

## SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 1561 experiments for  
(no ligands specified)

Metal : La+++

(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
La+++	oth	none	25°C	0.0	U				1974JOb (625)	1
									K(La+3e=La(s))=-119.7(-2.36V)	
									K(La+e=La(II))=-64(-3.8V)	

Method: Literature evaluated data

La+++	oth	none	25°C	0.0	U				1952LAb (626)	2
									K(La+3e)=-127.9(-2520 V)	

Method: combination of thermodynamic data. Ce: -125.9(-2480 mV), Pr: -124.8 (-2470 mV), Gd: -121.5(-2400 mV), Dy: -119.3(-2350 mV), Lu: -114.3(-2250 mV)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	sol	none	25°C	0.0	C				1992FIa (1149)	3
									Kso(LaAsO4)=-21.45	

Equilibrium monitored by EDTA and iodine titrations.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	cal	non-aq	25°C	100%	U	H		K1=2.22 B2=3.90	1982AVa (2082)	4
Medium: N,N-dimethylacetamide. DH(K1)=32.6 kJ mol <sup>-1</sup> , DH(K2)=45.6 kJ mol <sup>-1</sup>										

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.70M	C			K1=5.17	2004LBb (3252)	5
									K(La+HCO3=LaHCO3)=1.29	

Medium: 0.70 m NaClO4. Calculated for I=0, K1=6.73, B2=11.30,  
K(La+HCO3=LaHCO3)=2.34, K(La+HL=LaL+H)=-3.60, K(La+2HL=LaL2+2H)=-9.36

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 La+++ dis NaClO4 25°C 0.70M C I K1=5.00 B2= 8.78 1998LBb (3253) 6  
 Method: H2O/tributylphosphate distribution and ICP-mass spectrometry.  
 Values calculated for I=0.0 M, K1=6.98, B2=11.86.

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 La+++ dis NaClO4 25°C 0.68M C K1=5.31 B2= 9.12 1987CBc (3254) 7  
 Method: distribution between 0.68 m NaClO4/NaHCO3 and tributyl  
 phosphate. Conditional constants in terms of total carbonate, [CO3]tot.

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 La+++ sol none 25°C 0.0 C 1986FMa (3255) 8  
 Kso(La2(CO3)3)=-29.91

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 La+++ sol none 25°C 0.0 C 1986HMa (3256) 9  
 Kso(La2(CO3)3)=-29.91

Method: spectrophotometry.

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 La+++ gl oth/un 25°C 1.00M C 1983FSb (3257) 10  
 K(La2L3(s)+6H=2La+3CO2(g)+3H2O)=22.65; In 1 M La(ClO4)3 medium

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 La+++ gl NaClO4 25°C 3.0M C K1=5.67 1981CFa (3258) 11  
 B(La2L)=6.92  
 K(La+HL)=1.40

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 La+++ dis oth/un 20°C 2.5M C 1979DBb (3259) 12  
 B4=13.24

Media: 2.5 M (NH4)2NO3/hexane. Analysis by NAA. By competition with edta;  
 K1(La(edta))=15.60 recalculated for I=2.5 from J.Am.Chem.Soc.,75 1953,4196

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 La+++ sol oth/un 25°C 0.0 U 1966JHa (3260) 13  
 Kso(La2L3)=-33.4

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 C6N6Co--- H3L Cyanocobaltate (5470)  
 Hexacyanocobaltate; [Co(CN)6]---

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

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 La+++ con non-aq 25°C 100% U K1=2.39 1965JTb (3497) 14  
 Medium: H2NCHO

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 La+++ con oth/un 25°C 0.0 U I K1=3.74 1963DKb (3498) 15  
 In dioxan/H2O: K1=4.09(10% dioxan), 4.60(20%)

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 La+++ con none 25°C 0.0 U K1=3.67 1962AYa (3499) 16

Method: high-field conductivity

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 La+++ con diox/w 25°C 10% U I K1=3.72 1960ATb (3500) 17  
 Medium: 10% dioxan/H2O; K1=3.42(0%),4.12(20%). At I=0 K1=3.77(0%),4.12(10%)

-----  
 La+++ con none 25°C 0.0 U T H K1=3.76 1950JMc (3501) 18

DH(K1)=5.6 kJ mol<sup>-1</sup>, DS=90.8 J K<sup>-1</sup> mol<sup>-1</sup>. K1=3.74(18 C)

La+++ con none 25°C 0.0 U T H K1=3.74 1947JAa (3502) 19

DH(K1)=8.4 kJ mol<sup>-1</sup>, DS=100.8 J K<sup>-1</sup> mol<sup>-1</sup>. K1=3.71(18 C)

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C6N6Fe---- H4L (2191)

Hexacyanoferrate (II); Fe(II)(CN)6----

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

La+++ con alc/w 50°C 10% U TI K1=3.74 1973BMg (3582) 20

K(KLaL(s)=K+La+L)=-9.40

60 C: Ks=-9.45. 0% EtOH, 50 C: Ks=-8.7; 70 C, -8.8. 20% EtOH: 50 C,  
-9.85; 60 C: -10.25. 25% EtOH, 50 C: -10.10; 60 C: -10.60

La+++ sp none 25°C 0.0 U K1=5.06 1958PWa (3583) 21

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C6N6Fe--- H3L Ferricyanide (2491)

Hexacyanoferrate (III); Fe(III)(CN)6---

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

La+++ cal none 25°C 0.00 M H K1=3.70 1972SCd (3664) 22

DH(K1)=3.6 kJ mol<sup>-1</sup>, DS=82.8 J K<sup>-1</sup> mol<sup>-1</sup>

La+++ con diox/w 25°C 20% U I K1=3.68 1970JOa (3665) 23

Medium:Dioxan/H2NCHO. K1=2.40(0% dioxan), 4.14(30%), 4.78(40%), 5.56(50 %),  
6.20(60%). In acetone/H2NCHO: K1=2.70(10% acetone), 3.39(30%), 4.42(50%)

La+++ con non-aq 25°C 100% U K1=2.40 1965JTb (3666) 24

Medium: H2NCHO

La+++ con oth/un 25°C 0.0 U K1=3.80 1964HPc (3667) 25

K1=3.58(2000 atm.), 3.62(1495 atm), 3.68(985 atm), 3.74(480 atm)  
DV1=8 ml(1 atm), 4.6 ml(2000 atm)

La+++ con oth/un 25°C 0.0 U K1=3.74 1963DKb (3668) 26

La+++ oth none 25°C 0.0 U K1=3.66 1961PFb (3669) 27

method:high-field conductivity

La+++ con none 25°C 0.0 U K1=3.43 1953BPb (3670) 28

Method: high-field conductivity

La+++ con none 25°C 0.0 U K1=3.74 1951DJa (3671) 29

also for H2O-glycine

La+++ con none 25°C 0.0 U K1=3.73 1951WYa (3672) 30

La+++ con none 18°C 0.0 U T H K1=3.70 1948DJa (3673) 31

DH(K1)=8.5 kJ mol<sup>-1</sup>, DS=100.0 J K<sup>-1</sup> mol<sup>-1</sup>(25 C). K1=3.74(25 C), 3.76(30 C)  
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Cl- HL Chloride CAS 7647-01-0 (50)  
 Chloride;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	dis	NaCl	25°C	1.0M	C			K1=-0.70	1997HTb (5147)	32
Method: by solvent extraction from 1.0 M NaCl into CHCl <sub>3</sub> , 0.1 M 1,1,1-trifluoro-4-(2-thienyl)-2,4-pentanedione.										
La+++	nmr	none	27°C	0.0	U			K1=-0.82	1992CDb (5148)	33
La+++	cal	non-aq	25°C	100%	U	H		K1=3.04 B2=5.19 K3=0.43	1991ITa (5149)	34
Medium: DMF, 0.2 M Et <sub>4</sub> NClO <sub>4</sub> . DH(K1)=21.2 kJ mol <sup>-1</sup> , DH(K2)=12.1, DS(K1)=129, DS(K2)=82, DS(K3)=249 J K <sup>-1</sup> mol <sup>-1</sup>										
La+++	sol	NaClO <sub>4</sub>	25°C	?	U			K1=0.48	1982MAa (5150)	35
La+++	cal	non-aq	25°C	100%	U			K1=2.33 B2=4.12	1980VCa (5151)	36
Medium: dimethylacetamide										
La+++	vlt	non-aq	290°C	100%	U			K1=1.95 B2=3.59	1973SSc (5152)	37
Medium: fused 1:1 (Na,K)NO <sub>3</sub>										
La+++	EMF	non-aq	25°C	100%	U			B3=5.62	1971DTb (5153)	38
Medium: SeOCl <sub>2</sub> , 0.5 M Et <sub>4</sub> NClO <sub>4</sub>										
La+++	sol	none	25°C	0.0	U			Kso=-15.51(fresh); -16.76(aged)	1970MSi (5154)	39
Kso: La(OH) <sub>2</sub> Cl(s)=La+2OH+Cl										
La+++	ISE	NaClO <sub>4</sub>	25°C	1.0M	U			K1=0.20	1965GSb (5155)	40
La+++	cal	oth/un	25°C	0.0	U	H			1964LAd (5156)	41
DH(K1)=5.02 kJ mol <sup>-1</sup>										
La+++	dis	NaClO <sub>4</sub>	25°C	4.0M	U			K1=-0.22 B2=-0.64	1964SEa (5157)	42
La+++	EMF	NaClO <sub>4</sub>	25°C	2.0M	U			K1=-0.39 B(LaCl(CH <sub>3</sub> CO <sub>2</sub> ))=0.79	1963FDa (5158)	43
yethod:quinhydrone electrode										
La+++	dis	NaClO <sub>4</sub>	22°C	1.0M	U			K1=-0.5	1962PMb (5159)	44
Similar values for other lanthanides										
La+++	sol	NaClO <sub>4</sub>	25°C	0.50M	U			K1=-0.46	1962SOa (5160)	45

La+++ sol none 25°C 0.0 U 1960ASd (5161) 46  
 Kso(La(OH)2Cl)=-15.0  
 Kso(La(OH))2.5Cl0.5)=-18.4

La+++ sp NaCl04 25°C 1.0M U T H K1=-0.12 1951MAa (5162) 47  
 K1=-0.11 (19 C), -0.05 (40 C). DH(K1)=5.9 kJ mol<sup>-1</sup>, DS=17 J K<sup>-1</sup> mol<sup>-1</sup>

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Cl03- HL Chlorate CAS 7790-93-4 (971)  
 Chlorate;

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 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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La+++ sp NaCl04 25°C 1.0M U K1=-0.2 1951MAa (6045) 48  
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Cl04- 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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La+++ nmr none 27°C 0.0 U K1=-1.52 1992CDb (6288) 49

La+++ dis NaCl04 ? var U 1964G0a (6289) 50  
 Kd(La+3L=LaL3(in TBP))=0.42  
 Kd'(La+H+4L=HLaL4(in TBP))=1.57

Data also for other 4f elements. Kd=0.09(Ce), 0.01(Pr), 0.39(Nd)  
 Kd'=1.36(Ce), 1.37(Pr), 1.72(Nd)

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Cr04-- H2L Chromate CAS 7738-94-5 (2382)  
 Chromate;

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 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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La+++ con oth/un 25°C 0.0 U K1=3.92 1966ERa (6495) 51  
 K2(B2?)=3.29

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

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 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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La+++ ix oth/un 25°C 0.02M C T H K1=3.11 B2= 5.16 2004LMa (6978) 52  
 Medium: 0.025 M HNO3. Applying Pitzer parameters: at I=0, K1=8.31.  
 Data for 5 to 45 C. DH(K1)=10.3 kJ mol<sup>-1</sup>, DH(B2)=21.4.

La+++ ISE NaCl04 25°C 0.0 C I K1=3.62 2000Lba (6979) 53  
 Method: Fluoride ISE. Values calc. from data for I=0.015-0.70 M NaCl04.  
 At I=0.70 M, K1=2.695

La+++ ix KNO3 25°C 0.02M C K1=3.06 B2= 5.03 1999SBc (6980) 54  
 Medium: 0.025 M HNO3. Additional method: ICP-MS.

Assumed  $K_1(\text{HF}) = 3.03$ , derived from literature values.

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La+++	ISE none	25°C	0.0	C	H	$K_1=2.66$	$B_2=7.13$	1989MJa	(6981)	55
						$K_{\text{so}}=-15.3$				

Also by conductivity and radiometry.  $\text{DH}(K_{\text{so}})=59.7 \text{ kJ mol}^{-1}$ ;  $\text{DS}=-92.4$ .

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La+++	ISE R4N.X	25°C	0.50M	C		$K_1=2.65$	$B_2=7.13$	1989MJb	(6982)	56
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La+++	cal NaClO4	25°C	1.00M	C	H			1988GBa	(6983)	57
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$\text{DH}(K_1)=12.1 \text{ kJ mol}^{-1}$ ;  $\text{DS}(K_1)=91.7 \text{ J mol}^{-1} \text{ K}^{-1}$

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La+++	gl KCl	25°C	1.00M	U	M			1981KTb	(6984)	58
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$K(\text{LaEDTA}+\text{F})=1.25$   
 $K(\text{La}(\text{EDTA})\text{F}+\text{F})=0.60$

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La+++	gl NaCl	25°C	1.00M	U		$K_1=2.68$		1979BHa	(6985)	59
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La+++	ISE none	25°C	0.0	U	T			1974PHa	(6986)	60
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$K_{\text{so}}(\text{LaF}_3(\text{s}))=-17.95$

$K_{\text{so}}=-17.65(20 \text{ C})$

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La+++	oth NaClO4	25°C	0.10M	U		$K_1=2.75$		1973MSg	(6987)	61
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method:electromigration or transference number

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La+++	dis NaClO4	25°C	0.50M	U		$K_1=2.69$	$B_2=5.18$	1970ALb	(6988)	62
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$B_3=7.8$

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La+++	dis NaClO4	25°C	0.50M	C		$K_1=2.69$	$B_2=5.18$	1970ALc	(6989)	63
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$B_3=7.78$

Method: extraction of 140La from 0.50 M NaClO4 medium into toluene/  
di-(2-ethylhexyl)phosphoric acid. Medium pH 3.6.

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La+++	sol KNO3	25°C	1.0M	U		$K_1=5.15$		1970EJa	(6990)	64
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$K_{\text{so}}(\text{LaF}_3(\text{s}))=-17.66$

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La+++	ISE NaNO3	25°C	1.0M	U	T	$K_1=5.1$		1969AJa	(6991)	65
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$K_{\text{so}}(\text{LaF}_3(\text{s}))=-17.09$

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La+++	oth KNO3	25°C	0.10M	U				1969CFa	(6992)	66
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$K_{\text{so}}(\text{LaF}_3(\text{s}))=-17.6$

Medium: acetate buffer. Unreliable value?

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La+++	EMF none	25°C	0.0	U				1968LIa	(6993)	67
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$K_{\text{so}}(\text{LaF}_3(\text{s}))=-18.5$

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La+++	ISE oth/un	25°C	0.03M	U				1968LIa	(6994)	68
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$K_{\text{so}}(\text{LaF}_3(\text{s}))=-17.9$

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La+++	EMF NaClO4	25°C	1.0M	U	H	$K_1=2.67$		1967WCa	(6995)	69
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By calorimetry:  $\text{DH}(K_1)=16.8 \text{ J K}^{-1} \text{ mol}^{-1}$ ,  $\text{DS}=107.0 \text{ J K}^{-1} \text{ mol}^{-1}$

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La+++ EMF NaClO4 25°C 0.50M U I K1=2.68 1957KHa (6996) 70  
K(La+HF=LaF+H)=-0.23

At I=0 corr K1=3.56

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I03- HL Iodate CAS 7782-68-5 (1257)  
Iodate;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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La+++ sol oth/un 25°C 0.0 U 1966FPb (8532) 71  
Kso=-10.92

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La+++ sol none 25°C 0.0 U 1929MGa (8533) 72  
Kso(LaL3)=-11.21

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La+++ sol none 25°C 0.0 U 1923B0a (8534) 73  
Kso(LaL3.H2O)2=-9.23

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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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La+++ sol oth/un 25°C dil U 1974L0a (8607) 74  
Kso(La(H2IO6)(H2O)3)=-8.52

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Mo04-- H2L Molybdate (443)  
Molybdate;

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

La+++ sp oth/un 25°C ? U M 1997STa (8738) 75  
K(La+H2L=LaL+2H)=-1.0

Ligand: nano-Molibdenomanganate, MnMo9032-----

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La+++ con oth/un 25°C .001M U K1=4.22 1968DKc (8739) 76  
By solubility: Kso(La2L3)=-20.66, K1=3.68

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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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La+++ gl oth/un 20°C 0.10M U 1989SBb (8776) 77  
B(LaHL)=9.64

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	5.00M	U		K1=0.2	1985MMa (9174)	78
*****									
		HL		Nitrate			CAS 7697-37-2	(288)	
NO3-Nitrate;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	cal	NaClO4	25°C	2.0M	C	IH	K1=-0.12	1998BMb (9739)	79
DH(K1)=2.1 kJ mol <sup>-1</sup> . From Pitzer extrapolation to I=0.0, K1=0.71, DH(K1)=0.1 kJ mol <sup>-1</sup>									
La+++	nmr	none	27°C	0.0	U		K1=-0.35	1992CDb (9740)	80
La+++	dis	none	25°C	0.0	U		K1=1.61	1992MSb (9741)	81
La+++	dis	R4N.X	25°C	0.0	C		K1=1.61	1988MSg (9742)	82
Extraction into tributylphosphate from 0.1-2.74 M NH4NO3 medium.									
La+++	cal	non-aq	25°C	100%	U	H	K1=1.23 B2=2.43	1982AVa (9743)	83
Medium: N,N-dimethylacetamide. DH(K1)=48.2 kJ mol <sup>-1</sup> , DH(K2)=23.1 kJ mol <sup>-1</sup>									
La+++	gl	NaClO4	35°C	8.10M	U		B2=-0.22 B4=-2.04	1977EKb (9744)	84
La+++	ix	NaClO4	?	3.26M	U		K1=0.25 B2=0.43	1962KSa (9745)	85
La+++	sp	NaClO4	25°C	1.0M	U	T H	K1=-0.26	1951MAa (9746)	86
K1=-0.32(19 C), -0.23(40 C). DH(K1)=7.1 kJ mol <sup>-1</sup> , DS=21 J K <sup>-1</sup> mol <sup>-1</sup>									
*****									
		HL		Azide			CAS 7782-79-8	(441)	
N3-Azide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	NaClO4	25°C	1.0M	C		K1=0.62	1982GAb (10239)	87
Method: competition with Co(II).									
La+++	EMF	NaClO4	25°C	3.0M	U		K1=0.64	1973MPa (10240)	88
*****									
		HL		Hydroxide			(57)		
OH-Hydroxide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaCl	25°C	1.0M	C			2003RSa (11660)	89
							*K1=-8.87		
							*Kso(La(OH)3)=21.15		

\*Kso by radiometric titration using <sup>140</sup>La.



