamic cycle.

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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 1978MBc (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)

1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; ((HOOCH<sub>2</sub>)<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ce++++	sp	R4N.X	20°C	0.20M	U			K1=26.0	1978SPb (89569)	1094
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C15H12O2                      HL      Diphenylacac              CAS 120-46-7    (362)  
1,3-Diphenylpropane-1,3-dione, Dibenzoylmethane; C<sub>6</sub>H<sub>5</sub>.CO.CH<sub>2</sub>.CO.C<sub>6</sub>H<sub>5</sub>

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

B4=51.6

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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
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Ce++++	gl	oth/un	20°C	0.10M	M T H			K1=16.1    B2=27.50	1978MBe (92777)	1096
--------	----	--------	------	-------	-------	--	--	---------------------	-----------------	------

Medium: 0.10 M KClO<sub>4</sub>. 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
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Ce++++	gl	KCl	25°C	0.10M	U			B2=40.6	2000XRa (97552)	1097
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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
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Ce++++	oth	KCl	25°C	0.10M	U			B2=41.9	2000XRa (99381)	1098
--------	-----	-----	------	-------	---	--	--	---------	-----------------	------

K value calculated from a thermodynamic cycle.

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

Medium: 0.10 M KClO<sub>4</sub>. 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
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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

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