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La+++      gl  NaClO4 25°C 0.0 C IH                      2000KBa (11661) 90
                                           *K1=-8.81
In 0.7 M NaClO4, *K1=-9.12. DH(*K1)=43 kJ mol-1.
-----
La+++      gl  NaCl  25°C 0.10M U I                      1999FBa (11662) 91
                                           *B(1,3)=-26.12
In 0.1 M Me4NCl, *B(1,3)=-26.41.
-----
La+++      sol none  25°C dil C T H                      1998DCa (11663) 92
                                           *Kso(La(OH)3)=19.6
Self medium, 0.01-0.07 M. Values extraoplated from data for 40-150 C.
At 40 C, *Kso=18.5. DH(*Kso)=-134.57 kJ mol-1, DS(*Kso)=-75.4 J K-1 mol-1.
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La+++      gl  oth/un 25°C dil U                          1996HTc (11664) 93
                                           B(La2(OH)5)=28.15
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La+++      gl  NaClO4 25°C 0.10M M M                      1995HKc (11665) 94
                                           K(La(nta)+OH)=4.6
                                           K(La(edta)+OH)=1.7
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La+++      gl  NaNO3 25°C 2.0M C                          1990LSc (11666) 95
                                           *K1=-10.45
                                           *B(2,2)=-17.53
                                           *B(5,9)=-72.43
                                           *B(5,10)=-79.78
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La+++      dis oth/un 30°C 0.01M C                        1989MKb (11667) 96
                                           *K1=-3.85
Medium: ClCH2COOH
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La+++      con oth/un 25°C dil C                          1988Mca (11668) 97
                                           *K1=-6.40
Method: conductivity of 0.5 mM LaCl3 solution as function of pH.
-----
La+++      gl  NaClO4 60°C 3.00M C H                      1987CIa (11669) 98
                                           *K1=-9.28
                                           *B(2,1)=-8.92
                                           *B(2,3)=-22.47
                                           *B(3,3)=-22.87
In 3 M LiClO4. DH(*K1)=40.6; DH(*B(1,2))=56 kJ mol-1.
-----
La+++      gl  NaClO4 21°C 1.0M C                          1987KDb (11670) 99
                                           *K1=-8.55
                                           *K2=-9.38
                                           *K1=-9.38
                                           *Kso=22.8
Method: Analysis of precipitation boundary for fresh precipitate.
-----
La+++      ISE KNO3  25°C 0.50M C                        K1=9.0    B2=13.35 1984FMb (11671) 100

```

La+++	gl	NaClO4	25°C	3.00M	U	1982BBc (11672)	101	*K1=-10.36 *B(2,2)=-17.74
La+++	gl	NaClO4	25°C	3.00M	U	1973AKa (11673)	102	*K1=-10.4
Medium: LiClO4								
La+++	gl	NaClO4	25°C	3.00M	U	1973AKb (11674)	103	*K1=-10.35
Medium: D2O containing LiClO4. *K1: La+D2O=LaOD+D								
La+++	EMF	alc/w	20°C	25%	U	1973SPe (11675)	104	*K1(LaA+H2O=LaAOH+H)=-8.46
Medium: ca.25 to 35% w/w MeOH or EtOH/H2O. H3A=NTA								
La+++	EMF	alc/w	25°C	25%	U I	1972USa (11676)	105	*K1=-8.70
Medium: 25% v/v EtOH/H2O, 0.05 M NaClO4. *K1=-9.06(v=0), -8.17(v=50); *K1=-8.73(v=0, I=0)								
La+++	dis	NaClO4	?	0.10M	U	1971GDb (11677)	106	*K1=-7.4
Medium: LiClO4								
La+++	sol	none	25°C	0.00	U	1970MSi (11678)	107	Kso(La(OH)3(s)=La+3OH)=-22.76
Kso=-22.76(aged)								
La+++	oth	oth/un	rt	10%	U	1967PBb (11679)	108	Kso=-27.7 K(LaL3(s)=LaL3)=-5.3 B3=22.4
Medium: 10% sea water. Method: Tyndall scattering								
La+++	gl	NaClO4	25°C	0.30M	U	1966FKa (11680)	109	*K1=-9.06
La+++	oth	oth/un	20°C	dil	U	1966OPa (11681)	110	Kso=-20.1
Method: Tyndall scattering								
La+++	sol	NaNO3	?	0.38M	U	1965ZSa (11682)	111	Kso=-19.19
La+++	sol	none	20°C	0.0	U	1964KBa (11683)	112	Kso=-27.71

La+++	gl	NaClO4	25°C	3.0M	U		1964LDa (11684)	113
						*B(2,1)=-9.98 *B(5,9)=-71.43 *K1=-10.12		
Medium: 3 M LiClO4								
La+++	EMF	none	25°C	0.0	M		1962AEa (11685)	114
						Kso=-21.5		
Method: H electrode								
La+++	gl	oth/un	25°C	3.0M	U		1961BCb (11686)	115
						*K1=-10.1 *B(2,1)=-9.95		
Medium: LiClO4. *B(5,9)=-71.45 or *B(6,10)=-78.75								
La+++	gl	none	25°C	0.0	U		1960ASd (11687)	116
						Kso(La(OH)3)=-21.7		
La+++	EMF	oth/un	25°C	dil	C		1959SEb (11688)	117
						*Kso=20.46		
*Kso(La(OH)3(s)+3H=La+3H2O). Method: H electrode								
La+++	cal	oth/un	?	0.10M	U	H	1959WAa (11689)	118
Medium:HCl; *Kso: (La(OH)3(s)+3H=La+3H2O); DH(*Kso)=-150 kJ mol <sup>-1</sup>								
La+++	sol	oth/un	?	var	U		1958STb (11690)	119
						Kso(La(OH)3)=-36		
La+++	gl	none	?	0.0	U		1957MOa (11691)	120
						Kso=-22.60		
La+++	gl	oth/un	25°C	dil	U		1955KRa (11692)	121
						*K1=-8.3		
La+++	gl	oth/un	20°C	dil	U		1953WSa (11693)	122
						*K1=-5.6		
La+++	con	oth/un	25°C	?	U	K1=3.30	1951DAa (11694)	123
La+++	gl	oth/un	25°C	var	U		1951MFb (11695)	124
						Kso(La(OH)3)=-18.77		
La+++	gl	oth/un	25°C	var	U		1944MKa (11696)	125
						Kso(La(OH)3)=-19.0		
La+++	gl	none	25°C	0.0	U		1938OKa (11697)	126
						Kso(La(OH)3)=-18.7		
La+++	sol	oth/un	100°C	var	U		1932ENa (11698)	127
						Kso=3.11 + y		

La+++      con oth/un 25°C    dil    U      1931KEa (11699) 128  
Kso=-20.04 (aged)

Kso:  $\text{K}(\text{La}(\text{OH})_3(\text{s})=\text{La}+3\text{OH})$ . Method: H electrode

02--	H2L	Peroxide	CAS 7772-84-1	(2813)
Peroxide; -0.0-				

$K(2\text{La}+3\text{H}_2\text{O}_2=\text{La}_2(\text{O}_2)_3+6\text{H})=-31.51$ ,  $K(2\text{La}+2\text{H}_2\text{O}_2=\text{La}_2(\text{O}_2)_2(\text{OH})_2+6\text{H})=-37.11$ ,  $K(2\text{La}+2\text{H}_2\text{O}_2=\text{La}_2(\text{O}_2)_3(\text{O}_2\text{H})(\text{OH})_2+5\text{H})=-27.7$ . Also spectrophotometric values.

La+++      sp   NaCl04 25°C   1.0M U      1951MAa (12670) 132  
K(La+H2O2=LaO2H+H)<-5.2

$$K_{so}(\text{LaPO}_4) = -25.75$$
$$\begin{aligned} K(\text{La}(\text{nta}) + \text{HL}) &= 9.9 \\ K(\text{La}(\text{edta}) + \text{HL}) &= 4.1 \end{aligned}$$

In synthetic seawater,  $K_s(\text{LaPO}_4) = -24.51$ .

$$K_{so}(\text{LaPO}_4 \cdot x\text{H}_2\text{O}) = -24.5$$

La+++      dis R4N.X    25°C 0.50M U      1970RSd (13236) 138

$$K(\text{La}+\text{H}_2\text{L})=1.61$$

Medium:  $\text{NH}_4\text{ClO}_4$

La+++ sol  $\text{NaClO}_4$  25°C 0.50M U 1963TVa (13237) 139

$$K_{\text{so}}(\text{LaL})=-22.43$$

\*\*\*\*\*

P207---- H4L Pyrophosphate CAS 2466-09-3 (198)  
Diphosphate; from  $(\text{HO})_2\text{PO}_2\text{O.PO}(\text{OH})_2$

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

La+++	gl	$\text{NaClO}_4$	25°C	0.10M	M	M		1995HKc (13610)	140
-------	----	------------------	------	-------	---	---	--	-----------------	-----

$$K(\text{La}(\text{nta})+\text{HL})=5.9$$

$$K(\text{La}(\text{edta})+\text{L})=4.2$$

La+++	gl	KCl	25°C	0.50M	U			1989APd (13611)	141
-------	----	-----	------	-------	---	--	--	-----------------	-----

$$K(\text{La}+\text{H}_2\text{L})=3.79$$

La+++	gl	R4N.X	25°C	0.10M	U		K1=4.66	1968MHb (13612)	142
-------	----	-------	------	-------	---	--	---------	-----------------	-----

$$K(\text{LaL}+\text{H})=5.56$$

$$K(\text{La}+\text{HL})=0.85$$

Medium:  $\text{Me}_4\text{NCl}$

La+++	kin	oth/un	25°C	0.0	U		B2=19.53	1967SSo (13613)	143
-------	-----	--------	------	-----	---	--	----------	-----------------	-----

La+++	sol	oth/un	25°C	0.0	U	H	K1=16.72 B2=18.57	1966SSf (13614)	144
-------	-----	--------	------	-----	---	---	-------------------	-----------------	-----

$$B(\text{La}_2\text{L})=19.64$$

$$K(\text{La}_4\text{L}_3(\text{s})=\text{La}+3\text{LaL})=-17.36$$

Medium: 0 corr.  $\text{DH}(\text{Ks})=66.0 \text{ kJ mol}^{-1}$

\*\*\*\*\*

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

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

La+++	sp	$\text{NaClO}_4$	25°C	1.0M	C		K1=5.70	2003VCa (13721)	145
-------	----	------------------	------	------	---	--	---------	-----------------	-----

Method: laser-induced fluorescence spectroscopy for  $\text{Eu}^{+++}$  as competing ion

La+++	cal	$\text{NaClO}_4$	25°C	1.0M	C	H		2002VCa (13722)	146
-------	-----	------------------	------	------	---	---	--	-----------------	-----

$\text{DH}(\text{K1})=-13.20 \text{ kJ mol}^{-1}$ ,  $\text{DS}(\text{K1})=64.9 \text{ J K}^{-1} \text{ mol}^{-1}$ .

La+++	cal	$\text{NaClO}_4$	25°C	1.0M	C	H	K1=3.13	2002VCa (13723)	147
-------	-----	------------------	------	------	---	---	---------	-----------------	-----

By entropy titration:  $\text{DH}(\text{K1})=-0.99 \text{ kJ mol}^{-1}$ ,  $\text{DS}(\text{K1})=61.79 \text{ J K}^{-1} \text{ mol}^{-1}$ .

\*\*\*\*\*

P3010----- H5L CAS 10380-08-2 (1001)

Triphosphosphate; from  $(\text{HO})_2\text{PO}_2\text{O.PO}(\text{OH}).\text{O.PO}(\text{OH})_2$

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

La+++	gl	$\text{NaClO}_4$	25°C	0.10M	M	M		1995HKc (13873)	148
-------	----	------------------	------	-------	---	---	--	-----------------	-----

K(La(nta)+HL)=7.1

K(La(edta)+L)=3.4

-----  
La+++      gl   KNO3   25°C 0.10M U T H      B2=8.0      1974KRa (13874) 149

K(La+2HL)=6.1

K(La+2HL)=6.4 and B2=8.3 (35 C), K(La+2HL)=5.9 and B2=7.9 (45 C)

DH(La+2HL)=-20 kJ mol<sup>-1</sup>; DH(B2)=-11

-----  
La+++      gl   R4N.X   25°C 0.10M U      K1=6.56      1968MHb (13875) 150

K(La+HL)=2.90

K(LaL+H)=5.17

Medium: Me4NCl

-----  
La+++      gl   NaClO4 30°C 0.30M U      1963KUa (13876) 151

K(La+HL)=6.61

-----  
La+++      gl   NaClO4   ?   0.10M U      B2=15.81      1962RKa (13877) 152

K(La+HL)=4.63

K(La+2HL)=8.32

\*\*\*\*\*

P309---      H3L      CAS 13566-25-1 (235)

Cyclotrimetaphosphate;

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

-----  
La+++      cal oth/un 25°C 0.10M C   H      K1=3.24      1983GGb (13961) 153

Medium: 0.10 M HCl. DH(K1)=18.9 kJ mol<sup>-1</sup>, DS(K1)=126 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
La+++      con none   25°C   0.0   U      K1=5.70      1952MOa (13962) 154

\*\*\*\*\*

P4012----      H4L      CAS 13598-74-8 (234)

Cyclotetrametaphosphate;

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

-----  
La+++      sol none   25°C   0   U      K1=3.3      B2=6.6      1998BKa (14009) 155

-----  
La+++      cal oth/un 25°C 0.10M C   H      K1=2.65      1983GGb (14010) 156

Medium: 0.10 M HCl. DH(K1)=10.8 kJ mol<sup>-1</sup>, DS(K1)=87 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
La+++      con none   25°C   0.0   U      K1=6.66      1952MOa (14011) 157

\*\*\*\*\*

P4013-----      H6L      Tetraphosphate      (1102)

Tetraphosphate;

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

-----  
La+++      gl   R4N.X   25°C 0.10M U      K1=6.59      1968MHb (14048) 158

K(LaL+H)=5.05

K(La+HL)=3.29

Medium: Me4NCl

\*\*\*\*\*

S--                      H2L      Sulfide                      CAS 7783-06-4    (705)  
Sulfide;

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values                      Reference ExptNo  
-----  
La+++            oth none    25°C      0    U    1988LIa (14406) 159

Kso(La2S3)=-25.8

\*Kso(La2S3)=26.3

Derived from thermodynamic data and K(H+S=HS)=17.3.

-----  
La+++            oth none    25°C    0.0    U    1952GGc (14407) 160  
Kso(La2L3)=-12.70

From thermodynamic data

\*\*\*\*\*

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

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values                      Reference ExptNo  
-----  
La+++            dis oth/un 25°C    1.0M C                      K1=0.14                      1997HTb (15124) 161

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

-----  
La+++            cal non-aq 25°C 100% U    H                      K1=1.5      B2=2.5                      1992TIa (15125) 162  
K3=0.6

Medium: DMF, 0.2 M R4NX. DH(K1)=9 kJ mol<sup>-1</sup>, DH(B2)=7, DH(B3)=17

-----  
La+++            dis R4N.X    30°C 1.00M U                      K1=0.12      B2=0.22                      1974KMa (15126) 163  
Medium: NH4ClO4/NH4SCN, pH 2.8

-----  
La+++            dis NaClO4 27°C    1.0M U                      T K1=0.06      B2=0.05                      1968RSj (15127) 164

-----  
La+++            dis NaCl       ?    2.0M U    1965G0a (15128) 165  
Kd(La+3L)=2.4

Extraction into TBP. Kd values also for other lanthanides

-----  
La+++            dis NaClO4 25°C    5.0M U                      T K1=0.24      B2=<-0.62                      1964SEa (15129) 166  
B3=-0.73

\*\*\*\*\*

S04--                      H2L      Sulfate                      CAS 7664-93-9    (15)  
Sulfate;

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values                      Reference ExptNo  
-----  
La+++            sol oth/un 25°C    0.66M C                      K1=1.94                      2004SBb (16284) 167

Method: solubility of BaSO4 in 0.117 m LaCl3 solution.  
Calculated for I=0, K1=3.61.

-----

La+++ cal NaClO4 25°C 1.00M U T H K1=0.80 B2=1.00 1987SMa (16285) 168  
 DH(K1)=54.18 kJ mol<sup>-1</sup>, DH(K2)=6.65. At 35 C: K1=1.11, K2=0.24; at 45 C:  
 K1=1.42, K2=0.26; at 55 C: K1=1.70, K2=0.26.

La+++ cal none 25°C 0.0 U H 1974FPc (16286) 169  
 DH(K1)=13.1 kJ mol<sup>-1</sup>, DS=113.4 J K<sup>-1</sup> mol<sup>-1</sup>. In D20: DH(K1)=13.2, DS=114.5

La+++ cal none 25°C 0.0 U H 1974POa (16287) 170  
 DH(K1)=18.4 kJ mol<sup>-1</sup>

La+++ con oth/un 25°C 0.0 U K1=3.65 1973FPb (16288) 171  
 In D20: K1=3.67

La+++ kin none 25°C 0.0 U K1=3.62 1973RSb (16289) 172

La+++ dis NaClO4 25°C 0.50M U K1=1.77 B2=2.66 1970ALb (16290) 173

La+++ cal oth/un 25°C 0.0 U H 1969FPa (16291) 174  
 DH(K1)=14.6 kJ mol<sup>-1</sup>

La+++ cal oth/un 25°C 0.0 U H K1=3.50 B2=5.35 1969IEa (16292) 175  
 DH(K1)=13.6 kJ mol<sup>-1</sup>, DH(K2)=5.27; DS(K1)=112.5 J K<sup>-1</sup> mol<sup>-1</sup>, DS(K2)=53.1

La+++ ISE NaClO4 25°C 2.0M U H K1=1.29 1967CCd (16293) 176  
 By calorimetry: DH(K1)=15.6 kJ mol<sup>-1</sup>, DS=76.9 J K<sup>-1</sup> mol<sup>-1</sup>

La+++ con oth/un 25°C 0.0 U K1=3.62 1967FDa (16294) 177  
 Medium: 0 corr., 1 atm. K1=3.43(500 atm), 3.27(3000 atm), 3.17(1500 atm),  
 3.07(2000 atm)

La+++ con oth/un 25°C 0.0 U K1=3.70 1966ERa (16295) 178

La+++ sol oth/un 160°C 0.0 U T 1966LSc (16296) 179  
 Kso(La2L3)=-18.2  
 Kso=-16.3(135 C), -17.4(150 C), m units

La+++ dis NaClO4 25°C 1.0M U K1=1.45 B2=2.46 1965SEa (16297) 180

La+++ sol oth/un 20°C 0.0 U K1=3.42 1954KOb (16298) 181

La+++ con oth/un 25°C 0.0 U K1=3.62 1954SJa (16299) 182

La+++ EMF oth/un 25°C 0.0 U T H K1=3.82 1952JMb (16300) 183  
 Method: H electrode. K1=3.79(20 C), 3.86(30 C), 3.88(35 C).  
 DH(K1)=10.5 kJ mol<sup>-1</sup>, DS=109 J K<sup>-1</sup> mol<sup>-1</sup> (25 C)

La+++ sp NaClO4 25°C 1.0M U T H K1=1.40 1951MAa (16301) 184  
 K1=1.37(19 C), 1.48(40 C). DH(K1)=10.5 kJ mol<sup>-1</sup>, DS=63 J K<sup>-1</sup> mol<sup>-1</sup>(25 C)

La+++ con oth/un 25°C 0.0 U K1=3.62 1950JMa (16302) 185



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 La+++ sol oth/un 25°C 0.0 U K1=3.66 1930DAa (16303) 186  
 By conductivity K1=3.75

\*\*\*\*\*  
 S203-- H2L Thiosulfate CAS 73686-28-7 (177)  
 Thiosulfate;

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	vlt	oth/un		var	U		K1=0.82 B2=0.6 B3=2.58	1969SSf (16868)	187

 -----

La+++ sp oth/un 25°C 0.0 U K1=2.99 1964BMb (16869) 188

La+++ dis NaClO4 25°C 1.00M U K1=0.8 1951MAa (16870) 189

La+++ con oth/un 32°C var U B(La2L3)=8.63 1950DUa (16871) 190

\*\*\*\*\*  
 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
La+++	gl	NaClO4	25°C	1.0M	C		K1=1.11 B2= 1.68 B3=2.07 B4=1.93	1996LIa (17621)	191

 -----

\*\*\*\*\*  
 CH40 L Methyl alcohol CAS 67-56-1 (597)  
 Methanol; CH3.OH

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	25°C	100%	M		K(2La+H-1L)=10.99 K(2La+2H-1L)=19.62 K(2La+3H-1L)=26.08 K(2La+4H-1L)=32.60	2003GNb (17883)	192

 -----

Medium: methanol. K(2La+5H-1L)=37.07. Also data in 10% methanol, 0.01 M Bu4NC1O4.

\*\*\*\*\*  
 CH606P2 H4L Medronic acid CAS 1984-15-2 (2384)  
 Methanediphosphonic acid; CH2(P03H2)2

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.50M	U		K(La+H2L)=4.81	1989APd (18284)	193

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\*\*\*\*\*  
 C2H203 HL Glyoxylic acid CAS 298-12-4 (1142)

Glyoxylic acid; OHC.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	20°C	0.10M	U		K1=2.36 B2=3.96 K3=0.8	1964PSd (18424)	194

\*\*\*\*\*

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
La+++	ix	R4N.X	25°C	0.05M	C		K1=4.94 B2= 9.28 K(La+HL)=1.92	2001SBf (18937)	195
Medium: 0.05 M NH4NO3. At I=0, K1=5.87, B2=10.47.									

La+++	gl	KCl	25°C	1.0M	U	M		1988KTa (18938)	196
								K(La(edta)+L)=2.70	

La+++	gl	KNO3	35°C	0.10M	U	M	K1=6.20	1986RMb (18939)	197
								B(LaL(cytidine))=9.74	

La+++	vlt	NaClO4	25°C	1.00M	U		K1=4.40	1972MGf (18940)	198
								K(La+HL)=2.27	

Method : amperometry

La+++	oth	oth/un	25°C	0.10M	U		K1=4.71 B2=7.83	1971STe (18941)	199
-------	-----	--------	------	-------	---	--	-----------------	-----------------	-----

Method : electrical migration or transference number

La+++	dis	NaClO4	25°C	0.50M	U		K1=4.47 B2=8.00	1970ALb (18942)	200
-------	-----	--------	------	-------	---	--	-----------------	-----------------	-----

La+++	sol	oth/un	25°C	0.50M	U		K1=5.66	1970MKe (18943)	201
-------	-----	--------	------	-------	---	--	---------	-----------------	-----

La+++	dis	NaClO4	25°C	1.0M	U		K1=4.3 B2=7.9 B3=10.3	1964SEa (18944)	202
-------	-----	--------	------	------	---	--	-----------------------	-----------------	-----

La+++	dis	NaClO4	20°C	0.10M	U			1963STc (18945)	203
								Kso=-25.0	

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.10M	C		K1=3.39	2003AHa (19498)	204

\*\*\*\*\*

C2H4O2 HL Acetic acid CAS 64-19-7 (36)  
Ethanoic acid; CH3.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++ gl none 25°C dil M T H K1=2.20 B2= 4.25 1998DCa (20018) 205  
 Self medium, 0.01-0.07 M. Data for 40-80 C. At 40 C, K1=2.41, B2=4.36.  
 DH(K1)=21.05 kJ mol<sup>-1</sup>, DS(K1)=112.8 J K<sup>-1</sup> mol<sup>-1</sup>.

La+++ gl NaNO3 25°C 0.25M C K1=1.74 B2=3.25 1985DRd (20019) 206  
 B3=3.8

La+++ sp NaNO3 25°C 0.10M U K1=1.15 19850Ha (20020) 207

La+++ sp NaClO4 21°C 2.0M U K1=1.66 B2=2.30 1984BMa (20021) 208  
 B3=3.00  
 B4=3.28

La+++ EMF diox/w ? 50% U I K1=2.42 B2=3.81 1971MCb (20022) 209  
 Medium: 0-70% dioxan, 0.5 M NaClO4. 0%: K1=1.35. 70%: K1=3.27, B2=5.19

La+++ oth oth/un 20°C 0.20M U 1968TTb (20023) 210  
 B3=2.97

Method : paper electrophoresis

La+++ gl alc/w 25°C 95% U H K1=4.75 B2=8.32 1967Gwa (20024) 211  
 B3=10.90  
 B4=11.76

Medium:95% MeOH,0.5 M NaClO4. By calorimetry:DH(K1)=13.7 kJ mol<sup>-1</sup>, DS=136.6  
 JK<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=10.9,DS=104.5; DH(K3)=4.5,DS=64.8; DH(K4)=1.7,DS=20.9

La+++ EMF alc/w 25°C 60% U I K1=2.59 B2=4.65 1967MCb (20025) 212  
 B3=6.36  
 B4=7.36  
 B6=7.95

Method:quinhydrone electrode. Medium: 60% EtOH,2 M NaClO4. At 0%:K1=1.54,  
 B2=2.46,B3=3.16; 20%:K1=1.94,B2=3.06,B3=3.88. 85%:B2=6.85,B3=9.23,B7=13.26

La+++ gl oth/un 25°C 0.0 U K1=2.545 B2=4.12 1964AMa (20026) 213

La+++ cal NaClO4 25°C 2.0M C H 1964GRa (20027) 214  
 DH(K1)=9.125 kJ mol<sup>-1</sup>, DS(K1)=61.1 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=15.84, DS(B2)=101;  
 DH(B3)=19.33, DS(B3)=123.

La+++ gl NaClO4 25°C 2.0M U K1=1.45 B2=2.25 1962BCa (20028) 215  
 K3=0.3

La+++ gl NaClO4 20°C 0.10M U K1=2.02 B2=3.26 1962KPa (20029) 216

La+++ EMF NaClO4 20°C 2.0M U K1=1.56 B2=2.48 1958SOb (20030) 217  
 B3=2.98  
 B4=2.95

Method: quinhydrone electrode

\*\*\*\*\*

C2H4O2S                      H2L      Thioglycolic                      CAS 68-11-1    (596)  
 Mercaptoethanoic acid; HS.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.20M	U		K1=6.00    B2=11.21	1996PJa (20334)	218
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.40 K(La(EDTA)+L)=3.32	1986LSb (20335)	219
La+++	gl	KNO3	30°C	0.10M	U	M		1980RTa (20336)	220
							K(La(CDTA)+L)=2.59		
La+++	gl	oth/un	25°C	.065M	U	TIH	K1=3.65    B2=6.85	1975GSa (20337)	221
At 35 C: K1=4.40, K2=3.24; 45 C: 4.67, 3.75. At 35 C, I=0.15: 4.57, 3.66; At 35 C, I=0.25: K1=4.83, K2=3.88									
La+++	cal	NaClO4	25°C	2.0M	C	H		1964GRa (20338)	222
DH(K1)=6.21 kJ mol <sup>-1</sup> , DS(K1)=48.1 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=16.3, DS(B2)=95.0.									
La+++	gl	NaClO4	20°C	0.10M	U			1964PKa (20339)	223
							K(La+HL)=1.98 K(LaHL+HL)=1.00		
La+++	gl	NaClO4	25°C	2.0M	U			1962BCa (20340)	224
							K(La+HL)=1.42 K(LaHL+HL)=0.7		
La+++	gl	KCl	30°C	0.10M	U			1962CTa (20341)	225
							K(La+HL)=2.27 K(LaHL+HL)=2.35		

\*\*\*\*\*

C2H4O3                      HL      Glycolic acid                      CAS 79-14-1    (33)  
 2-Hydroxyethanoic acid; HO.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.20M	U		K1=5.54    B2=10.26	1996PJa (20569)	226
La+++	EMF	NaClO4	25°C	1.00M	U	M	K1=2.13    B2=4.09	1991WPb (20570)	227
H2A=malic acid									
							B(LaLA)=4.45		
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.60	1986LSb (20571)	228
							K(La(EDTA)+L)=3.28		
La+++	gl	NaClO4	25°C	2.00M	C	T	K1=2.14    B2=3.79	1985AMa (20572)	229
							B3=4.90 B4=5.92		

La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.59	1985LSf (20573)	230
K(La(edta)+L)=3.34									
La+++	gl	KN03	32°C	0.10M	U			1980PPf (20574)	231
K(La+HL=LaL+H)=-1.58									
*K(LaL)=-6.64									
K(La+2HL=LaL2+2H)=-2.56									
*K(LaL2)=-6.26									
La+++	gl	NaClO4	25°C	0.50M	C	T	K1=2.27	B2=3.86	1977CMa (20575) 232
B3=5.17									
La+++	cal	NaClO4	25°C	2.0M	C	H			1964GRa (20576) 233
DH(K1)=-2.65 kJ mol <sup>-1</sup> , DS(K1)=33 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=-4.414, DS(B2)=56.9;									
DH(B3)=-7.029, DS(B3)=68.2; DH(B4)=-9.16, DS(B4)=66.1.									
La+++	gl	NaClO4	20°C	0.10M	U		K1=2.55	B2=4.24	1964PKb (20577) 234
B3=5.0									
La+++	gl	KCl	30°C	0.10M	U		K1=2.86	B2=5.28	1962CTa (20578) 235
La+++	EMF	NaClO4	20°C	2.0M	U		K1=2.19	B2=3.76	1959SOB (20579) 236
B3=4.81									
B4=5.1									
B5=4.8									

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
La+++	gl	NaClO4	25°C	0.20M	U		K1=4.09	B2= 7.58	1996PJa (21592) 237
La+++	gl	KN03	25°C	0.20M	U	M	K1=5.99	1990LSb (21593)	238
K(La(phen)+L)=5.75									
La+++	gl	NaClO4	25°C	0.20M	U		K1=4.09	B2= 7.58	1987PPa (21594) 239
La+++	gl	KN03	35°C	0.10M	U			1987RRc (21595)	240
K(La+HL)=3.23									
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=5.32	1986LSb (21596)	241
K(La(EDTA)+L)=4.09									
La+++	gl	KN03	35°C	0.10M	U	M		1986RMb (21597)	242
K(La+HL)=3.23									
K(La+HL+cytidine)=8.27									
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=5.32	1985LSe (21598)	243

K(La(edta)+L)=4.09.

-----  
La+++ gl alc/w 20°C 60% U I T K1=3.54 1980SKc (21599) 244  
In 0.1 M NaCl: K1=4.01  
-----

La+++ EMF KCl 25°C 1.0M U M 1977GMa (21600) 245

K(LaA+L)=3.11  
K(LaA+HL)=2.93  
K(LaA+H2L)=3.40

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

-----  
La+++ gl NaCl04 30°C 0.2M U T K1=3.85 1977MSf (21601) 246  
-----

La+++ gl KCl 30°C 0.10M U T K1=3.23 B2=6.15 1962CTa (21602) 247

\*\*\*\*\*  
C2H6OS HL CAS 60-24-2 (841)  
2-Mercaptoethanol; HS.CH2.CH2.OH  
-----

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

La+++ gl NaCl04 25°C 0.10M U T K1=5.02 1981SKb (22071) 248  
Temp range 15-35. K1 at 15 = 5.47; K1 at 45 = 4.71

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

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

La+++ sp non-aq 25°C 100% U 1992MBb (22104) 249

K8=2.2  
K9=1.0  
K10=0.9

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

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

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

La+++ gl NaCl04 22°C 0.10M U 1972MCd (22149) 250

K(LaH-1L+H)=8.50

\*\*\*\*\*  
C2H6O6P2 H4L (5706)  
Ethene-1,1-diphosphonic acid; H2C:C(P03H2)2  
-----

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

La+++ gl KCl 25°C 0.15M U I 1989AMa (22172) 251

K(La+H2L)=4.37

\*\*\*\*\*

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

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

La+++ kin none 25°C 0.00 U K1=0.73 1966SSb (22575) 252

\*\*\*\*\*

C2H8N2 L Ethylenediamine CAS 107-15-7 (23)  
1,2-Diaminoethane; H2N.CH2.CH2.NH2

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

La+++ ISE non-aq 25°C 100% C H K1=1.48 B2=2.77 1992CBa (23183) 253  
B3=3.31

Medium: DMSO, 0.10 M Et4NClO4. By calorimetry, DH(K1)=-23, DH(B2)=-51,  
DH(B3)=-75 kJ mol<sup>-1</sup>.

-----  
La+++ gl KNO3 25°C 0.10M U TIH K1=4.88 B2=9.07 1986NSa (23184) 254  
B(LaAL)=8.28

H2A=phthalic acid. DH(LaAL)=-35.8 kJ mol<sup>-1</sup>, DS=38.5 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
La+++ cal non-aq 23°C 100% U K1=9.5 B2=17.00 1969FMa (23185) 255  
K3=6.2  
K4=3.3

Medium: CH3CN

\*\*\*\*\*

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

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

La+++ sp oth/un 25°C 0.70M U K(La+H2L)=5.31 1987APa (23380) 256

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C2H9NO6P2 H4L IDPA CAS 32545-63-4 (1335)  
Imino-N,N-bis(methylenephosphonic acid); HN(CH2PO3H2)2

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

La+++ gl KNO3 25°C 0.1M C K1=10.79 1985MMA (23455) 257  
B(LaHL)=18.43

\*\*\*\*\*

C3H2O2 HL Propynoic acid CAS 471-25-0 (162)  
Propiolic acid; HCC.COOH

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

La+++ gl NaClO4 25°C 1.00M C H K1=1.31 B2=2.19 1996HBa (23487) 258  
B3=3.1

DH(K1)= 2.7 kJ mol<sup>-1</sup>, DS=34 J K<sup>-1</sup> mol<sup>-1</sup>

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C3H4O2 HL Acrylic acid CAS 79-10-7 (2044)

Propenoic acid; CH<sub>2</sub>:CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	C	H	K1=1.95 B2=3.61 B3=5.2	1996HBa (23990)	259

DH(K1)=7.0 kJ mol<sup>-1</sup>, DS=61 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

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
La+++	nmr	NaClO4	25°C	2.00M	U	H	K1=1.0	1980CCa (24057)	260

DH=-3.72 kJ mol<sup>-1</sup>. Alternative method: Calorimetry.

\*\*\*\*\*

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
La+++	gl	NaClO4	25°C	1.00M	U		K1=3.045 B2=5.133 B(LaHL)=6.48	1987MOa (24476)	261
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.80 K(La(EDTA)+L)=2.96	1986LSb (24477)	262
La+++	gl	NaClO4	25°C	1.00M	C		K1=2.89 B2=4.51 B3=5.70	1985AMa (24478)	263
La+++	gl	NaNO3	25°C	0.25M	C		K1=3.82 B2=6.13 B(LaHL)=7.08	1985DRd (24479)	264
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.84 K(La(edta)+L)=3.01	1985LSf (24480)	265
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.80 K(La(edta)+L)=2.96	1984LSd (24481)	266
La+++	gl	NaClO4	25°C	0.10M	U		K1=4.01	1972DCc (24482)	267
La+++	gl	NaClO4	25°C	1.00M	U		K1=3.07 B2=5.14 B(LaHL)=6.31 B(LaHL2)=9.18	1971DGa (24483)	268
La+++	ix	NaClO4	25°C	0.15M	U		K(La+HL)=1.34	1968KKc (24484)	269



$$K(\text{LaHL}+\text{HL})=0.85$$

La+++ gl KNO3 25°C 0.10M U K1=3.69 B2=5.90 1968PFa (24485) 270

La+++ gl oth/un 25°C ->0 U T H K1=5.00 1956GNb (24486) 271  
K1=4.15(35 C). DH(K1)=-20 kJ mol<sup>-1</sup>

La+++ gl oth/un 25°C ->0 U K1=4.89 1951PJb (24487) 272  
\*\*\*\*\*  
C3H4O6 H2L CAS 560-27-0 (4233)  
Dihydroxypropanedioic acid; HOOC.C(OH)2.COOH

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

La+++ gl KCl 25°C 0.20M U K1=3.25 1973LPb (24628) 273  
\*\*\*\*\*  
C3H5NO2 HL (4234)  
Isonitrosoacetone; CH3.CO.CH:N.OH, anti-Pyruvic aldehyde oxime

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

La+++ gl diox/w 20°C 50% U K1=4.73 1971MAf (24645) 274  
Medium: 50% dioxan, 0.1 M NaClO4  
\*\*\*\*\*  
C3H6N2O2 L Methylglyoxime CAS 2140-03-6 (2981)  
Methylglyoxime; CH3.C(:N.OH).CH:N.OH

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

La+++ gl diox/w 20°C 50% U K1=6.07 B2=11.25 1971MAf (24807) 275  
Medium: 50% dioxan, 0.1 M NaClO4  
\*\*\*\*\*  
C3H6O2 HL Propionic acid CAS 79-09-4 (35)  
Propanoic acid; CH3.CH2.COOH

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

La+++ gl NaClO4 25°C 1.0M C K1=1.62 B2= 2.48 1996LIa (25015) 276  
B3=3.08  
B4=3.40

La+++ EMF diox/w 25°C 50% U I K1=2.50 B2=4.32 1971MCc (25016) 277  
B3=4.80  
Medium:0.5NaClO4. 0%: K1=1.24, B2=2.10; 20%: K1=1.78, B2=2.92; 60%: K1=2.95,  
B2=5.04, B3=5.81; 70%: B2=5.90, B3=6.65

La+++ gl NaClO4 25°C 2.0M U K1=1.53 B2=2.42 1965CGa (25017) 278

La+++ gl NaClO4 20°C 0.10M U K1=1.89 B2=3.07 1964PKa (25018) 279  
\*\*\*\*\*

C3H6O2S                      H2L      Thiolactic acid    CAS 79-42-5    (366)  
 2-Mercaptopropionic acid; CH3.CH(SH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.20M	U			K1=5.57    B2=10.74	1996PJa (25153)	280
La+++	gl	NaClO4	25°C	2.00M	U			K(La+HL)=1.23	1968CMa (25154)	281
La+++	gl	NaClO4	31°C	2.0M	U			K(La+HL)=1.49 K(LaHL+HL)=0.7	1963BCb (25155)	282

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C3H6O2S                      H2L                      CAS 107-96-0    (437)  
 3-Mercaptopropionic acid; HS.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	2.00M	U			K(La+HL)=1.54	1968CMa (25215)	283
La+++	gl	NaClO4	31°C	2.0M	U			K(La+HL)=1.82 K(LaHL+HL)=1.3	1963BCb (25216)	284
La+++	gl	KCl	30°C	0.10M	U			K(La+HL)=2.30 K(LaHL+HL)=2.40	1962CTa (25217)	285

\*\*\*\*\*

C3H6O3                      HL                      CAS 81598-26-7    (2521)  
 3-Hydroxypropionic acid; HO.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	2.00M	U			K1=1.56	1969JCC (25269)	286
La+++	gl	KCl	30°C	0.10M	U			K1=2.58    B2=5.07	1962CTa (25270)	287

\*\*\*\*\*

C3H6O3                      HL      L-Lactic acid      CAS 79-33-4    (82)  
 L-2-Hydroxypropionic acid; CH3.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.20M	U			K1=6.47    B2=11.11	1996PJa (25467)	288
La+++	gl	NaClO4	25°C	0.20M	U	M		K1=3.68 K(La(EDTA)+L)=3.35	1986LSb (25468)	289
La+++	gl	NaClO4	25°C	0.20M	U	M		K1=3.72	1985LSf (25469)	290

K(La(edta)+L)=3.40

La+++ gl KNO3 30°C 0.10M U 1983MPc (25470) 291

K(La+HL=LaL+H)=-0.88

\*K(LaL)=-5.36

K(La+2HL=LaL2+2H)=-1.71

\*K(LaL2)=-4.8

La+++ EMF alc/w 25°C 20% U I K1=3.96 1973LSa (25471) 292

Data for 0% and 40.3% EtOH. Also 0.05 M NaClO4 at 0%, 20% and 40.3%

La+++ gl NaClO4 25°C 0.10M U K1=2.44 B2=4.32 1966GGb (25472) 293

La+++ gl NaClO4 25°C 0.20M U K1=2.44 B2=3.93 1964DVa (25473) 294

La+++ gl NaClO4 20°C 0.10M U K1=2.60 B2=4.34 1964PKb (25474) 295  
B3=5.6

\*\*\*\*\*

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

La+++ gl NaClO4 20°C 0.10M U K1=2.03 B2=2.88 1964PKa (25602) 296

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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

La+++ gl NaClO4 25°C 0.20M U K1=3.76 B2= 7.19 1996PJa (26193) 297

La+++ gl NaNO3 25°C 0.0 U K1=4.32 1991ADb (26194) 298

Extrapolated from data for 0.01-0.1 M NaNO3. Data for 35 and 45 C.

La+++ gl NaClO4 20°C 0.10M M TIH K1=3.20 1991ELa (26195) 299

K(La+HL=LaL+H)=-6.49

DH(K1)=32.4 kJ mol<sup>-1</sup>, DS=171 J K<sup>-1</sup> mol<sup>-1</sup>; DH(La+HL)=62, DS=88

La+++ gl KNO3 25°C 0.20M U M K1=5.68 1990LSb (26196) 300

K(La(phen)+L)=5.42

La+++ gl KNO3 35°C 0.10M U K1=4.93 1990RSe (26197) 301

La+++ gl NaClO4 25°C 0.20M U K1=3.76 B2= 7.19 1987PPa (26198) 302

La+++ gl NaClO4 25°C 0.20M U M K1=5.82 1986LSb (26199) 303

K(La(EDTA)+L)=4.28

La+++ gl NaClO4 25°C 0.20M U M K1=5.82 1985LSe (26200) 304

La+++      g1   NaCl04 25°C 0.20M U      M    K1=5.82                  1984LSd (26201) 305  
K(La(edta)+L)=4.28

C3H7NO2                      HL            B-Alanine                      CAS 107-95-9    (575)  
3-Aminopropanoic acid; H2N.CH2.CH2.COOH

La+++      gl   NaCl104 25°C 0.20M U      M      K1=5.20      1986LSb (26461) 307  
K(La(EDTA)+L)=4.33

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

La+++      nmr oth/un    ?   0.10M U      1971K0b (26604) 310  
K(La+HL)=0.60

N-Methylacetohydroxamic acid;  $\text{CH}_3\text{CO.N(OH)CH}_3$

La+++ sp NaCl04 25°C 2.0M C 1999BGa (26624) 311  
K(La+HL=LaL+H)=-3.456

2-Amino-3-mercaptopropanoic acid;  $\text{H}_2\text{N} \cdot \text{CH}(\text{CH}_2 \cdot \text{SH})\text{COOH}$

La+++      gl   NaNO3   15°C 0.10M U T      K1=13.35   B2=18.65   1984IDa (26803) 312  
At 30 C, K1=13.25, K2=5.20.

$$\Delta H(K1) = -17.3 \text{ kJ mol}^{-1}, \Delta S(K1) = 56 \text{ J K}^{-1} \text{ mol}^{-1}.$$

C3H7NO3                      HL              Serine                      CAS 56-45-1    (49)

2-Amino-3-hydroxypropanoic acid;  $\text{H}_2\text{N}.\text{CH}(\text{CH}_2.\text{OH})\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.20M	U		K1=4.72 B2= 8.69	1996PPa (27146)	314

La+++	gl	NaNO3	25°C	0.10M	M	I M	K1=4.51	1995KDd (27147)	315
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K(La(egta)+L)=3.39  
Data for 0.15 and 0.05 M NaNO3. At I=0, K1=4.81, K(La(egta)+L)=3.63.

La+++	gl	NaClO4	20°C	0.10M	M	TIH		1991ELa (27148)	316
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B(LaHL)=3.18  
Constant independent of I. DH(K1)=19.2 kJ mol<sup>-1</sup>, DS=126 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*  
C3H8NO5P H3L Glyphosate CAS 1071-83-6 (1617)  
N-(Phosphonomethyl)glycine;  $\text{H}_2\text{O}_3\text{P}.\text{CH}_2.\text{NH}.\text{CH}_2.\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.1M	C		K1=6.7 B2=10.1	1985Mma (27405)	317

\*\*\*\*\*  
C3H8O2 L Propyleneglycol CAS 57-55-6 (2025)  
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
La+++	gl	NaClO4	22°C	0.10M	U			1972MCd (27679)	318

\*\*\*\*\*  
C3H8O3 L Glycerol CAS 56-81-5 (2707)  
Propane-1,2,3-triol;  $\text{HO}.\text{CH}_2.\text{CH}(\text{OH}).\text{CH}_2.\text{OH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	22°C	0.10M	U			1972MCd (27738)	319

K(LaH-1L+H)=8.35  
La+++ gl NaCl 25°C 0.10M U 1970PKe (27739) 320  
K(LaH-1L+H)=8.28

\*\*\*\*\*  
C3H10N2 L Propanediamine CAS 109-76-2 (123)  
1,3-Diaminopropane;  $\text{H}_2\text{N}.\text{CH}_2.\text{CH}_2.\text{CH}_2.\text{NH}_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	27°C	0.10M	M	M		1979KSc (28310)	321

K(LaL+phthalate)=6.21  
K(LaL+malonate)=5.39  
\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.10M	U		K1=12.84 K(La+HL)=6.68 K(La+2HL)=11.06	2002KAa (28573)	322

La+++	gl	KNO3	25°C	0.10M	C		K(LaL+H)=7.82 K(LaHL+H)=5.66	1991SKb (28574)	323
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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
La+++	cal	NaClO4	25°C	0.10M	U	H	K1=2.7      B2=4.18	19760Ca (28654)	324

DH(K1)=6.3 kJ mol<sup>-1</sup>, DS=74 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=12.6, DS=122

La+++	gl	NaClO4	25°C	0.10M	C	H	K1=2.713    B2= 4.18	19760Cb (28655)	325
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By calorimetry: DH(K1)=6.32 kJ mol<sup>-1</sup>, DS(K1)=73.6 J K<sup>-1</sup> mol<sup>-1</sup>.  
 DH(B2)=12.6, DS(B2)=122.

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	oth/un	25°C	0.10M	U		K1=2.450	1987TSb (28891)	326

\*\*\*\*\*

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
La+++	gl	oth/un	25°C	0.10M	U	T H	K1=3.47	1987TSb (28915)	327

30 C:K=3.10; 35 C: 2.88. DH=-103.0 kJ mol<sup>-1</sup>, DS=-280 J K<sup>-1</sup> mol<sup>-1</sup>

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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
La+++	EMF	NaClO4	25°C	1.00M	U	M	K1=2.64    B2=4.19 B(LaLA)=4.45	1991WPb (29092)	328

HA=glycolic acid

La+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.18	1986LSb (29093)	329
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K(La(EDTA)+L)=3.80

La+++ gl KNO3 25°C 0.10M U T HM K1=4.76 B2=8.08 1986NSa (29094) 330  
B(LaAL)=7.92

H2A=phthalic acid. DH(LaAL)=-41.5 kJ mol<sup>-1</sup>, DS=0.3 J K<sup>-1</sup> mol<sup>-1</sup>

La+++ gl NaClO4 25°C 2.00M C K1=2.56 B2=3.90 1985AMa (29095) 331

La+++ gl NaClO4 25°C 0.20M U M K1=4.22 1985LSf (29096) 332  
K(La(edta)+L)=3.86

La+++ gl NaClO4 25°C 0.10M U K1=3.44 1973CDc (29097) 333

La+++ gl NaClO4 25°C 0.10M U K1=3.45 B2=5.43 1970RFa (29098) 334

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C4H4O4 H2L Fumaric acid CAS 110-17-8 (289)

trans-Butenedioic acid; HOOC.CH:CH.COOH

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

La+++ gl NaClO4 25°C 0.10M C K1=2.47 1986LCa (29205) 335  
B(LaHL)=6.01  
K(La+HL)=1.93

La+++ gl KNO3 25°C 0.10M U T HM K1=3.01 1986NSa (29206) 336  
B(LaAL)=5.70

H2A=phthalic acid. DH(LaAL)=-28.7 kJ mol<sup>-1</sup>, DS=12.2 J K<sup>-1</sup> mol<sup>-1</sup>

La+++ gl NaClO4 25°C 0.10M U K1=2.74 1973CDc (29207) 337

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C4H4O5 H2L Oxobutanedioic CAS 328-42-7 (1733)

2-Oxosuccinic acid, Oxalacetic acid; HOOC.CH2.CO.COOH

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

La+++ gl NaClO4 25°C 0.50M M K1=3.11 1991MOa (29270) 338

La+++ gl oth/un 25°C ? U K1=5.3 B2=9.3 1956GNc (29271) 339

\*\*\*\*\*

C4H5NO5 H2L (7375)

Oxalohydroxamic acid; HOOC.CO.CH2.CO.NHOH

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

La+++ gl KNO3 25°C 0.1M M K1=9.54 B2=18.34 1989LWa (29313) 340  
K3=7.64

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C4H6O2 HL Methylacrylic (6992)

2-Methylpropenoic acid; CH2:C(CH3)COOH

\*\*\*\*\*

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.10M	U		K1=2.27	1995PAa (29700)	341
*****									
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
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.32 K(La(EDTA)+L)=2.92	1986LSb (29717)	342
-----									
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.35 K(La(edta)+L)=2.97	1985LSf (29718)	343
*****									
C4H6O4		H2L					Succinic acid	CAS 110-15-6 (112)	
1,4-Butanedioic acid; HOOCH2.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	M	H	K1=3.09	1986CDb (29983)	344
DH=11.5 kJ mol-1, DS=98 J K-1 mol-1									
-----									
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.73 K(La(EDTA)+L)=3.50	1986LSb (29984)	345
-----									
La+++	gl	KNO3	25°C	0.10M	U	T HM	K1=3.56 B2=6.56 B(LaAL)=6.38	1986NSa (29985)	346
H2A=phthalic acid. DH(LaAL)=-44.2 kJ mol-1, DS=-26.1 J K-1 mol-1									
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La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.77 K(La(edta)+L)=3.56	1985LSf (29986)	347
-----									
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.73 K(La(edta)+L)=3.50	1984LSd (29987)	348
-----									
La+++	sol	oth/un	25°C	0.50M	U		K1=3.77	1970MKe (29988)	349
-----									
La+++	ix	NaClO4	25°C	0.15M	U		K(La+HL)=1.48 K(LaHL+HL)=1.2	1968KKc (29989)	350
-----									

La+++	gl	oth/un	25°C	->0	U		K1=3.96	1951PJb (29990)	351
*****									
C4H6O4S		H3L					Thiomalic acid	CAS 70-49-5 (109)	
2-Mercaptosuccinic acid, 2-Sulfanyl-1,4-butanedioic acid; HOOCH(SH).CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.20M	U		K1=6.13 B2=11.54	1996PJa (30341)	352



La+++      gI   NaCl04 25°C 0.20M U      M    K1=4.29                  1986LSb (30342) 353  
K(La(EDTA)+L)=4.04

La+++      gl   KN03   30°C 0.10M U      M      1980RTa (30343) 354  
K(La(CDTA)+L)=2.99

La+++	g1	KCl	30°C 0.10M U	1962CTa (30344) 355
			K(La+HL)=3.01	
			K(LaHL+HL)=2.57	
			K(La(HL)2+HL)=2.27	

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++ g1 NaCl04 25°C 0.20M U K1=4.51 B2= 8.81 1996PJa (30657) 356

La+++      gl   NaCl04 25°C 1.00M U      K1=3.685   B2=6.093   1987M0a (30658) 357  
B(LaHL)=5.00

La+++      g1   NaCl04 25°C 0.50M C      K1=3.86   B2=6.30   1986LEd (30659) 358  
B(LaHL)=6.44

The above values for S(-)-malic acid. With R,S-Malic acid  $K_1=3.95$ ,  $B_2=6.58$   
 $B(MHL)=6.56$

La+++      gl   NaCl04 25°C 0.20M U      M    K1=3.75                  1986LSb (30660) 359  
K(La(EDTA)+L)=3.38

La+++      g1   NaCl04 25°C 2.00M C      K1=3.531   B2=5.98   1985AMa (30661) 360  
B3=6.85

La+++      gl   NaCl04 25°C 0.20M U      M    K1=3.79                  1985LSf (30662) 361  
K(La(edta)+L)=3.43

La+++      g1   KN03   20°C 0.10M U      K1=3.96   B2=5.26   1980Sdb (30663) 362  
K(La+HL)=1.81

La+++ g1 NaCl04 25°C 0.10M U K1=4.37 B2=7.16 1970RFa (30664) 363La+++ EMF NaCl04 25°C 2.00M U K1=3.71 B2=6.17 1969JPa (30665) 364

La+++      EMF KCl      25°C 0.20M U      K1=4.04      1964DAb (30666) 365

La+++      g1   KCl      30°C 0.10M U      K1=4.73      B2=7.95      1962CTa (30667) 366  
K3=2.68

La+++ gl oth/un 22°C 0.12M U K1=4.38 1962DAa (30668) 367  
T:21-22

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C4H6O5                      H2L      Diglycolic acid   CAS 110-99-6   (243)  
Di(carboxy)methyl ether, 2,2'-Oxydiethanoic acid; H00C.CH2.O.CH2.C00H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	KNO3	25°C	0.10M	M	M	K1=2.41 K(LaL+ida)=2.12 K(LaL+gly)=2.29 B(LaLA)=8.45 B(LaLB)=9.35	1989NDa (30888)	368
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H2A is tartaric acid, H2B is malic acid. Also data for quaternary systems:  
LaLA+ida, LaLA+gly, LaLB+ida, LaLB+gly.

La+++	gl	KCl	25°C	1.0M	U	M	K(La(edta)+L)=2.10	1988KTa (30889)	369
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La+++	cal	NaClO4	25°C	1.0M	C	H		1963GRd (30890)	370
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DH(K1)=-0.293 kJ mol<sup>-1</sup>, DS(K1)=93.3 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-3.46, DS(B2)=149;  
DH(B3)=-1.98, DS(B3)=189.

La+++	EMF	NaClO4	20°C	1.00M	U		K1=4.93    B2=8.41 B3=10.25	1963GTa (30891)	371
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Method: quinhydrone electrode

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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).C00H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	NaClO4	25°C	1.00M	U		K1=2.72    B2=4.93 B(LaHL)=5.08	1987MOa (31026)	372
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La+++	gl	NaClO4	25°C	2.00M	C		K1=2.95    B2=5.48	1985AMa (31027)	373
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C4H6O6                      H2L      L-Tartaric acid   CAS 87-69-4   (92)  
L-Tartaric acid, L-2,3-Dihydroxybutanedioic acid; H00C.CH(OH).CH(OH).C00H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	sp	KCl	25°C	.044M	U	M	B2=6.25	1981KFa (31287)	374
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La+++	sp	oth/un	25°C	0.0	U	T H	K1=4.58	1975YBa (31288)	375
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DH(K1)=-9.2 kJ mol<sup>-1</sup>, DS=59 J K<sup>-1</sup> mol<sup>-1</sup>. Temperature range 9-15 C only

La+++	gl	R4N.X	25°C	0.10M	U	I	K1=3.68    B2=6.13 B(LaHL)=6.41	1972DMb (31289)	376
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I=0.1-0.4 M Me4NCl

La+++	gl	none	25°C	0.00	M	T	K1=4.60    B2=7.59	1972DMb (31290)	377
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K(La+HL)=2.48

15 C-35 C

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La+++ gl NaClO4 25°C 0.10M U K1=3.62 B2=6.67 1972RMa (31291) 378  
Values quoted for meso form  
K1(d1)=4.39, K2(d1)=3.01, B2(meso-d1)=7.43  
-----

La+++ gl alc/w 25°C 50% U I K1=5.22 1972SSj (31292) 379  
Medium: 0-50% EtOH, 0.05 M. 50% EtOH, I=0: K1=6.90  
-----

La+++ EMF NaClO4 25°C 2.00M U K1=3.26 B2=5.05 1969JPa (31293) 380  
-----

La+++ gl KCl 24°C 0.20M U K1=2.89 1966DDa (31294) 381  
-----

La+++ EMF oth/un 25°C var U K1=3.68 B2=6.37 1966PBb (31295) 382  
B(La2L)=5.32  
K(La+H-1L)=10.73  
-----

Method: H electrode

-----  
La+++ con oth/un 25°C ? U 1965BRf (31296) 383  
K(La+HL)=2.5  
-----

La+++ dis NaClO4 20°C 0.10M U B2=6.72 1963STc (31297) 384  
\*\*\*\*\*  
C4H7NO3 HL CAS 543-24-8 (3586)  
N-Acetylglycine; CH3.CO.NH.CH2.COOH  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ EMF NaClO4 25°C 0.10M U K1=1.61 1971RCa (31503) 385  
\*\*\*\*\*  
C4H7NO4 H2L Aspartic acid CAS 56-84-8 (21)  
Aminobutanedioic acid; H2N.CH(CH2.COOH).COOH  
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-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ gl KNO3 25°C 0.10M C M 2003AHa (31874) 386  
K(LaL+A)=3.53  
HA is 3-amino-5-mercapto-1,2,4-triazole.  
-----

La+++ gl NaClO4 25°C 0.20M U K1=5.30 B2=10.31 1996PJa (31875) 387  
-----

La+++ gl NaClO4 25°C 0.20M U K1=5.30 B2=10.31 1996PPa (31876) 388  
-----

La+++ gl NaClO4 21°C 0.10M M K1=4.53 1987WLa (31877) 389  
B(LaHL)=12.49  
-----

La+++ gl NaClO4 25°C 0.20M U M K1=5.61 1986LSb (31878) 390  
K(La(EDTA)+L)=4.55  
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La+++	gl	NaClO4	30°C	0.10M	U		K1=4.47	1984YLa (31879)	391
La+++	gl	KCl	30°C	0.10M	U		K1=4.84 B2=8.26	1962CTa (31880)	392
La+++	gl	KCl	25°C	0.10M	U		K1=5.0 B2=9.20	1961BLb (31881)	393
*****									
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
La+++	sp	oth/un	25°C	0.10M	U		K1=5.88	1997YSa (32286)	394
La+++	gl	KCl	25°C	1.0M	U	M		1988KTa (32287)	395
							K(La(edta)+L)=2.84		
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=6.30 B2=11.10	1988VSc (32288)	396
							K(La(HEDTA)+L)=4.37		
							K(La(CDTA)+L)=4.17		
							K(La(DTPA)+L)=3.60		
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=6.30 B2=11.10	1987VSb (32289)	397
							K(La(NTA)+L)=5.37		
							K(La(edta)+L)=3.97		
La+++	gl	KNO3	27°C	0.10M	M	M		1984KTb (32290)	398
							K(LaA+L)=5.25		
							K(LaB+L)=5.11		
H2A=Citraconic acid, H2B=Maleic acid									
La+++	gl	KNO3	27°C	0.10M	U	M		1980KTb (32291)	399
							K(LaA+L)=5.82		
							K(LaB+L)=5.37		
H2A=phthalic acid, H2B=malonic acid									
La+++	gl	alc/w	20°C	60%	U	I	K1=6.21	1980SKc (32292)	400
In 0.1 M NaCl: K1=7.54									
La+++	EMF	KCl	25°C	1.0M	U	M		1977GMa (32293)	401
							K(LaA+L)=3.36		
							K(LaA+HL)=0.98		
							K(LaA+H2L)=1.95		
							K(LaA+H3L)=3.61		
Method: Pt/H2 electrode. H3A is N-hydroxyethyl-1,2-diaminoethane-N,N',N'-triethanoic acid.									
La+++	gl	alc/w	25°C	1.0M	U	I	K1=6.03 B2=10.96	1976TBb (32294)	402
							K(La+3L)=14.2		
Medium: 1 M LiCl in 60% MeOH/H2O v/v; in 100%H2O K1=5.01; B2=8.81; B3=11.3									
Also data for EtOH, Dioxane, Acetone mixed solvents									

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-----
La+++      gl  KCl      25°C 0.10M U      K1=6.10      1974KPd (32295) 403
-----
La+++      cal KNO3     20°C 0.10M U      HM          1971GKb (32296) 404
                        K(LaA+L)=2.80
DH(LaA+L)=-6.53 kJ mol-1, DS=31.8 J K-1 mol-1. DH(LaAL)=-18.79, DS=287.
H4A=EDTA
-----
La+++      gl  KNO3     20°C 0.10M U      HM      K1=5.70  B2=9.67  1964ANa (32297) 405
By calorimetry: DH(K1)=-0.7 kJ mol-1, DS=107.0 k=J K-1 mol-1
DH(B2)=-0.7, DS=182. Ternary complexes with HEDTA
-----
La+++      gl  KNO3     25°C 0.10M U      K1=5.88  B2=9.97  1962THa (32298) 406
*****
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
-----
La+++      gl  diox/w 20°C 50% U      K1=7.42  B2=13.73  1971MAf (32542) 407
Medium: 50% v/v dioxan, 0.1 M NaClO4
-----
La+++      gl  diox/w 25°C 50% U      K1=6.6   B2=12.5   1954CFa (32543) 408
*****
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
-----
La+++      gl  NaClO4 21°C 0.10M M          B(LaH-1L)=-6.97
-----
La+++      gl  NaClO4 30°C 0.10M U      K1=3.47      1984YLa (32705) 410
-----
La+++      gl  NaClO4 30°C 0.2M U      K1=3.53      1977MSf (32706) 411
-----
La+++      gl  NaClO4 25°C 0.10M U      B2=6.48      1973TSc (32707) 412
*****
C4H8N2O3      HL      Gly-Gly CAS 556-50-3 (54)
Glycyl-glycine; H2N.CH2.CO.NH.CH2.COOH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  NaClO4 30°C 0.10M U T H      K1=3.35  B2=5.85  1980SBb (33032) 413
                        K3=2.43
DH=-114.45 kJ mol-1. Further data available for T=40. Alternative method:
Conductivity.
*****
C4H8N2O4      H2L      HDA CAS 19247-05-3 (1025)
Hydrazine-N,N'-diethanoic acid; HOOC.CH2.NH.NH.CH2.COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	60°C	0.10M	U		K1=5.93 B2=9.71 B3=12.64	1978NBa (33087)	414
*****									
C4H8N2O4		H2L					CAS 39156-77-9	(3008)	
Hydrazine-N,N-diethanoic acid; H2N.N(CH2.COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KN03	30°C	0.10M	U	M		1984AIa (33108)	415
							K(La(EDTA)+L)=2.439		
La+++	EMF	KCl	25°C	0.10M	U		K1=3.8 B2=6.6 K3<0.1	1954VIA (33109)	416
*****									
C4H8O2		HL					Isobutyric acid CAS 79-31-2	(573)	
2-Methylpropanoic acid; CH3.CH(CH3).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaCl04	25°C	2.00M	U	H	K1=1.57 B2=2.47	1965CGa (33234)	417
By calorimetry: DH(K1)=14.5 kJ mol-1, DS=79 J K-1 mol-1; DH(K2)=10.5, DS=52									
La+++	gl	NaCl04	25°C	0.50M	U		K1=1.64 B2=2.16	1964SPa (33235)	418
*****									
C4H8O2		HL					CAS 107-92-6	(1118)	
n-Butanoic acid; CH3.CH2.CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	EMF	diox/w	25°C	60%	U	I	K1=2.93 B2=5.21 B3=6.79	1971MSi (33338)	419
Medium: 0-70% dioxan, 0.5 M NaCl04. K1(0%)=1.64, B2=2.43; K1(20%)=1.96, B2=3.33; K1(40%)=2.36, B2=4.25; K1(50%)=2.78, B2=4.61; B2(70%)=5.97, B3=8.40									
*****									
C4H8O2S		HL					CAS 2935-90-2	(1147)	
Methyl-3-mercaptopropionate; HS.CH2.CH2.CO2.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KN03	25°C	0.10M	U	T H	K1=2.44	1975SBa (33370)	420
							K(LaL+30H)=1.22		
DH=-29.5 kJ mol-1 and DS=-32.6 J mol-1 K-1.									
Values available when T=35 and 45 and also via conductivity.									
*****									
C4H8O2S		HL					CAS 627-04-3	(3007)	
S-Ethylthioethanoic acid; CH3.CH2.S.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	31°C	2.0M	U		K1=1.70 B2=2.50	1963BCb (33408)	421

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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
La+++	gl	NaClO4	25°C	0.20M	U		K1=2.30 B2=4.04	1964DVa (33483)	422
La+++	EMF	NaClO4	25°C	1.0M	U		K1=2.16 B2=3.63 K3=0.75 K4=0.46	1964EVa (33484)	423

Method: quinhydrone electrode

La+++	gl	NaClO4	20°C	0.10M	U		K1=2.62 B2=4.42 B3=5.53	1964PKb (33485)	424
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La+++	gl	NaClO4	25°C	0.50M	U		K1=2.22 B2=3.67	1964SPa (33486)	425
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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
La+++	gl	KNO3	25°C	0.10M	C		K1=2.65 B2=4.52 K3=1.20	1975PFb (33681)	426

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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
La+++	gl	KNO3	25°C	0.10M	U		K1=2.69 B2=4.69 K3=1.60	1976PKb (33703)	427

La+++	gl	NaClO4	25°C	0.50M	U		K1=2.40 B2=3.88 B3=4.90	1964SPa (33704)	428
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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
La+++	gl	KNO3	25°C	0.10M	U T		K1=4.27	1978SSb (33917)	429

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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
La+++	gl	NaClO4	25°C	0.20M	U		K1=4.86 B2= 8.90	1996PPa (34310)	430
La+++	gl	oth/un	25°C	0.05M	U	TIH	K1=4.05 B2= 7.05	1975SCf (34311)	431
Data for 0.15 and 0.25 M. Also data for 45 C. At I=0, B2=7.68. DH(K1)=-31.8 kJ mol-1, DS(K1)=-29 J K-1 mol-1; DH(K2)=-4.52, DS(K2)=42.3. *****									
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
La+++	gl	KNO3	25°C	0.10M	C		K1=3.35 *K(LaL)=-5.65 K(2La(OH)L=La2(OH)2L2)=8.69	2001AAb (34627)	432
***** C4H11O4P HL (4276) Diethylphosphoric acid; (C2H5O)2.PO.OH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	kin	oth/un	25°C		U		K1=1.24	1971MGb (35260)	433
La+++	kin	none	25°C	0.00	M		K1=1.82	1966SSb (35261)	434
***** 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
La+++	EMF	NaClO4	25°C	100%	C	H	K1=5.29 B2= 8.36	2000CDa (35793)	435
Medium: DMF, 0.10 M Et4N[CF3SO3]. Method: Ag/Ag+ electrode. By calorimetry: DH(K1)=-44.9, DH(B2)=-89.7 kJ mol-1.									
La+++	ISE	non-aq	25°C	100%	C	H	K1=2.78 B2=4.70	1993CCb (35794)	436
Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-40.2 kJ mol-1, DS=-82; DH(B2)=-79.0, DS-175. *****									
C4H14N2O4P2 H2L CAS 37107-07-6 (4287) Ethylenebis(iminomethylenephosphonous acid)									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.10M	U		K1=4.16	1971MMh (35831)	437
***** 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
La+++	gl	KCl	25°C	0.10M	U		K(La+HL)=7.49	1965DKb (35884)	438

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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
La+++	cal	NaClO4	25°C	0.10M	U	H	K1=3.05 B2=4.49	1978COa (35944)	439

DH(K1)=4.05 kJ mol<sup>-1</sup>, DS=71.9; DH(K2)=4.51, DS=43.0

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	cal	NaClO4	25°C	1.0M	C	H		1990YKb (36058)	440

DH(K1)=-0.72 kJ mol<sup>-1</sup>, DS(K1)=41.6 J K<sup>-1</sup> mol<sup>-1</sup>.

La+++	EMF	NaClO4	25°C	1.0M	C		K1=2.30 B2= 4.09 B3=5.26	1983KKb (36059)	441
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Method: Pt/quinhydrone electrode.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	U		K1=1.77 B2=2.89	1969RFa (36258)	442

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	U		K1=1.79 B2=2.91	1969RFa (36296)	443

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	cal	NaClO4	25°C	2.00M	U	H	K1=1.48	1976YCa (36306)	444

DH=6.19 kJ mol<sup>-1</sup> and DS=49.79 J mol<sup>-1</sup> K<sup>-1</sup>.

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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
La+++	gl	diox/w	25°C	50%	U		K1=7.13	1970GDa (36791)	445

Medium: 50% dioxan, 0.1 M NaClO4

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	25°C	50%	M I		K1=5.34 B2=9.98 K3=3.98	1994SSa (37066)	446

Medium: 50% dioxan, I=0 corr. At 35 C: K1=5.10, K2=4.44, K3=3.01

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C5H6O5 HL CAS 98-02-2 (4309)  
Furfurylmercaptan; C4H3O.CH2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	25°C	50%	U T		K1=4.70 K3=4.07	1973SSf (37345)	447

Medium: 50% EtOH, 0.1 M NaClO4  
K1(35 C)=4.66, K1(45 C)=4.58, K3(35 C)=4.03, K3(45 C)=3.98

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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
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.61 K(La(EDTA)+L)=3.81	1986LSb (37361)	448

La+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.66 K(La(edta)+L)=3.83	1985LSf (37362)	449
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C5H6O4 H2L Itaconic acid CAS 97-65-4 (398)  
Methylenesuccinic acid; HOOC.CH2.C(:CH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.20M	U		K1=2.52 K(La+HL)=1.56	1989MFa (37425)	450

La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.81 K(La(EDTA)+L)=3.56	1986LSb (37426)	451
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La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.85 K(La(edta)+L)=3.59	1985LSf (37427)	452
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La+++	sol	oth/un	25°C	1.0M	U		K1=4.10	1984KPF (37428)	453
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in 1.0 M HCl

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C5H7NO3 HL (4313)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	20°C	50%	U		K1=3.86 B2=6.73	1971MAf (37528)	454
Medium: 50% v/v dioxan, 0.1 M NaClO4									

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C5H8N2O3 H2L (4317)

Methylacetylglglyoxime; CH3.C(:N.OH).C(:N.OH).CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	20°C	50%	U		K1=4.98 B2=9.00	1971MAf (37705)	455

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C5H8O2 HL Acetylacetone CAS 123-54-6 (164)

Pentane-2,4-dione; CH3.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.10M	U		K1=4.89 B2=8.35 K3=2.53	1995PAa (38003)	456

La+++	gl	diox/w	30°C	75%	U		K1=6.50 B2=11.98 K3=4.09	1979MBc (38004)	457
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La+++	gl	NaClO4	?	0.10M	U	M		1973TZa (38005)	458
							K(La(EDTA)+L)=3.45		

La+++	gl	alc/w	?	50%	U	I	K1=5.88	1971K0a (38006)	459
Medium: 5-80% MeOH, 0.005 LaCl3, 0.005 HL. K1(5%)=5.00, K1(80%)=6.95									

La+++	gl	mixed	30°C	67%	U		K1=6.12 B2=10.67 K3=3.83	1964DBb (38007)	460
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Medium: 67% acetone, 0.1 M NaClO4

La+++	gl	NaClO4	25°C	2.0M	U		K1=4.71 B2=8.16	1964YCa (38008)	461
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La+++	gl	oth/un	30°C	0.10M	U		K1=4.96 B2=8.41 K3=2.5	1960GFa (38009)	462
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La+++	gl	diox/w	?	75%	U		K1=6.15 B2=10.82 K3=3.68	1956DBa (38010)	463
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La+++	gl	oth/un	30°C	0.0	U		K1=5.1 B2=8.90 K3=3.00	1955IFa (38011)	464
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C5H8O4 H2L CAS 601-75-2 (479)

Ethylpropanedioic acid; HOOC.CH(C2H5).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	KCl	25°C	0.20M	U		K1=3.70	1989ZPa (38244)	465
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In 70.4% v/v EtOH/H2O: K1 = 5.96

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C5H8O4		H2L					CAS 498-21-5	(2234)	
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Methylsuccinic acid; HOOC.CH2.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	NaClO4	25°C	0.50M	C		K1=2.52 B(LaHL)=6.44	1986LEe (38263)	466
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La+++	gl	NaClO4	25°C	0.10M	U		K1=2.95 B2=4.59	1970RFa (38264)	467
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C5H8O4		H2L	Glutaric acid				CAS 110-94-1	(420)	
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Pentanedioic acid; HOOC.CH2.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	NaClO4	25°C	0.10M	M	H	K1=2.99	1986CDb (38324)	468
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DH=12.4 kJ mol<sup>-1</sup>, DS= 99 J K<sup>-1</sup> mol<sup>-1</sup>

La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.70 K(La(EDTA)+L)=2.86	1986LSb (38325)	469
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La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.74 K(La(edta)+L)=2.90	1985LSf (38326)	470
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La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.70 K(La(edta)+L)=2.86	1984LSd (38327)	471
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La+++	gl	alc/w	25°C	25%	U	I	K1=3.24	1973CSd (38328)	472
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Medium: 0-40% EtOH, 0.05 M. K1(0%)=3.02, K1(40%)=3.52

La+++	sol	oth/un	25°C	0.50M	U		K1=3.10	1970MKe (38329)	473
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La+++	gl	oth/un	25°C	->0	U		K1=3.83	1951PJb (38330)	474
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C5H8O5		H2L	(+)-Citramalic				CAS 6236-09-5	(2692)	
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S-2-Hydroxy-2-methylsuccinic acid; HOOC.C(CH3)(OH).CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	NaClO4	25°C	0.50M	C		K1=4.39 B(LaHL)=6.80	1986LEc (38406)	475
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C5H8O7		H2L					CAS 40120-71-6	(3022)	
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2,3,4-Trihydroxypentanedioic acid, Trihydroxyglutaric acid;  $\text{HOOC}(\text{CH}(\text{OH}))_3\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	EMF	oth/un	25°C	0.10M	U		K1=3.98	1969PSc (38429)	476
La+++	gl	KCl	24°C	0.20M	U		K1=3.20	1966DDa (38430)	477
*****									
C5H9NO2		HL		Proline			CAS 147-85-3	(44)	
Pyrrolidine-2-carboxylic acid; $\text{C}_4\text{H}_8\text{N}(\text{COOH})$									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	U	T H	K1=4.32	1984SGb (38625)	478
35 C, K1=4.22; 45 C, 4.10. DH=-5.3 kJ mol <sup>-1</sup> , DS=31 J K <sup>-1</sup> mol <sup>-1</sup>									
La+++	gl	NaClO4	25°C	0.10M	U		B2=4.26	1981ZLa (38626)	479
*****									
C5H9NO3		HL		Hydroxyproline			CAS 51-35-4	(416)	
4-Hydroxy-2-pyrrolidinecarboxylic acid; $\text{C}_4\text{H}_7\text{N}(\text{OH})(\text{COOH})$									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaCl	37°C	0.15M	U		K1=3.64 B2= 6.96	1997GMa (38738)	480
La+++	gl	NaClO4	25°C	0.10M	U		B2=3.90	1981ZLa (38739)	481
La+++	gl	oth/un	25°C	0.05M	U	TIH	K1=3.80 B2= 6.85	1975SCf (38740)	482
Data for 0.15 and 0.25 M. Also data for 45 C. At I=0, B2=7.56. DH(K1)=-7.28 kJ mol <sup>-1</sup> , DS(K1)=48.3 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-10.9, DS(K2)=21.9. *****									
C5H9NO4		H2L		Glutamic acid			CAS 56-86-0	(22)	
2-Aminopentanedioic acid; $\text{H}_2\text{N}(\text{CH}_2)_2\text{COOH}$									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.10M	C	M		2003AHa (39092)	483
K(LaL+A)=3.37 HA is 3-amino-5-mercapto-1,2,4-triazole. *****									
C5H9NO4		H2L		MIDA			CAS 4408-64-4	(190)	
N-Methyliminodiethanoic acid; $\text{CH}_3\text{N}(\text{CH}_2)_2\text{COOH}$									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.10M	U		K1=6.18 B2=11.08 B3=14.48 B(La+2OH+L)=16.27	1980MGc (39258)	484
La+++	nmr	oth/un	25°C	1.00M	U		K1=5.74	1972KNb (39259)	485

C5H9N3O4S                      H2L                      CAS 16907-58-7    (2106)  
Thiosemicarbazone-diethanoic acid; H2N.CS.NH.N(CH2.COOH)2

C5H9N3O5                      H2L                      CAS 4438-86-2    (3622)  
Semicarbazone-1,1-diethanoic acid; H2N.CO.NH.N(CH2.COOH)2

C5H10N2O3                      HL              Glutamine                      CAS 56-85-9    (18)  
2-Aminopentanedioic acid 5-amide; H2N.CH(CH2.CH2.CO.NH2)COOH

La+++      g1   NaClO4   25°C   0.10M   U      B2=6.43      1973TSb (39823) 489  
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C5H10O3                      HL                      CAS 3739-30-8 (3612)  
2-Hydroxy-2-methylbutanoic acid, Methylethylglycolic acid; CH<sub>3</sub>.CH<sub>2</sub>.

Method: quinhydrone electrode.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	1.0M	U			K1=1.98	1968GCa (40281)	493

C5H10O4 HL CAS 4767-03-7 (4297)  
 2,2-Bis(hydroxymethyl)propanoic acid; CH3.C(CH2OH)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	U		K1=2.06 B2=3.54 K3=1.21	1970RDa (40299)	494

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
La+++	gl	KNO3	25°C	0.10M	C		K1=2.57 B2=4.35 K3=1.00	1975PFb (40314)	495

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	cal	none	25°C	0.0	U	H	K1=0.49	1993MLa (40351)	496

DH(K1)=-9.6 kJ mol<sup>-1</sup>, TDS=-6.8

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
La+++	gl	NaClO4	25°C	0.20M	U		K1=5.29 B2=10.09	1996PPa (40722)	497
La+++	gl	KNO3	25°C	0.20M	U	M	K1=5.48 K(La(phen)+L)=5.30	1990LSb (40723)	498
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=5.94 K(La(EDTA)+L)=5.10	1986LSb (40724)	499
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=5.94 K(La(edta)+L)=5.10.	1985LSe (40725)	500

La+++	gl	KCl	25°C	0.10M	U		K1=3.73	1974BFa (40726)	501
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C5H11NO2 HL Nor-Valine CAS 760-78-1 (689)  
 2-Aminopentanoic acid; CH3.CH2.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	27°C	0.10M	M	TI	K1=5.36	1996ALa (40839)	502

For I = 0.05, K1=5.41; I=0.15, K1=5.09. Also data for 32 and 37 C.

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
La+++	gl	NaClO4	25°C	0.20M	U		K1=4.86    B2= 9.02	1996PPa (41104)	503

La+++	gl	NaNO3	25°C	0.10M	M	I M	K1=4.58                      1995KDd (41105)	504
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K(La(egta)+L)=3.43

Data for 0.15 and 0.05 M NaNO3. At I=0, K1=4.79, K(La(egta)+L)=3.68.

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C6H3N3O7                      HL      Picric acid                      CAS 88-89-1    (593)  
2,4,6-Trinitrophenol; HO.C6H2(NO2)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	oth/un	21°C	0.40M	U		K1=0.92                      1955BKa (42121)	505	
							B3=3.22		

Medium:0.2-0.9(some EtOH)

\*\*\*\*\*

C6H4N2O5                      HL                                      CAS 50-28-5    (505)  
2,4-Dinitrophenol; HO.C6H3(NO2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	oth/un	25°C	0.10M	U		K1=1.01                      1966PMa (42231)	506	

\*\*\*\*\*

C6H4O6                              H4L                                      CAS 5678-48-2    (871)  
Tetrahydroxy-1,4-benzoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	EMF	NaClO4	30°C	0.10M	U		K1=5.80    B2=8.10    1981HIa (42325)	507	

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C6H5NO2                      HL      Picolinic acid                      CAS 98-98-6    (391)  
2-Pyridine-carboxylic acid; C5H4N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	20°C	0.10M	U		K1=4.51                      1987EGb (42554)	508	

Soln. contains 0.5 M t-butanol

La+++	gl	KNO3	25°C	0.20M	U	M	K1=4.04                      1987LSc (42555)	509
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K(La(nta)+L)=2.95, K(La(edta)+L)=3.60.

La+++	gl	NaClO4	25°C	0.50M	U		K1=3.19    B2=5.85    1977GGb (42556)	510	
							B3=8.17		

La+++	gl	KNO3	25°C	0.10M	U		K1=3.51    B2=6.46    1968PIa (42557)	511	
							K3=2.28		



K4=1.30

-----  
La+++      gl   NaClO4   25°C   2.0M U      K1=3.50    B2=5.89    1965YCa (42558) 512  
-----

La+++      gl   oth/un   25°C   0.50M U   I      K1=3.21    B2=6.06    1964MTa (42559) 513  
B3=7.94

I=0.02:K1=4.19, B2=7.20, B3=10.47

-----  
La+++      gl   KNO3    25°C   0.10M U      K1=3.54    B2=6.28    1964THb (42560) 514  
B3=8.9

\*\*\*\*\*  
C6H5NO2                      HL    Nicotinic acid    CAS 59-67-6   (419)  
3-Pyridine-carboxylic acid; C5H4N.CO0H  
-----

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

La+++      gl   NaClO4   25°C   0.20M U      K1=1.90      1973FDa (42674) 515  
-----

\*\*\*\*\*  
C6H5NO3                      HL    2-Nitrophenol    CAS 88-75-5   (510)  
2-Nitrohydroxybenzene; HO.C6H4.NO2  
-----

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

La+++      sp   NaClO4   25°C   0.10M U      K1=2.20      1966PMa (42736) 516  
-----

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

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

La+++      gl   NaClO4   30°C   0.10M U                      1969DNc (42752) 517

K(La+HL)=3.18

K(LaHL+HL)=3.04

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

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

La+++      gl   R4N.X    25°C   0.10M C      K1=1.0      1990CBe (42809) 518  
-----

\*\*\*\*\*  
C6H5NO3                      HHL                      CAS 824-40-8   (878)  
Pyridine-2-carboxylic acid N-oxide (Picolinic acid N-oxide); C5H4N(O)COO  
-----

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

La+++      gl   NaClO4   25°C   2.0M U      K1=2.53    B2=4.29    1965YCa (42835) 519  
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\*\*\*\*\*  
C6H5NO4                      H2L    4-Nitrocatechol   CAS 3316-09-4   (890)  
1,2-Dihydroxy-4-nitrobenzene; O2N.C6H3(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaNO3	25°C	0.0	U	M	K1=9.22 K(La(egta)+L)=5.29	1996KDb (42930)	520
Extrapolated from data for I=0.05-0.15 M NaNO3.									
La+++	gl	KNO3	25°C	0.10M	U		K1=7.81 B2=13.14	1981BDa (42931)	521
*****									
C6H5NO4		H2L					CAS 3163-07-3	(2711)	
2,4-Dihydroxy-1-nitrobenzene; 02N.C6H3(OH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	KCl	25°C	0.10M	M	I	K1=5.42	1989PEa (42955)	522
*****									
C6H5O4Br		L					CAS 40838-32-2	(1084)	
6-Bromo-5-hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	KCl	25°C	0.10M	U		K1=4.68	1987PLa (43111)	523
*****									
C6H5O4Cl		HL					Chlorokojic aci	(3086)	
3-Chloro-5-hydroxy-2-hydroxymethyl-4-pyrone;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	oth/un	30°C	0.10M	U		K1=5.28 B2=9.76	1972DSd (43134)	524
*****									
C6H5O4I		L					(1085)		
6-Iodo-5-hydroxy-2-hydroxymethyl-4H-pyran-4-one;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	KCl	25°C	0.10M	U		K1=4.71	1987PLa (43153)	525
*****									
C6H6N2O2		HL					Cupferron	CAS 135-20-6	(637)
N-Nitrosophenylhydroxylamine; C6H5.N(OH).NO									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	dis	NaClO4	25°C	0.10M	U		K2=4.07 K3=3.61	1960RYa (43417)	526
Extraction into hexane									
La+++	dis	NaClO4	25°C	0.10M	U		B3=12.90	1954DYa (43418)	527
*****									
C6H6O		HL					Phenol	CAS 108-95-2	(457)

## Hydroxybenzene, phenol; C6H5.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.10M	U		K1=4.17	1978KYb (43540)	528
La+++	sp	NaClO4	25°C	0.10M	U		K1=1.51	1966PMa (43541)	529
*****									
C6H6O2		H2L		Catechol			CAS 120-80-9	(534)	
1,2-Dihydroxybenzene, pyrocatechol; HO.C6H4.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaNO3	25°C	0.0	U	M	K1=9.37 K(La(egta)+L)=5.36	1996KDb (43775)	530
Extrapolated from data for I=0.05-0.15 M NaNO3.									
La+++	gl	NaClO4	25°C	0.20M	U		K1=8.30	1996PJ a (43776)	531
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=8.55 K(La(EDTA)+L)=6.20	1986LSb (43777)	532
La+++	gl	KNO3	25°C	0.10M	U	TIH	K1=7.24 B2=12.36 B(LaAL)=10.26	1986NSa (43778)	533
H2A=phthalic acid. DH(LaAL)=-44.8 kJ mol <sup>-1</sup> , DS=45.9 J K <sup>-1</sup> mol <sup>-1</sup>									
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=8.64 K(La(edta)+L)=6.12	1985LSf (43779)	534
La+++	gl	NaClO4	28°C	0.20M	U	M	K1=8.55 K(La(edta)+L)=6.20	1982LSa (43780)	535
La+++	gl	KNO3	25°C	0.05M	M	I	K1=9.12 B2=17.32	1981BDc (43781)	536
Also data for I=0.2 and 0.35 M. At I=0, K1=9.60, K2=8.60									
La+++	EMF	NaCl	25°C	0.10M	U		K1=9.46	1969PKe (43782)	537
*****									
C6H6O2		H2L		Resorcinol			CAS 108-46-3	(3645)	
1,3-Dihydroxybenzene; HO.C6H4.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.45 K(La(EDTA)+L)=2.10	1986LSb (43878)	538
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=4.49 K(La(edta)+L)=2.13	1985LSf (43879)	539
La+++	gl	NaClO4	28°C	0.20M	U	M	K1=4.45 K(La(edta)+L)=2.10	1982LSa (43880)	540

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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
La+++	gl	NaClO4	25°C	0.20M	U		K1=8.85	1996PJ a (43964)	541
La+++	gl	NaClO4	30°C	0.20M	U	M	K1=9.14 K(La(anta)+L)=4.87	1978MSk (43965)	542

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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
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.50 K(La(EDTA)+L)=2.20	1986LSb (44015)	543
La+++	gl	NaClO4	25°C	0.20M	U	M	K1=3.53 K(La(edta)+L)=2.24	1985LSf (44016)	544
La+++	gl	NaClO4	28°C	0.20M	U	M	K1=3.50 K(La(edta)+L)=2.20	1982LSa (44017)	545

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	30°C	0.10M	U	M	K1=5.22    B2=9.31 B(LaLA)=11.74 K(LaA+L)=5.86 K(LaB+L)=4.95 K(LaC+L)=4.08	1989NO b (44091)	546

H2A=iminodiacetic acid, H2B=hydroxyethyliminodiethanoic acid, H3C=nitrilo-triethanoic acid

La+++	gl	NaClO4	30°C	0.10M	U		K1=5.76    B2=10.17 K3=3.17	1970DSc (44092)	547
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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
La+++	gl	NaClO4	30°C	0.10M	U	M	K1=5.03    B2=9.01 B(LaLA)=11.50 K(LaA+L)=5.61 K(LaB+L)=4.26	1989NO b (44223)	548

$$K(\text{LaC}+\text{L})=3.80$$

H2A=iminodiacetic acid, H2B=hydroxyethyliminodiethanoic acid, H3C=nitrilo-triethanoic acid

La+++ sp KCl 25°C 0.10M C I K1=5.302 1987PEa (44224) 549  
In 0.086 M KCl, K1=5.352.

La+++ gl oth/un 30°C 0.10M U K1=5.35 B2=9.56 1972DSd (44225) 550  
K3=3.31

La+++ gl NaClO4 25°C 2.0M U K1=5.14 B2=9.27 1964YCa (44226) 551

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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

La+++ gl KNO3 25°C 0.10M U TIH K1=13.30 B2=25.54 1980BDd (44466) 552  
Data for I=0.05-0.2 M and for I=0.10 M (35 C). Also DH and DS values.

La+++ gl NaClO4 25°C 0.10M U K1=12.87 1970SSi (44467) 553

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C6H7NO HL 2-Aminophenol CAS 95-55-6 (2868)  
2-Amino-1-hydroxybenzene; HO.C6H4.NH2

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

La+++ gl KNO3 25°C 0.10M U TIH K1=6.24 B2=10.07 1986NSa (44932) 554  
B(LaAL)=12.42

H2A=phthalic acid. DH(LaAL)=-53.2 kJ mol<sup>-1</sup>, DS=59.4 J K<sup>-1</sup> mol<sup>-1</sup>

La+++ gl mixed 25°C 50% U I K1=3.54 B2=6.52 1969BCa (44933) 555

Medium: 50% DMSO, 0.12 M NaClO4. In 0.12 M NaClO4, 50% dioxan: K1=4.50,  
K2=3.14. Medium: 0.12 NaClO4, 50% EtOH: K1=3.59, K2=2.48

\*\*\*\*\*

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

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

La+++ gl diox/w 25°C 50% M I K1=5.39 B2=10.27 1994SSa (45187) 556  
K3=4.23

Medium: 50% dioxan, I=0 corr. At 35 C: K1=5.31, K2=4.80, K3=4.09

\*\*\*\*\*

C6H8O4 H2L CAS 2583-25-7 (958)  
2-Allylpropanedioic acid; HOOCH(CH2.CH:CH2).COOH

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

La+++ gl KCl 25°C 0.20M U I K1=3.20 1989ZPa (45470) 557

In 70.4% v/v EtOH/H2O: K1 = 5.01

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C6H8O6                      H2L      Ascorbic acid      CAS 50-81-7    (285)

Ascorbic acid (Vitamin C);

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

La+++            gl    NaClO4 25°C 2.00M U    IH                      1988HSa (45645) 558

K(La+HL)=1.41

DH=3.1 kJ mol<sup>-1</sup>, DS=37.7 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C6H8O6S                      H3L                      CAS 99-68-3    (3692)

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

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

La+++            gl    NaClO4 25°C 0.10M U    TIH            K1=4.38    B2=7.64    1986AJc (45699) 559

DH(K1)=-4.8 kJ mol<sup>-1</sup>, DS=67.7 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-4.3, DS=48.5

-----  
La+++            gl    NaClO4 30°C 0.10M U    IH            K1=4.38    B2=7.64    1983ASa (45700) 560

DH(K1)=-4.8 kJ mol<sup>-1</sup>, DH(K2)=-4.4

-----  
La+++            gl    KNO3    25°C 0.05M M                      K1=4.82                      1975DPb (45701) 561

\*\*\*\*\*

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

2-Hydroxypropane-1,2,3-tricarboxylic acid; HOOCCH2.CH(OH)(COOH).CH2COOH

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

La+++            gl    NaNO3    25°C 0.25M C                      K1=6.41    B2=11.3    1985DRd (46150) 562

B(LaHL)=10.22

B(LaH2L)=12.1

B(LaHL2)=15.52

B(LaH2L2)=19.1

-----  
La+++            gl    KNO3    25°C 0.10M U            M                      1975TDa (46151) 563

B(La(IDA)L)=10.1

-----  
La+++            dis NaClO4 25°C 0.15M U                      1973HHc (46152) 564

K(La+HL+L)=10.03

-----  
La+++            gl    alc/w    25°C 25% U    I            K1=8.32                      1972BKd (46153) 565

Medium: EtOH/H2O, 0.05 M (NaCl,NaClO4).    0%, K1=7.63, 50%, K1=9.22

-----  
La+++            oth oth/un 25°C 0.10M U                      K1=7.17    B2=10.17    1971STe (46154) 566

K(LaL+HL)=2.20

Constants obtained by survey of literature data

-----  
La+++            oth oth/un 20°C    ?    U                      K1=6.65                      1970BBE (46155) 567

K(La+H2L)=2.52

$$K(\text{La}+\text{HL})=3.80$$

La+++ ix R4N.X 20°C 0.60M U B2=8.4 1966SSh (46156) 568  
Medium: NH4Cl, pH 6. By chromatography, pH 4.3, B2=8.7

La+++ sol oth/un 25°C 0.0 U I K1=8.37 B2=11.05 1965SKc (46157) 569  
Kso=-12.06

At I=0.1: K1=6.9, B2=10.7, Kso=-10.71

\*\*\*\*\*

C6H8O7 H3L (6770)  
Carboxymethoxysuccinic acid;  $\text{HOOC} \cdot \text{CH}_2 \cdot \text{O} \cdot \text{CH}(\text{COOH})\text{CH}_2 \cdot \text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	EMF	NaClO4	25°C	1.00M	U		K1=5.72 B2=9.05	1991WPb (46332)	570
*****									
C6H9NO6	H3L	NTA					CAS 139-13-9	(191)	
Nitrilotriethanoic acid; $\text{N}(\text{CH}_2 \cdot \text{COOH})_3$									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	ISE	NaClO4	25°C	0.10M	C	I	K1=10.16	1997LBb (46870)	571
Method: Cu ISE and competitive complexation by Cu. Data for 0.1-5.0 M.									
At I=0.0 M, K1=12.04.									

La+++ gl alc/w 30°C 50% C K1=10.06 1994SOa (46871) 572  
Medium: 50% v/v MeOH/H2O, 0.10 M NaClO4.

La+++ cal KNO3 25°C 0.10M U T H 1984MPc (46872) 573  
DH(K1)=-3.35 kJ mol<sup>-1</sup>, DH(B2)=-15.48. At 40 C DH(K1)= 2.80  
DH(B2)=-11.84

La+++ ISE KNO3 25°C 0.10M C K1=10.19 1980NSf (46873) 574  
Competitive method using Cd ion-selective electrode.

La+++ gl alc/w 20°C 60% U K1=11.40 1980SKc (46874) 575

La+++ gl oth/un 20°C 0.10M U B2=17.62 1979MOa (46875) 576

La+++ gl KNO3 20°C 1.0M C K2=6.64 1978GHb (46876) 577

La+++ gl diox/w 30°C 50% U M 1978SGf (46877) 578  
 $K(\text{LaL}+\text{A})=4.46$

HA=tropolone

La+++ gl NaClO4 25°C 0.50M U K1=9.68 1977GGb (46878) 579

La+++ EMF KCl 25°C 1.0M U M 1977GMa (46879) 580  
 $K(\text{LaA}+\text{L})=5.48$   
 $K(\text{LaA}+\text{H}_2\text{L})=3.00$

K(LuA+H3L)=3.22

K(LaA+H4L)=5.43

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

La+++ gl KNO3 20°C 0.10M U M 1974TDa (46880) 581  
K(LaL+Citrate)=3.6

La+++ cal KNO3 20°C 0.10M U HM 1971GKb (46881) 582  
K(LaA+L)=4.79

H4A=EDTA. DH(LaA+L)=-25.44 kJ mol<sup>-1</sup>, DS=5.0 J K<sup>-1</sup> mol<sup>-1</sup>.

DH(LaLA)=-37.7 kJ mol<sup>-1</sup>, DS=260 J K<sup>-1</sup> mol<sup>-1</sup>

La+++ nmr oth/un 25°C ? U M 1971KTe (46882) 583  
B(LaL(EDTA))=16.30

La+++ gl oth/un 20°C 0.20M U 1970VMa (46883) 584  
B(LaL(OH))=5.07

La+++ cal oth/un ? dil U H 1967MPb (46884) 585  
DH(K1)=1.25 kJ mol<sup>-1</sup>, DS(K1)=188.3 J K<sup>-1</sup> mol<sup>-1</sup>  
DH(B2)=-15.5 kJ mol<sup>-1</sup>, DS(B2)=280 J K<sup>-1</sup> mol<sup>-1</sup>

La+++ ISE NaClO4 25°C 0.10M U T K1=10.5 1967SKe (46885) 586  
By solubility: K1=10.6

La+++ gl KCl 20°C 0.10M U K1=10.47 B2=17.84 1965ANb (46886) 587

La+++ vlt KCl 20°C 0.10M U T K1=10.48 1964PCa (46887) 588

La+++ dis NaClO4 20°C 0.10M U B2=17.15 1963STc (46888) 589

La+++ gl KNO3 25°C 0.10M U T H T K1=10.36 B2=17.60 1962MFb (46889) 590  
15 C: K1=10.38,7.34; 20 C: 10.37,7.25; 30 C: 10.43,7.25; 35 C: 10.43,7.17;  
40 C: 10.49,7.16. DH(K1)=8.6 kJ mol<sup>-1</sup>, DS=228 J K<sup>-1</sup> m<sup>-1</sup>; DH(K2)=-10.2, DS=104

La+++ vlt KNO3 20°C 0.10M U 1957NOa (46890) 591  
B(La2L3)=35.5

La+++ vlt KNO3 20°C 0.10M U T K1=10.47 1956SGa (46891) 592

La+++ gl KCl 20°C 0.10M U K1=10.37 1951SFa (46892) 593

La+++ gl KCl 20°C 0.10M U K1=>10 K2=7.4 1948SBa (46893) 594  
K(LaLOH+H)=9.2

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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



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-----
La+++      gl  KNO3   35°C 0.10M U                1987RRc (47572) 595
                                         K(La+HL)=3.41
-----
La+++      gl  KNO3   35°C 0.10M U      M          1986RMb (47573) 596
                                         K(La+HL)=3.41
K(La+HL+cytidine)=8.47
-----
La+++      gl  NaCl04 37°C 3.00M U          T K1=3.40   B2=6.85   1971JWa (47574) 597
                                         B(LaHL)=11.07
-----
La+++      gl  NaCl04 25°C 3.00M U          T K1=4.10   B2=5.40   1970JWa (47575) 598
                                         B(LaHL)=11.75
*****
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
-----
La+++      gl  KNO3   25°C 0.10M C      M   K1=6.65          2003AHa (47845) 599
                                         K(LaL+A)=3.48
HA is 3-amino-5-mercapto-1,2,4-triazole.
*****
C6H10O2          HL                CAS 3002-24-2 (2742)
2,4-Hexanedione; CH3.CO.CH2.CO.CH2.CH3
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
La+++      gl  mixed  30°C 67% U          K1=6.22   B2=11.09   1964DBb (47931) 600
                                         K3=4.16
Medium: 67% acetone, 0.1 M NaCl04
*****
C6H10O2S          HL                (4370)
Ethyl thioacetoacetate; CH3.CS.CH2.CO.OCH2.CH3
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
La+++      gl  mixed  30°C 75% U          K1=6.76   B2=12.26   1970DRa (47964) 601
                                         K3=4.60
Medium: 75% acetone, 0.1 M
*****
C6H10O3          HL                CAS 16841-19-3 (3649)
1-Hydroxycyclopentanecarboxylic acid; HO.C5H8.COOH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
La+++      gl  NaCl04 25°C 0.10M U          K1=2.377  B2=4.06    1966PRb (47991) 602
                                         K3=0.95
*****
C6H10O3          HL                CAS 141-97-9 (3068)

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Ethyl acetoacetate; CH<sub>3</sub>.CO.CH<sub>2</sub>.CO<sub>2</sub>.C<sub>2</sub>H<sub>5</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	mixed	30°C	75%	U		K1=5.48 B2=10.28	1969DRa (48014)	603
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Medium: 75% acetone, 0.1 M NaClO<sub>4</sub>

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C6H10O <sub>4</sub>	H2L	Adipic acid	CAS 124-04-9	(401)
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1,6-Hexanedioic acid; HOOC.(CH<sub>2</sub>)<sub>4</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	NaClO <sub>4</sub>	25°C	0.10M	M	H	K1=2.95	1986CDb (48074)	604
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DH=14.4 kJ mol<sup>-1</sup>, DS=105 J K<sup>-1</sup> mol<sup>-1</sup>

La+++	sol	oth/un	25°C	0.50M	U		K1=3.96	1970MKe (48075)	605
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La+++	gl	oth/un	25°C	->0	U		K1=4.10	1951PJa (48076)	606
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C6H10O <sub>4</sub>	H2L		CAS 597-43-3	(2693)
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2,2-Dimethylbutanedioic acid; HOOC.C(CH<sub>3</sub>)<sub>2</sub>.CH<sub>2</sub>.COOH

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

La+++	gl	NaClO <sub>4</sub>	25°C	0.50M	C		K1=3.13 B(LaHL)=7.13	1986LEe (48102)	607
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C6H10O <sub>6</sub>	H2L		CAS 23243-68-7	(242)
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1,2-Bis(carboxymethoxy)ethane; HOOC.CH<sub>2</sub>.O.CH<sub>2</sub>.CH<sub>2</sub>.O.CH<sub>2</sub>.COOH

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

La+++	gl	NaClO <sub>4</sub>	25°C	1.00M	C	H	K1=4.35 B2=7.71 B3=8.60 B(LaHL2)=9.42	1974GGa (48343)	608
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C6H10O <sub>8</sub>	H2L	Saccharic acid	CAS 87-73-0	(1191)
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D-2,3,4,5-Tetrahydroxy-1,6-hexanedioic acid, Glucaric acid; HOOC.(CHOH)<sub>4</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	NaClO <sub>4</sub>	25°C	0.10M	U	M	K1=4.42 K(La(edta)+L)=3.90	1997PPb (48478)	609
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C6H11NO <sub>5</sub>	H2L	HIMDA	CAS 93-62-9	(192)
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N-(2-Hydroxyethyl)iminodiethanoic acid; HO.CH<sub>2</sub>.CH<sub>2</sub>.N(CH<sub>2</sub>.COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	alc/w	30°C	50%	C		K1=8.57	1994SOa (48750)	610
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La+++      g1   KN03   20°C 1.00M U      K1=7.62   B2=13.25   1974Cmd (48751) 611  
K(LaL2(OH)+H)=10.56

La+++      gl    KCl      25°C 0.10M U      K1=7.33    B2=13.90    1965DTa (48753) 613

La+++      g1   KN03   25°C 0.10M U      K1=8.00   B2=13.98   1963TLa (48754) 614

La+++      gl    KNO3    25°C 0.10M U      K(LaLOH+H)=8.5      1958CGa (48755) 615

\*\*\*\*\*  
C6H12N2O4                      H2L        EDDA                      CAS 5657-17-0    (119)  
1,2-Diaminoethane-N,N'-diethanoic acid; HOOC.CH2.NH.CH2.CH2.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++      g1   R4N.X   25°C 0.10M C      K1=7.04      1988CCb (49247) 616

La+++      gl   NaCl04 25°C 1.00M C   H   K1=6.96   B2=11.55   1974GGa (49248) 617  
B(LaH2L)=17.66

La+++ gl KNO3 25°C 0.10M U K1=7.04 B2=11.77 1962THb (49249) 618

\*\*\*\*\*  
C6H12N2O4                      H2L                      CAS 4726-83-4    (5911)  
N,N-Dihydroxyhexanediamide; HN(OH).CO.(CH2)4.CO.NH(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++      g1    NaNO3    25°C 0.10M C      K1=9.01      1989EHa (49335) 619

\*\*\*\*\*  
C6H12O2                      HL                      CAS 142-62-1    (964)  
Hexanoic acid; CH3.(CH2)4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++ g1 NaCl 20°C 0.10M U K1=2.30 1986GKb (49426) 620

\*\*\*\*\*  
C6H12O3                      HL      DiEtGlycolic      CAS 3639-21-2    (421)  
2-Ethyl-2-hydroxybutanoic acid; (C2H5)2.C(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++      EMF NaCl04 25°C    1.0M U      K1=1.85    B2=3.11    1965TVa (49461) 621  
K3=0.56  
K4=0.42

Method: quinhydrone electrode

\*\*\*\*\*

C6H12O3 HL (3662)  
2-Hydroxy-2-methylpentanoic acid; (Methylpropylglycolic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	EMF	NaClO4	25°C	1.0M	U			K1=2.20 K3=0.77	B2=3.45 1964EVa (49481)	622

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
La+++	gl	KNO3	25°C	0.10M	U			K1=2.81 K3=0.60	B2=4.66 1979PPa (49495)	623

\*\*\*\*\*

C6H12O5 L CAS 22416-73-5 (8237)  
Methyl-alpha-D-lyxofuranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	kin	non-aq	25°C	100%	C			K1=2.57	1980LVc (49512)	624

Medium: methanol.

\*\*\*\*\*

C6H12O5 L CAS 52485-92-4 (8236)  
Methyl-alpha-D-ribofuranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	kin	non-aq	25°C	100%	C			K1=2.38	1980LVc (49515)	625

Medium: methanol. For methyl-beta-D-ribofuranoside, K1<1.0

\*\*\*\*\*

C6H12O5 L CAS 1824-96-0 (8238)  
Methyl-alpha-D-xylofuranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	kin	non-aq	25°C	100%	C			K1=1.95	1980LVc (49519)	626

Medium: methanol. For methyl-beta-D-xylofuranoside, K1=1.60

\*\*\*\*\*

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
La+++	gl	NaClO4	25°C	0.20M	U	M		K1=2.96 K(La(EDTA)+L)=2.13	1986LSb (49729)	627

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La+++ gl NaClO4 25°C 0.20M U M K1=2.99 1985LSf (49730) 628  
K(La(edta)+L)=2.16

La+++ oth oth/un 20°C 0.10M U K1=2.60 B2=4.75 1967MMe (49731) 629  
K3=1.54

Method: paper electrophoresis.

La+++ EMF alc/w 25°C 90% U I K1=6.11 1966KRb (49732) 630  
Medium: 90% MeOH. K1=4.48(50%), 5.17(80%)

La+++ gl KCl 25°C 0.20M U K1=2.43 B2=4.25 1963K0c (49733) 631

La+++ ix oth/un ? 0.20M U K1=2.38 B2=4.28 1962K0a (49734) 632  
K3=1.42

By electrostatic(?): K2=1.98, K3=1.43. K4=0.84, K5=0.17, K6=-0.4

\*\*\*\*\*

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

La+++ gl NaNO3 25°C 0.10M M M K1=5.27 1996KDd (49907) 633  
\*K(LaL)=-8.50  
\*K(La(OH)L)=-8.98  
K(La(egta)+L)=3.56

Data for 0.05-0.15 M NaNO3. At I=0, K1=5.48, K(La(egta)+L)=3.71.

La+++ gl NaClO4 25°C 0.20M U K1=4.22 B2= 7.74 1987PPa (49908) 634

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C6H13NO2 HL Leucine CAS 61-90-5 (47)  
2-Amino-4-methylpentanoic acid; H2N.CH(CH2.CH(CH3)2)COOH

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

La+++ gl NaNO3 25°C 0.10M M M K1=5.25 1996KDd (50079) 635  
\*K(LaL)=-8.53  
\*K(La(OH)L)=-9.01  
K(La(egta)+L)=3.52

Data for 0.05-0.15 M NaNO3. At I=0, K1=5.50, K(La(egta)+L)=3.70.

La+++ gl KNO3 25°C 0.20M U M K1=5.27 1990LSb (50080) 636  
K(La(phen)+L)=5.15

La+++ gl NaClO4 25°C 0.20M U K1=4.59 B2= 8.63 1987PPa (50081) 637

La+++ gl NaClO4 25°C 0.20M U M K1=5.61 1986LSb (50082) 638  
K(La(EDTA)+L)=4.31

La+++ gl NaClO4 25°C 0.20M U M K1=5.61 1985LSe (50083) 639  
K(La(edta)+L)=4.31.

\*\*\*\*\*

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  
-----

La+++ gl NaNO3 25°C 0.10M M M K1=5.13 1996KDd (50183) 640  
\*K(LaL)=-8.56  
\*K(La(OH)L)=-9.04  
K(La(egta)+L)=3.50

Data for 0.05-0.15 M NaNO3. At I=0, K1=5.33, K(La(egta)+L)=3.69.

-----  
La+++ gl NaClO4 22°C 0.10M M M K1=4.60 B2=9.09 1991DTa (50184) 641  
B3=12.55  
K(LaA+L)=8.08

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

-----  
La+++ gl KCl 20°C 0.20M U K1=3.00 1990PLa (50185) 642

\*\*\*\*\*

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

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

La+++ gl KCl 20°C 0.20M U K1=3.93 1990PLa (50218) 643

\*\*\*\*\*

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  
-----

La+++ gl KNO3 20°C 0.10M U K1=4.99 B2=8.40 1982RFa (50375) 644

La+++ gl NaClO4 20°C 0.10M U T K1=5.30 B2= 8.62 1981SGd (50376) 645  
Data for 20-40 C. At 30 C: K1=5.01, K2=3.15

-----  
La+++ nmr oth/un 25°C 1.00M U K1=4.61 1974KTa (50377) 646  
Method: proton NMR

-----  
La+++ gl KCl 30°C 0.10M U K1=4.95 B2=8.60 1973MSe (50378) 647

-----  
La+++ gl alc/w 20°C 50% U I K1=6.06 1970KRa (50379) 648  
Medium: 0-80% MeOH, 0.03 M KCl. K1(0%)=4.84, K1(20%)=5.39, K1(80%)=7.10

-----  
La+++ oth NaNO3 20°C 0.10M U K1=7.3 B2=12.10 1966JMc (50380) 649  
Method: paper electrophoresis

-----  
La+++ gl KNO3 25°C 0.10M U K1=5.0 1958CGa (50381) 650

\*\*\*\*\*

C6H13NO4S HL MES CAS 4432-31-9 (7807)

4-Morpholineethanesulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.10M	C			K1=3.40 *K(LaL)=-6.12 K(2La(OH)L=La2(OH)2L2)=10.13	2001AAb (50432)	651

\*\*\*\*\*  
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
La+++	gl	KNO3	25°C	0.10M	C	M		K1=4.99 K(LaL+A)=3.28	2003AHa (50503)	652

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

La+++	gl	KNO3	25°C	0.10M	M	I		K1=5.02 B2= 9.23	1997EAa (50504)	653
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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
La+++	gl	NaCl	37°C	0.15M	U	M		K1=2.39 B2= 5.13 B(LaHL)=11.37 B(LaH2AL)=24.43	1997GMa (50581)	654

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
La+++	gl	NaClO4	20°C	0.10M	U	T H		K1=5.8 30 C: K1=5.52, 40 C: 5.22. DH=-48.7 kJ mol <sup>-1</sup> , DS=-55 J K <sup>-1</sup> mol <sup>-1</sup>	1983SDa (50826)	655

\*\*\*\*\*  
C6H15O4P HL CAS 1611-31-0 (4393)  
Dipropylphosphoric acid; (CH3.CH2.CH2.O)2.PO.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	kin	none	25°C	0.00	M			K1=1.92	1966SSb (51515)	656

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

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

La+++ ISE non-aq 25°C 100% C H K1=4.13 1993CCb (52201) 657  
 Medium: DMSO, 0.1 M Et4NClO4. Method: Ag+ ISE. By calorimetry, DH(K1)=-50.9  
 kJ mol<sup>-1</sup>, DS=-92.

\*\*\*\*\*

C6H20N208P4 H4L CAS 938-16-3 (4402)  
 Ethylenediaminetetra(methylenephosphonous acid);

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

La+++	gl	KNO3	25°C	0.10M	U		K1=6.44	1971MMh (52248)	658
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\*\*\*\*\*

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

La+++	gl	NaCl	37°C	0.15M	C		K1=11.64 K(LaL+H)=6.98 K(LaHL+H)=6.60	1995WJa (52345)	659
-------	----	------	------	-------	---	--	---	-----------------	-----

La+++	gl	KNO3	25°C	0.10M	C		K(LaL+H)=7.1 K(LaHL+H)=7.6	1991SKb (52346)	660
-------	----	------	------	-------	---	--	-------------------------------	-----------------	-----

La+++	gl	KCl	25°C	0.10M	U		K1=20.15 K(La+HL)=15.38 K(La+H2L)=12.13 K(La+H3L)=10.00 K(La+H4L)=8.04	1967KDa (52347)	661
-------	----	-----	------	-------	---	--	--	-----------------	-----

K(La+H5L)=4

\*\*\*\*\*

C7H4N206 HL CAS 2460-59-5 (3139)  
 3,5-Dinitrosalicylaldehyde; HO.C6H2(NO2)2.CHO

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

La+++	sp	NaClO4	25°C	0.10M	U		K1=1.84	1966PMa (52396)	662
-------	----	--------	------	-------	---	--	---------	-----------------	-----

\*\*\*\*\*

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

La+++	gl	NaNO3	25°C	0.10M	U	I M	K1=4.83 *K(LaL)=-7.60 K(La(egta)+L)=4.55	1996KDc (52486)	663
-------	----	-------	------	-------	---	-----	--	-----------------	-----

Data for 0.05 and 0.15 M NaNO3. At I=0, K1=5.18, \*K(LaL)=-7.79,  
 K(La(egta)+L)=4.97.

La+++	gl	oth/un	24°C	0.20M	U		K1=4.51	1972PSd (52487)	664
-------	----	--------	------	-------	---	--	---------	-----------------	-----



Medium: LiCl

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La+++ EMF KNO3 30°C 0.10M U K1=5.0 1971DDa (52488) 665  
\*\*\*\*\*  
C7H5NO4 H2L Dipicolinic aci CAS 449-83-2 (418)  
2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ cal NaClO4 25°C 0.50M C H 1963GRd (52784) 666  
DH(K1)=-13.10 kJ mol<sup>-1</sup>, DS(K1)=108 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-26.8,  
DS(B2)=173; DH(B3)=-36.11, DS(B3)=223.  
-----

La+++ EMF oth/un 20°C 0.50M U K1=7.98 B2=13.79 1961GRa (52785) 667  
K3=4.27  
\*\*\*\*\*  
C7H5NO4 HL CAS 121-92-6 (490)  
3-Nitrobenzoic acid; O2N.C6H4.COOH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ gl NaClO4 25°C 0.10M C H K1=1.57 1986CLc (52868) 668  
DH=5.5 kJ mol<sup>-1</sup>, DS=49 J K<sup>-1</sup> mol<sup>-1</sup>  
\*\*\*\*\*  
C7H5NO4 HL CAS 5274-70-4 (3148)  
3-Nitrosalicylaldehyde; HO.C6H3(NO2).CHO  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ sp NaClO4 25°C 0.10M U K1=3.03 1966PMa (52883) 669  
\*\*\*\*\*  
C7H5NO4 HL CAS 62-23-7 (489)  
4-Nitrobenzoic acid; O2N.C6H4.COOH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ gl NaClO4 25°C 0.10M M H K1=1.59 1999YKa (52909) 670  
By calorimetry: DH(K1)=7.10 kJ mol<sup>-1</sup>, DS(K1)=54.2 J K<sup>-1</sup> mol<sup>-1</sup>.  
\*\*\*\*\*  
C7H5NO4 HL CAS 97-51-8 (1887)  
5-Nitrosalicylaldehyde; O2N.C6H3(OH).CHO  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ sp NaClO4 25°C 0.10M U K1=2.73 1966PMa (52936) 671  
\*\*\*\*\*  
C7H5O2Cl HL (3747)  
2-Hydroxy-6-chlorobenzaldehyde (6-chlorosalicylaldehyde)  
-----

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

-----  
La+++ sp NaCl04 25°C 0.10M U K1=4.08 1966PMa (53158) 672  
\*\*\*\*\*

C7H5O2Cl HL CAS 1927-94-2 (3143)

3-Chlorosalicylaldehyde; HO.C6H3(Cl).CHO  
-----

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

La+++ sp NaCl04 25°C 0.10M U K1=3.16 1966PMa (53189) 673  
\*\*\*\*\*

C7H5O2Cl HL CAS 2420-26-0 (3144)

4-Chlorosalicylaldehyde; HO.C6H3(Cl).CHO  
-----

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

La+++ sp NaCl04 25°C 0.10M U K1=3.38 1966PMa (53208) 674  
\*\*\*\*\*

C7H5O2Cl HL CAS 635-93-8 (3145)

5-Chlorosalicylaldehyde; HO.C6H3(Cl).CHO  
-----

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

La+++ sp NaCl04 25°C 0.10M U K1=3.20 1966PMa (53223) 675  
\*\*\*\*\*

C7H5O2F HL CAS 445-29-4 (5711)

3-Fluorobenzoic acid; F.C6H4.COOH  
-----

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

La+++ gl NaCl04 25°C 0.10M C H K1=1.65 1986CLc (53237) 676  
DH(K1)=6.7 kJ mol<sup>-1</sup>, DS=54 J K<sup>-1</sup> mol<sup>-1</sup>  
\*\*\*\*\*

C7H5O2F HL CAS 456-22-4 (5710)

4-Fluorobenzoic acid; F.C6H4.COOH  
-----

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

La+++ gl NaCl04 25°C 0.10M C H K1=1.88 1986CLc (53257) 677  
DH(K1)=8.1 kJ mol<sup>-1</sup>, DS=63 J K<sup>-1</sup> mol<sup>-1</sup>  
\*\*\*\*\*

C7H5O3As HL CAS 50722-40-2 (8008)

2-Arsenosobenzoic acid;  
-----

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

La+++ gl alc/w 35°C 20% U K1=4.05 1973SPf (53278) 678  
Medium: 20% EtOH/H2O, 0.1 M KNO3.  
\*\*\*\*\*

C7H5O6BrS H2L (1626)

3-Bromo-5-sulfosalicylic acid; Br.C6H2(OH)(COOH).SO3H

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  NaCl04 25°C 0.10M C   H   T               1993ALa (53370) 679
                                     B(1,1,1)=12.30
                                     B(1,0,1)=6.49
                                     B(1,0,2)=10.72
                                     B(1,-1,1)=-2.73
B(p,q,r); pLa+qH+rL=(La)pHqLr. B(1,-2,1)=-11.85.

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*****
C7H6N2O4      H2L      CAS 2683-49-0 (3753)
4-Aminopyridine-2,6-dicarboxylic acid (4-aminodipicolinic acid)
-----

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      sol  KNO3   20°C 0.10M U           K1=9.6    B2=16.27 1965ABa (53510) 680
                                     K3=4.50

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*****
C7H6O5      HL      Thiotropolone      CAS 1073-38-7 (8477)
2-Mercapto-2,4,6-cycloheptatrien-1-one;
-----

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  diox/w 30°C 50% M I      K1=4.75   B2= 9.10 1978SSi (53545) 681
Medium: 50% v/v dioxane/H2O, 0.10 M NaCl04. Data for 0.005 and 0.2 M
NaCl04.

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*****
C7H6O2      HL      Salicylaldehyde CAS 90-02-8 (193)
2-Hydroxybenzaldehyde, Salicylaldehyde; HO.C6H4.CHO
-----

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      sp  NaCl04 25°C 0.10M U           K1=3.40      1966PMa (53624) 682
*****
C7H6O2      HL      Tropolone      CAS 533-75-5 (3129)
2-Hydroxycyclohepta-2,4,6-trien-1-one;
-----

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      sp  NaCl04 25°C 0.10M U           K1=6.25      1970HOa (53678) 683
-----
La+++      gl  KNO3   25°C 0.10M U           K1=6.19   B2=11.12 1969CMb (53679) 684
                                     K3=4.19

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*****
C7H6O2      HL      Benzoic Acid      CAS 65-85-0 (462)
Benzenecarboxylic acid; C6H5.CO0H
-----

```

```

Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      cal NaCl04 25°C 0.10M U   H      K1=1.92   B2=3.56 1982CBc (53839) 685

```

La+++      gl   alc/w   25°C   99%   U      K1=5.60   B2=9.75   1974BPb (53840) 686  
K3=2.42

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

La+++      gl    NaClO4 25°C    0.1M C    H      1996HYa (54241) 687  
By calorimetry: DH(K1)=2.01 kJ mol<sup>-1</sup>, DH(B2)=5.07 J K<sup>-1</sup> mol<sup>-1</sup>

Data for 0.05 and 0.15 M NaNO<sub>3</sub>. At I=0, K<sub>1</sub>=7.78, \*K(LaL)=-8.20, K(La(egta)+L)=5.72.

Medium: 20% w/w EtOH/H<sub>2</sub>O, 0.10 M KNO<sub>3</sub>.  
ada: N-(acetamido)-iminodiethanoic acid.

La+++      gl   alc/w   25°C   40%   U      M T K1=7.36                  1986LSb (54245) 691  
K(La(EDTA)+L)=7.09

La+++      gl   KN03    25°C 0.10M U T HM    K1=9.64                  1986NSa (54246) 692  
B(LaAL)=14.99

La+++      gl   NaClO4   25°C   0.20M   U      M      K1=7.43      1985LSf (54247) 693  
K(La(edta)+L)=7.13

La+++      gl    KNO3    30°C 0.10M U      M      1976RTb (54248) 694  
K(La(NTA)+L)=6.20

Medium: 50% v/v acetone/H<sub>2</sub>O, 0.25 M NaClO<sub>4</sub>

La+++      gl   alc/w   25°C 100% U      K1=5.32   B2=9.60   1973BPd (54250) 696  
K3=3.11

Medium: 99.9% MeOH, 0.1 M NaCl

La+++ sp oth/un 25°C 0.10M U 1968ENa (54251) 697  
K(La+HL)=2.08

La+++ gl KCl 30°C 0.10M U K1=2.64 1962CTa (54252) 698

La+++ con oth/un 25°C ? U 1959FEa (54253) 699  
K(La+HL)=2.82

By solubility: K(LaL3(s)=LaL3)=-10.48

La+++ gl oth/un 21°C 2.86M U B2=16.82 1959FEa (54254) 700  
K(LaL(HL)2+H)=7.5  
K(LaL2HL+H)=10.0  
K(La+H+3L)=16.57

\*\*\*\*\*  
C7H6O3 H2L CAS 99-06-9 (1370)  
3-Hydroxybenzoic acid; HO.C6H4.COOH

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

La+++ gl NaCl04 25°C 0.10M C H 1988LLa (54382) 701  
B(La+HL)=1.76

La+++ gl alc/w 25°C 99% U K1=5.79 B2=10.31 1974BPb (54383) 702  
K3=3.12

\*\*\*\*\*  
C7H6O3 H2L CAS 99-96-7 (1371)  
4-Hydroxybenzoic acid; HO.C6H4.COOH

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

La+++ gl NaCl04 25°C 0.10M M H K1=1.71 1999YKa (54422) 703  
By calorimetry: DH(K1)=8.64 kJ mol-1, DS(K1)=61.7 J K-1 mol-1.

La+++ gl NaCl04 25°C 0.10M C H 1988LLa (54423) 704  
K(La+HL)=1.97

DH=8.63 kJ mol-1, DS=66.6 J K-1 mol-1

La+++ gl alc/w 25°C 99% U K1=6.00 B2=10.64 1974BPb (54424) 705  
K3=2.62

\*\*\*\*\*  
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

La+++ gl NaCl04 25°C 0.20M U M T K1=6.09 1986LSb (54529) 706  
K(La(EDTA)+L)=4.06



-----  
La+++ gl KNO3 35°C 0.10M U K1=6.54 B2=11.87 1969MDa (55020) 718  
\*\*\*\*\*

C7H7NOS HL (2034)

N-Thioformyl-N-phenylhydroxylamine; H(C:S)N(C6H5)OH

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

La+++ gl diox/w 30°C 70% U K1=7.54 B2=13.26 1981MBb (55153) 719  
\*\*\*\*\*

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  
-----

La+++ gl alc/w 24°C 20% C M K1=2.555 1996MIa (55233) 720  
K(La(ada)+L)=2.86

Medium: 20% w/w EtOH/H2O, 0.10 M KNO3.

ada: N-(acetamido)-iminodiethanoic acid.

-----  
La+++ gl NaNO3 25°C 0.10M M I M K1=3.33 1995KDc (55234) 721  
K(La(egta)+L)=2.46

Data for 0.05 and 0.15 M NaNO3. At I=0, K1=3.76, K(La(egta)+L)=2.98.

-----  
La+++ gl NaClO4 25°C 0.10M C K1=1.96 B2=4.08 1989HMa (55235) 722  
-----

La+++ gl alc/w 25°C 0.20M U M K1=2.05 1986LSb (55236) 723  
K(La(EDTA)+L)=1.96

-----  
La+++ gl KNO3 30°C 0.20M C M 1985KMD (55237) 724  
K(La(nta)+L)=3.60  
K(La(edta)+L)=4.22

-----  
La+++ gl NaClO4 25°C 0.10M U H K1=4.02 1982KYc (55238) 725  
By calorimetry, DH(K1)=4.44 kJ mol<sup>-1</sup>, DS(K1)=91.96 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
La+++ gl non-aq 25°C 100% U K1=6.05 B2=10.87 1970BBh (55239) 726  
K3=3.04  
K4=2.64

Medium: MeOH, 0.1 M NaCl

-----  
La+++ gl KCl 30°C 0.10M U K1=3.14 1962CTa (55240) 727  
\*\*\*\*\*

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  
-----

La+++ gl diox/w 30°C 50% U T H K1=4.23 B2= 7.46 1973PSc (55331) 728  
Medium: 50% dioxane/H2O, 0.3 M KNO3. DH and DS values reported.

Data for 40 C.

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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  
-----

La+++ gl NaClO4 25°C 0.10M M H K1=1.91 1999YKa (55384) 729  
By calorimetry: DH(K1)=5.80 kJ mol<sup>-1</sup>, DS(K1)=56.5 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
La+++ gl KCl 25°C 0.20M U K1=2.12 1977EBa (55385) 730  
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C7H7NO2 HL CAS 495-18-1 (184)  
Benzohydroxamic acid; C6H5.CO.NH.OH

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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La+++ gl diox/w 35°C 50% A K1=9.25 B2=17.00 1977AKa (55504) 731  
K3=6.73

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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  
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La+++ gl KNO3 25°C 0.1M M K1=9.79 B2=18.12 1989LWa (55599) 732  
K3=8.04

-----  
La+++ gl mixed 25°C 75% U 1970SEa (55600) 733  
K(La+HL)=6.30  
K(LaHL+HL)=5.96  
K(La(HL)2+HL)=4.90

Medium: 75% acetone, 0.1 M NaClO4

\*\*\*\*\*

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

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

La+++ gl NaNO3 25°C 0.10M M I M K1=3.23 1995KDc (55677) 734  
K(La(egta)+L)=2.27

Data for 0.05 and 0.15 M NaNO3. At I=0, K1=3.55, K(La(egta)+L)=2.54.

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

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

La+++ gl KCl 25°C 0.20M M T H K1=7.94 1991BPb (55690) 735  
K(La+OH+L)=14.39



DH(K1)=-115 kJ mol<sup>-1</sup>, DS(K1)=-236 J K<sup>-1</sup> mol<sup>-1</sup>. DH(La(OH)L)=-248.5,  
DS(La(OH)L)=-557. Also data for 35, 45 and 55 C.

\*\*\*\*\*

C7H8O2                      H2L      Methylcatechol      CAS 452-86-8      (525)  
1,2-Dihydroxy-4-methylbenzene; CH<sub>3</sub>.C<sub>6</sub>H<sub>3</sub>(OH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	NaNO <sub>3</sub>	25°C	0.0	U	M	K1=9.49 K(La(egta)+L)=5.47	1996KDb (56069)	736
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Extrapolated from data for I=0.05-0.15 M NaNO<sub>3</sub>.

La+++	gl	mixed	25°C	50%	U	I	K1=3.82      B2=7.32	1969BCb (56070)	737
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Medium: 50% DMSO, 0.12 M NaClO<sub>4</sub>. In 50% dioxan, 0.12 M NaClO<sub>4</sub>: K1=4.60,  
K2=3.47; 50% EtOH, 0.12 M NaClO<sub>4</sub>: K1=3.95, K2=2.75

\*\*\*\*\*

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
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La+++	sp	KCl	25°C	0.10M	M	I	K1=5.50	1986PLb (56129)	738
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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
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La+++	sp	KCl	25°C	0.10M	M	I	K1=5.26	1986PLb (56148)	739
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C7H11NO4                      H2L                                      CAS 499-82-1      (3163)  
Piperidine-2,6-dicarboxylic acid; C<sub>5</sub>H<sub>9</sub>N(COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	KNO <sub>3</sub>	25°C	0.10M	U		K1=5.31      B2=9.37	1963THb (56808)	740
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C7H11NO6                      H3L                                      (2926)  
2-Aminobutanoic-N-propane-1,3-dioic acid; HOOC.CH(C<sub>2</sub>H<sub>5</sub>).NH.CH(COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	KNO <sub>3</sub>	25°C	0.1M	U		K1=7.50	1982KKc (56847)	741
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C7H11NO6                      H3L      MNTA                                      (1026)  
Nitrilo(2-propanoic)-diethanoic acid; HOOC.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
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La+++	gl	KNO <sub>3</sub>	20°C	0.10M	U		K1=11.02      B2=18.24	1974RMg (56912)	742
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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  
-----

La+++            gl    KNO3    25°C 0.15M M T H            K1=3.46                      1979SKd (57124) 743  
Data for 35 and 45 C. At 35 C, K1=3.56, DH(K1)=18.2 kJ mol<sup>-1</sup>,  
DS(K1)=127 J K<sup>-1</sup> mol<sup>-1</sup>.

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

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

La+++            gl    NaClO4 25°C 1.0M U            K1=1.76    B2=3.19                      1967STd (57264) 744  
\*\*\*\*\*

C7H12O3                      HL                      (4422)  
3-Methyl ethylacetoacetate; CH3.CO.CH(CH3).CO.OCH2.CH3

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

La+++            gl    mixed 30°C 75% U            K1=7.07                      1971DRb (57275) 745  
Medium: 75% acetone, 0.1 M

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C7H12O4                      HL                      CAS 96740-23-7    (2249)  
1,5-Dimethoxy-pent-2,4-dione, CH3.O.CH2.CO.CH2.CO.CH2.O.CH3

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

La+++            gl    diox/w 24°C 50% U            K1=4.5                      1979ACa (57292) 746  
\*\*\*\*\*

C7H12O4                      H2L        Pimelic acid                      CAS 111-16-0    (985)  
1,7-Heptanedioic acid; HOOC.(CH2)5.COOH

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

La+++            gl    KNO3    25°C 0.20M U        M                      1990KMF (57305) 747

K(La(nta)+L)=5.44  
K(La(hedta)+L)=5.38  
K(La(cdta)+L)=5.24  
K(La(dtpa)+L)=5.09

hedta is N-(hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid

\*\*\*\*\*

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

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

La+++            gl    KNO3    25°C 0.10M U            K1=3.61    B2=5.95                      1968PFa (57366) 748

\*\*\*\*\*

C7H12O6 HL Quinic acid CAS 77-95-2 (2578)  
1,3,4,5-Tetrahydroxycyclohexane-1-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaCl	20°C	0.10M	U		K1=2.73	1977SSc (57404)	749
La+++	EMF	NaClO4	25°C	1.0M	U		K1=2.30 K3=1.15 K4=0.61	19670Ta (57405)	750

Method: quinhydrone electrode

\*\*\*\*\*

C7H13NO5 H2L (8081)  
4-Hydroxy-2-aminopentane-1,5-dioic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	20°C	0.1M	U		K1=4.82	1978KPe (57555)	751

Data for threo isomer. For erythro isomer: K1=4.65

\*\*\*\*\*

C7H13NO6 H2L CAS 32013-58-4 (6079)  
N-(2,3-Dihydroxypropyl)iminodiethanoic acid; HO.CH2.CH(OH).CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	20°C	0.10M	U		K1=7.52 B2=13.25	1980RPa (57615)	752

\*\*\*\*\*

C7H14N2O3 HL Gly-Val CAS 7963-21-9 (973)  
Glycyl-valine; H2N.CH2.CO.NH.CH(CH(CH3)2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	30°C	0.15M	U T H		K1=3.60	1980SKe (57754)	753

Data for 20 and 40 C. DH(K1)=4.56 kJ mol<sup>-1</sup>, DS(K1)=84.1 J K<sup>-1</sup> mol<sup>-1</sup>.  
Ligand is glycyl-DL-valine.

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	EMF	NaClO4	25°C	1.0M	U		K1=2.07 K3=1.10	1965TVa (57863)	754

Method: quinhydrone electrode

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++ gl NaClO4 25°C 0.10M C K1=1.75 B2=2.97 1976SPa (57876) 755  
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C7H15N04 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

La+++ gl KNO3 20°C 0.10M U K1=4.49 B2=7.50 1982RFa (57938) 756  
 \*\*\*\*\*

C7H15N05S 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

La+++ gl KNO3 25°C 0.10M C K1=3.34 2001AAb (57994) 757  
 \*K(LaL)=-5.82  
 K(2La(OH)L=La2(OH)2L2)=9.62  
 \*\*\*\*\*

C8H204Cl4 H2L CAS 632-58-6 (3214)  
 Tetrachlorophthalic acid; Cl4.C6(COOH)2

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

La+++ gl oth/un 20°C 0.10M U 1960Wka (58390) 758  
 Kso=5.06  
 \*\*\*\*\*

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

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

La+++ sp non-aq 25°C 100% C K1=6.08 2003ZRa (58514) 759  
 Medium: DMSO.

La+++ sp NaNO3 25°C 0.10M U K1=3.29 19850Ha (58515) 760

La+++ sp NaClO4 30°C 0.10M C 1978BKd (58516) 761  
 K1eff=4.577

Medium pH 5.4 (acetate).

La+++ sp KNO3 12°C 0.10M U 1965GEa (58517) 762  
 K(La+H2L)=3.43  
 \*\*\*\*\*

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

La+++ gl alc/w 22°C 80% U K1=5.74 B2=10.68 1995MTa (58636) 763

K3=3.71

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

La+++ gl mixed 25°C 50% U K1=5.30 1980SBc (58637) 764  
Medium: 50% MeCN

La+++ dis non-aq 25°C 100% U T M 1972KKd (58638) 765  
K(LaL3+bpy)=4.76  
K(LaL3+2bpy)=6.70  
K(LaL3+A)=3.34  
K(LaL3+2A)=5.55

Medium: benzene. K(LaL3+phen)=6.25, K(LaL3+2phen)=9.91. A=4,4'-dipyridyl  
Temperature range 15-35 C

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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
La+++	gl	alc/w	24°C	20%	C	M	K1=3.71	1996MIa (58978) 766		
							K(La(ada)+L)=4.43			

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

La+++ gl NaNO3 25°C 0.10M M I M K1=4.16 1995KDb (58979) 767  
K(La(egta)+L)=3.85

Data for 0.05 and 0.15 M NaNO3. At I=0, K1=4.44, K(La(egta)+L)=4.17.

La+++ gl alc/w 25°C 40% U M K1=4.09 1986LSb (58980) 768  
K(La(EDTA)+L)=3.08

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

La+++ gl KNO3 25°C 0.10M U K1=2.95 1986NSa (58981) 769

La+++ gl NaClO4 25°C 0.20M U M K1=4.14 1985LSf (58982) 770  
K(La(edta)+L)=3.16

La+++ gl NaClO4 30°C 0.10M U K1=4.10 B2=7.28 1966KPb (58983) 771

La+++ gl oth/un 25°C 0.0 U B2=4.74 1951PJb (58984) 772

\*\*\*\*\*

C8H6O4 H2L Isophthalic aci CAS 212-91-5 (1619)  
Benzene-1,3-dicarboxylic acid; C6H4(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	cal	NaClO4	25°C	0.10M	U	H	K1=2.15	1982CBc (59055) 773		
								DH= 14.57 kJ mol <sup>-1</sup> , DS= 90 J K <sup>-1</sup> mol <sup>-1</sup>		

\*\*\*\*\*

C8H7NO2 HL CAS 532-54-7 (4363)

Isonitrosoacetophenone, Phenylglyoxal 2-oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	20°C	50%	U		K1=5.72 B2=10.64	1971MAf (59103)	774
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
La+++	gl	KNO3	25°C	0.1M	M		K1=8.15 B2=15.55 K3=6.36	1989LWa (59126)	775
*****									
C8H7O2Cl		HL					CAS 1450-74-4 (6325)		
2-Hydroxy-5-chloro-acetophenone; Cl(HO)C6H3.CO.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	25°C	20%	M	I	K1=5.44	1994KDa (59219)	776
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=5.78, *K(LaL)=-8.99, *K(La(OH)L)=-9.28.									
*****									
C8H8N2O		L					CAS 4856-97-7 (3820)		
2-(Hydroxymethyl)benzimidazole;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	30°C	50%	U	T H	B2=15.36	1988NOa (59311)	777
40 C: B2=15.30; 50 C: B2=15.25. DH=-9.8 J K-1 mol-1, DS=261 J K-1 mol-1.									
*****									
C8H8N2O2		HL					Phenylglyoxime (3222)		
Phenylglyoxime; C6H5.C(:N.OH).CH:N.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	20°C	50%	U		K1=6.38 B2=11.90	1971MAf (59338)	778
Medium: 50% dioxan, 0.1 M NaClO4									
*****									
C8H8N4O5		L					(6097)		
2-Acetylpyridinethiosemicarbazone; C5H4N.CO.CH:N.NH.CS.NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	25°C	75%	C	I	K1=6.91 B2=13.50	1988GSa (59409)	779
In 75%(v/v) ethanol/water; 0.1 M NaClO4. I=0.2 M: K1=6.82, K2=6.76; I=0.05 M: K1=7.02, K2=6.73; I=0.02 M: K1=7.14, K2=6.90									
*****									
C8H8O2		HL					2-Acetylphenol CAS 118-93-4 (1888)		

2-Hydroxyacetophenone; HO.C6H4.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	25°C	20%	M	I	K1=6.05	1994KDa (59466)	780
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=6.34, *K(LaL)=-8.92, *K(La(OH)L)=-9.46.									
*****									
C8H8O2		HL		Phenylacetic			CAS 103-82-2	(1361)	
Phenylethanoic acid; C6H5.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.1M	C	H	K1=1.74	1996HYa (59552)	781
By calorimetry: DH(K1)=11.30 kJ mol-1									
*****									
La+++	gl	NaClO4	25°C	0.10M	C	H	K1=1.74	1990HYa (59553)	782
By calorimetry: DH(K1)=11.3 J K-1 mol-1									
*****									
C8H8O2		HL					CAS 583-80-2	(3191)	
beta-Methyltropolone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	alc/w	?	3%	U		K1=6.12	1967GDb (59599)	783
Medium: 3% EtOH, 0.2 M NaClO4									
*****									
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
La+++	gl	alc/w	25°C	20%	M	I		1994KDa (59680)	784
K(La+HL)=5.84									
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=6.18, *K(LaHL)=-8.86, *K(La(OH)HL)=-9.26.									
*****									
C8H8O3		HL		o-Anisic acid			CAS 579-75-9	(2337)	
2-Methoxybenzoic acid; CH3O.C6H4.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	M	H	K1=1.78	1988CLb (59738)	785
DH=7.97 kJ mol-1, DS=61 J K-1 mol-1									
*****									
La+++	gl	diox/w	30°C	76%	M		K1=6.89	1978PMa (59739)	786
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.									
*****									
C8H8O3		HL		Mandelic Acid			CAS 611-72-3	(80)	
2-Phenyl-2-hydroxyethanoic acid; C6H5.CH(OH).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	cal	alc/w	25°C	60%	U	H		1996YLa (59843)	787
							K(LaL+Phen)=2.44		
Medium: 60% v/v MeoH/H2O. Phen: 1,10-phenanthroline.									
DH=-3.95 kJ mol-1, DS=75.2 J K-1 mol-1.									
La+++	gl	NaClO4	25°C	0.10M	C		K1=2.55 B2=4.14	1989HMa (59844)	788
La+++	gl	NaClO4	25°C	2.0M	U	T	K1=1.93	1972DCb (59845)	789
La+++	gl	KNO3	25°C	1.0M	U	I	K1=1.94 B2=3.34	1967PNb (59846)	790
At I=0.1: K1=2.24, K2=1.7									
La+++	gl	NaClO4	25°C	1.0M	U		K1=2.18 B2=3.62	1966TVa (59847)	791
							K3=1.23		
							K4=0.74		

\*\*\*\*\*

C8H8O3 HL m-Anisic acid CAS 586-38-9 (2804)  
3-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
La+++	gl	NaClO <sub>4</sub>	25°C	0.10M	M	H	K1=1.96	1988CLb (59913)	792
DH=5.41 kJ mol <sup>-1</sup> , DS=56 J K <sup>-1</sup> mol <sup>-1</sup>									

\*\*\*\*\*

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
La+++	gl	NaNO <sub>3</sub>	25°C	0.10M	M	I M	K1=4.267	1995KDd (59929)	793
							K(La(egta)+L)=2.637		

Data for 0.15 and 0.05 M NaNO<sub>3</sub>. At I=0, K1=4.491, K(La(egta)+L)=2.946.

\*\*\*\*\*

C8H8O3 HL p-Anisic acid CAS 100-09-4 (1373)  
4-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
La+++	gl	NaClO <sub>4</sub>	25°C	0.10M	M	H	K1=2.06	1988CLb (59955)	794
DH=6.88 kJ mol <sup>-1</sup> , DS=63 J K <sup>-1</sup> mol <sup>-1</sup>									

La+++	gl	diox/w	30°C	76%	M		K1=6.80	1978PMa (59956)	795
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Medium: 76% v/v dioxane/H<sub>2</sub>O, 0.10 M NaClO<sub>4</sub>.

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



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	25°C	50%	M		K1=3.19	1978AGc (60054)	796

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

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	35°C	50%	U		K1=4.05 B2=7.23	1971MAa (60092)	797

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H8O9 H4L (6951)  
Tetrahydrofuran-2,3,4,5-tetracarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	cal	NaClO4	25°C	0.10M	C H			2000MNa (60133)	798

DH(La+H2L)=0.16 kJ mol<sup>-1</sup>, DS=80. DH(La+2H2L)=-2.31, DS=141.

La+++	gl	NaClO4	25°C	0.10M	C		K1=8.45 B2=11.65	1995JNa (60134)	799
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B(LaH2L)=15.33  
B(LaHL)=-12.05  
B(LaH-1L)=-1.97  
B(LaH4L2)=30.02  
B(LaH3L2)=26.73

\*\*\*\*\*

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
La+++	gl	NaNO3	25°C	0.10M	M I M		K1=4.66	1995KDc (60233)	800

K(La(egta)+L)=4.11  
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=4.89, K(La(egta)+L)=4.39.

\*\*\*\*\*

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
La+++	gl	KN03	30°C	0.10M	C M		K1=5.39 B2=10.24	1987RSc (60345)	801

K3=4.35  
K(La(hedta)+L)=3.80  
hedta is N-hydroxyethyldiaminoethane-N',N',N'-triethanoic acid.

La+++	gl	KN03	20°C	0.10M	M T		K1=5.45 B2=10.35	1986RSc (60346)	802
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K3=4.39  
Data for 20-50 C. At 30 C, K1=5.39, K2=4.85, K3=4.35.

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 C8H9NO2S HL CAS 104-18-7 (4575)  
 (4-Aminophenylthio)ethanoic acid; H2N.C6H4.S.CH2.COOH

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 La+++ gl KNO3 25°C 0.05M M K1=3.50 1975DPb (60373) 803  
 \*\*\*\*\*

C8H9NO4 H2L (4520)  
 Dehydroethanoic acid oxime;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 La+++ gl diox/w 35°C 50% U 1971MAa (60498) 804  
 K(La+HL)=3.85  
 K(La+2HL)=6.88

Medium: 50% dioxan, 0.01 M NaClO4

\*\*\*\*\*  
 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  
 -----  
 La+++ gl R4N.X 25°C 0.10M C K1=12.82 B2=22.64 1975JTa (60635) 805  
 -----  
 La+++ gl oth/un 20°C 0.0 U K2=10 1948SBa (60636) 806  
 \*\*\*\*\*

C8H10N6O2S2 H2L (2746)  
 2,5-Dihydroxybenzoquinone bis-thiosemicarbazone;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 La+++ gl diox/w 30°C 50% C TIH K1=4.04 B2=7.17 1989GDa (60816) 807  
 DH(K1)=-58.27 kJ mol<sup>-1</sup>  
 \*\*\*\*\*

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

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 La+++ gl alc/w 22°C 20% U K1=4.18 B2=7.44 1988ZTa (60850) 808  
 K3=2.91  
 \*\*\*\*\*

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  
 -----  
 La+++ gl KCl 30°C 0.10M C K1=5.85 B2=10.05 1996SZa (60870) 809  
 For the -5-en-2-exo isomer, K1=6.08, B2=10.84.

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

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C8H12O4                      H2L                      CAS 1076-97-9    (2224)

Cyclohexane-1,4-dicarboxylic acid; C<sub>6</sub>H<sub>10</sub>.(COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	gl	NaClO4	25°C	0.10M	M	H		K1=4.34	1986CDb (61711)	817
-------	----	--------	------	-------	---	---	--	---------	-----------------	-----

DH=12.9 kJ mol<sup>-1</sup>, DS=126 J K<sup>-1</sup> mol<sup>-1</sup>

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C8H13NO6		H3L						(3835)		
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2-Amino-2-carboxypropane-N,N-diethanoic acid; H<sub>2</sub>CC(CH<sub>3</sub>)<sub>2</sub>N(CH<sub>2</sub>COOH)<sub>2</sub>

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

La+++	gl	KNO3	20°C	0.10M	U			K1=8.30 B2=13.77	1974RMg (61765)	818
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C8H13NO6		H3L						(5681)		
----------	--	-----	--	--	--	--	--	--------	--	--

2-Aminobutanoic-N,N-diethanoic acid; CH<sub>3</sub>CH<sub>2</sub>CH(COOH)N(CH<sub>2</sub>COOH)<sub>2</sub>

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

La+++	gl	KNO3	20°C	0.10M	U			K1=9.98 B2=16.33	1974RMg (61790)	819
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C8H13NO6S		H3L						(5675)		
-----------	--	-----	--	--	--	--	--	--------	--	--

2-Mercapto-1-aminoethane-N,N,S-triethanoic acid; H<sub>2</sub>CC(S)CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>2</sub>COOH)<sub>2</sub>

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

La+++	gl	NaClO4	25°C	0.10M	U			K1=7.59	1975POa (61825)	820
-------	----	--------	------	-------	---	--	--	---------	-----------------	-----

K(La+HL)=2.60

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C8H13N2O5P		H3L						CAS 951-83-7 (2556)		
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Pyridoxamine-5-phosphate;

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

La+++	gl	KCl	25°C	0.50M	U				1978AAa (61841)	821
-------	----	-----	------	-------	---	--	--	--	-----------------	-----

K(La+H3L)=1.11

K(La+H2L)=2.43

K(La+2H2L)=5.00

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C8H14O3		HL						CAS 607-97-6 (4489)		
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3-Ethylethylacetoacetate; CH<sub>3</sub>.CO.CH(C<sub>2</sub>H<sub>5</sub>).CO.OC<sub>2</sub>H<sub>5</sub>

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

La+++	gl	mixed	30°C	75%	U			K1=7.58	1971DRb (62079)	822
-------	----	-------	------	-----	---	--	--	---------	-----------------	-----

Medium: 75% acetone, 0.1 M

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C8H14O4		H2L						Suberic acid CAS 505-48-6 (517)		
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Octanedioic acid; H<sub>2</sub>OC(CH<sub>2</sub>)<sub>6</sub>COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.20M	U	M			1990KMf (62096)	823
								K(La(nta)+L)=3.33 K(La(hedta)+L)=3.26 K(La(cdta)+L)=3.22 K(La(dtpa)+L)=3.20		

hedta is N-(hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid.

\*\*\*\*\*

C8H16N2O4	H2L	(267)
1,2-Diaminoethane-N,N'-di(2-propanoic acid); ((CH3)(COOH).CH.NH.CH2)2		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	KCl	20°C	0.10M	U			K1=5.8	1958ISa (62472)	824

\*\*\*\*\*

C8H16N2O4	H2L	CAS 13288-40-9 (3237)
1,2-Diaminoethane-N,N'-di(3-propanoic acid); (H00CCH2CH2NHCH2.)2		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	KCl	20°C	0.10M	U			K1=5.8	1958ISa (62503)	825

\*\*\*\*\*

C8H16N2O4	H2L	(266)
N,N'-Dimethylethylenediamine-N,N'-diethanoic acid;		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.10M	C			K1=6.60 B2=11.70	1993WLa (62529)	826

\*\*\*\*\*

C8H16N2O4	H2L	CAS 38937-66-5 (5912)
N,N-Dihydroxyoctanediamide; HN(OH).CO.(CH2)6.CO.NH(OH)		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaNO3	25°C	0.10M	C			K1=9.59	1989EHa (62541)	827

\*\*\*\*\*

C8H16O4	L	12-Crown-4	CAS 294-93-9 (174)
1,4,7,10-Tetraoxacyclododecane; cyclo(-O.(CH2.CH2.O)3.CH2.CH2-)			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	ISE	non-aq	25°C	100%	U			K1=5.00 B2=6.98	1982MDa (62682)	828

Medium: propylene carbonate

\*\*\*\*\*

C8H18N2O4S	HL	HEPES	CAS 7365-45-9 (2786)
4-(2-Hydroxyethyl)-1-piperazine-ethanesulfonic acid;			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++      gl  KNO3    25°C 0.10M C      K1=3.33      2001AAb (62876) 829
              *K(LaL)=-6.15
              K(2La(OH)L=La2(OH)2L2)=10.21
*****
C8H18N2O10P2      H6L      EDDADPO      CAS 2310-83-0 (2436)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-dimethylphosphonic acid;
(-CH2.N(CH2.COOH)(CH2.PO3H2))2
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  KCl      25°C 0.10M U      K(La+HL)=15.6      1965DKb (62902) 830
              K(La+H2L)=8.43
*****
C8H18O4      L      Triglyme      CAS 112-49-2 (2358)
1,2-Bis(methoxyethoxy)ethane; CH3O.C2H4O.CH2.CH2.OC2H4.OCH3
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  non-aq 25°C 100% C      K1=3.92      1989BPa (62987) 831
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4
*****
C8H19NO5      L      Bis-tris      CAS 6976-37-0 (2827)
Bis-(2-hydroxyethyl)imino-tris(hydroxymethyl)methane;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  NaCl     30°C 0.10M C      K1=3.76      B2= 8.20      2002NWa (63061) 832
Constants expressed on the molality scale.
*****
C8H19O4P      HL      CAS 107-66-4 (2130)
Dibutylphosphoric acid; (C4H9O)2P(O)OH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      kin oth/un 25°C 0.02M U      K1=1.64      1974GMc (63182) 833
-----
La+++      kin none  25°C 0.0 M      K1=2.02      1966SSb (63183) 834
-----
La+++      sol oth/un ? 0.0 U      K1=1.80      B2=3.5      1965SSg (63184) 835
              B3=4.62
*****
C8H22N2O6P2      H4L      CAS 13516-59-1 (3850)
2,2'-(Ethylenedi-imino)bis(propylphosphonic acid);
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  KCl      25°C 0.10M U      K1=10.13      1965DKb (63340) 836
              K(La+HL)=5.37

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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
La+++	gl	diox/w	35°C	75%	U		K1=6.10 B2=11.40 K3=4.50	1971MAb (63566)	837

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
La+++	sp	diox/w	20°C	50.0M	U		K1=2.43 B2=3.20	1977MBb (63610)	838

\*\*\*\*\*

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
La+++	gl	NaClO4	25°C	0.10M	U		K1=4.68 B2=8.71 K3=3.4	1973MAa (63699)	839

\*\*\*\*\*

C9H6NO4IS H2L Ferron CAS 547-91-1 (275)  
7-Iodo-8-hydroxyquinoline-5-sulfonic acid; (HO)(HO3S)C9H4NI

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	U	I	K1=4.65 B2=9.23 B3=12.48	1987BCd (63812)	840

Data also in 42% MeOH, 51% EtOH and 61.2% dioxan

La+++	gl	oth/un	20°C	0.10M	U	I	K1=5.00	1978GMb (63813)	841
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In 60% EtOH/H2O: K1=6.50

La+++	gl	oth/un	20°C	0.10M	U		K1=4.92	1977SKd (63814)	842
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C9H6N2O5S H2L CAS 5263-74-1 (2738)  
7-Nitroso-8-hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	27°C	50%	C	H	K1=6.28 B2=11.58	1986EAa (63876)	843

\*\*\*\*\*

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

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

La+++ sp KNO3 25°C 0.10M U K1=6.63 1974KSa (63927) 844  
 \*\*\*\*\*  
 C9H6O6 H3L Hemimellitic ac CAS 569-51-7 (1621)  
 1,2,3-Benzenetricarboxylic acid; C6H3.(COOH)3

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

La+++ gl NaClO4 25°C 0.10M U H K1=4.81 1994CRa (63971) 845  
 K(La+HL)=2.59

DH(K1)=14.2 kJ mol<sup>-1</sup>; DS=140 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

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

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

La+++ gl NaClO4 25°C 0.5M M H K1=2.96 1991KBb (64064) 846  
 By calorimetry: DH(K1)=4.55 kJ mol<sup>-1</sup>, DS(K1)=72.0 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

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

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

La+++ gl KNO3 25°C 0.10M U TIH K1=6.57 B2=12.06 1986NSa (64293) 847  
 B(LaAL)=14.66

H2A=phthalic acid. DH(LaAL)=-45.9 kJ mol<sup>-1</sup>, DS=126.4 J K<sup>-1</sup> mol<sup>-1</sup>

La+++ sol none RT 0.0 U 1981FCa (64294) 848  
 Kso(LaL3)=-28.06

Method: spectrophotometry.

La+++ gl oth/un 20°C 0.10M U I K1=5.87 1978GMb (64295) 849  
 in 60% EtOH/H2O: K1=7.30

La+++ gl oth/un 20°C 0.10M U K1=5.89 1977SKd (64296) 850

La+++ sp alc/w 25°C 50% U B2=14.63 1974BUB (64297) 851  
 B3=21.89

La+++ gl diox/w 30°C 50% U K1=8.48 B2=16.21 1970GMb (64298) 852  
 Medium: 50% dioxan, 0.3 M NaClO4

La+++ dis NaClO4 25°C 0.10M U K2K3=10.4 1960RYa (64299) 853

La+++ dis NaClO4 25°C 0.10M U K1=5.85 1954DYa (64300) 854  
 B3=16.95



La+++ gl diox/w 25°C 50% U K1=8.66 B2=16.40 1954JFa (64301) 855  
\*\*\*\*\*

C9H7N02 HL CAS 1127-45-3 (4614)  
8-Hydroxyquinoline-N-oxide;

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

La+++ gl diox/w 30°C 50% U K1=6.68 1970GMb (64407) 856  
Medium: 50% dioxan, 0.3 M NaClO4

\*\*\*\*\*  
C9H7N04S H2L Sulfoxine CAS 84-88-8 (448)  
8-Hydroxyquinoline-5-sulfonic acid;

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

La+++ gl KNO3 30°C 0.10M U M 1976RTb (64555) 857  
K(La(NTA)+L)=3.88

-----  
La+++ cal KNO3 20°C 0.10M U HM 1971GKb (64556) 858  
K(LaA+L)=3.36  
DH(LaA+L)=-12.58 kJ mol<sup>-1</sup>, DS=21.32 J K<sup>-1</sup> mol<sup>-1</sup>  
DH(LaHL): DH=-24.83, DS=275.9. H4A=EDTA

-----  
La+++ gl oth/un 25°C 0.0 U H K1=5.63 B2=10.13 1958F0b (64557) 859  
K3=3.70  
DH(K1)=-10.0 kJ mol<sup>-1</sup>, DS=75 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-17.6, DS=25; DH(K3)=-18.8,  
DS=8

\*\*\*\*\*  
C9H7N3O2S H2L TAR CAS 2246-46-0 (707)  
4-(2'-Thiazolylazo)-resorcinol; C3H2NS.N:N.C6H3(OH)2

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

La+++ sp NaNO3 25°C 0.10M C K1=6.93 19850Hb (64711) 860  
K(La+HL)=3.61  
K(LaL+H)=6.12

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

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

La+++ sp alc/w 30°C 20% C T H K1=7.27 B2=13.53 1998EGa (64831) 861  
Medium: 20% v/v EtOH/H2O, 0.10 M KCl. Also data for 35 and 45 C.  
DH and DS values reported

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

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

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-----
La+++      sp  NaClO4   ?   0.20M U           K1=7.07      1967GDc (64944) 862
                                         B(LaHL)=9.48
-----
La+++      gl  NaClO4  25°C 0.20M U           K1=7.20      B2=12.76  1966GDa (64945) 863
                                         K3=3.40
*****
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
-----
La+++      gl  KCl      30°C 0.10M U           K1=4.06      B2= 7.09  1996SZa (64977) 864
*****
C9H9O2Br      HL                      CAS 56609-15-5 (1417)
3-Bromo-2-hydroxy-5-methyl-acetophenone; CH3.CO.C6H2(OH)(Br)CH3
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  diox/w  27°C 0.10M U           K1=3.84              1982LMa (65162) 865
*****
C9H10O3      HL                      CAS 1878-49-5 (1600)
2-Phenyl-2-methoxyethanoic acid; C6H5.CH(OCH3)COOH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  NaClO4  25°C 0.10M C           K1=2.09      B2=3.84  1989HMa (65462) 866
*****
C9H10O3      HL    Tropic acid      CAS 529-64-6 (1601)
2-Phenyl-3-hydroxypropanoic acid; HO.CH2.CH(COOH)C6H5
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  NaClO4  25°C 0.10M C           K1=2.02      B2=3.90  1989HMa (65476) 867
*****
C9H10O4      HL                      CAS 1521-38-6 (8489)
2,3-Dimethoxybenzoic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  diox/w  25°C 76% M           K1=6.33              1978PMa (65531) 868
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.
*****
C9H10O4      HL                      CAS 91-52-1 (8490)
2,4-Dimethoxybenzoic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  diox/w  25°C 76% M           K1=7.10              1978PMa (65538) 869
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

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\*\*\*\*\*

C9H10O4 HL CAS 1466-76-8 (8491)  
2,6-Dimethoxybenzoic acid;

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

La+++ gl diox/w 25°C 76% M K1=6.19 1978PMa (65545) 870  
Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

\*\*\*\*\*

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  
-----

La+++ gl KCl 30°C 0.10M C K1=3.92 B2=6.69 1996SZa (65573) 871  
For the -2,5-dien-2-exo isomer, K1=4.06, B2=7.09.

\*\*\*\*\*

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  
-----

La+++ gl NaClO4 24°C 0.10M U K1=4.12 1986ZBa (65588) 872  
K(La+HL)=1.60

\*\*\*\*\*

C9H10O5 H2L CAS 54384-22-4 (8406)  
1-Methyl-(exo,exo)-7-oxabicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid;

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

La+++ gl KCl 30°C 0.10M U K1=5.24 B2= 7.95 1996SZa (65605) 873

\*\*\*\*\*

C9H10O5 H2L (7233)  
1-Methyl-7-oxa-bicyclo[2.2.1]hept-5-en-2-exo,3-cis-dicarboxylic acid;

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

La+++ gl KCl 30°C 0.10M C K1=5.24 B2=7.95 1996SZa (65620) 874

\*\*\*\*\*

C9H11NO2 HL Phenylalanine CAS 63-91-2 (2)  
2-Amino-3-phenylpropanoic acid; H2N.CH(CH2.C6H5)COOH

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

La+++ gl NaCl 25°C 0.15M U H K1=2.78 1992ZNa (65948) 875  
By calorimetry: DH(K1)=-1.67 kJ mol<sup>-1</sup>, DS(K1)=47.62 J K<sup>-1</sup> mol<sup>-1</sup>.

-----

La+++ gl NaNO3 25°C 0.0 U K1=4.01 1991ADb (65949) 876  
Extrapolated from data for 0.01-0.1 M NaNO3. Data for 35 and 45 C.

-----

La+++ gl KNO3 35°C 0.10M U K1=4.71 1990RSe (65950) 877

La+++ gl KCl 25°C 0.10M U K1=3.8 1972BFe (65951) 878

\*\*\*\*\*

C9H11NO3 H2L Tyrosine CAS 60-18-4 (4)  
2-Amino-3-(4-hydroxyphenyl)propanoic acid; HO.C6H4.CH2.CH(NH2).COOH

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

La+++ gl KNO3 25°C 0.10M U 1977SAb (66229) 879

K(La+HL)=3.82

At 35 C, I=0: K(La+HL)=4.23

La+++ gl KCl 25°C 0.10M U 1972BFe (66230) 880

K(La+HL)=4.2

\*\*\*\*\*

C9H11N3O2S HL CAS 51146-75-9 (6170)  
N-(2-Hydroxy-3-methoxybenzylidene)thiosemicarbazide; CH3O(OH)C6H3.CH:N.CS.NH.NH2

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

La+++ gl diox/w 30°C 75% U K1=6.73 1988MKd (66506) 881

\*\*\*\*\*

C9H11N3O3 HL CAS 58336-41-7 (6169)  
N-(2-Hydroxy-3-methoxybenzylidene)semicarbazide; CH3O(OH)C6H3.CH:N.CO.NH.NH2

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

La+++ gl diox/w 30°C 75% U K1=8.13 1988MKd (66515) 882

\*\*\*\*\*

C9H12N2O6 HL Uridine CAS 58-96-8 (828)  
Uracil-1-beta-D-ribofuranoside;

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

La+++ gl KNO3 35°C 0.10M U M K1=4.12 1990RSc (66696) 883

K(LaA+L)=3.85

K(LaB+L)=3.68

K(LaC+L)=3.31

H2A=Iminodiethanoic acid, H3B=NTA, H4C=EDTA

La+++ gl KNO3 35°C 0.10M U M K1=4.10 1990RSe (66697) 884

K(LaL+Ala)=8.73

K(LaL+Phe)=8.48

K(LaL+Trp)=8.77

\*\*\*\*\*

C9H12N2O10 H5L CAS 80921-06-8 (2924)  
2,3-Diaminopropanoic-N,N'-di-1,3-propanedioic acid;  
(HOOC)2CH.NH.CH(COOH).CH2.NH.CH(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	EMF	KN03	25°C	0.10M	U		K1=12.05	1983KBd (66739)	885

Method: Hg-electrode

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KN03	25°C	0.10M	U		K1=9.17 B2=15.34	1968TKe (66887)	886

\*\*\*\*\*

C9H13N209P		H3L	UMP-5				CAS 58-97-9 (2948)		
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Uridine-5'-monophosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KN03	35°C	0.10M	U	M		1992RAd (66974)	887

K(La+HL)=3.59  
K(La+HL+Gly)=3.64  
K(La+HL+His)=8.35  
K(La+HL+histamine)=7.72

\*\*\*\*\*

C9H13N305		L	Cytidine				CAS 65-46-3 (2152)		
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Cytidine, Cytosine-1-beta-D-ribofuranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KN03	35°C	0.10M	U	M	K1=2.90	1990RSc (67062)	888

K(La+HA+L)=7.01  
B(LaLB)=13.98  
B(LaLC)=18.93

H2A=Iminodiethanoic acid, H3B=NTA, H4C=EDTA

La+++	gl	KN03	35°C	0.10M	U	M	K1=2.30	1990RSe (67063)	889
-------	----	------	------	-------	---	---	---------	-----------------	-----

K(LaL+Ala)=4.73  
K(LaL+Phe)=4.77  
K(LaL+Trp)=5.11

La+++	gl	KN03	35°C	0.10M	U	M	K1=2.90	1986RMb (67064)	890
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K(La+L+HGly)=8.27, K(La+L+HHis)=8.47, K(La+L+oxalate)=9.74

\*\*\*\*\*

C9H14N308P		H2L	CMP-5				CAS 63-37-6 (1243)		
------------	--	-----	-------	--	--	--	--------------------	--	--

Cytidine-5'-monophosphoric acid, Cytidilic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KN03	25°C	0.10M	C	M	K1=4.72	2001AAb (67254)	891

\*K(LaL)=-5.82  
K(2La(OH)L=La2(OH)2L2)=10.60

B(LaLA)=8.45

B(LaLB)=8.15

B(LaLC)=8.70, B(LaLD)=6.66. HA=MOPSO, HB=MES, HC=ACES and HD=HEPES.

\*\*\*\*\*

C9H15N06                      H3L                      (7177)  
2-Aminopentanoic-N,N-diethanoic acid; C3H7C(COOH)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	20°C	0.10M	U		K1=9.75    B2=16.26	1974RMg (67409)	892

\*\*\*\*\*

C9H16N2O6                      H3L                      MEDTA                      CAS 40423-02-7 (5717)  
N-Methyldiaminoethane-N,N',N'-triethanoic acid; HOOC.CH2.N(CH3)CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	cal	NaClO4	25°C	0.50M	M	IH	K1=11.08	1986RCa (67640)	893

DH=-12.6 kJ mol<sup>-1</sup>, DS=170 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C9H16O4                      H2L                      CAS 1636-27-7 (485)  
Dipropylpropanedioic acid (Di-n-propylmalonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.10M	U		K1=3.66	1968PFa (67774)	894

\*\*\*\*\*

C9H16O4                      H2L                      Azelaic acid                      CAS 123-99-9 (3255)  
Nonanedioic acid; HOOC.(CH2)7.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.20M	U	M		1990KMf (67792)	895

K(La(нта)+L)=3.75  
K(La(hedta)+L)=3.60  
K(La(cdta)+L)=3.44  
K(La(dtpa)+L)=3.52

hedta is N-(hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid.

\*\*\*\*\*

C9H18N2O4                      H2L                      CAS 18992-11-5 (5913)  
N,N-Dihydroxynonanediarnide; HN(OH).CO.(CH2)7.CO.NH(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaNO3	25°C	0.10M	C		K1=9.98	1989EHa (67941)	896

\*\*\*\*\*

C9H24N3O9P3                      H6L                      NOTPH                      CAS 83843-39-3 (224)  
1,4,7-Triazacyclononane-N,N',N''-tris(methylenephosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++ gl KCl 25°C 1.0M U K1=14.3 1984KMa (68322) 897  
K(La+HL)=10.2

\*\*\*\*\*

C10H5O2F7S L (6996)  
1-(2-Thienyl)-3-heptafluoropropylpropane-1,3-dione; C3F7.C(O)CH2C(O)C4H3S

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

La+++ gl alc/w 22°C 80% U K1=5.70 B2=10.92 1995MTa (68428) 898  
K3=4.12

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

\*\*\*\*\*

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

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

La+++ gl diox/w 25°C 50% C T H K1=7.45 B2=14.79 1992SAa (68476) 899  
K3=6.48

At 35 C: K1=7.10, K2=6.55, K3=5.55; DH(K1)=-61.6 kJ mol<sup>-1</sup>

\*\*\*\*\*

C10H6O8 H4L Pyromellitic Ac CAS 89-05-4 (519)  
Benzene-1,2,4,5-tetracarboxylic acid; C6H2.(COOH)4

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

La+++ gl NaClO4 25°C 0.10M U K1=4.32 1994CRa (68519) 900  
K(La+HL)=3.61

\*\*\*\*\*

C10H7NO2 HL CAS 131-91-9 (2668)  
1-Nitroso-2-naphthol, alpha-Nitroso-beta-naphthol;

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

La+++ sp KCl 25°C 0.10M M I K1=3.89 1976PEa (68580) 901

\*\*\*\*\*

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

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

La+++ gl KNO3 25°C 0.10M U K1=5.37 B2=10.20 1982LPc (68648) 902

\*\*\*\*\*

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

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

La+++ gl NaClO4 30°C 0.10M U K1=2.43 B2=4.64 1969DNc (68712) 903

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaCl04	30°C	0.10M	U		K1=2.43	1969DNc (68763)	904

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.10M	M		K1=3.75 B2=7.23	1979LSb (68814)	905

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	oth/un	25°C	0.10M	U		K1=4.97 B2= 9.00 B3=12.50	1989AIa (68847)	906

Medium not stated.

La+++	sp	KCl	25°C	0.10M	C		K1=3.94	1973PMb (68848)	907
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\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	oth/un	25°C	0.10M	U		K1=4.53 B2= 8.39 B3=11.58	1989AIa (68887)	908

Medium not stated.

La+++	gl	KCl	25°C	0.10M	U	I	K1=3.46 B3=9.9	1967MAi (68888)	909
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K1=4.56(I=0),4.06(I=0.01); B3=10.8(I=0.01)

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	KCl	25°C	0.10M	M		K1=4.70	1978PPb (68947)	910

\*\*\*\*\*

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

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



La+++ gl oth/un 25°C 0.10M U K1=5.03 B2=9.21 1990ATa (69017) 911  
B3=12.77

La+++ gl KCl 25°C 0.10M U I K1=4.37 B2=7.83 1967MAi (69018) 912  
B3=11.24

K1=6.19(I=0)

\*\*\*\*\*

C10H7N5O5 HL CAS 102964-51-2 (6212)

5-(2'-Nitrophenylazo)barbituric acid;

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

La+++ gl diox/w 25°C 75% U K1=4.21 B2=8.04 1986MIa (69098) 913

\*\*\*\*\*

C10H7O2F3 HL CAS 326-06-7 (196)

3-Benzoyl-1,1,1-trifluoroacetone; CF3.CO.CH2.CO.C6H5

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

La+++ gl alc/w 22°C 80% U K1=6.38 B2=11.75 1995MTa (69153) 914  
K3=5.28

Medium: 80% v/v EtOH/H2O, 0.1 M NaClO4

\*\*\*\*\*

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

2,2'-Bipyridine; (C5H4N)2

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

La+++ sp non-aq 25°C 100% C T K1=2.51 2005SYa (69592) 915

In ethylacetate; At 50 C: K1=2.33

La+++ gl KNO3 25°C 0.10M U TIH K1=3.43 B2=6.35 1986NSa (69593) 916  
B(LaAL)=11.17

H2A=phthalic acid. DH(LaAL)=-41.0 kJ mol<sup>-1</sup>, DS=76.1 J K<sup>-1</sup> mol<sup>-1</sup>

La+++ gl NaNO3 25°C 0.50M U K1=0.8 1979HJa (69594) 917

La+++ cal non-aq 25°C 100% U M 1972KKc (69595) 918

K(LaA3+L)=3.25

K(LaA3+2L)=5.50

Medium: CHCl3. A=4,4,4-trifluoro-1-(2-thienyl)-1,3-butanedione

\*\*\*\*\*

C10H8N2O2S2 L (7069)

3-Benzamidiorhodanine; C6H5.CO.NH.C3H2NS2:O

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

La+++ gl alc/w 25°C 20% U T H K1=7.30 B2=12.93 1994BSd (69694) 919  
2.90

Medium: 20% v/v EtOH/H2O, 0.1 M KCl. Also at 35 C, 45 C.

DH(K1)=-17 kJ mol<sup>-1</sup>, DH(K2)=-12, DH(K3)=-10

\*\*\*\*\*

C10H8N4O3 HL CAS 43168-60-1 (6209)

5-Phenylazobarbituric acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ gl diox/w 25°C 75% U K1=4.51 B2=8.36 1986MIa (69732) 920  
\*\*\*\*\*

C10H8O2 H2L CAS 92-44-4 (1658)

2,3-Dihydroxynaphthalene;

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

La+++ gl NaClO4 20°C 0.10M U M 1973PAC (69772) 921

K(LaA+L)=5.54, H4A=EDTA

\*\*\*\*\*

C10H8O5S H3L DHNSA (877)

2,3-Dihydroxynaphthalene-6-sulfonic acid;

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

La+++ gl NaNO3 25°C 0.10M U K1=9.87 B2=16.92 1984NHa (69851) 922

La+++ gl NaClO4 30°C 0.20M U M K1=8.31 1978MSl (69852) 923

K(La(edta)+L)=4.64

\*\*\*\*\*

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  
-----

La+++ gl NaNO3 25°C 0.10M U K1=9.82 1990Hwa (69957) 924

La+++ gl NaClO4 20°C 0.10M M T H K1=6.95 1978AKb (69958) 925

Data for 40 C. DH(K1)=-19.2 kJ mol<sup>-1</sup>, DS(K1)=58 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C10H9NO2 HL CAS 57334-35-7 (3905)

2-Hydroxymethyl-8-hydroxyquinoline;

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

La+++ sp KCl 30°C 1.0M M K1=7.35 1996BTa (70119) 926

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C10H9NO4S H2L CAS 29021-67-8 (3926)

2-Methyl-8-hydroxyquinoline-5-sulfonic acid;

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

La+++ gl NaClO4 30°C 0.10M U TI K1=4.64 B2=8.82 1988BCd (70199) 927

B3=12.05  
 in 42.5% MeOH-water: K1=5.92, B2=10.68, B3=14.51  
 51.8% EtOH-water: K1=6.25, B2=11.37, B3=15.02

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	sp	alc/w	25°C	100%	U			K1eff=3.53	19890Kb (70349)	928

At pH 3.4 by competition with 18-crown-6. Medium: MeOH, 0.03 M Et4NClO4  
 \*\*\*\*\*  
 C10H9N3OS HL CAS 60321-26-8 (4671)  
 2-(2-Thiazolylazo)methylphenol; C3H2NS.N:N.C6H3(CH3)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	sp	diox/w	25°C	10%	U			K1=8.17	1973KSd (70363)	929

Medium: 10% dioxan, 0.1 M KNO3  
 \*\*\*\*\*  
 C10H9O2Br HL CAS 4023-81-8 (1182)  
 4-Bromo-1-phenyl-1,3-butanedione; Br.C6H4.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	30°C	75%	U			K1=6.48 B2=11.88 K3=4.06	1979MBc (70435)	930

Data also for 4'-chloro- analogue  
 \*\*\*\*\*  
 C10H9O2F HL CAS 29681-98-9 (307)  
 1-(4-Fluorophenyl)butane-1,3-dione; F.C6H4.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	30°C	75%	U			K1=6.61 B2=12.23 K3=4.16	1979MBc (70449)	931

\*\*\*\*\*  
 C10H10N03Cl HL CAS 75813-79-5 (1962)  
 4-Chloro-N-hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H4.Cl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	none	20°C	0.0	U			K1=7.21 B2=12.27 K3=4.93 B3=17.19	1979KSb (70509)	932

\*\*\*\*\*  
 C10H10N4O2S HL Sulfadiazine CAS 68-35-9 (1885)  
 4-Amino-N-(2-pyrimidinyl)benzenesulfonamide; C4H3N2NHSO2C6H4NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	25°C	50%	C	M	K1=5.70 B2=11.45 K(La(NTA)+L)=6.55	1993EEa (70613)	933

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

La+++	gl	NaNO <sub>3</sub>	25°C	0.10M	C	M	K(La(EDTA)+L)=2.00	1988SSg (70614)	934
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\*\*\*\*\*  
 C10H10O<sub>5</sub> HL CAS 13522-48-0 (4722)  
 3-Mercapto-1-phenylbut-2-en-1-one; C<sub>6</sub>H<sub>5</sub>.CO.CH:CH.C(SH).CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	mixed	30°C	75%	U		K1=3.42 B2=6.40 K3=2.70	1969DNb (70636)	935

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

\*\*\*\*\*  
 C10H10O<sub>2</sub> HL Benzoylacetone CAS 93-91-4 (197)  
 1-Phenylbutane-1,3-dione; C<sub>6</sub>H<sub>5</sub>.CO.CH<sub>2</sub>.CO.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	30°C	75%	U		K1=6.65 B2=12.18 K3=4.06	1979MBc (70739)	936

La+++	gl	alc/w	25°C	80%	U		K1=7.02 B2=12.27 K3=3.36	1967DZa (70740)	937
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Medium: 80% MeOH, 0.1 M NaCl

La+++	gl	alc/w	24°C	80%	U		K1=7.02 B2=12.27 K3 = 3.36	1967DZb (70741)	938
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Medium: 80% v/v MeOH/H<sub>2</sub>O, 0.1 M NaCl

La+++	gl	mixed	30°C	67%	U		K1=6.24 B2=11.45 K3=4.76	1964DBb (70742)	939
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Medium: 67% acetone, 0.1 M NaClO<sub>4</sub>

La+++	dis	oth/un	?	0.10M	U		K1=5.2 B2=9.3 B3=12.1	1960STb (70743)	940
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La+++	gl	none	?	0.0	U		K1=6.33 B2=11.66 K3=5.12	1958DBa (70744)	941
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 C10H10O<sub>6</sub> H<sub>2</sub>L CAS 5411-14-3 (2394)  
 1,2-Phenylenedioxodiethanoic acid; C<sub>6</sub>H<sub>4</sub>(O.CH<sub>2</sub>.COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO <sub>4</sub>	25°C	0.10M	M		K1=3.81 B2=7.30	1977HCb (70853)	942



La+++ gl diox/w 30°C 50% U M K1=7.46 B2=13.50 1980SGa (71588) 948  
K(La(NTA)+L)=5.10

La+++ gl alc/w 24°C 80% U K1=7.88 B2=14.23 1968DZb (71589) 949  
K3=5.0  
K4=3.4

Medium: 80% MeOH, 0.1 M NaCl

La+++ sp alc/w ? 3% U K1=6.29 1967GDb (71590) 950

Medium: 3% EtOH, 0.2 M NaClO4

C10H12O4 HL CAS 5936-18-9 (2743)

2-Hydroxy-3,4-dimethoxyacetophenone; (HO)(CH3O)2C6H2.CO.CH3

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

La+++ gl diox/w 15°C 50% C T H K1=6.89 B2=12.04 1987GBa (71654) 951

K1(35, 40, 50 C) = 6.55, 6.45, 6.41 respectively. DH(K1)=-32.13 kJ mol<sup>-1</sup>

C10H12O5 HL CAS 490-64-2 (8492)

2,4,5-Trimethoxybenzoic acid;

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

La+++ gl diox/w 25°C 76% M K1=7.30 1978PMa (71673) 952

Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

C10H12O5 HL CAS 570-02-5 (8493)

2,4,6-Trimethoxybenzoic acid;

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

La+++ gl diox/w 25°C 76% M K1=6.71 1978PMa (71680) 953

Medium: 76% v/v dioxane/H2O, 0.10 M NaClO4.

C10H14N5O7P H2L AMP-5 CAS 18422-05-4 (842)

Adenosine-5'-monophosphoric acid, 5-Adenylic acid;

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

La+++ gl KNO3 25°C 0.10M C M K1=4.20 2001AAb (72457) 954

\*K(LaL)=-5.52

K(2La(OH)L=La2(OH)2L2)=11.00

B(LaLA)=8.42

B(LaLB)=7.43

B(LaLC)=8.58, B(LaLD)=6.94. HA=MOPSO, HB=MES, HC=ACES and HD=HEPES.

La+++ gl R4N.X 25°C 0.10M C T K1=3.91 1991SMa (72458) 955

K(La+HL)=2.76

IUPAC evaluation

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

B(LaLC)=7.33, B(LaLD)=6.84. HA=MOPSO, HB=MES, HC=ACES and HD=HEPES.

C10H15N5O10P2                      H3L                      ADP                      CAS 20398-34-9    (2181)  
Adenosine-5'-diphosphoric acid;

Competitive reaction with MgL. Medium: 0.05 M PIPES, pH 7.0.

C10H16N2O2 L (7408)  
N-(2-Pyridylmethyl)iminodiethanol; C5H4N.CH2.N(CH2CH2.OH)2

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

La+++      g1   KN03   20°C 0.10M U      K1=12.05      1968MJa (73151) 963  
By other method: K1=13

C10H16N2O8	H4L	EDTA	CAS 60-00-4	(120)
1,2-Diaminoethane-N,N,N',N'-tetraethanoic acid, Sequesteric acid;				

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	gl	NaClO4	20°C	0.1M	C	K1=15.9 K(LaL+H)=2.6	1993MDb (73894)	964
Data also for other lanthanides using an unbuffered titration method								
La+++	cal	NaClO4	25°C	0.10M	C H		1987YJa (73895)	965
DH(K1)=-11.6 kJ mol <sup>-1</sup> , DS(K1)=252 J K <sup>-1</sup> mol <sup>-1</sup> .								
La+++	gl	KCl	25°C	1.0M	U	K(LaL+H)=2.00	1984BKc (73896)	966
La+++	gl	NaClO4	25°C	0.20M	U	K1=11.53	1984LSd (73897)	967
La+++	gl	NaClO4	28°C	0.20M	U	K1=9.31	1982LSa (73898)	968
La+++	gl	NaClO4	20°C	0.02M	U M	K(LaL+PO4)=2.2	1982MPd (73899)	969
La+++	gl	oth/un	20°C	0.10M	U	K1=15.13	1979MOa (73900)	970
La+++	vlt	KNO3	20°C	0.10M	U	K1=15.66	1978NLb (73901)	971
La+++	gl	NaClO4	25°C	0.50M	U	K1=14.48	1977GGb (73902)	972
La+++	gl	KCl	25°C	1.00M	U	K2=3.12 K(LaL+HL)=1.60 K(2LaL+L)=4.65	1976BKa (73903)	973
La+++	gl	KCl	25°C	1.0M	U	K(LaL+H)=3.1	1976GMb (73904)	974
La+++	sp	KCl	25°C	0.10M	U	K2=3.12 K(2LaL+L)=4.65 K(LaL+HL)=1.60	1975BKa (73905)	975
La+++	gl	KNO3	30°C	0.10M	U M	K(LaL+IDA)=2.14 K(LaL+NTA)=3.27 K(LaL+HEDTA)=3.57	1975RTa (73906)	976
La+++	gl	KCl	25°C	1.0M	C	K2=3.12 K(LaL+HL)=1.60 K(2LaL+L=La2L3)=4.65	1974BKe (73907)	977
La+++	gl	KNO3	20°C	0.10M	U M	K(LaL+Citrate)=3.5	1974TDa (73908)	978
La+++	gl	KNO3	25°C	0.10M	U T M	K(LaL+HA)=2.54 K(LaL+A)=3.90	1973TRb (73909)	979



La+++	gl	KN03	25°C	0.10M	U	T	M		1973TRb (73910)	980
K(LaL+A)=4.5 K(2 C)=4.4, K(35 C)=4.3, K(45 C)=4.2, H4A=adenosine triphosphate										
La+++	nmr	oth/un	?	1.0M	U			K2=1.43 K(LaL+HL)=1.31	1972KTd (73911)	981
La+++	gl	NaCl04	25°C	0.10M	U			K1=15.25 K(La+HL)=7.22	1970KSd (73912)	982
La+++	gl	NaCl04	25°C	0.10M	U		M		1969AIb (73913)	983
K(LaL+A)=5.72, H4A=tiron										
La+++	nmr	oth/un	40°C	0.10M	U				1969MGc (73914)	984
K(La(OH)L(H2O)n-1+H) > 11.0 K(LaL(H2O)n+H) < 4.0										
La+++	dis	oth/un	25°C	?	U			K1=15.77	1969PJa (73915)	985
Method: paper electrophoresis. Medium: pH=1.86										
La+++	sol	oth/un	25°C	0.0	U		M		1966KLa (73916)	986
B(LaL(0xalate))=20.1										
La+++	oth	KN03	20°C	0.10M	U			K1=15.5	1965JMb (73917)	987
Method: electrophoresis										
La+++	gl	KN03	20°C	0.10M	U			K1=15.5	1964ANa (73918)	988
La+++	cal	KN03	20°C	0.10M	U		H		1963ANf (73919)	989
DH(K1)=-11.7 kJ mol-1, DS=255 J K-1 mol-1										
La+++	dis	NaCl04	20°C	0.10M	U		T	K1=15.3	1963STc (73920)	990
La+++	ix	KCl	25°C	0.10M	U		H	K1=15.19	1959BDb (73921)	991
DH(K1)=-3.3 kJ mol-1, DS=280 J K-1 mol-1										
La+++	vlt	oth/un	20°C	0.01M	U			K1=15.14	1955WSa (73922)	992
La+++	gl	KCl	20°C	0.10M	U		I	T K1=15.13	1954SGa (73923)	993
By polarography, 0.1 M KN03, K1=15.50, K(LaL+H)=3.28										
La+++	gl	KCl	20°C	0.10M	U		T	K1=14.72	1953WSa (73924)	994
La+++	gl	KCl	20°C	0.10M	U			K1=15.30	1952VIa (73925)	995
La+++	gl	KCl	20°C	0.10M	U		T	K1=15.40	1951SFa (73926)	996
*****										

C10H16N5O13P3                      H4L      ATP                      CAS 56-65-5    (403)  
 Adenosine-5'-triphosphoric acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	KNO3	25°C	0.10M	C	M		1999BIa (74749)	997
							K(LaL2+His)=4.98 K(LaL2+Pro)=4.13 K(LaL2+Asn)=3.68 K(LaL2+Gln)=3.25		
K(LaL2+Asp)=7.95, K(LaL2+Glu)=6.84.									

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La+++	gl	NaClO4	20°C	0.20M	U	T H	K1=6.87    B2=10.37	1993VLa (74750)	998
							K(La(nta)+L)=3.76 K(La(edta)+L)=3.61		
Data for 30, 40 C. DH(K1)=12.4 kJ mol <sup>-1</sup> , DS(K1)=174 J K <sup>-1</sup> mol <sup>-1</sup> . DH(K2)=12.4, DS(K2)=110; DH(La(nta)+L)=18.2, DS=134; DH(La(edta)+L)=13.4, DS=115.									

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La+++	gl	R4N.X	25°C	0.10M	C	T	K1=6.32	1991SMa (74751)	999
							K(La+HL)=3.52		

IUPAC evaluation

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La+++	gl	KCl	25°C	0.10M	U		K1=6.53    B2=10.26	1988SSd (74752)	1000
							K(La+HL)=4.43		

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La+++	kin	oth/un	25°C	0.05M	C		K1=6.48	1983Mcc (74753)	1001
Method: inhibition of the hexokinase reaction, pH 8.0 (0.05 M TAPS).									

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La+++	gl	KNO3	35°C	0.10M	U	M		1972TRc (74754)	1002
							K(La(EDTA)+L)=4.3		

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C10H16O2                      HL                      CAS 100563-25-5    (4706)  
 2-Butanoylcyclohexanone; CH3.CH2.CH2.CO.C6H9O

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	oth/un	30°C	0.10M	U		K1=8.52    B2=15.85	1972DSe (74922)	1003
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C10H16O8P2                      H4L                      (6907)  
 1,2-Diphosphinoethane-P,P,P'P'-tetraethanoic acid;  
 (HOOC.CH2)2P.CH2.CH2.P(CH2.COOH)2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	NaClO4	25°C	0.10M	C		K1=4.84	1992PPb (74950)	1004
							B(LaHL)=9.70 B(LaH2L)=13.15		

Additional method: competition with Zn, using Zn(Hg) electrode

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La+++	gl	NaClO4	25°C	0.10M	C		K1=4.84	1982PPc (74951)	1005
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B(LaHL)=9.70  
B(LaH2L)=13.15

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C10H17N2O10P H5L CAS 69219-70-1 (7961)

Bis{[bis(carboxymethyl)amino]methyl}phosphinic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaCl	25°C	0.16M	C		K1=13.0 K(La+HL)=7.9 K(LaL+H)=4.14 B(LaHL)=17.14	2001XRa (75024)	1006

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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
La+++	gl	NaCl04	25°C	0.10M	U	TIH	K1=6.450	2003GSb (75129)	1007
Values for 0.05-0.2 M NaCl04, 15-45 C and 10-30% MeOH/H2O, 20% EtOH/H2O, 20% DMF/H2O. At I=0, K1=7.820. DH(K1)=-33.3 kJ mol <sup>-1</sup> , DS(K1)=-38.									
La+++	gl	NaCl04	37°C	0.15M	U	M	B(LaHL)=12.79 B(LaH2L)=19.95 B(LaH-1L)=-3.59 *K=-8.61	1976TWa (75130)	1008

\*\*\*\*\*

C10H18N2O4S H2L (6638)

1-Thia-4,7-diazacyclononane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.10M	C		K1=6.02	1993WLa (75216)	1009

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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
La+++	gl	NaCl04	25°C	0.50M	U		K1=12.97	1977GGb (75429)	1010
La+++	EMF	KCl	25°C	1.0M	U		K2=3.62 K(LaL+HL)=2.02 K(LaL+H2L)=1.74 K(LaL+H4L)=3.58	1977GMa (75430)	1011

Method: Pt/H2 electrode.

La+++	gl	NaCl04	20°C	0.10M	U		K(LaL+A)=3.08	1974PJJa (75431)	1012
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K(LaL+B)=3.22													
HA=pentane-2,4-dione, B=1-phenylbutane-1,3-dione													
La+++	gl	oth/un	20°C	?	U				1971MNa (75432)1013				
						K(LaL+L)=2.96							
La+++	gl	KN03	25°C	0.10M	U	M			1963TLb (75433)1014				
						K(LaL+A)=3.22							
						K(LaL+B)=4.04							
						K(LaL+C)=3.90							
H2A=iminodiethanoic acid, H2B=hydroxyethyliminodiethanoic acid, H2C=diaminoethane-N,N'-diethanoic acid													
La+++	EMF	oth/un	20°C	0.10M	U		K1=13.82		1962PMa (75434)1015				
La+++	gl	KN03	15°C	0.10M	U	T H	K1=13.52		1961MFb (75435)1016				
K1=13.49(20 C), 13.46(25 C), 13.40(30 C), 13.43(35 C), 13.39(40 C) DH(K1)=-9.20 kJ mol <sup>-1</sup> (25 C), DS=227 J K <sup>-1</sup> mol <sup>-1</sup>													
La+++	gl	KN03	25°C	0.10M	U		K1=13.22		1956SPa (75436)1017				
*****													
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				
La+++	gl	KN03	25°C	0.20M	U	M			1990KMf (75601)1018				
						K(La(nta)+L)=5.94							
						K(La(hedta)+L)=5.83							
						K(La(cdta)+L)=5.64							
						K(La(dtpa)+L)=5.34							
hedta is N-(hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid.													
La+++	gl	oth/un	20°C	0.10M	U				1960WKa (75602)1019				
						Kso=-25.18							
*****													
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				
La+++	gl	KN03	25°C	0.10M	U	T H	K1=3.13		1981SKg (75692)1020				
Data for 35 and 45 C. DH(K1)=8.03 kJ mol <sup>-1</sup> , DS(K1)=87.4 J K <sup>-1</sup> mol <sup>-1</sup> .													
*****													
C10H20N2O4 H2L CAS 5578-84-7 (5914) N,N-Dihydroxydecanediamide; HN(OH).CO.(CH2)8.CO.NH(OH)													
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference ExptNo				
La+++	gl	NaNO3	25°C	0.10M	C		K1=10.33		1989EHa (75802)1021				

C10H20N2O6                      H2L                      CAS 5616-21-7    (570)  
N,N'-Bis(2-hydroxyethyl)diaminoethane-N,N'-diethanoic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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C11H8O3                      H2L                      CAS 2083-08-1 (1131)  
2-Hydroxy-1-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	g1	diox/w	25°C	75%	U			K1=6.00	1975DJa	(77062)1038
*****										

C11H8O3 HL CAS 483-35-6 (3347)  
2-Hydroxy-3-methyl-1,4-naphthoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	35°C	75%	M	I		K1=4.24 B2=7.34	1986SSc	(77075)1039

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	g1	KN03	20°C	0.10M	U T H		K1=8.51	B2=16.29	1977SKc	(77124)1040
Further data at 30, 40 C. DH(B2)=-81.6 kJ mol-1										

La+++            gl   diox/w 25°C   75%   U                            K1=5.37                            1975DJa (77125)1041  
\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	35°C	50%	U		K1=3.23	B2=5.68	1971MAa	(77180)1042
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
La+++	gl	diox/w	30°C	50%	U	TI	M	K1=4.54 K3=2.17	B2=7.99	1985ECa (77203)1043
20 C: K1=4.87, K2=3.84, K3=2.47; 40C: K1=4.23, K2=3.08, K3=1.90										
*****										

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
La+++	g1	NaClO4	25°C	0.10M	C			K1=7.08 B2=12.14 K(La+HL)=1.46	1979Lab	(77229)1044

C11H8O9S2                      H4L                      CAS 67097-84-1    (1995)

1-Hydroxy-4,7-disulfo-2-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	cal	NaClO4	25°C	0.10M	C	H	K1=7.08 B2=11.7 K(La+HL)=2.01	1986LLc (77282)	1045

DH(La+HL)=4.2 kJ mol<sup>-1</sup>, DS=52 J K<sup>-1</sup> mol<sup>-1</sup>

C11H9NO4 H2L CAS 4321-82-7 (4829)

3-Acetyl-4-hydroxycoumarin oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	35°C	50%	U		K(La+HL)=3.02 K(La+2HL)=5.24	1971MAa (77423)	1046

Medium: 50% dioxan, 0.01 M NaClO4

C11H9N3O HL CAS 10335-29-2 (3937)

2-(2'-Pyridylazo)phenol; C5H4N.N:N.C6H4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	alc/w	24°C	5%	U		K1=5.67	1973BJb (77457)	1047

Medium: 5% EtOH, 0.1 M NaClO4

C11H9N3O2 H2L PAR CAS 1141-59-9 (636)

4-(2'-Pyridylazo)-1,3-dihydroxybenzene; C5H4N.N:N.C6H3(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	KNO3	25°C	0.10M	C		K1=8.91 K(La+HL)=3.18	1983OHb (77555)	1048

La+++	sp	KCl	20°C	0.10M	U		K(La+HL)=2.69	1971EKa (77556)	1049
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La+++	sp	NaClO4	20°C	0.10M	U		K1=9.2	1967SNb (77557)	1050
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C11H9N3O3 HL HNQS CAS 62331-38-8 (6194)

2-Hydroxy-1,4-naphthoquinone monosemicarbazone; C10H5(OH)(O):N.NH.CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	35°C	75%	U	TI	K1=4.01 B2=7.37	1987SSb (77611)	1051

At I=0.1 M. At 35 C, I=0.05, K1=4.71, K2=4.40; I=0.01, K1=5.12, K2=4.15,  
At 40 C, I=0.1 M, K1=3.98, K2=3.40; at 45 C, I=0.1 M, K1=4.10, K2=2.17

C11H10N4O3 HL CAS 92265-24-2 (6211)

5-(2'-Methylphenylazo)barbituric acid;



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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  diox/w 25°C  75%  U          K1=4.00  B2=7.85  1986MIa (77731)1052
*****
C11H10N4O4          HL          CAS 92265-26-4  (6210)
5-(2'-Methoxyphenylazo)barbituric acid;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  diox/w 25°C  75%  U          K1=4.19  B2=8.24  1986MIa (77745)1053
*****
C11H11NO2          HL          CAS 35385-27-4  (8689)
8-Hydroxy-(2-hydroxyethyl)quinoline;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      sp  KCl      30°C  1.0M M          K1=5.18          1996BTa (77768)1054
*****
C11H11NO6          H3L          CAS 1147-65-5  (425)
N-(2'-Carboxyphenyl)iminodiethanoic acid; H00C.C6H4.N(CH2.COOH)2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      sp  NaNO3    20°C  0.10M U          K(?)=5.41          1961DSa (77828)1055
*****
C11H11N3O2S        HL  Sulfapyridine  CAS 144-83-2  (8356)
4-Amino-N-2-pyridinyl-benzenesulfonamide;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  alc/w  25°C  50%  C    M  K1=9.75  B2=18.07  1993EEa (77932)1056
K(La(NTA)+L)=8.25
Medium: 50% v/v EtOH/H2O, 0.10 M NaClO4.
*****
C11H12N2O2          HL          CAS 103314-23-4  (6182)
2-(N-2-Pyrrolidimino)benzoic acid; C4H7N:N.C6H4.COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  NaClO4  25°C  0.10M U TIH  B2=12.40          1986GSb (78019)1057
35 C: B2=12.50; 45 C: B2=12.80. DH(B2)=-36.3 kJ mol-1, DS=121 J K-1 mol-1
*****
C11H12N2O2          HL  Tryptophan    CAS 73-22-3  (3)
2-Amino-3-(3-indolyl)propanoic acid; H2N.CH(CH2.C8H6N)COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  KNO3     35°C  0.10M U          K1=5.02          1990RSe (78212)1058

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-----  
La+++      gl   KCl      25°C 0.10M U T H      K1=4.4      1976BFc (78213)1059  
For 55C K1= 3.75  
-----

La+++      gl   KCl      25°C 0.10M U      K1=4.45      B2=8.55      1972BFe (78214)1060  
\*\*\*\*\*

C11H12N2O5S      HL      CAS 56475-09-3 (8410)  
3-(4'-Sulfophenylhydrazo)-pentane-2,4-dione;  
-----

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

La+++      gl   oth/un 30°C 0.10M U      B2=20.51      1985EEb (78322)1061  
Medium: not stated. For 3'-sulfophenylhydrazo-, B2=20.64; for 2'-sulfo-  
phenylhydrazo-, B2=23.34; for 4'-methyl-2'-sulfophenylhydrazo-, B2=22.26.  
\*\*\*\*\*

C11H12N4O2S      HL      Sulfamerazine      CAS 127-79-7 (8431)  
4-Amino-N-(4-methyl-2-pyrimidinyl)benzenesulfonamide;  
-----

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

La+++      gl   alc/w 25°C 50% C      K1=5.81      B2=10.57      1993EEa (78358)1062  
K(La(nta)+L)=10.52

Medium: 50% v/v EtOH/H2O, 0.10 M NaCl04.  
\*\*\*\*\*

C11H12O2      HL      CAS 4023-79-4 (305)  
1-(4-Methylphenyl)butane-1,3-dione; CH3.C6H4.CO.CH2.CO.CH3  
-----

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

La+++      gl   diox/w 30°C 75% U      K1=6.80      B2=12.54      1979MBc (78373)1063  
K3=4.13  
\*\*\*\*\*

C11H12O3      HL      CAS 94-02-0 (3351)  
Ethyl benzoylacetate; C6H5.CO.CH2.CO2.C2H5  
-----

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

La+++      gl   mixed 25°C 75% U      K1=7.49      B2=13.91      1971DRa (78401)1064  
Medium: 75% acetone, 0.1 M NaCl04  
\*\*\*\*\*

C11H13NO3      H2L      CAS 63467-38-9 (1961)  
4-Methyl-N-hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H4.CH3  
-----

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

La+++      gl   diox/w 20°C 82% U      K1=6.96      B2=12.37      1979KSb (78497)1065  
K3=5.14  
\*\*\*\*\*

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

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  NaClO4 25°C 0.10M U TI      K1=6.97  B2=12.32  1978MSj (78526)1066
Also data for 30 and 35 C and 0.01 and 0.05 M NaClO4.

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*****
C11H13NO4      L      CAS 15658-60-3 (4587)
Diethyl 2,6-pyridinedicarboxylate; Dipicolinic acid diethyl ester;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      sp  non-aq 20°C 100% C      K1=6.8    B2=12.80  1997RPa (78534)1067
                        B3=16.3

```

Medium: acetonitrile.

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*****
C11H13NO4S      HL      CAS 58943-48-9 (1411)
N-Acetylacetonylidene-orthanilic acid; H03S.C6H4.N:C(CH3).CH2.CO.CH3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      EMF NaClO4 25°C 0.10M U      K1=16.80      1982MSc (78593)1068
*****
C11H13NO5      H3L    HBIDA      CAS 7372-13-6 (1603)
N-(2-Hydroxybenzyl)iminodiethanoic acid; H0.C6H4.CH2.N(CH2.COOH)2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  KNO3   25°C 0.10M C      K1=11.65  B2=19.67  1989YSa (78630)1069
                        K(La+HL)=4.95
                        K(La+2HL)=10.87
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La+++      gl  KNO3   20°C 0.10M U      K1=12.14  B2=19.81  1983MSc (78631)1070
*****
C11H13NO6      H4L      CAS 1911-59-2 (4852)
2,3-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      EMF oth/un  ?      ?  U      1975DTa (78664)1071
                        K(La+HL)=12.7

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*****
C11H13NO6      H4L      CAS 59036-09-8 (2111)
2,5-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2
-----

```

```

Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  oth/un 25°C 0.0 U      1970TTb (78679)1072
                        K(La+HL)=13.8

```

```

*****
C11H13NO6      H4L      CAS 31477-66-7 (4853)

```

2,6-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2

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

La+++	EMF	oth/un	?	?	U			1975DTa (78693)	1073
-------	-----	--------	---	---	---	--	--	-----------------	------

K(La+HL)=10.6

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C11H14N2O4 H2L (1880)  
N-(6-Methyl-2-pyridylmethyl)iminodiethanoic acid; CH3C5H3NCH2N(CH2COOH)2

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

La+++	gl	KNO3	25°C	0.10M	U		K1=5.72 B2=9.57	1964THa (78886)	1074
-------	----	------	------	-------	---	--	-----------------	-----------------	------

\*\*\*\*\*

C11H15NO5 HL CAS 1429-25-0 (2696)  
3-Hydroxy-6-(hydroxymethyl)-2-(4-morpholinylmethyl)-4H-pyran-4-one;

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

La+++	sp	KCl	25°C	0.10M	M	I		1986POa (79051)	1075
-------	----	-----	------	-------	---	---	--	-----------------	------

B(LaHL)=11.02

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

La+++	gl	KNO3	20°C	0.10M	U		K1=11.20	1981NSc (79302)	1076
-------	----	------	------	-------	---	--	----------	-----------------	------

La+++	EMF	KNO3	25°C	0.10M	U		K1=14.30	1980KBc (79303)	1077
-------	-----	------	------	-------	---	--	----------	-----------------	------

La+++	vlt	KNO3	20°C	0.10M	U		K1=16.20	1978NLb (79304)	1078
-------	-----	------	------	-------	---	--	----------	-----------------	------

La+++	vlt	KNO3	20°C	0.10M	U		K1=16.42	1964ICb (79305)	1079
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C11H18N2O8 H4L CAS 38539-29-0 (2573)  
1,3-Diaminopropane-N,N'-di(1,4-butanedioic acid)

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

La+++	gl	KNO3	25°C	0.10M	U		K1=8.52	1976GKd (79368)	1080
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C11H18N2O8 H4L CAS 4408-81-5 (923)  
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.)2.CH2

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

La+++	cal	KNO3	20°C	0.10M	U	H	K1=11.23 *K(LaHL)=-4.67	1971AWa (79453)	1081
-------	-----	------	------	-------	---	---	----------------------------	-----------------	------

DH=15.8 kJ mol<sup>-1</sup>, DS=266.3 J K<sup>-1</sup> mol<sup>-1</sup>

La+++      gl    KNO3    20°C 0.10M U    H      1964ANa (79454)1082

La+++      gl    KNO3    20°C 0.10M U      K1=11.23      1964LAa (79455)1083

C11H18N2O9                      H4L                      HDPTA                      CAS 3148-72-9                      (431)

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

La+++ sp KNO3 20°C 0.10M U K1=12.2 1967SMf (79562)1085

Method: electrophoresis

2-Hydroxy-1,3-diaminopropane-N,N'-di(1,4-butanedioic) acid

La+++      g1    KNO3    25°C 0.10M U      K1=9.29      1976GKd (79599)1087

2-(3'-Methylbutanoyl)cyclohexanone (2-isovaleryl cyclohexanone);

La+++      gl   mixed   30°C   75%   U      K1=8.95   B2=16.44   1972DSd (79654)1088

C11H18O2                      HL                      CAS 5601-52-5    (4821)

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

Medium: 75% acetone

1,1,1-Tris(carboxymethoxymethyl)ethane;

La+++ g1 R4N.X 25°C 0.10M C K1=5.7 2001VSa (79675)1090

N,N-dibenzyl- and N-CH<sub>2</sub>OCH<sub>2</sub>COOH- derivatives.

\*\*\*\*\*

C<sub>11</sub>H<sub>22</sub>O<sub>5</sub> 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  
-----

La+++ cal non-aq 25°C 100% U H K<sub>1</sub>=2.54 1993LLa (79858)1091  
Medium: MeCN. DH(K<sub>1</sub>)=-60.7 kJ mol<sup>-1</sup>.

\*\*\*\*\*

C<sub>11</sub>H<sub>26</sub>N<sub>2</sub>O<sub>6</sub> L Bistris-propane CAS 64431-96-5 (7920)  
1,3-Bis[tris(hydroxymethyl)methylamino]propane;

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

La+++ gl NaClO<sub>4</sub> 25°C 0.10M C K<sub>1</sub>=2.30 2001GYb (79956)1092  
K(2La+20H+2L)=18.11  
K(2La+40H+2L)=28.96  
K(2La+50H+2L)=33.62

\*\*\*\*\*

C<sub>12</sub>H<sub>7</sub>O<sub>2</sub>F<sub>7</sub> 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  
-----

La+++ gl alc/w 22°C 80% U K<sub>1</sub>=6.27 B<sub>2</sub>=11.17 1995MTa (80185)1093  
K<sub>3</sub>=4.70

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

\*\*\*\*\*

C<sub>12</sub>H<sub>8</sub>N<sub>2</sub> L Phenanthroline CAS 66-71-7 (144)  
1,10-Phenanthroline;

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

La+++ sp non-aq 25°C 100% C H K<sub>1</sub>=1.77 2002KNc (80472)1094  
Medium: N,N-dimethylformamide, 0.20 M Et<sub>4</sub>NClO<sub>4</sub>.  
By calorimetry: DH(K<sub>1</sub>)=-13.8 kJ mol<sup>-1</sup>.

-----  
La+++ dis non-aq 25°C 100% C HM K(LaA<sub>3</sub>+L)=6.90 1998YHa (80473)1095

Method: solvent extraction from 0.10 M NaClO<sub>4</sub> into CHCl<sub>3</sub>. HA is  
1-(2-thienyl)-4,4,4-trifluoro-1,3-butanedione. DH(LaA<sub>3</sub>+L)=13 kJ mol<sup>-1</sup>.

\*\*\*\*\*

C<sub>12</sub>H<sub>9</sub>N<sub>2</sub>OCl HL CAS 73446-98-7 (9081)  
N-2-(5-Chloropyridyl)salicylalimine;

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

La+++ gl alc/w 25°C 50% C T H K<sub>1</sub>=3.76 B<sub>2</sub>= 6.92 1997GSa (80587)1096  
Medium: 50% v/v EtOH/H<sub>2</sub>O, 0.20 M KCl. At 50 C, K<sub>1</sub>=3.45, K<sub>2</sub>=2.91.

DH(K1)=-23 kJ mol<sup>-1</sup>.

\*\*\*\*\*

C12H10N2O HL CAS 1823-47-8 (3969)

2-Salicylideneaminopyridine; (2-OH).C6H4.CH:N.C5H4N

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ gl alc/w 25°C 50% C T H K1=4.69 B2= 8.21 1997GSa (80674)1097  
K3=2.65

Medium: 50% v/v EtOH/H2O, 0.20 M KCl. At 50 C, K1=4.31, K2=3.24,  
K3=2.40. DH(K1)=-28 kJ mol<sup>-1</sup>.

\*\*\*\*\*

C12H10N2O HL CAS 3860-58-0 (9082)

2-[(2-Pyridylmethylene)amino]phenol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ gl alc/w 25°C 50% C K1=6.47 B2=12.07 1997GSa (80684)1098  
Medium: 50% v/v EtOH/H2O, 0.20 M KCl.

\*\*\*\*\*

C12H10N2S L CAS 19257-96-6 (9084)

2-(2-Pyridyl)benzothiazoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ gl alc/w 25°C 50% C K1=6.05 B2=10.93 1997GSa (80742)1099  
Medium: 50% v/v EtOH/H2O, 0.20 M KCl.

\*\*\*\*\*

C12H10N6O4S H2L CAS 77327-19-6 (8343)

2-[4-Amino-3-(1,2,4-triazolylazo)]naphthol-4-sulphonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ gl NaCl04 30°C 0.10M U T H K1=6.15 B2=11.25 1982Gmb (80783)1100  
Data for 40 and 50 C. Also DH and DS values.

\*\*\*\*\*

C12H11N3OS HL (6787)

2-Hydroxy-1-naphthaldehyde thiosemicarbazone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ gl diox/w 20°C 75% U I K1=6.60 B2=11.72 1992SSc (80890)1101  
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  
-----  
La+++ gl diox/w 20°C 75% U I K1=7.096 B2=12.640 1992SSc (80919)1102

Medium: 75% v/v dioxan/H2O; 0.1 M NaClO4

\*\*\*\*\*

C12H1104P HL CAS 838-85-7 (2133)

Diphenylphosphoric acid; (C6H5O)2P(O)OH

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

La+++ kin oth/un 25°C 0.02M U K1=1.77 1974Gmc (80950)1103

\*\*\*\*\*

C12H12N03Cl HL (1055)

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

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

La+++ sp NaClO4 25°C 0.50M U K1=1.776 1987MSa (80968)1104

\*\*\*\*\*

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  
-----

La+++ gl alc/w 22°C 0.1M U K1=6.08 B2=11.44 2000TBb (81075)1105  
K3=3.94

Medium: 0.1 M NaClO4 in 70% v/v EtOH/H2O

\*\*\*\*\*

C12H12N4O2 HL AHMP CAS 62201-49-4 (7697)

4-(4-Acetophenyl)hydrazono-3-methyl-2-pyrazolin-5-one;

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

La+++ gl alc/w 25°C 50% U T H K1=6.63 B2=13.11 1999EEa (81127)1106

Medium: 50%(v/v) EtOH/H2O, 0.10 M KCl. DH(K1)=-39.8 kJ mol<sup>-1</sup>,

DS(K1)=-6.5 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-39.8 kJ mol<sup>-1</sup>, DS(K2)=-9.6 J K<sup>-1</sup>mol<sup>-1</sup>.

\*\*\*\*\*

C12H13N03 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  
-----

La+++ sp NaClO4 25°C 0.50M U K1=1.885 1987MSa (81198)1107

\*\*\*\*\*

C12H14N4O2S L Sulfadimidine CAS 57-68-1 (6167)

2-(4-Aminobenzolsulfamido)-4,6-dimethylpyrimidine;

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

La+++ gl NaNO3 25°C 0.10M U M 1988SSg (81370)1108

K(La(EDTA)+L)=1.47

\*\*\*\*\*

C12H15N05 H3L (4930)



1-Hydroxy-4-methylphenyl-2-methyleneiminodiethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	oth/un	25°C	0.0	U			K1=12.95	1970TTb (81498)	1109
*****										
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
La+++	dis	R4N.X	25°C	0.12M	C			K1=2.39	1998SUa (81698)	1110
Medium: 0.12 M Et4NBr.										
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid										
*****										
C12H17NO4		HL						(2695)		
3-Hydroxy-6-(hydroxymethyl)-2-(1-piperidinylmethyl)-4H-pyran-4-one;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	sp	KCl	25°C	0.10M	M	I			1986POa (81716)	1111
B(LaHL)=13.49										
*****										
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
La+++	gl	KNO3	25°C	0.10M	C			K1=5.09	1988YSa (81814)	1112
*****										
C12H18N2O8		H2L						CAS 93031-52-8	(5829)	
1,4-Dioxa-7,10-diazacyclododecane-5,12-dione-7,10-diethanoic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	0.10M	C			K1=5.48	1988CCb (81838)	1113
*****										
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
La+++	EMF	KNO3	25°C	0.10M	U			K1=12.10	1985SGa (81869)	1114
*****										
La+++	EMF	KNO3	25°C	0.10M	U			K1=13.93 B2=17.93	1980SGb (81870)	1115
*****										
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
La+++	vlt	KNO3	20°C	0.10M	U		K1=16.58	1968NLa (82027)	1116
*****									
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
La+++	gl	KNO3	20°C	0.10M	U		K1=6.81	1975DPa (82080)	1117
La+++	gl	KNO3	25°C	0.10M	U		K1=6.56	1973GBd (82081)	1118
*****									
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
La+++	vlt	KNO3	20°C	0.10M	U		K1=14.70	1976NKa (82136)	1119
*****									
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
La+++	gl	NaClO4	25°C	0.10M	U	IH	K1=10.53 B(La+HL)=4.89	1988RNa (82169)	1120
DH(K1)=-6.77 kJ mol-1, DH(La+HL)=29.1, DS(K1)=179 J K-1 mol-1									
La+++	vlt	R4N.X	30°C	0.01M	C		K1=14.82	1981GMh (82170)	1121
Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.									
*****									
C12H20N2O8		H4L					CAS 2458-58-4	(922)	
1,4-Diaminobutane-N,N,N',N'-tetraethanoic acid; (HOOC.CH2)2N.(CH2)4.N(CH2.COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	20°C	0.10M	U	H	K(La+HL)=6.17	1964ANa (82226)	1122
By calorimetry: DH(K1)=7.9 kJ mol-1, DS=202 J K-1 mol-1									
La+++	gl	KNO3	20°C	0.10M	U		K1=9.13	1964LAa (82227)	1123
*****									
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
La+++	vlt	KNO3	20°C	0.10M	U		K1=16.68	1966NSb (82311)	1124

-----  
La+++ oth KNO3 20°C 0.10M U K1=18.5 1965JMb (82312)1125  
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  
-----

La+++ oth KNO3 20°C 0.10M U K1=15.5 1965JMb (82403)1126  
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  
-----

La+++ gl KNO3 25°C 0.10M C K1=12.6 1985TPa (82464)1127

La+++ gl KNO3 20°C 0.10M U H K1=12.8 1964ANa (82465)1128  
By calorimetry: DH(K1)=-0.84 kJ mol<sup>-1</sup>, DS=242 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

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  
-----

La+++ gl KNO3 20°C 0.10M U H K1=16.6 1964ANa (82546)1129  
By calorimetry: DH(K1)=-14.0 kJ mol<sup>-1</sup>, DS=270 J K<sup>-1</sup> mol<sup>-1</sup>

La+++ EMF KNO3 20°C 0.10M U K1=16.00 1962MMc (82547)1130

\*\*\*\*\*

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

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

La+++ oth oth/un ? ? U 1967LDa (82589)1131  
B(La2L)=19.27

Method: high-frequency titration

\*\*\*\*\*

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  
-----

La+++ gl KNO3 20°C 0.10M C K1=15.46 1978NLa (82677)1132

\*\*\*\*\*

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
La+++	gl	KNO3	20°C	0.10M	U		K1=9.84	1985LBc (82699)	1133

\*\*\*\*\*

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
La+++	gl	R4N.X	25°C	0.10M	C		K1=10.94	1998CCb (83086)	1134
La+++	gl	KCl	25°C	0.10M	C		K1=16.6	1997HTa (83087)	1135

\*\*\*\*\*

C12H24O2                      HL                      Lauric acid                      CAS 143-07-7 (2540)  
Dodecanoic acid, CH3.(CH2)10.COOH

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	oth	oth/un	20°C	var	U			1981HTc (83112)	1136

Kso=-20.28

\*\*\*\*\*

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
La+++	sp	non-aq	25°C	100%	C		K1=2.22	2003ZRa (83442)	1137

Medium: DMSO. Method: competition with murexide.

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La+++	dis	R4N.X	25°C	0.12M	C		K1=1.11	1998SUa (83443)	1138
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Medium: 0.12 M Et4NBr.  
Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid

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La+++	nmr	alc/w	RT	70%	C		K1=1.3	1996ASa (83444)	1139
-------	-----	-------	----	-----	---	--	--------	-----------------	------

Method: 1H NMR. Medium: 70% MeOH/H2O

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La+++	dis	non-aq	25°C	100%	U			1993INa (83445)	1140
-------	-----	--------	------	------	---	--	--	-----------------	------

B(LaPL)=7.05  
B(LaPL2)=8.66

K is the equilibrium constant for extraction of the metal picrate (P) into CH2Cl2. For extraction from D2O, B=7.52 and 9.14.

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La+++	cal	non-aq	25°C	100%	U	IH	K1=4.40	1993LLa (83446)	1141
-------	-----	--------	------	------	---	----	---------	-----------------	------

Medium: MeCN. DH(K1)=-36.2 kJ mol<sup>-1</sup>. In MeOH K1=3.29, DH=11.8

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La+++	dis	non-aq	25°C	100%	U		B2=8.66	1990NIa (83447)	1142
-------	-----	--------	------	------	---	--	---------	-----------------	------

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

-----  
La+++ sp alc/w 25°C 100% U 1989OKb (83448)1143  
K1eff=3.89

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

-----  
La+++ ISE alc/w 25°C 100% C K1=3.54 1986XJa (83449)1144  
-----

La+++ nmr non-aq 25°C 100% U K1=<1.23 1985BPa (83450)1145  
Medium: DMF

-----  
La+++ ISE non-aq 25°C 100% C K1=8.75 1983ANb (83451)1146  
The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4

-----  
La+++ oth alc/w 25°C 100% U K1=4.08 1980WJa (83452)1147  
Method: fluorimetry in CH3OH

-----  
La+++ cal alc/w 25°C 100% U H K1=3.29 1977ILb (83453)1148  
Medium: Methanol. DH=11.8 kJ mol-1.

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

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

-----  
La+++ sp alc/w 25°C 100% C K1=5.70 2002NFa (83856)1149  
Medium: 100% MeOH. Method: electrospray ionization mass spectrometry.

-----  
La+++ ISE non-aq 25°C 100% C K1=16.5 1986ALa (83857)1150  
Medium: propylene carbonate, 0.1 M Et4NClO4

-----  
La+++ gl alc/w 25°C 100% C I K1=7.08 1983ANb (83858)1151  
The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NClO4  
In propylene carbonate, 0.1 M Et4NClO4, K1=14.4

-----  
La+++ gl alc/w 25°C 95% C K1=6.18 1981ANa (83859)1152  
Medium: 95% MeOH, 0.1 M Me4NCl

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

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

-----  
La+++ gl non-aq 25°C 100% C K1=5.30 1989BPa (84006)1153  
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

\*\*\*\*\*  
C12H27O4P L CAS 126-73-8 (2432)  
Tri-n-butyl phosphate; (C4H9O)3PO

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

La+++ dis KNO3 ? 1.30M U 1961SKb (84121)1154

B3=0

\*\*\*\*\*

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  
-----

La+++ gl R4N.X 25°C 0.10M U K1=13.65 1996BJa (84158)1155  
K(La+HL)=9.62  
K(La+H2L)=4.85

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  
-----

La+++ gl NaNO3 25°C 0.20M C T H K1=5.70 1991KKa (84337)1156  
At 15 C K1=5.61; at 35 C K1=5.78. DH=15.1 kJ mol<sup>-1</sup>, DS=154.7 J K<sup>-1</sup> mol<sup>-1</sup>

La+++ gl NaCl 20°C 0.10M C K1=9.1 1988SJb (84338)1157

La+++ gl NaClO4 25°C 0.20M U K1=5.7 1980KKb (84339)1158

\*\*\*\*\*

C12H32N4O12P4 H8L DOTPH CAS 91987-74-5 (229)  
1,4,7,10-Tetraazacyclododecane-N,N',N'',N'''-tetramethylenephosphonic acid;

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

La+++ gl KNO3 25°C 1.0M U K1=25.0 1984KMb (84413)1159  
K(La+HL)=19.3

\*\*\*\*\*

C13H50F13S L (6997)  
1-(2-Thienyl)-3-tridecafluorohexylpropane-1,3-dione; C6F13.CO.CH2.CO.C4H3S

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

La+++ gl alc/w 22°C 80% U K1=5.25 B2=9.87 1995MTa (84456)1160  
K3=3.60

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

\*\*\*\*\*

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

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

La+++ sp alc/w 25°C 50% U K1=9.04 1982HMa (84504)1161

\*\*\*\*\*

C13H9FO2S HL CAS 43191-66-8 (6154)

1-(2'-Thienyl)-3''-fluoro-2''-hydroxyphenyl)-prop-1-one-2-ene;  
 C4H3S.CH:CH.CO.C6H3(OH)F

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaCl04	30°C	0.10M	U		K1=4.57	1989SHa (84516)	1162
*****									
C13H9NOS		HL					CAS 3411-95-8	(1683)	
2-(2-Hydroxyphenyl)benzothiazole;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	25°C	50%	U		K1=6.55 B2=11.85	1954CFa (84552)	1163
*****									
C13H9N2O4Cl		HL					CAS 36016-30-5	(182)	
N-(4-Chlorophenyl)-3-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H4Cl).OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	35°C	50%	A		K1=7.01 B2=12.51 K3=4.46	1977AKa (84603)	1164
*****									
C13H9N3OS		L					(6217)		
Acenaphthenequinone Monothiosemicarbazone; C12H6O:N.NH.CS.NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	25°C	75%	U TI		K1=8.60 B2=16.02	1986SSd (84622)	1165
Medium: 0.1 M NaCl04. 30 C: K1=8.75, K2=7.84; 40 C: K1=8.28, K2=7.59; 50 C: K1=8.20, K2=7.13; I=0.01 M: K1= 9.35, K2=8.80; I=0.05: K1=8.90, K2=8.37									
*****									
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
La+++	gl	oth/un	20°C	0.10M	M T H		K1=8.7	1978MBe (84940)	1166
Medium: 0.10 M KCl04. Data for 44 C. DH and DS values reported.									
*****									
C13H11NOS		H2L					(7306)		
2-(Salicylideneamino)thiophenol, Salicylaldehyde-2-mercaptoanil; HO.C6H4.CH:N.C6H4.SH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	25°C	70%	U		K1=11.13 B2=21.27	1995IFa (85045)	1167
Medium: 70% v/v EtOH/H2O, 0.10 M NaCl.									
*****									
C13H11NO2		H2L					CAS 78-75-2	(6258)	
3-(Salicylideneamino)phenol; HO.C6H4.CH:N.C6H4.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	25°C	50%	U		K1=6.15 B2=10.25	1977DWa (85085)	1168
*****									
C13H11NO2			HL				CAS 304-88-1	(181)	
N-Phenylbenzohydroxamic acid; C6H5.CO.N(C6H5).OH									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	35°C	50%	A		K1=10.30 B2=19.10	1977AKa (85159)	1169
							K3=7.76		
La+++	gl	diox/w	25°C	50%	U		K1=6.15 B2=11.04	1972GDb (85160)	1170
Medium: 50% dioxan, 0.25 M NaClO4									
-----									
La+++	gl	mixed	25°C	75%	U		K1=7.28 B2=13.04	1969DSb (85161)	1171
							K3=4.74		
Medium: 75% acetone, 0.1 M NaClO4									
*****									
C13H11NO5S			H2L				CAS 23117-22-8	(6287)	
N-Benzoyl-4-hydroxylaminobenzene sulfonic acid; C6H5.CO.N(OH).C6H4HSO3									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaNO3	30°C	0.50M	U		K1=4.53 B2=8.20	1976GMc (85222)	1172
							B3=10.73		
*****									
C13H11NS			HL				CAS 42152-36-3	(8401)	
2-[(Phenylmethylene)amino]benzenethiol;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	25°C	70%	U		K1=8.42 B2=15.79	1995IFa (85230)	1173
Medium: 70% v/v EtOH/H2O, 0.10 M NaCl. Also data for p-Cl, p-NMe2, p-OH, p-OCH3, p-CH3, p-NO2 substituted benzaldehyde Schiff bases.									
*****									
C13H11N2O3F3			HL				(5563)		
3-(2-Acetylphenylhydrazone)-1,1,1-trifluoropentane-2,4-dione;									
CF3.CO.C(CO.CH3):N.HN.C6H4.COCH3									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	30°C	75%	U		K1=7.82 B2=14.07	1988ESb (85248)	1174
*****									
C13H12N2O			HL				CAS 59129-92-9	(9080)	
N-2-(5-Methylpyridyl)salicylalimine;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo



La+++      gl   alc/w   25°C   50%   C T H      K1=6.37   B2=10.43   1997GSa (85342)1175  
K3=4.03

Medium: 50% v/v EtOH/H2O, 0.20 M KCl. At 50 C, K1=5.85, K2=4.02,  
K3=3.73. DH(K1)=-36 kJ mol<sup>-1</sup>.

\*\*\*\*\*

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

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

La+++      gl   oth/un   25°C   0.10M U              K1=12.674      1987KSc (85361)1176

\*\*\*\*\*

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  
-----

La+++      EMF alc/w   20°C   50%   U              K1=3.05      1971MAc (85414)1177

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  
-----

La+++      EMF alc/w   20°C   50%   U              K1=1.40      1971MAc (85464)1178

Medium: 50% EtOH, 0.1 M NaClO4

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C13H14NO3P                      H2L                      CAS 19316-85-7      (1466)  
2-Hydroxyphenyl-N-phenylaminomethylphosphinic acid;

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

La+++      gl   NaClO4   20°C   0.10M U              K1=6.40      1985SIb (85564)1179

\*\*\*\*\*

C13H14N2O3                      HL                      (4940)  
3-(2-Acetylphenylhydrazon)pentane-2,4-dione;(CH3.CO)2C:N.NH.C6H4(CO.CH3)

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

La+++      gl   diox/w   30°C   75%   U              K1=10.20   B2=18.83   1988ESb (85611)1180

\*\*\*\*\*

C13H14N3O5P                      H2L                      CAS 80767-75-5      (1467)  
2-Hydroxy-4-nitrophenyl-N-(2-pyridylmethyl)aminomethylphosphinic acid;

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

La+++      gl   NaClO4   20°C   0.10M U              K1=6.80      1985SIb (85642)1181

K(La+HL)=3.10

\*\*\*\*\*  
 C13H14N3O5P                      H2L                      CAS 80767-76-6 (1468)  
 2-Hydroxy-4-nitrophenyl-N-(3-pyridylmethyl)aminemethylphosphinic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	gl	NaCl04	20°C	0.10M	U			K1=6.90	1985SIb (85655)	1182
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C13H15N06                      H3L                      (4999)  
 2-Benzylnitritotriethanoic acid;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	oth	oth/un	25°C	0.10M	U			K1=10.86    B2=17.76	1962HKa (85739)	1183
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C13H15N2O3P                      H2L                      CAS 80767-72-2 (1460)  
 2-Hydroxyphenyl-(N-2-pyridylmethylamino)methylphosphinic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	gl	NaCl04	20°C	0.10M	U			K1=7.10	1985SIa (85782)	1184
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C13H15N2O3P                      H2L                      CAS 80767-73-3 (1461)  
 2-Hydroxyphenyl-(N-3-pyridylmethylamino)methylphosphinic acid;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	gl	NaCl04	20°C	0.10M	U			K1=6.85	1985SIa (85795)	1185
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C13H15N2O3P                      H2L                      CAS 80767-74-4 (1462)  
 2-Hydroxyphenyl-(N-4-pyridylmethylamino)methylphosphinic acid;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

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La+++	gl	NaCl04	20°C	0.10M	U			K1=7.20	1985SIa (85808)	1186
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\*\*\*\*\*

C13H15N2O4P                      H3L                      CAS 80767-78-8 (1463)  
 2-Hydroxyphenyl-(N-2-pyridylmethylamino)methylphosphonic acid;  
 C6H4(OH)CH(PO3H2).NH.CH2.C5H4N  
 -----

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

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La+++	gl	NaCl04	20°C	0.10M	U			K1=10.72	1985SIa (85821)	1187
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C13H15N2O4P                      H3L                      CAS 85946-85-6 (1464)  
 2-Hydroxyphenyl-(N-3-pyridylmethylamino)methylphosphonic acid;  
 C6H4(OH)CH(PO3H2).NH.CH2.C5H4N  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++ gl NaClO4 20°C 0.10M U K1=10.65 1985SIa (85834)1188  
 \*\*\*\*\*  
 C13H15N2O4P H3L CAS 85946-86-7 (1465)  
 2-Hydroxyphenyl-(N-4-pyridylmethylamino)methylphosphonic acid;  
 C6H4(OH)CH(PO3H2).NH.CH2.C5H4N

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

La+++ gl NaClO4 20°C 0.10M U K1=10.95 1985SIa (85847)1189  
 \*\*\*\*\*  
 C13H19NO3 H2L (2031)  
 2-(1-(2-Hydroxyphenyl)-ethylimine)-3-methylbutanoic acid;

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

La+++ gl NaClO4 25°C 0.10M U TIH K1=8.00 B2=13.75 1980SSc (86056)1190  
 \*\*\*\*\*  
 C13H20N04P H3L (1471)  
 2-Hydroxyphenyl-N-(cyclohexylamino)methylphosphonic acid;  
 C6H4(OH)CH(PO3H2).NH.C6H11

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

La+++ gl NaClO4 20°C 0.10M U K1=9.90 1985SIb (86092)1191  
 \*\*\*\*\*  
 C13H20N2O8 H4L CAS 123064-92-6 (7929)  
 trans-1,3-Cyclopentanediaminotetraethanoic acid;

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

La+++ gl KCl 25°C 1.0M U K1=10.83 1989CMb (86123)1192  
 K(La+H)=4.75  
 \*\*\*\*\*  
 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  
 -----

La+++ gl KNO3 25°C 0.10M C K1=8.96 1982PPd (86198)1193  
 K(La+HL)=6.09  
 \*\*\*\*\*  
 C13H22N2O8 H4L CAS 1198-14-7 (5004)  
 1,2-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)2NCH2CH(C3H7)N(CH2COOH)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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La+++ vlt KNO3 20°C 0.10M U K1=16.61 1974NLa (86229)1194  
 \*\*\*\*\*  
 C13H22N2O8 H4L (7164)  
 2,4-Diaminopentane-N,N,N',N'-tetraethanoic acid;

(HOOCCH<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
La+++	gl	KNO <sub>3</sub>	20°C	0.10M	U		K <sub>1</sub> =10.21	1981NSc (86257)	1195
*****									
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
La+++	vlt	KNO <sub>3</sub>	20°C	0.10M	U		K <sub>1</sub> =16.41	1968NLb (86284)	1196
*****									
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
La+++	gl	KNO <sub>3</sub>	25°C	0.10M	C		K <sub>1</sub> =13.31 K(La+HL)=8.36	1985PLa (86305)	1197
*****									
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
La+++	cal	non-aq	25°C	100%	C H		K <sub>1</sub> =2.23	1998LBc (86476)	1198
Medium: acetonitrile. DH(K <sub>1</sub> )=-25.98 kJ mol <sup>-1</sup> , DS(K <sub>1</sub> )=-44.5 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
La+++	gl	NaClO <sub>4</sub>	25°C	0.10M	C M		K <sub>1</sub> =4.7 B <sub>2</sub> =11.55	1988SIb (86644)	1199
Ternary complexes with eosin: B(LaL <sub>2</sub> A <sub>3</sub> )=10.44; rosebengal; B(LaL <sub>2</sub> A <sub>3</sub> )=12.83									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	oth/un	25°C	0.10M	U		K <sub>1</sub> =11.64	1981Ela (86645)	1200
*****									
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
La+++	gl	NaClO <sub>4</sub>	25°C	0.20M	U M		K <sub>1</sub> =9.85	1987Vsa (86738)	1201
K(La(cdta)+L)=5.20, K(La(dtpa)+L)=4.55.									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO <sub>4</sub>	25°C	0.20M	U M		K <sub>1</sub> =9.98 K(La(edta)+L)=7.81 B(La(edta)L)=19.44	1984LSe (86739)	1202

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

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 La+++ sp oth/un 30°C ? U K1=5.21 1972JAa (86794)1203  
 \*\*\*\*\*

C14H9N7O6 H3L (5044)  
 1,5-Bis(2-hydroxy-4-nitrophenyl)-3-cyanoformazan;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 La+++ sp NaClO4 25°C 0.10M U 1971BSf (86860)1204  
 B(LaH2L2)=46.4

\*\*\*\*\*  
 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  
 -----  
 La+++ gl NaClO4 30°C 0.10M U K1=4.16 1989SHa (86886)1205  
 \*\*\*\*\*

C14H12N02Br 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  
 -----  
 La+++ gl diox/w 25°C 50% U T H K1=9.00 B2=16.50 1983AGb (87047)1206  
 K3=6.50

35 C: K1=8.50, K2=7.20, K3=6.50

\*\*\*\*\*  
 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  
 -----  
 La+++ gl diox/w 25°C 50% U T H K1=9.05 B2=16.60 1983AGb (87073)1207  
 K3=6.54

35 C: K1=8.55 K2=7.06, K3=6.05

\*\*\*\*\*  
 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  
 -----  
 La+++ gl diox/w 25°C 50% U T H K1=9.35 B2=17.20 1983AGb (87082)1208  
 K3=6.87

35 C: K1=8.86, K2=7.34, K3=6.36

\*\*\*\*\*

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
La+++	gl	alc/w	28°C	60%	U			K1=5.06 B2=8.76 B3=12.13	1976WPb (87176)	1209

Data also for 4'-methyl analogue. K1=4.65, K2=3.60, B3=11.60

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	25°C	50%	U I			K1=3.25 B2=5.85	1985ANa (87217)	1210

\*\*\*\*\*

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
La+++	gl	diox/w	25°C	50%	U T H			K1=8.70 B2=15.90 K3=6.20	1983AGb (87243)	1211

35 C: K1=8.20, K2=6.70, K3=5.70

\*\*\*\*\*

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
La+++	gl	diox/w	35°C	50%	A			K1=8.37 B2=15.23 K3=5.34	1977AKa (87251)	1212

\*\*\*\*\*

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
La+++	gl	diox/w	35°C	50%	A			K1=8.50 B2=15.50 K3=5.99	1977AKa (87262)	1213

\*\*\*\*\*

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
La+++	gl	diox/w	35°C	50%	A			K1=8.75 B2=16.00 K3=6.62	1977AKa (87275)	1214

\*\*\*\*\*

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
La+++	EMF	diox/w	35°C	50%	U			K1=8.75 B2=16.00 K3=6.62	1977AKa (87288)	1215

\*\*\*\*\*  
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
La+++	gl	diox/w	25°C	50%	U T H			K1= 9.55 B2=17.61 K3=7.05	1983AGb (87445)	1216

35 C: K1=9.49, K2=7.55, K3=6.98

\*\*\*\*\*  
C14H13NO2 HL CAS 889-29-2 (6259)  
N-Salicylidene-3-methoxyaniline; HO.C6H4.CH:N.C6H4.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	alc/w	25°C	50%	U			K1=3.75 B2=7.15	1977DWa (87528)	1217

\*\*\*\*\*  
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
La+++	gl	NaClO4	25°C	0.10M	U T H			K1=4.25 B2= 7.75	1978GKb (87577)	1218

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)=320 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*  
C14H14N2O2 HL (6168)  
N-(2-Hydroxy-3-methoxybenzylidene)phenylhydrazine; C6H5.NH.N:CH.C6H3(OH)OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	30°C	75%	U			K1=8.08	1988MKd (87656)	1219

\*\*\*\*\*  
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
La+++	gl	mixed	30°C	0.10M	U T H			K1=10.38 B2=19.02	1988TRb (87721)	1220

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

\*\*\*\*\*  
C14H15O4P HL CAS 843-24-3 (2134)

Di(4-methylphenyl)phosphoric acid; (CH<sub>3</sub>C<sub>6</sub>H<sub>5</sub>O)<sub>2</sub>P(O)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	kin	oth/un	25°C	0.02M	U			K1=2.82	1974GMc (87794)	1221
*****										

C<sub>14</sub>H<sub>16</sub>N<sub>3</sub>O<sub>3</sub>P                      H<sub>2</sub>L                      CAS 25881-35-0 (1469)  
Phenyl-N-(benzylamino)methylphosphonic acid; C<sub>6</sub>H<sub>5</sub>.CH(P<sub>3</sub>H<sub>2</sub>).NH.CH<sub>2</sub>.C<sub>6</sub>H<sub>5</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	gl	NaClO <sub>4</sub>	20°C	0.10M	U			K1=8.60	1985SIb (87811)	1222
*****										

C<sub>14</sub>H<sub>16</sub>N<sub>4</sub>O<sub>4</sub>P                      H<sub>3</sub>L                      CAS 61146-25-6 (1470)  
2-Hydroxyphenyl-N-(benzylamino)methylphosphonic acid; C<sub>6</sub>H<sub>4</sub>(OH)CH(P<sub>3</sub>H<sub>2</sub>).NH.CH<sub>2</sub>.C<sub>6</sub>H<sub>5</sub>

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

La+++	gl	NaClO <sub>4</sub>	20°C	0.10M	U			K1=9.60	1985SIb (87824)	1223
*****										

C<sub>14</sub>H<sub>16</sub>N<sub>2</sub>O<sub>2</sub>S                      HL                      CAS 189231-67-2 (8475)  
2-Thiophenylhydrazodimedone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	gl	diox/w	25°C	75%	C T H			K1=13.13   B2=24.63	1997EIa (87870)	1224
Medium: 75% v/v dioxane/H <sub>2</sub> O, 0.10 M KNO <sub>3</sub> . Data for 10-40 C. DH(K <sub>1</sub> )=-5.50 kJ mol <sup>-1</sup> , DS(K <sub>1</sub> )=-4.24 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K <sub>2</sub> )=-5.50, DS(K <sub>2</sub> )=-6.03.										
*****										

C<sub>14</sub>H<sub>16</sub>N<sub>2</sub>O<sub>3</sub>                      H<sub>2</sub>L                      (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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La+++	gl	mixed	30°C	0.10M	U T H			K1=10.84   B2=19.88	1988TRb (87888)	1225
Medium: 0.1 M KNO <sub>3</sub> in 75% v/v isopropanol/water										
*****										

C<sub>14</sub>H<sub>16</sub>N<sub>2</sub>O<sub>8</sub>                      H<sub>4</sub>L                      CAS 40774-59-2 (1901)  
1,2-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C<sub>6</sub>H<sub>4</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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La+++	gl	NaClO <sub>4</sub>	25°C	1.00M	C   H			K1=11.39	1992YNa (87955)	1226
By calorimetry: DH(K <sub>1</sub> )=11.7 kJ mol <sup>-1</sup> , DS=257 J K <sup>-1</sup> mol <sup>-1</sup>										
*****										

C<sub>14</sub>H<sub>17</sub>N<sub>2</sub>O<sub>4</sub>P                      H<sub>3</sub>L                      (1472)  
2-Hydroxyphenyl-N-(2-(2'-pyridyl)ethylamino)methylphosphonic  
acid; C<sub>6</sub>H<sub>4</sub>(OH)CH(P<sub>3</sub>H<sub>2</sub>)NHCH<sub>2</sub>CH<sub>2</sub>C<sub>5</sub>H<sub>4</sub>N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++ gl NaClO4 20°C 0.10M U K1=10.85 1985SIb (88044)1227  
\*\*\*\*\*

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  
-----

La+++ gl R4N.X 25°C 0.10M C K1=2.70 1990CBe (88149)1228  
\*\*\*\*\*

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  
-----

La+++ dis non-aq 25°C 100% U B2=7.71 1990NIa (88292)1229  
B2=extraction eq.constant: M+3P+2(S)=ML2P3(S); solvent(S)=CH2Cl2, P=picrate  
-----

La+++ ISE R4N.X 25°C 0.10M C K1=2.13 1986XJa (88293)1230  
\*\*\*\*\*

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  
-----

La+++ dis R4N.X 25°C 0.12M C K1=2.04 1998SUa (88394)1231  
Medium: 0.12 M Et4NBr.

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

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

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

La+++ gl KCl 25°C 1.0M U K1=3.71 1987CMe (88431)1232  
K(LaHL+H)=4.88  
K(LaL+H)=7.62  
\*\*\*\*\*

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  
-----

La+++ gl KCl 25°C 1.0M U K1=6.24 1987CMe (88444)1233  
K(LaHL+H)=6.30  
K(LaL+H)=8.75  
\*\*\*\*\*

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
La+++	gl	KCl	25°C	1.0M	U			K1=7.13 K(LaHL+H)=6.76 K(LaL+H)=7.61	1987CMe (88458)	1234
*****										
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
La+++	gl	KCl	25°C	1.0M	U			K1=16.3 K(LuL+H)=2.4	1987CMe (88698)	1235
La+++	gl	KCl	25°C	1.00M	U			K1=16.3	1984MFa (88699)	1236
La+++	gl	KNO3	27°C	0.10M	U	M		K(La+L+HA)=12.72 K(LaL+HA)=5.88	1981KSe (88700)	1237
H2A=Citraconic acid										
La+++	gl	KNO3	27°C	0.10M	U	M		K(La+L+HA)=12.71 K(LaL+HA)=5.98	1981KSe (88701)	1238
H2A=Maleic acid										
La+++	gl	NaClO4	25°C	0.50M	U			K1=15.54	1977GGb (88702)	1239
La+++	gl	KNO3	30°C	0.10M	M	T HM		K(LaL+A)=2.62 K(LaL+D)=2.98 K(LaL+C)=3.07	1977RTa (88703)	1240
A=glycolate, C=malate, D=lactate. Also at 35 C										
La+++	gl	KNO3	30°C	0.10M	U	M		K(LaL+salicylate)=4.60 K(LaL+sulfosalicylate)=3.12 K(LaL+8-quinolinolate)=2.73	1975RTb (88704)	1241
La+++	cal	KNO3	20°C	0.10M	U	H			1963ANb (88705)	1242
DH(K1)=6.7 kJ mol-1, DS=346 J K-1 mol-1										
La+++	cal	KNO3	20°C	0.10M	U	H		K1=16.91	1963ANf (88706)	1243
DH(K1)=6.7 kJ mol-1, DS=347 J K-1 mol-1										
La+++	dis	NaClO4	20°C	0.10M	U			K1=16.75	1963STc (88707)	1244
Medium: KClO4										
La+++	EMF	KNO3	25°C	0.10M	U	T H		K1=16.35	1962MHa (88708)	1245
DH(K1)=15.1 kJ mol-1, DS=364 J K-1 mol-1. At 20 C: K(LaL+H)=2.24										

-----  
La+++ vlt KNO3 20°C 0.10M U K1=16.26 1954SGa (88709)1246  
K(LaL+H)=2.56

\*\*\*\*\*  
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  
-----

La+++ gl KCl 25°C 1.0M U K1=7.02 1987CMe (88838)1247  
K(LaHL+H)=5.55  
K(LaL+H)=7.87

\*\*\*\*\*  
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  
-----

La+++ gl KCl 25°C 1.0M U K1=7.3 1987CMe (88859)1248  
K(LaHL+H)=5.8  
K(LaL+H)=7.4

-----  
La+++ gl KCl 25°C 1.00M U K1=7.3 1984MFb (88860)1249

\*\*\*\*\*  
C14H22N2O9 H2L CAS 93031-53-9 (5830)  
1,4,7-Trioxa-10,13-diazacyclopentadecane-8,15-dione-10,13-diethanoic acid;  
-----

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

La+++ gl R4N.X 25°C 0.10M C K1=7.23 1988CCb (88882)1250

\*\*\*\*\*  
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  
-----

La+++ nmr none RT 0.0 U 2000CVa (89296)1251  
Kout(LaA+TmL)=2.47

Medium: D2O. Method: 13C nmr. A: 1,4,7,10-tetrakis(2-hydroxypropyl)-  
1,4,7,10-tetraazacyclododecane.  
-----

La+++ cal KNO3 25°C 0.10M C T 1988MIa (89297)1252  
DH(K1)=-21.3 kJ mol<sup>-1</sup>, DS=301.8 J mol<sup>-1</sup> K<sup>-1</sup>. Also data for 283 and 313 K  
-----

La+++ cal NaClO4 25°C 0.10M C H 1987YJa (89298)1253  
DH(K1)=-14.4 kJ mol<sup>-1</sup>, DS(K1)=325 J K<sup>-1</sup> mol<sup>-1</sup>.  
-----

La+++ cal NaClO4 25°C 0.50M U H 1977CGc (89299)1254  
DH(K1)=-25.3 kJ mol<sup>-1</sup>  
-----

La+++	gl	NaClO4	25°C	0.50M	U	K1=18.23	1977GGb	(89300)1255
La+++	gl	KNO3	30°C	0.10M	U	K1=19.32	1976GAa	(89301)1256
La+++	sp	oth/un	20°C	dil	U	K1=19.23	1969KAf	(89302)1257
La+++	cal	KNO3	27°C	0.10M	U H		1968CLd	(89303)1258
DH(K1)=15.0 kJ mol-1, DS=226 J K-1 mol-1								
La+++	cal	KNO3	20°C	0.10M	U T H		1965ANa	(89304)1259
DH(K1)=-19.6 kJ mol-1, DS=307 J K-1 mol-1								
La+++	EMF	KNO3	25°C	0.10M	U H	K1=19.48	1962MTc	(89305)1260
DH(K1)=-23.8 kJ mol-1, DS=293 J K-1 mol-1								
La+++	EMF	oth/un	25°C	0.10M	U	K1=19.1	1960HRA	(89306)1261
La+++	gl	oth/un	25°C	0.10M	U	K1=19.96	1959HCA	(89307)1262
*****								
C14H23O2P		HL		CAS 64266-08-6		(2137)		
Phenyl(2-ethylhexyl)phosphinic acid; (C6H5)(2-C2H5C6H12)P(O)OH								
-----								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
La+++	kin	oth/un	25°C	0.02M	U	K1=3.55	1974GMC	(89471)1263
*****								
C14H23O2P		HL		CAS 31066-81-6		(2136)		
Phenyl(n-octyl)phosphinic acid; (C6H5)(C8H17)P(O)OH								
-----								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
La+++	kin	oth/un	25°C	0.02M	U	K1=3.49	1974GMC	(89474)1264
*****								
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
La+++	vlt	KNO3	20°C	0.10M	U	K1=14.13	1969NDc	(89512)1265
*****								
C14H24N2O8		H4L		(7165)				
1,2-Diaminohexane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)NCH2CH(C4H9)N(CH2COO								
-----								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
La+++	vlt	KNO3	20°C	0.10M	U	K1=16.52	1974NLa	(89532)1266
*****								
C14H24N2O8		H4L		HMDTA		CAS 1633-00-7		(920)
1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2.CH2)2								

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	1.00M	U	M	K(LaEDTA+L)=2.9 K(LaEDTA+HL)=3.0 K(2LaEDTA+L)=6.2	1976BKa (89585)	1267

La+++	gl	KCl	25°C	0.10M	U		K(La+HL)=6.28 K(La+H2L)=2.30	1974KPd (89586)	1268
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C14H24N2O8                      H4L                      CAS 1633-00-7 (5076)

4-Methyl-1,2-diaminopentane-N,N,N',N'-tetraethanoic acid;  
(HOOCCCH2)2NCH2CH(N(CH2COOH)2CH2CH(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	vlt	KNO3	20°C	0.10M	U		K1=16.45	1968NLb (89635)	1269

\*\*\*\*\*

C14H24N2O8                      H2L                      CAS 17619-53-3 (5833)

Diaminoethane-N,N'-Di(ethylaceto)-N,N'-diethanoic acid;  
(-CH2.N(CH2.COOH)CH2.COOC2H5)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	0.10M	C		K1=10.25	1988CCb (89653)	1270

\*\*\*\*\*

C14H24N2O8                      H4L                      EDTP                      (2936)

Diaminoethane-N,N,N',N'-tetrapropoic acid; (HOOCC.CH2CH2)2N.CH2CH2.N(CH2CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	U		K(La+HL)=4.52 K(La+H2L)=3.88 K(La+H3L)=2.84 B(LaHL)=14.0	1995HAa (89685)	1271

B(LaH2L)=19.43, B(LaH3L)=22.56

\*\*\*\*\*

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
La+++	gl	KNO3	25°C	0.10M	U		K1=10.68 K(La+HL)=6.59	1984TPa (89732)	1272

\*\*\*\*\*

C14H24N2O10                      EGTA                      CAS 67-42-5 (349)

Ethyleneglycol-0,0'-bis(2-aminoethyl ether)-N,N,N',N'-tetraethanoic acid; H4L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaNO3	25°C	0.0	U		K1=15.55	1996KDb (89881)	1273
Extrapolated from data for I=0.05-0.15 M NaNO3.									
La+++	gl	NaNO3	25°C	0.10M	U	I	K1=15.37	1996KDc (89882)	1274
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=15.55.									
La+++	gl	NaNO3	25°C	0.10M	M		K1=15.37	1996KDd (89883)	1275
Data for 0.05-0.15 M NaNO3. At I=0, K1=15.55.									
La+++	gl	NaNO3	25°C	0.10M	M	I	K1=15.37	1995KDb (89884)	1276
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=15.55.									
La+++	gl	NaNO3	25°C	0.10M	M	I	K1=15.37	1995KDc (89885)	1277
Data for 0.05 and 0.15 M NaNO3. At I=0, K1=15.55.									
La+++	gl	NaNO3	25°C	0.10M	M	I	K1=15.373	1995KDd (89886)	1278
Data for 0.15 and 0.05 M NaNO3. At I=0, K1=15.552.									
La+++	gl	NaNO3	25°C	0.0	U	HM	K1=15.31 K(LaL+ala)=2.52 K(LaL+phe)=2.50	1991ADb (89887)	1279
Extrapolated from data for 0.01-0.1 M NaNO3. Data for 35 and 45 C. At 35 C DH(LaL+ala)=-21.0 kJ mol-1, DS=-22.4; DH(LaL+phe)=-19.2, DS=-17.0.									
La+++	gl	KCl	25°C	1.0M	U	M	K2=1.50 K(LaL+ida)=1.3	1985KBb (89888)	1280
La+++	gl	KN03	20°C	0.10M	U	H	K1=15.79	1964ANa (89889)	1281
By calorimetry: DH(K1)=-22.8 kJ mol-1, DS=224 J K-1 mol-1									
La+++	EMF	KN03	20°C	0.10M	U		K1=15.55	1962MMc (89890)	1282
*****									
C14H24O9 H3L CAS 64020-01-5 (8224)									
1,1,1-Tris[(2-carboxyethoxy)methyl]ethane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	0.10M	C		K1=3.22	2001Vsa (90052)	1283
Medium: 0.10 M Me4NCl. Also data for N-ethyl-, N-CH2OH-, N-CH2O(CH2)2COOH- derivatives.									
*****									
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
La+++	gl	KN03	25°C	0.10M	C		K1=15.86	1985TPa (90102)	1284
*****									

C14H25N3O9 H4L CAS 4454-15-3 (5078)  
 ((N-(2-Hydroxyethyl)-2,2'-iminodiethylene)dinitrilo)tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	vlt	KCl	?	0.10M	U		K1=11.35	1968VLa (90116)	1285

\*\*\*\*\*

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
La+++	gl	R4N.X	25°C	0.10M	M		K1=10.11	1986COb (90194)	1286

\*\*\*\*\*

C14H26N2O8 H2L (6658)  
 1,4,10,13-Tetraoxa-7,16-diaza-2,3-dicarboxycyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	0.10M	U		K1=5.5 B(LaHL)=13.2 B(La(OH)L)=10.1	1990AFa (90223)	1287

\*\*\*\*\*

C14H28N2O4 L Cryptand 2,1,1 CAS 31250-06-3 (836)  
 1,10-Diaza-4,7,13,18-tetraoxabicyclo[8,5,5]eicosane (2,1,1);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	ISE	non-aq	25°C	100%	C		K1=15.1	1986ALa (90385)	1288
Medium: propylene carbonate, 0.1 M Et4NC104									
La+++	ISE	non-aq	25°C	100%	C	I	K1=12.86	1985CKa (90386)	1289
Medium: propylenecarbonate									

\*\*\*\*\*

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
La+++	gl	R4N.X	25°C	0.10M	C		K1=6.62	1988CCc (90482)	1290

\*\*\*\*\*

C14H28O2 HL Myristic acid CAS 544-63-8 (2543)  
 Tetradecanoic acid; CH3(CH2)12.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	oth	oth/un	20°C	var	U		Kso=-22.8	1981HTc (90509)	1291

\*\*\*\*\*

C14H28O7 L 21-Crown-7 CAS 33089-36-0 (2264)

1,4,7,10,13,16,19-Heptaoxacycloheneicosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	non-aq	25°C	100%	C			K1=7.61	1989BPa (90527)	1292
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4										
*****										
C14H3007		L						CAS 1072-40-8	(2499)	
2,5,8,11,14,17,20-Heptaoheneicosane; CH3.O.(CH2.CH2.O)6.CH3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	non-aq	25°C	100%	C			K1=6.68	1989BPa (90697)	1293
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4										
*****										
C14H32N204		L						CAS 102-60-3	(2678)	
Tetra(2-hydroxypropyl)-N,N,N',N'-diaminoethane; (-CH2.N(CH2.CH(OH).CH3)2)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaN03	25°C	0.10M	U			K1=2.90	1986HBc (90746)	1294
*****										
C14H32N2010P2		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
La+++	gl	R4N.X	25°C	0.10M	U			K1=12.90	1996BJa (90766)	1295
								K(La+HL)=9.10		
								K(La+H2L)=4.96		

Medium: 0.1 M Me4NCl

\*\*\*\*\*

C14H34N406P2		H4L						CAS 200952-02-9	(7644)	
1,4,7,10-Tetraazacyclododecane-1,7-bis(methanephosphonic acid monoethyl ester);										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.10M	C			K1=8.16	1998BRa (90844)	1296
*****										
C15H11N04		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
La+++	gl	alc/w	35°C	70%	U			K1=5.91 B2=11.63	1982SLb (91078)	1297
*****										
C15H11N30		HL						(5108)		
2-(2'-Pyridylazo)-1-hydroxynaphthalene;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++ sp alc/w 24°C 40% U K1=7.12 1973BJb (91257)1298  
Medium: 40% EtOH, 0.1 M NaClO4

\*\*\*\*\*  
C15H11N3O2 L CAS 74378-23-7 (2745)  
Phenanthrenequinone monosemicarbazone; C14H8(:O)(:N.NH.CO.NH2)

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

La+++ gl diox/w 25°C 75% C TIH K1=6.59 B2=13.13 1989SVa (91306)1299  
DH(K1)=-40.0 kJ mol-1

\*\*\*\*\*  
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  
-----

La+++ gl alc/w 35°C 70% U K1=6.82 1982SLb (91371)1300

\*\*\*\*\*  
C15H11O2Cl HL CAS 1218-24-2 (953)  
3-Phenyl-1-(2'-hydroxy-5'-chlorophenyl)-2-propen-1-one;

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

La+++ gl alc/w 35°C 70% U K1=6.37 B2=12.55 1982SLb (91391)1301

La+++ gl alc/w 35°C 70% U K1=6.37 B2=12.55 1980SLb (91392)1302

\*\*\*\*\*  
C15H12O5 HL (1261)  
mono-Thiodibenzoylmethane; C6H5.CO.CH2.CS.C6H5

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

La+++ gl NaClO4 30°C 0.05M U K1=6.98 B2=13.26 1979VMa (91494)1303  
K3=5.76

\*\*\*\*\*  
C15H12O2 HL CAS 1214-47-7 (951)  
3-Phenyl-1-(2'-hydroxyphenyl)-2-propen-1-one, 2'-hydroxychalkone;  
C6H5.CH:CH.CO.C6H4.OH

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

La+++ gl alc/w 35°C 70% U K1=7.45 B2=14.68 1982SLb (91585)1304  
Medium: 70% EtOH, 0.1 M KNO3

-----  
La+++ gl alc/w 35°C 70% U K1=7.45 B2=14.68 1980SLb (91586)1305

\*\*\*\*\*  
C15H13NO2 HL CAS 7369-44-0 (4066)  
N-3-Diphenylpropenohydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	dis	oth/un	RT	0.05M	C				1993ATa (91638)	1306
Method: extraction from 0.05 M triethanolamine buffer into chloroform.										
Analysis by spectrophotometry. $K(\text{La}+3\text{HL}(\text{org})=\text{LaL3}(\text{org})+3\text{H})=-18.30$										
*****										
C15H14NOCl		HL						CAS 268214-29-5	(8398)	
4-Chloro-3,5-dimethyl-2-[(phenylimino)methyl]phenol;										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	30°C	75%	M			K1=6.65	2000ANa (91692)	1307
Medium: 75% v/v dioxan/H2O, 0.10 M NaClO4. Data for an extensive series of										
4'-substituted phenylimino derivatives.										
*****										
C15H14O3S		H2L						(6191)		
1-(2-Hydroxy-3,5-dimethylphenyl)-3-(2-thiophene)-propan-1,3-dione;										
C4H3S.CO.CH2.CO.C6H2(OH)(CH3)2										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	30°C	50%	U				1987DDc (91785)	1308
								K(La+HL)=6.99		
								K(LaHL+HL)=6.25		
*****										
C15H14O3S		H2L						CAS 57051-65-7	(6190)	
1-(2-Hydroxy-4,5-dimethylphenyl)-3-(2-thiophene)-propan-1,3-dione;										
C4H3S.CO.CH2.CO.C6H2(OH)(CH3)2										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	30°C	50%	U				1987DDc (91791)	1309
								K(La+HL)=7.10		
								K(LaHL+HL)=6.23		
*****										
C15H14O4		H2L						CAS 60403-51-2	(2361)	
1-(2-Furyl)-3-(2-hydroxy-3,4-dimethylphenyl)-propan-1,3-dione;										
C4H3O.CO.CH2.CO.C6H2(OH)(CH3)2										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	30°C	50%	U				1987DDc (91797)	1310
								K(La+HL)=6.65		
								K(LaHL+HL)=5.00		
Medium: 0.1 M NaClO4 in 50% dioxan										
*****										
C15H14O4		H2L						CAS 60403-52-3	(6186)	
1-(2-Furyl)-3-(2-hydroxy-3,5-dimethylphenyl)-propan-1,3-dione;										
C4H3O.CO.CH2.CH2.C6H2(OH)(CH3)2										
-----										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	30°C	50%	U			1987DDc (91803)	1311
							K(La+HL)=6.50		

\*\*\*\*\*

C15H14O4                      H2L                      CAS 60403-54-5 (6187)  
 1-(2-Furyl)-3-(2-hydroxy-3,6-dimethylphenyl)-propan-1,3-dione;  
 C4H3O.CO.CH2.CH2.C6H2(OH)(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	30°C	50%	U			1987DDc (91809)	1312
							K(La+HL)=7.30		
							K(LaHL+HL)=5.84		

\*\*\*\*\*

C15H15NO2                      HL                      (1167)  
 N-(4-Tolyl)-4'-tolylhydroxamic acid; CH3.C6H4.CO.N(C6H4.CH3)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	25°C	50%	U T H		K1=9.80    B2=18.10 K3=7.20	1983AGb (91843)	1313

35 C: K1=9.30, K2=7.80, K3=6.70

\*\*\*\*\*

C15H15NO3                      HL                      (6240)  
 N-4-Tolyl-4'-methoxybenzohydroxamic acid; CH3O.C6H4.CO.N(C6H4.CH3).OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	25°C	50%	U T H		K1=9.85    B2=18.20 K3=7.34	1983AGb (91865)	1314

35 C: K1=9.36, K2=7.86, K3=6.86

\*\*\*\*\*

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
La+++	gl	alc/w	20°C	75%	U T H		K1=9.12    B2=14.38	1993RAa (92027)	1315

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

La+++	gl	mixed	30°C	0.10M	U T H		K1=11.14    B2=20.50	1988TRb (92028)	1316
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Medium: 0.1 M KNO3 in 75% v/v isopropanol/water

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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
La+++	gl	KNO3	25°C	0.10M	C		K1=10.81	1978MPb (92153)	1317

\*\*\*\*\*

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
La+++	sp	non-aq	25°C	100%	M		K1=7.4 B2=14.80 B3=21.0	1997RPb (92285)	1318

Medium: acetonitrile.

\*\*\*\*\*

C15H25N3O10 H5L (5127)  
Diethylenetriamine-N,N,N'',N''-tetraethanoic acid-N'-propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	EMF	KCl	?	0.10M	U		K1=15.0	1966VLa (92374)	1319
La+++	vlt	oth/un	?	?	U		K1=16.69	1966VLa (92375)	1320

\*\*\*\*\*

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
La+++	gl	KNO3	25°C	0.10M	C		K1=17.39 K(La+HL)=11.38	1989SPa (92395)	1321

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.10M	C		K1=17.62	2000SBb (92433)	1322

\*\*\*\*\*

C15H26N4O9 H4L CAS 137076-43-8 (5085)  
Diethylenetriamine-N,N,N',N'',N''-pentaethanoic acid N-methylethylamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.10M	C		K1=16.43	2000SBb (92448)	1323

\*\*\*\*\*

C15H33NO6 L CAS 70384-51-9 (838)  
Tris(3,6-dioxahexyl)amine; (CH3.CH2.O.CH2.CH2.O.CH2.)3N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	ISE	non-aq	25°C	100%	C		K1=9.0 B2=16.3	1986ALa (92567)	1324

Medium: propylene carbonate, 0.1 M Et4NClO4

\*\*\*\*\*

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
La+++	gl	R4N.X	25°C	0.10M	C		K1=8.7	1992LRa (92613)	1325
*****									
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
La+++	kin	oth/un	25°C	0.02M	U		K1=4.42	1972GSe (92656)	1326
*****									
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
La+++	gl	oth/un	20°C	0.10M	M T H		K1=12.4	1978MBe (92778)	1327
Medium: 0.10 M KClO4. Data for 44 C. DH and DS values reported.									
*****									
C16H11N3O10S2		H4L			Chromotrope 2B		CAS 548-80-1	(896)	
2-((4-Nitrophenyl)azo)chromotropic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	oth/un	25°C		?	U		1963SSc (92863)	1328
							K1eff=4.9 (pH 6.0)		
*****									
C16H12N2O		HL					CAS 5603-14-5	(9083)	
2-[(Quinolyl)methylene]amino]phenol;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	25°C	50%	C		K1=5.89 B2=10.63	1997GSa (92927)	1329
Medium: 50% v/v EtOH/H2O, 0.20 M KCl.									
*****									
C16H12N2O4S		H2L					CAS 13964-82-4	(3475)	
1-(4-Sulfophenylazo)-2-hydroxynaphthalene;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	oth/un	25°C	dil	U		B2=7.52	1969SPd (93000)	1330
*****									
C16H12N2O11S3		H5L					CAS 548-81-2	(5180)	
2-(4'-Sulfophenylazo)chromotropic acid,									
2-(4-sulfophenylazo)-1,8-dihydroxyaphthalene-3,6-diHSO3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++ gl oth/un 25°C 0.10M U K1=7.23 B2=11.45 1985AAa (93097)1331  
Data also for 12 other 4-substituted phenyl analogues

\*\*\*\*\*

C16H12N2S L CAS 31230-95-2 (9085)  
2-(2-Benzothiazoliny)quinoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ gl alc/w 25°C 50% C K1=5.61 B2=10.14 1997GSa (93106)1332  
Medium: 50% v/v EtOH/H2O, 0.20 M KCl.

\*\*\*\*\*

C16H12N3O4ClS H2L CAS 133131-00-7 (8468)  
7-Amino-8-[(4-chlorophenyl)azo]-4-hydroxy-2-naphthalenesulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
La+++ gl NaCl 25°C 0.10M U K1=9.65 B2=15.18 1997IHa (93116)1333  
B3=19.62

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  
-----  
La+++ gl diox/w 30°C 75% M K1=5.76 1987ESa (93131)1334  
\*\*\*\*\*

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  
-----  
La+++ sp KCl 22°C 0.10M U 1978KYa (93197)1335  
K(La+H2L)=3.35  
K(LaHL+H)=4.40  
K(La+HL)=6.72

-----  
La+++ gl NaCl04 30°C 0.10M U 1976NDa (93198)1336  
K(La+H2L=LaH2L)=5.30  
K(LaHL+H)=7.89  
K(LaL+H)=10.75

-----  
La+++ sp oth/un 25°C ? U 1963SDg (93199)1337  
K(?)=10.1

\*\*\*\*\*

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

-----  
La+++ sp oth/un 20°C 0.10M U 1971SSd (93259)1338  
K(La+H2L)=8.64  
-----

La+++ sp oth/un 20°C ? U 1965BUa (93260)1339  
B(LaH2L)=28.8  
-----

\*\*\*\*\*  
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  
-----

La+++ sp alc/w 25°C 10% U I 1979KRb (93441)1340  
B3=19.55  
Medium: 10% w/w EtOH/H2O, 0.1 M NaClO4. In 30%: B3=18.85  
-----

\*\*\*\*\*  
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  
-----

La+++ gl alc/w 35°C 70% U K1=7.60 B2=14.55 1982SLb (93531)1341  
Medium: 70% EtOH, 0.1 M KNO3  
-----

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

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

La+++ gl alc/w 35°C 70% U K1=7.29 B2=14.12 1982SLb (93569)1342  
-----

La+++ gl alc/w 35°C 70% U K1=7.29 B2=14.12 1980SLb (93570)1343  
-----

\*\*\*\*\*  
C16H14O4 HL BHMA (5929)  
omega-Benzoyl-2-hydroxy-4-methoxy-3-methylacetophenone;  
-----

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

La+++ gl alc/w 30°C 25% M K1=5.51 B2=9.92 1987DGB (93582)1344  
Medium: 25% v/v EtOH/H2O  
-----

\*\*\*\*\*  
C16H15N07 H4L (4082)  
N-(3-Carboxy-2-hydroxynaphthyl-1-ylmethyl)iminodiethanoic acid;  
-----

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

La+++ sp NaClO4 20°C 0.10M U K1=12.8 1968BWA (93633)1345  
-----

\*\*\*\*\*  
C16H15N5O7S2 H2L Cefixime CAS 79350-37-1 (8532)  
5-Thia-1-azabicyclo[4,2,0]oct-2-ene-2-carboxylic acid;  
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      con non-aq 25°C 100% C      K1=4.92  B2= 7.08  2003GNa (93652)1346
Medium: DMSO.
*****
C16H17N3O4S      HL      Cephalexin      CAS 15686-71-2 (7748)
7-(2-Aminophenylacetyl-amino)-3-methyl-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic ac.
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  KNO3  25°C 0.10M C      K1=5.57      2000GFb (93759)1347
*****
C16H17N3O5S      H2L      Cephadroxil      CAS 50370-12-2 (8403)
7-[[Amino(4-hydroxyphenyl)acetyl]amino]-3-methyl-8-oxo-5-thia-1-azabicyclooct-2-ene-2-carboxylic;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  KNO3  25°C 0.10M C      K1=5.87      2000GFb (93765)1348
*****
C16H18N2O3      HL      (5564)
2-(2-Acetylphenylhydrazon)-5,5-dimethyl-1,3-cyclohexanedione;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  diox/w 30°C 75% U      K1=8.37  B2=15.15  1988ESb (93780)1349
*****
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
-----
La+++      gl  NaClO4 25°C 0.10M U      K1=6.41      2001WZa (93844)1350
B(LaHL)=13.78
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
-----
La+++      gl  diox/w 25°C 50% U      K1=5.0  B2= 9.12  1997MAb (93860)1351
Medium: 50% v/v dioxan/H2O, 0.10 M NaClO4. For the 1,4-phenylenediamine derivative, K1=5.75, K2=4.00.
*****
C16H18N4O4      H2L      CAS 161563-40-2 (8400)
1,3-Phenylenediamine bisazobenzoylacetone;
-----

```



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	25°C	50%	U		K1=4.35 B2= 7.71	1997MAb (93867)	1352

Medium: 50% v/v dioxan/H2O, 0.10 M NaClO4. For the 1,4-phenylenediamine derivative, K1=4.80, K2=3.75.

\*\*\*\*\*

C16H20N2O8	H4L	CAS 6411-02-5	(1919)
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1-Phenyl-ethylenediamine-N,N,N',N'-tetraethanoic acid (DL)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	vlt	KN03	20°C	0.10M	U		K1=15.49	1969NDb (94041)	1353

\*\*\*\*\*

C16H22O6	L	(6733)
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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
La+++	dis	non-aq	25°C	100%	U		B(La+3P+2L)=7.45	1993INa (94250)	1354

By solvent extraction into dichloromethane. B is the extraction constant  
 $La(aq)+picrate(aq)+L(org)=LaL2P3(org)$ .

\*\*\*\*\*

C16H23N08	HL	(6776)
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19-Nitro-3,6,9,12,15-pentaoxabicyclo[15.13.1]heneicosa-1(21),17,19-trien-21-ol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	0.10M	C		K1=3.06	1990CBe (94260)	1355

\*\*\*\*\*

C16H23N08	L	CAS 53408-96-1	(1765)
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2,3-(4'-Nitrobenzo)-1,4,7,10,13,16-hexaoxacyclooctadeca-2-ene;  
 4'-Nitrobenzo-18-crown-6

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	ISE	R4N.X	25°C	0.10M	C		K1=2.43	1986XJa (94268)	1356

\*\*\*\*\*

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
La+++	dis	R4N.X	25°C	0.12M	C		K1=1.88	1998SUa (94479)	1357

Medium: 0.12 M Et4NBr.

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

\*\*\*\*\*

C16H26N2O10	H2L	CAS 93031-54-0	(5831)
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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
La+++	gl	R4N.X	25°C	0.10M	C		K1=8.46	1988CCb (94571)	1358

\*\*\*\*\*

C16H26N2O12                      H4L                      (6659)  
 1,4,10,13-Tetraoxa-7,16-diaza-2,3,11,12-tetracarboxycyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	0.10M	U		K1=9.3 B(LaHL)=17.0	1990AFa (94589)	1359

\*\*\*\*\*

C16H26N2O12                      H4L                      CAS 130190-52-2 (6660)  
 1,4,10,13-Tetraoxa-7,16-diaza-2,3,7,16-tetracarboxycyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	0.10M	U		K1=13.5 B(LaHL)=19.4	1990AFa (94603)	1360

\*\*\*\*\*

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
La+++	sp	KCl	25°C	0.08M	U		K1=9.7	1994FCa (94671)	1361

\*\*\*\*\*

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
La+++	sp	KCl	25°C	0.08M	U		K1=13.6	1994FCa (94686)	1362

\*\*\*\*\*

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
La+++	gl	KNO3	20°C	0.10M	U		K1=10.78	1969NDc (94714)	1363

\*\*\*\*\*

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
La+++	vlt	KNO3	20°C	0.10M	U		K1=14.12	1969NDc (94740)	1364

\*\*\*\*\*

C16H28N2O8                      H4L                      (5138)  
 1,2-Diaminooctane-N,N,N',N'-tetraethanoic acid;

(HOOCCH<sub>2</sub>)<sub>2</sub>N.CH<sub>2</sub>.CH(C<sub>6</sub>H<sub>13</sub>)N(CH<sub>2</sub>COOH)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	vlt	KNO <sub>3</sub>	20°C	0.10M	U		K <sub>1</sub> =16.47	1979MBd (94766)	1365
*****									
C16H <sub>28</sub> N <sub>4</sub> O <sub>8</sub>		H <sub>4</sub> L		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
La+++	nmr	none	RT	0.0	U			2000CVa (94909)	1366
							K <sub>out</sub> (LaA+TmL)=1.81		
Medium: D <sub>2</sub> O. Method: <sup>13</sup> C nmr. A: 1,4,7,10-tetrakis(2-hydroxypropyl)-1,4,7,10-tetraazacyclododecane.									

La+++	gl	NaCl	37°C	1.0M	C		K <sub>1</sub> =20.7	1994TBb (94910)	1367
Method: Competitive reaction with Ce <sup>3+</sup> ion.									

La+++	EMF	KCl	25°C	0.10M	C		K <sub>1</sub> =21.7	1991CMb (94911)	1368
							K(LaL+H)=2.5		
*****									
C16H <sub>29</sub> N <sub>5</sub> O <sub>8</sub>		H <sub>3</sub> L					(6505)		
Diethylenetriaminepentaethanoic acid N,N'-bismethylamide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO <sub>4</sub>	25°C	0.10M	C	H	K <sub>1</sub> =14.55	1993RCa (94999)	1369
							DH(K <sub>1</sub> )=-17.3 kJ mol <sup>-1</sup> , DS(K <sub>1</sub> )=221 J K <sup>-1</sup> mol <sup>-1</sup>		
*****									
C16H <sub>30</sub> N <sub>2</sub> O <sub>8</sub>		H <sub>2</sub> L					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
La+++	gl	NaNO <sub>3</sub>	25°C	0.10M	U		K <sub>1</sub> =12.47	1988HSb (95044)	1370
La+++	gl	R <sub>4</sub> N.X	25°C	0.10M	U		K <sub>1</sub> =12.21	1983CRb (95045)	1371
*****									
C16H <sub>30</sub> N <sub>4</sub> O <sub>12</sub> P <sub>2</sub>		H <sub>6</sub> L					CAS 330623-46-6	(8581)	
1,5,8,12-Tetraaza-3,10-dihydroxy-3,10-dioxide-3,10-diphosphacyclotetradecane-1,5,8,12-tetraOAc;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaCl	25°C	0.16M	C		K <sub>1</sub> =13.82	2002SSa (95087)	1372
							K(La+HL)=9.89		
							K(La+H <sub>2</sub> L)=6.03		
*****									
C16H <sub>32</sub> N <sub>2</sub> O <sub>5</sub>		L		Cryptand	2,2,1		CAS 31364-42-8	(837)	

1,10-Diaza-4,7,13,16,21-pentaoxabicyclo[8,8,5]tricosane (2,2,1);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	cal	non-aq	25°C	100%	C	H		K1=11.39	1990NRa (95227)	1373
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Medium: MeCN. DH(K1)=-18.6 kJ mol<sup>-1</sup>, DS=-10.3 J K<sup>-1</sup> mol<sup>-1</sup>.

In PC: DH(K1)=-18.4, DS=23.4

La+++	gl	R4N.X	25°C	0.25M	C			K1=6.59	1981BBe (95228)	1374
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Medium: Me4NCl

C16H32N8O4 L CAS 157599-02-5 (8676)

1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetamide;

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

La+++	gl	NaNO3	25°C	0.10M	C			K1=10.35	1995MHa (95377)	1375
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K(LaL+OH)=6.06

C16H32O7 L (6411)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	cal	non-aq	25°C	100%	U	H		K1=3.76	1993LLa (95386)	1376
-------	-----	--------	------	------	---	---	--	---------	-----------------	------

Medium: MeCN. DH(K1)=-29.2 kJ mol<sup>-1</sup>.

C16H35O2P HL CAS 13525-99-0 (2135)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	kin	oth/un	25°C	0.02M	U			K1=3.93	1974GMc (95501)	1377
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C16H35O4P HL CAS 3115-39-7 (2131)

Dioctylphosphoric acid; (C8H17O)2P(O)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++	kin	oth/un	25°C	0.02M	U			K1=4.27	1974GMc (95518)	1378
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C17H12N3O3Cl 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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La+++	gl	diox/w	30°C	70%	U			K1=4.56 B2=8.07	1987ECa (95691)	1379
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B3=10.61

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
La+++	gl	diox/w	30°C	70%	U			K1=4.41 B2=7.79 B3=10.28	1987ECa	(95708)1380

\*\*\*\*\*  
 C17H12O4 H2L CAS 60430-57-8 (6189)  
 1-(2-Furyl)-3-(2-naphthol)-propan-1,3-dione; C4H3O.CO.CH2.CO.C10H6.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	30°C	50%	U			K(La+HL)=6.87 K(LaHL+HL)=5.09	1987DDc	(95733)1381

\*\*\*\*\*  
 C17H13NO3 HL CAS 98399-88-3 (6195)  
 8-Formyl-7-hydroxy-4-methyl-2H-[1]-benzopyran-2-one-anil;  
 C6H5.N:CH.C9H3O(CH3)(OH)(:O)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	30°C	70%	U			K1=5.19 B2=9.31 B3=12.00	1987ECa	(95739)1382

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	30°C	75%	M			K1=15.34 B2=26.40	1987ESa	(95768)1383

\*\*\*\*\*  
 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
La+++	dis	non-aq	20°C	100%	C	H			2003JLb	(95889)1384
Extraction from 1.0 M NaCl into ligand phase. K(LaCl3+L(o)+0.5(i-Bu3PS)(o) LaCl2(H-1L)(i-Bu3PS)0.5(o)+HCl)=-2.33. K(La+4L(o)=La(H-1L)3L(o)+3H)=-5.17										
La+++	gl	NaNO3	20°C	0.10M	U	M			1981GCa	(95890)1385
B(LaL3(TBP)2)=22.36 B(LaL3(TBPoxide)4)=30.4										

TBP=tributyl phosphate, TBPO=tributyl phosphine oxide  
 \*\*\*\*\*  
 C17H14N2O5S H3L Calmagite CAS 3147-14-6 (2875)  
 1-(1-Hydroxy-4-methyl-2-phenylazo)-2-naphthol-4-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	M		K1=14.60 B2=22.10 K3=6.07	1978MPd (95929)	1386

\*\*\*\*\*

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
La+++	gl	diox/w	30°C	75%	M		K1=7.63 B2=14.46	1987ESa (96009)	1387

\*\*\*\*\*

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
La+++	gl	oth/un	25°C	0.10M	U T		K1=4.87	1990TSa (96040)	1388

30 C: K=4.70, 35 C: K=4.50

\*\*\*\*\*

C17H16O4 H2L CAS 58134-82-0 (6193)  
Benzoyl-2-hydroxy-4-methoxy-3-methylacetophenone;  
C6H5.CO.CH2.CO.C6H2(OH)(OCH3)(CH3)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	alc/w	30°C	75%	U T H		K1=6.64 B2=13.34	1987DGd (96152)	1389

20 C:K1=6.56, K2=5.47; 40 C:K1=6.94, K2=6.08; 50 C:K1=7.22, K2=6.27  
DH(K1)=-29 kJ mol<sup>-1</sup>, DS=34 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C17H18O4 H2L (6188)  
1-(2-Furyl)-3-(2-hydroxy-3,4-diethylphenyl)-propan-1,3-dione;  
C4H3O.CO.CH2.CO.C6H2(OH)(C2H5)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	30°C	50%	U		K(La+HL)=6.19	1987DDc (96244)	1390

\*\*\*\*\*

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
La+++	sp	NaNO3	25°C	0.10M	C		K1=7.22 K(La+HL)=2.38	19880Ha (96421)	1391

\*\*\*\*\*

C17H27N04 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
La+++	cal	non-aq	25°C	100%	C	H	K(LaNO3+L)=4.55	1993LLb (96535)	1392
Medium: acetonitrile. DH(LaNO3+L)=-51.71 kJ mol <sup>-1</sup> .									
*****									
C17H29N3O10		H4L					CAS 89378-46-1	(5528)	
(Bis(3-(bis(carboxymethyl)amino)propyl)methylammonio)ethanoate;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.10M	U		K1=7.58 K(La+HL)=5.11	1984TPa (96573)	1393
*****									
C17H30N4O8		H4L		TRITA			CAS 60239-20-5	(1018)	
1,4,7,10-Tetraazacyclotridecane-1,4,7,10-tetraethanoic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.10M	C		K1=17.02 K(LaL+H)=3.8	1991CMb (96652)	1394
*****									
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
La+++	gl	alc/w	25°C	30%	U	T H	K1=7.40 B2=11.90	2003EEa (96904)	1395
Medium: 30% v/v EtOH/H2O, 0.10 M KCl. Data for 25-45 C. DH(K1)=37 kJ mol <sup>-1</sup>									
DS=264 J K <sup>-1</sup> mol <sup>-1</sup> . DH(K2)=52, DS=261. Protonation constants not reported.									
*****									
C18H15NO3		HL					(6196)		
8-Formyl-7-hydroxy-4-methyl-2H-[1]-benzopyran-2-one 4-methylanil;									
CH3.C6H4.N:CH.C9H3O(OH)(CH3)(O)									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	30°C	70%	U		K1=5.98 B2=10.97 B3=14.60	1987ECa (96995)	1396
*****									
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
La+++	gl	diox/w	30°C	75%	U		K1=9.33 B2=17.00	1988ESb (97173)	1397
*****									
C18H18N4		L					CAS 16858-01-8	(1528)	

Tris(2-pyridylmethyl)amine; (C<sub>5</sub>H<sub>4</sub>NCH<sub>2</sub>)<sub>3</sub>N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	nmr	KCl	25°C	1.0M	C	H	K1=1.99	2004BRa (97263)	1398
Method: 1H nmr measurements in D <sub>2</sub> O. DH(K1)=-17 kJ mol <sup>-1</sup> , DS(K1)=-21 J mol <sup>-1</sup> K <sup>-1</sup>									

La+++	nmr	non-aq	RT	100%	U		K2=1.0	2000WMa (97264)	1399
Method: 1H nmr. Medium: C <sub>5</sub> D <sub>5</sub> N.									

\*\*\*\*\*  
C18H<sub>20</sub>N<sub>2</sub>O<sub>6</sub> H4L EHPG CAS 10328-28-6 (429)  
N,N'-Ethylene-bis-(2-(2'-hydroxyphenyl))glycine; (H<sub>2</sub>OCC(C<sub>6</sub>H<sub>4</sub>OH)NHCH<sub>2</sub>)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	EMF	KNO <sub>3</sub>	25°C	0.10M	C	T H	K1=16.66 K(LaL+H)=7.62	1985HWb (97434)	1400
Method: Hg (and glass) electrode, using Hg(II) as competitive indicator ion. Data for 10-35 C. DH(K1)=-47.1 kJ mol <sup>-1</sup> , DS(K1)=161 J K <sup>-1</sup> mol <sup>-1</sup> .									

\*\*\*\*\*  
C18H<sub>22</sub>N<sub>4</sub>O<sub>4</sub> H2L CAS 2444-14-6 (3502)  
N,N'-Bis(2-pyridylmethyl)diaminoethane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaCl	25°C	0.16M	C		K1=10.81 K(La+L=LaL(OH)+H)=0.06 K(LaL(OH)+H)=10.75	1997Cma (97546)	1401

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C18H<sub>24</sub>N<sub>2</sub>O<sub>2</sub> H2L CAS 58015-12-6 (5245)  
N,N'-Bis(2-hydroxy-5-methylphenylmethylene)ethylenediamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	EMF	oth/un	?	?	U		K1=19.4 K(La+H <sub>2</sub> L)=8.8	1975DTa (97585)	1402

\*\*\*\*\*  
C18H<sub>24</sub>N<sub>6</sub>O<sub>9</sub> H3L BAMTPH CAS 87834-24-0 (5915)  
N,N',N''-Tris(3-(hydroxyamino)-3-oxopropyl)-1,3,5-benzenetricarboxamide;  
C<sub>6</sub>H<sub>3</sub>(CONHCH<sub>2</sub>CH<sub>2</sub>CONHOH)<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaNO <sub>3</sub>	25°C	0.10M	C		K1=14.42	1989EHa (97621)	1403
*****									
C18H <sub>25</sub> N <sub>3</sub> O <sub>8</sub>	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
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-----
La+++      gl  KNO3   25°C 0.10M C      K1=13.10      1985TPa (97655)1404
*****
C18H26N6          L                      (6628)
3,6,14,17,23,24-Hexaazatricyclo[17.3.1.1]tetracosa-1(23),8,10,12(24),19,21-hexaene;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  KCl    25°C 0.10M M      K1=7.4        1996MBb (97715)1405
-----
La+++      gl  KCl    25°C 0.20M C      K1=7.4        1992RMa (97716)1406
*****
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
-----
La+++      gl  non-aq 25°C 100% U      K1=3.26  B2=5.91  1982MDa (97807)1407
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
-----
La+++      cal non-aq 25°C 100% C  H      K1=2.52      1998LBc (97878)1408
Medium: acetonitrile. DH(K1)=-43.84 kJ mol-1, DS(K1)=-98.8 J K-1 mol-1.
*****
C18H30N2O11        H2L                      CAS 93049-99-1 (5832)
1,4,7,10,13-Pentaoxa-16,19-diazacycloeicosane-14,21-dione-16,19-diethanoic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      gl  R4N.X  25°C 0.10M C      K1=8.35      1988CCb (97911)1409
*****
C18H30N4O12        H6L  TTHA                      CAS 869-52-3 (694)
Triethylenetetraaminehexaethanoic acid;((HOOC.CH2)2N.CH2.CH2.N(CH2.COOH).CH2)2
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
La+++      nmr none   RT   0.0  U                      2000CVa (98057)1410
Kout(2LaA+TmL)=4.41
Medium: D2O. Method: 13C nmr. A: 1,4,7,10-tetrakis(2-hydroxypropyl)-
1,4,7,10-tetraazacyclododecane.
-----
La+++      gl  KNO3   25°C 0.10M C      K1=24.444    1998AKa (98058)1411
K(LaL+H)=3.158
K(LaHL+H)=2.27
K(LaL+La)=3.81
K(La2L+H)=1.88

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 La+++ EMF KNO3 25°C 0.10M C T H K1=22.55 1987HCa (98059)1412  
 K(LaL+H)=4.74  
 K(LaHL+H)=2.49

Method: Hg electrode; competitive reaction with Hg(II).  
 Data for 15-35 C. At 25 C, DH(K1)=-116 kJ mol<sup>-1</sup>, DS(K1)=43 J K<sup>-1</sup> mol<sup>-1</sup>.  
 -----

La+++ vlt R4N.X 30°C 0.01M C K1=19.52 1981GMh (98060)1413  
 Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et4NBr.  
 -----

La+++ vlt NaClO4 25°C 0.40M C K1=22.83 1978MNB (98061)1414  
 Medium: 0.40 M NaClO4, pH 4.80. Method: polarography, using Cd as  
 indicator ion.  
 -----

La+++ gl KNO3 30°C 0.10M U K1=19.52 1976GAa (98062)1415  
 -----

La+++ EMF KNO3 25°C 0.10M U K1=22.30 1970HAa (98063)1416  
 By ion-selective electrode (Hg): K1=22.22  
 By glass electrode: K(LaL+H)=3.30, B(La2L)=3.40  
 -----

La+++ gl KNO3 25°C 0.10M U M K1=16.7 1969YMa (98064)1417  
 K(LaL+H)=3.51  
 K(LaHL+H)=3.11  
 B(La2L)=19.3  
 K(La2L+2A)=7.3

H2A=8-hydroxyquinoline-5-sulfonic acid  
 -----

La+++ gl KNO3 25°C 0.10M U K1=23.1 1965BMF (98065)1418  
 K(2La+L)=26.9

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.10M	C		K1=11.60 K(LaL+H)=6.05	1991CMb (98211)	1419

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La+++ gl NaNO3 25°C 0.20M C T H K1=12.74 1991KKa (98212)1420  
 At 15 C K1=12.60; at 35 C K1=12.87. DH=22.6 kJ mol<sup>-1</sup>, DS=317.8 J K<sup>-1</sup> mol<sup>-1</sup>  
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C18H34N2O8 H2L CAS 68670-15-5 (5851)  
 1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-di-(3-propanoic acid);  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	0.10M	C		K1=6.18	1988CCc (98339)	1421

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C18H36N2O6 L Cryptand 2,2,2 CAS 23978-09-8 (514)  
 1,10-Diaza-4,7,13,16,21,24-hexaoxabicyclo[8.8.8]hexacosane;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	cal	non-aq	25°C	100%	C	H	K1=15.06	2003DCa (98622)	1422
Method: competitive titration calorimetry of AgI+. Medium: acetonitrile. DH(K1)=-132.8 kJ mol <sup>-1</sup> , DS(K1)=-157 J K <sup>-1</sup> mol <sup>-1</sup> .									
La+++	oth	non-aq	25°C	100%	C	H	K1=10.81	1990NRa (98623)	1423
Medium: MeCN. DH(K1)=-18.7 kJ mol <sup>-1</sup> , DS=-13.3 J K <sup>-1</sup> mol <sup>-1</sup> . In PC: DH(K1)=-18.5, DS=11.5									
La+++	ISE	non-aq	25°C	100%	C		K1=16.1	1986ALa (98624)	1424
Medium: propylene carbonate, 0.1 M Et4NClO4									
La+++	ISE	non-aq	25°C	100%	U	H	K1=12.91	1984GBa (98625)	1425
Extrap.from higher T. 0.1 M (Et)4NH4ClO4. DH=-54.5 kJ mol <sup>-1</sup> ;DS=64 J K <sup>-1</sup> m <sup>-1</sup> . In propylene carbonate.									
La+++	gl	alc/w	25°C	100%	C	I	K1=8.28	1983ANb (98626)	1426
The equilibration took 7-12 days. Medium: MeOH, 0.05 M Et4NClO4 In propylene carbonate, 0.1 M Et4NClO4, K1=18.6									
La+++	gl	alc/w	25°C	95%	C		K1=9.4	1981ANa (98627)	1427
Medium: 95% MeOH, 0.1 M Me4NCl									
La+++	gl	R4N.X	25°C	0.25M	C		K1=6.45	1981BBe (98628)	1428
Medium: Me4NCl									

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C18H38N2O6 L (5802)  
7,16-Di(2-hydroxypropyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaNO3	25°C	0.10M	U		K1=3.24	1986HBc (98852)	1429
*****									
C18H40N2O10P2		H2L					(7241)		
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diylldimethylenediphosphonic acid bis(Et-ester);									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	0.10M	U		K1=7.60	1996BJa (98894)	1430
Medium: 0.1 M Me4NCl									
*****									
C19H14N6O3S3		HL					CAS 364325-73-5	(9096)	
4-[(4-Oxo-3-phenyl-2-thioxo-5-thiazolidinyl)azo]-N-2-pyrimidinyl-benzenesulfonamide ;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++ gl alc/w 25°C 30% U T H K1=8.18 B2=13.38 2003EEa (99069)1431  
 Medium: 30% v/v EtOH/H2O, 0.10 M KCl. Data for 25-45 C. DH(K1)=43 kJ mol<sup>-1</sup>  
 DS=300 J K<sup>-1</sup> mol<sup>-1</sup>. DH(K2)=35, DS=216. Protonation constants not reported.

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C19H1407S H4L Pyrocatechol Vi CAS 369596-29-2 (709)

Pyrocatechol Violet,

3-[3,4-Dihydroxyphenyl-3-hydroxy-4-oxo-2,5-cyclohexadien-1-ylidenemethyl-b.;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	NaCl04	30°C	0.20M	U	M	K1=7.81 K(La(nta)+L)=5.16	1978MSk (99110)	1432
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C19H15N08 H4L Alizarin Comp. CAS 3952-78-1 (671)

(3,4-Dihydroxy-2-anthraquinonyl-methyl)iminodiethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	ISE	KN03	25°C	0.10M	C	HM	K(2La+2H2L=La2L2+4H)=0.28 K(2La+2H2L=La2HL2+3H)=5.58 K(2La+2H2L+F=La2HL2F+3H)=9.70, K(2La+2H2L+F=La2H2L2F+2H)=14.17	1988YHa (99134)	1433
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La+++	sp	diox/w	20°C	20%	C		K22=14.70	1987ZJa (99135)	1434
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La+++	con	oth/un	25°C	0.10M	U		K1=4.20 B2=8.49	1981EIc (99136)	1435
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La+++	sp	KN03	RT	0.10M	C	M	Keff=4.56 K(2LaL+2F)=13.80	1971LKb (99137)	1436
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Medium: 0.10 M KN03, pH 4.5 (acetate buffer).

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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
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La+++	gl	alc/w	25°C	30%	U T H		K1=7.50 B2=11.30	2003EEa (99147)	1437
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Medium: 30% v/v EtOH/H2O, 0.10 M KCl. Data for 25-45 C. DH(K1)=44 kJ mol<sup>-1</sup>  
 DS=290 J K<sup>-1</sup> mol<sup>-1</sup>. DH(K2)=55, DS=256. Protonation constants not reported.

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C19H16N40 L LAMI (5930)

2-(2'-Lepidylazo)-N-methylisatin

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	diox/w	30°C	75%	M I		K1=9.11 B2=17.39	1987DGc (99165)	1438
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Medium: 75% v/v dioxan/H2O, 0.15 M NaCl04

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C19H17N3O4S2 HL Cephaloridine CAS 50-59-9 (8404)  
7-[a-(2-Thienyl)acetamido]-3-(1-pyridylmethyl)-3-cephem-4-carboxylic acid betaine;

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

La+++ gl KNO3 25°C 0.10M C K1=8.55 2000GFb (99192)1439

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C19H31NO5 L CAS 63281-62-9 (7946)

16-Phenylmethyl-1,4,7,10,13-pentaoxa-16-azacyclooctadecane;

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

La+++ cal non-aq 25°C 100% C H 1993LLb (99445)1440

K(LaNO3+L)=3.77

Medium: acetonitrile. DH(LaNO3+L)=-91.71 kJ mol<sup>-1</sup>.

\*\*\*\*\*

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  
-----

La+++ gl NaClO4 30°C 0.10M U M K1=9.41 B2=16.95 1987SOa (99569)1441

K(LaA+L)=7.85

K(LaB+L)=7.44

H2A=hydroxyethyliminodiethanoic acid, H3B=nitrilotriethanoic acid

-----  
La+++ gl oth/un 20°C 0.10M M T H K1=10.6 1978MBe (99570)1442

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

-----  
La+++ gl NaClO4 25°C 0.10M M K1=8.80 B2=14.05 1978MPd (99571)1443

K3=4.30

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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  
-----

La+++ gl alc/w 30°C 50% C M K1=9.80 B2=17.70 1994SOa (99654)1444

K(LaA+L)=8.20

K(La(nta)+L)=7.61

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

H2A is hydroxyethyliminodiethanoic acid.

-----  
La+++ gl NaClO4 30°C 0.10M U T H K1=11.25 1991NNb (99655)1445

Also data for 40 and 50 C. DH and DS values.

-----  
La+++ gl oth/un 20°C 0.10M M T H K1=10.7 1978MBe (99656)1446

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



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	sp	non-aq	25°C	100%	C		K1=2.01	2003ZRa (100155)	1454
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Medium: DMSO. Method: competition with murexide.

La+++	con	non-aq	25°C	100%	C	TIH	K1=2.01	2001RKa (100156)	1455
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Medium: DMF. Data for 15-55 C. Also data for 25-75% mol% DMF/AN.  
DH(K1)=-26 kJ mol<sup>-1</sup>, DS(K1)=-126 J K<sup>-1</sup> mol<sup>-1</sup>.

La+++	cal	non-aq	25°C	100%	C	H	K1=3.32	1998LHa (100157)	1456
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Medium: acetonitrile. DH(K1)=16.07 kJ mol<sup>-1</sup>.

La+++	gl	oth/un	25°C	0.0	U	H	K1=5.54	1991HJa (100158)	1457
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La+++	sol	none	25°C	0.0	U	I	K1=0.0	1975SNa (100159)	1458
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C20H24O12S2 H2L CAS 172985-47-6 (7820)  
2,3:11,12-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,11-diene-4',4''-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	dis	R4N.X	25°C	0.12M	C		K1=2.07	1998SUa (100282)	1459
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Medium: 0.12 M Et4NBr.

Method:solvent extraction into cyclohexane/di(2-ethylhexyl)phosphoric acid  
\*\*\*\*\*  
C20H35N5O10 H5L (6545)  
1,4,7,10,13-Pentaazacyclopentadecane-N,N',N'',N''',N''''-pentaethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	gl	NaNO3	25°C	0.20M	C	T H	K1=13.57	1991KKa (100541)	1460
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At 15 C K1=13.55;at 35 C K1=13.59. DH=2.9 kJ mol<sup>-1</sup>, DS=271.8 J K<sup>-1</sup> mol<sup>-1</sup>

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	sp	KCl	25°C	0.08M	U		K1=14.5	1994FCa (100559)	1461
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\*\*\*\*\*  
C20H36O6 L DiCy-18-crown-6 CAS 16069-36-6 (1653)  
2,3:11,12-Dicyclohexyl-1,4,7,10,13,16-hexaoxacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++	sp	non-aq	25°C	100%	C		K1=2.03	2003ZRa (100662)	1462
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Medium: DMSO. Method: competition with murexide.

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C20H37N5O10                      H3L        MEA                      CAS 129009-83-2    (7322)

N,N'-Bis(2-methoxyethylcarbamoylmethyl)diethylenetriamine;

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values                      Reference ExptNo  
-----  
La+++            gl    NaClO4 25°C 0.10M C    H            K1=14.25                      1997ICa (100735)1463  
DH(K1)=-23.1 kJ mol<sup>-1</sup>, DS=195 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C20H43O4P                      HL                      CAS 7785-87-1    (2132)

Didecylphosphoric acid; (C10H21O)2P(O)OH

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values                      Reference ExptNo  
-----  
La+++            kin oth/un 25°C 0.02M U                      K1=3.47                      1974GMc (100908)1464  
\*\*\*\*\*

C21H17N2O5As                      H2L        ArsenoBDMPH                      (5931)

2-Arsenodibenzoylmethanephénylhydrazone; C6H5.CO.C(CO.C6H5):N.NH.C6H4.AsO3H2

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values                      Reference ExptNo  
-----  
La+++            gl    alc/w 27°C 40% U                      K1=12.78    B2=17.08    1990MOc (101080)1465  
Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4

\*\*\*\*\*

C21H17N5                      L                      (7365)

2,6-Bis(1-methylbenzimidazol-2-yl)pyridine

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values                      Reference ExptNo  
-----  
La+++            sp    non-aq 20°C 100% U                      K1=8.9        B2=16.80    1997PBa (101089)1466  
K3=6.5

Medium: CH3CN

\*\*\*\*\*

C21H18N6O3S3                      HL                      CAS 364325-74-6    (9094)

N-(4,6-Dimethyl-2-pyrimidinyl)-4-[(4-oxo-3-phenyl-2-thioxo-5-thiazolidinyl)azo]-benzenesulfonamid

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values                      Reference ExptNo  
-----  
La+++            gl    alc/w 25°C 30% U T H                      K1=7.82    B2=12.47    2003EEa (101121)1467  
Medium: 30% v/v EtOH/H2O, 0.10 M KCl. Data for 25-45 C. DH(K1)=35 kJ mol<sup>-1</sup>  
DS=266 J K<sup>-1</sup> mol<sup>-1</sup>. DH(K2)=35, DS=206. Protonation constants not reported.

\*\*\*\*\*

C21H18N6O5S3                      HL                      CAS 412024-79-4    (9093)

N-(5,6-Dimethoxy-4-pyrimidinyl)-4-[(4-oxo-3-phenyl-2-thioxo-5-thiazolidinyl)azo]-benzenesulfonami

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values                      Reference ExptNo  
-----  
La+++            gl    alc/w 25°C 30% U T H                      K1=8.21    B2=14.52    2003EEa (101125)1468



Medium: 30% v/v EtOH/H<sub>2</sub>O, 0.10 M KCl. Data for 25-45 C. DH(K<sub>1</sub>)=32 kJ mol<sup>-1</sup>  
 DS=264 J K<sup>-1</sup> mol<sup>-1</sup>. DH(K<sub>2</sub>)=40, DS=254. Protonation constants not reported.

\*\*\*\*\*

C22H14O9 H5L CAS 4431-00-9 (3513)

Aurintricarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	oth/un	25°C	?	U		K(La+HL)=4.3	1966MSc (101502)	1469

\*\*\*\*\*

C22H17AsN4O14S3 H6L Arsenazo M CAS 3563-69-7 (623)

2-(2-Arsonophenylazo)-7-(3-sulfophenylazo)-1,8-dihydroxynaphthalene-3,6-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	NaClO4	25°C	0.1M	U		K(La+H4L)=10.08	1975MBa (101546)	1470

Room temperature

La+++	sp	oth/un	?	?	U		K1=13.21	1971SSi (101547)	1471
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C22H17N2O11AsS2 H6L MonoarsenazoIII CAS 14044-84-9 (4157)

2-(2'-Arsenophenylazo)-7-(phenyl)chromotropic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	oth/un	20°C	?	U		B(LaH2L2)=50.8	1965BUa (101563)	1472

\*\*\*\*\*

C22H17N4O14ClP2S2 H8L ClPhosphonazo 3 CAS 1914-99-4 (2577)

2,7-Bis((4-chloro-2-phosphophenyl)azo)chromotropic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	NaClO4	25°C	1.00M	U		K1=9.47	1977MNa (101579)	1473

\*\*\*\*\*

C22H17N4O14ClP2S2 H8L CAS 86253-02-3 (4159)

2-(4'-Chloro-2'-phosphonophenylazo)-7-(2''-phosphonophenylazo)chromotropic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	KNO3	25°C	0.20M	U		B(LaH10L2)=104.4	1967BMc (101585)	1474

\*\*\*\*\*

C22H18N4O14As2S2 H8L Arsenazo III CAS 1668-00-4 (1148)

2,7-Bis(2'-arsonophenylazo)chromotropic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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La+++ sp oth/un rt 0.10M C 2004LLa (101630)1475

K1eff=4.33  
B2eff=9.40  
B(2,2)eff=13.60

Method: spectral deconvolution. Medium: 0.1 M chloroacetate buffer, pH 3.5  
-----

La+++ sp NaCl04 25°C 0.10M U 1975NMa (101631)1476  
K(La+H5L)=7.85  
-----

La+++ sp oth/un 20°C ? U 1972SSi (101632)1477  
K(La+H4L)=14.87  
-----

La+++ sp NaNO3 20°C 0.20M U 1964BUc (101633)1478  
B(La2H8L2)=83.5  
B(La2H4L)=42.5  
-----

La+++ sp NaNO3 20°C 0.20M U 1963BUa (101634)1479  
B(La2L2)=81.2  
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\*\*\*\*\*  
C22H18N4O14P2S2 H8L Phosphonazo III CAS 16017-11-1 (4158)  
2,7-Bis(2'-phosphonophenylazo)chromotropic acid;  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

La+++ sp KNO3 25°C 0.20M U 1967BMc (101669)1480  
B(LaH10L2)=104.8  
-----

\*\*\*\*\*  
C22H19N3O4S HL CAS 84819-63-6 (8347)  
N-(3,4-DiMe-5-isoxazolyl)-4-[[ (2-hydroxy-1-naphthalenyl)methylene]amino]benzenesulfonamide;  
-----

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

La+++ gl NaCl04 25°C 0.10M U K1=7.45 B2=11.97 1982MBa (101687)1481  
-----

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

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

La+++ sp oth/un ? 0.10M U 1970PLc (101703)1482  
K(LaOH+2H3L)=15.19  
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\*\*\*\*\*  
C22H24N2O10 H4L CAS 132796-79-3 (8113)  
1,2-Bis(2-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;  
-----

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

La+++ EMF KNO3 25°C 0.10M C T H K1=10.75 1990HLA (101899)1483

$$K(\text{LaL}+\text{H})=3.48$$

Method: Competitive reaction with  $\text{Hg}^{++}$ , using Hg indicator electrode.

Data for 15-35 C.  $\text{DH}(\text{K1})=-33.0 \text{ kJ mol}^{-1}$ ,  $\text{DS}(\text{K1})=95.0 \text{ J K}^{-1} \text{ mol}^{-1}$ .

\*\*\*\*\*

C22H26N4O10                      H4L              BAPTA                      (7230)

1,2-Bis(o-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;

((HOOCC<sub>2</sub>H<sub>2</sub>)<sub>2</sub>NCH(OC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>)<sub>2</sub>

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

La+++              gl    R4N.X    25°C 0.10M C              K1=10.7              1993YTa (101979)1484

\*\*\*\*\*

C22H28O13S2                      H2L              DSDB21C7                      CAS 204931-02-2 (7821)

2,3:11,12-Dibenzo-1,4,7,10,13,16,19-heptaoxacycloheneicosa-2,11-diene-4',4''-disulfo  
nic acid;

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

La+++              dis R4N.X    25°C 0.12M C              K1=2.20              1998SUa (102078)1485

Medium: 0.12 M Et<sub>4</sub>NBr.

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

\*\*\*\*\*

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  
-----

La+++              gl    NaClO<sub>4</sub> 25°C 0.10M U              K1=6.65              2001WZa (102115)1486

$$B(\text{LaHL})=14.44$$

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

\*\*\*\*\*

C22H35N3O4                      L                      (7928)

4-(t-Butoxycarbonylethyl)-2,6-bis(diethylcarbamoyl)pyridine;

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

La+++              sp    non-aq 25°C 100% C              K1=7.4              B2=14.00              2001MSa (102247)1487

$$B3=19.0$$

Medium: acetonitrile, 0.10 M Et<sub>4</sub>NClO<sub>4</sub>

\*\*\*\*\*

C22H37N5O14                      H7L                      CAS 3234-59-1 (2425)

Tetraethylenepentamineheptaethanoic acid;

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

La+++              vlt R4N.X    30°C 0.01M C              K1=19.10              1981GMh (102332)1488

Method: polarography, using Cd as indicator ion. Medium: 0.01 M Et<sub>4</sub>NBr.

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La+++              gl    KNO<sub>3</sub>    30°C 0.10M U              K1=19.10              1976GAa (102333)1489  
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Also data for 80 C.

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4,4'-Diantiprylmethane,

4,4'-phenylmethylen-bis-(1,2-dihydro-1,5-dimethyl-2-phenylpyrazol-3-one

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	sp	diox/w	25°C	100%	U			K1=4.12	1995KMa (102676)	1497
*****										
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;										

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	cal	oth/un	25°C	0.01M	C	H		K1=3.45	2004LWa (102868)	1498
Medium: 0.01 M HCl. DH(K1)=7.2 kJ mol <sup>-1</sup> , DS(K1)=89.9 J K <sup>-1</sup> mol <sup>-1</sup> .										
*****										
C24H18N4O18As2S2		10L						CAS 2604-69-5	(4164)	
2,7-Bis(2'-arsono-5'-carboxyphenylazo)chromotropic acid;										
H										

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	sp	KNO3	20°C	0.20M	U				1965BMd (102875)	1499
B(LaH12L2)=96.0										
*****										
C24H29N3O12S3		H6L						(7355)		
1,2,3-Tris((2-hydroxy-5-sulfobenzyl)amino)propane;										

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaCl	25°C	0.16M	C			K1=11.33	1998LCa (103019)	1500
K(LaL+H)=7.14										
*****										
C24H30N4O4		H2L						CAS 289667-46-5	(7939)	
N,N'-[1,10-Phenanthroline-2,9-diylbis(methylene)]bis-valine;										

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaNO3	25°C	0.10M	C			K1=9.50	2000WZa (103030)	1501
B(LaHL)=18.40										
B(LaH2L)=22.80										
*****										
C24H32O14S2		H2L						CAS 204931-03-3	(7822)	
2,3:11,12-Dibenzo-1,4,7,10,13,16,19,22-octaoxacyclotetracos-2,14-diene-4',4"-disulfonic acid;										

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	dis	R4N.X	25°C	0.12M	C			K1=2.36	1998SUa (103194)	1502
Medium: 0.12 M Et4NBr.										

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

C24H36N4O4 L Py-2-18-aneN2O4 CAS 103837-13-4 (8062)  
7,16-Bis(2-pyridinylmethyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.10M	C		K1=3.53	1986DSa (103265)	1503

\*\*\*\*\*

C24H38N4O6 L CAS 380488-78-8 (7921)  
3-[2,6-Bis(diethylcarbamoyl)pyridine-4-yl)-N-(tert-butoxycarbonyl)alanine methyl ester;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	non-aq	25°C	100%	C		K1=7.4 B2=13.90 B3=19.0	2001MSa (103316)	1504

Medium: acetonitrile, 0.10 M Et4NClO4

\*\*\*\*\*

C24H42N6O12 H6L (6546)  
1,4,7,10,13,16-Hexaazacyclooctadecane-N,N',N'',N''',N''',N''''-hexaethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaNO3	25°C	0.20M	C T H		K1=19.11 K(La+H2L)=15.82	1991KKa (103379)	1505

Also 15 C and 35 C. DH(K1)=-17.15 kJ mol<sup>-1</sup>, DS(K1)=309.5 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C24H45N5O12 H3L HEMEA CAS 185214-83-9 (7324)  
N,N'-Bis(2-hydroxyethyl-2-methoxyethylcarbamoylmethyl)diethylenetriamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	C H		K1=16.78	1997ICa (103444)	1506

DH(K1)=-30.0 kJ mol<sup>-1</sup>, DS=220

\*\*\*\*\*

C24H46N2O6 L (6567)  
7,16-Bis(trans-2-hydroxycyclohexyl)-1,4,10,13-tetraoxa-7,16-diazocyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaNO3	25°C	0.10M	C		K1=4.08 K(LaL+OH)=5.97	1991DCa (103454)	1507

\*\*\*\*\*

C25H27N9O8S2 H2L CAS 62893-19-0 (8405)  
Cefoperazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.10M	C		K1=7.01	2000GFb (103658)	1508

\*\*\*\*\*  
 C25H32N2O7 H2L (7374)  
 1,15-Diaza-3,4:12,13-dibenzo-5,8,11-trioxacycloctadecane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.5M	C			K1=3.39	1993YNa (103731)	1509

\*\*\*\*\*  
 C25H48N6O8 H3L Desferrioxamine CAS 70-51-9 (2488)  
 Desferrioxamine B; NH2.((CH2)5.NOH.CO.C2H4.CO.NH)2.(CH2)5.NOH.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaNO3	20°C	0.1M	U			K(La+HL)=10.89 K(La+H2L)=7.61 K(La+H3L)=4.60	1963AEa (103818)	1510

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	diox/w	30°C	75%	U			K1=10.97 B2=21.19	1985RSb (103882)	1511

\*\*\*\*\*  
 C26H27N3O10 H4L (7231)  
 2-((2-Amino-5-methylphenoxy)-methyl)-6-methoxy-8-aminoquinoline-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	0.10M	C			K1=11.89	1993YTa (103965)	1512

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	gl	NaCl	25°C	0.16M	M			K1=15.8 K(LaL+H)=9.6 K(LaHL+H)=9.41 K(La+H2L)=7.62 K(La+H3L)=6.26	2001SKe (104048)	1513

K(La+H4L)=3.83, K(La+H5L)=3.42, K(La+H6L)=3.4, K(La+H7L)=3.0,  
 K(La+HL)=11.4.

\*\*\*\*\*  
 C26H33N3O12S3 H6L (7354)  
 1,1,1-Tris(((2-hydroxy-5-sulfobenzyl)amino)methyl)ethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaCl	25°C	0.16M	C		K1=9.17	1998LCa (104066)	1514
*****									
C26H34N6O8		H4L					CAS 132709-65-0	(8941)	
3,6,14,17,23,24-Hexaazatricyclotetracos-1,8,10,12,19,21-hexaene-3,6,14,17-tetraacetic acid;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KCl	25°C	0.10M	M		K1=22.1	1996MBb (104095)	1515
Method: competitive titration with arsenazo-III.									
*****									
C26H38N6		L					CAS 180684-75-7	(7295)	
1,8,14,17,24,31-Hexaazatricyclo[25.3.1.1.0.0]dotriaconta-10,12,14,26,28,									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	KNO3	25°C	0.20M	C		K1=2.1	1996FJa (104206)	1516
*****									
C27H24N4O		L					(1023)		
Benzoylacetone-monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	30°C	75%	U		K1=7.64	1983RSa (104386)	1517
*****									
C27H27N5O2		L					CAS 502691-12-5	(8900)	
2,6-Bis[(1-methylbenzimidazol-2-yl)]pyridine-4-carboxylate;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	non-aq	25°C	100%	C		K1=7.8 K3=3.8	B2=13.80 2002MRc (104422)	1518
Medium: acetonitrile, 0.10 M Et4NClO4. By 1H nmr, K1=8.0, K2=6.0, K3=3.8.									
*****									
C27H29NO11		L					Adriamycin	CAS 25316-40-9	(2407)
Doxorubicin;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	oth/un	25°C	0.02M	U T H		K1=3.85	1985LSa (104459)	1519
Medium: 0.02M pH 7.6 buffer									
*****									
C27H36N4O6		H6L					CAS 222626-11-1	(8885)	
Tris((2,3-dihydroxybenzylamino)ethyl)amine;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaClO4	25°C	0.10M	C			2002BDc (104558)	1520



B(LaHL)=24.28  
 B(LaH2L)=31.25  
 B(LaH3L)=38.53  
 B(LaH6L2)=76.41

K(La+H3L)=6.94, K(LaH3L+H3L)=6.29.

\*\*\*\*\*

C27H36N4O12S3                      H6L                      (7353)  
 Tris(((2-hydroxy-5-sulfobenzyl)amino)ethyl)amine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	NaCl	25°C	0.16M	C		K1=5.65	1995CHa (104566)	1521

\*\*\*\*\*

C27H42O15                      H3L                      (OEOAcAcOE)3                      CAS 62888-29-3 (2255)  
 1,4,10,13,16,22,25,28,34-Nonaoxacyclohexatriaconta-6,8,18,20,30,32-hexaone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	diox/w	24°C	50%	U		K1=10.4	1979ACa (104600)	1522

\*\*\*\*\*

C28H24N2O2                      H2L                      Solvent Green 3                      CAS 128-80-3 (1021)  
 1,4-Bis(4'-methylanilino)anthraquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	sp	mixed	20°C	40%	U		K1=8.66    B2=11.01	1985IHa (104667)	1523

Medium: 40% DMF, 0.1 M NaClO4

\*\*\*\*\*

C28H24O16S4                      H8L                      CAS 206559-10-6 (7767)  
 25,26,27,28-Tetrahydroxycalix[4]arene-5,11,17,23-tetrasulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	nmr	oth/un	27°C	dil	C T H		K1=3.7	2002IBa (104698)	1524

Medium: 0.01 M HCl, 5% w/w D2O. Method: 139La nmr. Data for 17-67 C.  
 DH(K1)=11.0 kJ mol<sup>-1</sup>, DS(K1)=108 J K<sup>-1</sup> mol<sup>-1</sup>.

La+++	cal	oth/un	25°C	0.10M	C	H		2001BIa (104699)	1525
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K(La+H4L)=4.23

Medium: 0.10 m Na4H4L, pH=2. DH(La+H4L)=9.2 kJ mol<sup>-1</sup>.

\*\*\*\*\*

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
La+++	sp	non-aq	25°C	100%	C T H			1997LQa (104790)	1526

K(LaNO3+L)=2.68

Medium: acetonitrile. Data for 20-35 C. DH(LaNO3+L)=-40.33 kJ mol<sup>-1</sup>.

\*\*\*\*\*

C28H40N4O4                      H2L                      CAS 138110-63-1 (8608)  
7,14-Dimethyl-5,12-diphenyl-1,4,8,11-tetraazacyclotetradecane-1,8-diethanoic acid;

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
La+++           gl   KCl      40°C 0.50M M            K1=8.12            1997BZa (104825)1527  
\*\*\*\*\*

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  
-----  
La+++           gl   non-aq 25°C 100% U            K1=5.14            1980MDb (104843)1528  
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  
-----  
La+++           ISE non-aq 25°C 100% U            K1=4.29            1982MDa (104891)1529  
Medium: propylene carbonate

\*\*\*\*\*

C28H52N4O10                      H5L                      CAS 137203-80-6 (8096)  
1-N-Dodecyltriethylenetetramine-N,N',N'', N''',N'''-pentaethanoic acid;

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
La+++           gl   alc/w    25°C    50%    C            K1=14.4            2001SYb (104989)1530  
K(LaL+H)=5.2

Medium: 50% EtOH/H2O, 0.10 M KNO3.

\*\*\*\*\*

C31H24N4O                      HL                      CAS 88700-85-0 (1409)  
1,2-Diphenyl-1,2-ethanedione-3-(4-benzyl-6-phenyl)-pyridaziny1 hydrazone;

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
La+++           gl   diox/w 30°C    75%    U    I            K1=8.19            1983RRa (105405)1531  
In 75% MeOH: K1=6.55; 75% DMF: 5.52

\*\*\*\*\*

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  
-----  
La+++           sp   NaCl04 20°C 0.20M U            K(La+HL)=11.67            1966KSd (105477)1532

-----  
La+++ sp oth/un 25°C ? U 1962TOa (105478)1533  
K(?)=5.8

Acetate buffer

\*\*\*\*\*

C32H28N8O10S2 H4L Diantiprylazo CAS 14918-39-9 (5368)

2,7-Bis(antipyrinylphenylazo)chromotropic acid;

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

La+++ sp KNO3 ? 0.20M U 1968BBa (105571)1534  
K(?)=81.5

\*\*\*\*\*

C32H34N4O2 L CAS 163892-66-8 (7329)

1-Phenyl-1,1-di(2,3-dimethyl-1-phenyl-3-pyrazolyl-5-one)butane; C6H5C(C3H7)((C2N2(O)(CH3)2(C6H5))2

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

La+++ sp diox/w 25°C 100% C 1997KMa (105632)1535  
K(La(NO3)3+L)=4.23

\*\*\*\*\*

C33H45N7O3 L CAS 345349-93-1 (9178)

Tris[6-((2-N,N-diethylcarbamoyl)pyridyl)methyl]amine;

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

La+++ nmr KCl 25°C 1.0M C H K1=1.99 2004BRa (105970)1536

Method: 1H nmr measurements in D2O. DH(K1)=15.5 kJ mol-1

DS(K1)=90 J mol-1K-1

\*\*\*\*\*

C36H32O12 H4L CAS 154160-91-5 (4354)

25,26,27,28-Tetrakis[(hydroxycarbonyl)methoxy]calix[4]arene;

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

La+++ gl non-aq 25°C 100% C K1=26.00 1998GVa (106224)1537  
B(La2L)=33.98  
B(LaHL)=33.59  
B(LaH2L)=37.83  
B(LaH-1L)=13.89

Medium: methanol, 0.01 M Et4NClO4. B(La2H-2L)=14.56.

\*\*\*\*\*

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  
-----

La+++ cal oth/un 25°C 0.01M C H K1=3.73 2004LWa (106228)1538

Medium: 0.01 M HCl. DH(K1)=5.1 kJ mol<sup>-1</sup>, DS(K1)=88.9 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C36H48O6 L CAS 76543-12-9 (7372)

p-tert-Butyloxacalix[3]arene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	nmr	non-aq	25°C	100%	U			1997Hda (106389)	1539
							Keff(LaA3+H3L=LaL+3H+3A)=-25.6		

Medium: DMSO; 0.2 M triethylamine, pH 9.0. A=triflate.

For p-chlorooxacalix[3]arene, Keff(LaA3+H3L=LaL+3H+3A)=-23.56

\*\*\*\*\*

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
La+++	dis	non-aq	25°C	100%	U			1993INa (106423)	1540
							B(La+3P+2L)=8.83		

By solvent extraction into dichloromethane. B is the extraction constant

La(aq)+picrate(aq)+L(org)=LaL2P3(org).

\*\*\*\*\*

C36H60O30 L a-Cyclodextrin CAS 10016-20-3 (6946)

alpha-Cyclodextrin, Cyclohexaamylose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	R4N.X	25°C	0.10M	U	T H	K1=3.85	1999FBa (106466)	1541
Medium: 0.1 M Me4NCl. K1=3.91 at 29 C, K1=4.05 at 37 C.									
DH(K1)=28.5 kJ mol <sup>-1</sup> , DS(K1)=169 J K <sup>-1</sup> mol <sup>-1</sup> .									

La+++	gl	NaCl	25°C	0.10M	U	I	K1=3.98	1999FBa (106467)	1542
In 0.1 M Me4NCl, K1=3.85.									

\*\*\*\*\*

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
La+++	gl	non-aq	25°C	100%	C		K2=5.0 K3=2.2	1997PBa (106549)	1543

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
La+++	oth	oth/un	RT	0.10M	U		K1=4.57	1995ETa (106608)	1544
Method: flow injection analysis with spectrophotometric detection. pH 6.20,									

La+++	gl	NaCl04 30°C 0.10M U	1980NAb (106609)1545
		K(La+H3L)=4.00	
		K(La+H2L)=6.04	
		K(LaH2L+H)=5.11	

La+++	sp	KCl	20°C 0.40M U	1967Mfd (106610)1546
				K(La+H4L=LaH2L+2H)=-5.85
				K(2La+H4L=La2H2L+2H)=-6.20

La+++ sp NaN03 ? 0.20M U 1963BAa (106611)1547  
B(La2L2)=35.8  
B(La2L2(OH)2)=23.2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	g1	R4N.X	25°C	0.10M	U T		K1=3.77	1999FBa	(106991)1548
Medium: 0.1 M Me4NCl. K1=3.82 at 29 C, K1=3.97 at 37 C.									
DH(K1)=29 kJ mol <sup>-1</sup> , DS(K1)=169 J K <sup>-1</sup> mol <sup>-1</sup> .									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	sp	non-aq	25°C	100%	C	I		K1=6.4 K(La+HL)=6.4	2001RDa	(107231)1549
Medium: CH3CN. In 95% v/v CH3CN/H2O, K1=6.4, K(La+HL)=4.3.										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
La+++	gl	non-aq	25°C	100%	C					1997PBa (107317)	1550
								K3=4.8			

C48H54N6O8 L CAS 449738-94-7 (8791)  
1,7-Dioxo-4,10-diazacyclododecane-4,10-bis[methylene-8-(1,3,3-trimethyl-6-nitro-spirobenzopyran)]

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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La+++ sp alc/w 25°C 100% C K1=9.17 2002NFa (107383)1551  
Medium: 100% MeOH. Method: electrospray ionization mass spectrometry.

\*\*\*\*\*

C48H80O40 L g-Cyclodextrin CAS 17465-86-0 (7612)  
Cyclooctaamylose;

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

La+++ gl R4N.X 25°C 0.10M U T H K1=3.77 1999FBa (107429)1552  
Medium :0.1 M Me4NCl. K1=3.82 at 29 C, K1=3.97 at 37 C.  
DH(K1)=29 kJ mol<sup>-1</sup>, DS(K1)=169 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C52H62N6O10 ; L CAS 190781-91-0 (8792)  
1,4,10,13-Tetraoxa-7,16-diazacyclododecane-7,16-bis[methylene-8-(trimethyl-6-nitro-  
spirobenzopyra

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

La+++ sp alc/w 25°C 100% C K1=11.4 2002NFa (107479)1553  
Medium: 100% MeOH. Method: electrospray ionization mass spectrometry.

\*\*\*\*\*

C52H64O12 H4L R-Bu-Calixarene CAS 113215-72-8 (6704)  
5,11,17,23-Tetra-(t-butyl)-25,26,27,28-tetrakis[(hydroxycarbonyl)methoxy]calix[4]ar  
ene;

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

La+++ gl non-aq 25°C 100% C K1=28.27 1998GVa (107490)1554  
B(La2L)=34.79  
B(LaHL)=34.84  
B(LaH2L)=38.76  
B(LaH-1L)=15.10

Medium: methanol, 0.01 M Et4NClO4. B(La2H-2L)=14.82; B(La2HL)=39.47.

\*\*\*\*\*

C52H69N07 L CAS 178626-47-6 (8569)  
5,11,17,23-Tetra-t-butyl-25-(diethylcarbamoyl)methoxy-27-carboxymethoxy-26,28-dihyd  
roxyalix[4]ar

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

La+++ sp non-aq 25°C 100% C K1=6.32 2002BBc (107514)1555  
Method: uv/vis spectroscopy. Medium: DMSO. Also data for the 25-methoxy-  
ethyl(carbamoylmethoxy)- and 25-di-(n-hexyl-carbamoyl)methoxy- derivatives

\*\*\*\*\*

C56H70N2O14 H4L CAS 219810-30-7 (4270)  
5,11,17,23-Tet(tBu)-25,27-[carboxylmethylcarbamoylmethoxy]-26,28-[carboxylmethoxy]c  
alix[4]arene;

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

La+++ gl non-aq 25°C 100% C K1=21.19 1998GVa (107591)1556  
 B(La2L)=31.06  
 B(LaHL)=32.07  
 B(LaH2L)=37.75  
 B(La2HL)=37.52

Medium: methanol, 0.01 M Et4NClO4. B(La2H-L2)=11.64.

\*\*\*\*\*

C60H76N4O16 H4L CAS 214361-27-0 (4274)  
 5,11,17,23-Tetra(t-Bu)-25,26,27,28-tetrakis{[(carboxyl)methylcarbamoyle]methoxy}calix[4]arene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	gl	non-aq	25°C	100%	C		K1=21.0 B(La2L)=29.9 B(LaHL)=32.66 B(LaH2L)=37.81 B(LaH-1L)=7.1	1998GVa (107646)	1557

Medium: methanol, 0.01 M Et4NClO4. B(La2H-2L)=9.0; B(La2HL)=38.5

\*\*\*\*\*

C96H144O24 L CAS 169888-22-6 (7534)  
 C-Undecylcalix[4]resorcinarene octa-alpha-(methyl ethanoate);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	dis	non-aq	25°C	100%	U		K=6.98	1995FDa (107966)	1558

Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.

K: MA(org)+L(org)=MLA(org) where A=picrate.

\*\*\*\*\*

C120H192O24 L CAS 175349-58-3 (7495)  
 C-Undecylcalix[4]resorcinarene octa-alpha-(tert-butyl ethanoate);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	dis	non-aq	25°C	100%	U		K=6.98	1995FDa (108009)	1559

Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.

K: MA(org)+L(org)=MLA(org) where A=picrate.

\*\*\*\*\*

C120H200N8O16 L CAS 169888-21-5 (7490)  
 C-Undecylcalix[4]resorcinarene octa-alpha-(N,N-diethyl acetamide);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
La+++	dis	non-aq	25°C	100%	U		K=11.11	1995FDa (108020)	1560

Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.

K: MA(org)+L(org)=MLA(org) where A=picrate.

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
La+++	sp	oth/un	25°C	?	U				1980LPb (108091)	1561
									K1eff=2.32	pH 6.8

Method: fluorescence

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#### EXPLANATORY NOTES

DATA Flags are :-

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

EVALUATION Flags are :-

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

END