

## SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 4999 experiments for  
(no ligands specified)

Metal : Zn++

(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
Zn++	EMF	non-aq	25°C	100%	C	IH		1980APa E0(Zn(s)/Zn++)=-1806 mV	(35)	1
Medium: DMSO, 1 M NH4ClO4. E0 referred to E0(aq)=0 for the Ag(s)/Ag+ elect.										
Zn++	oth	none	25°C	0.0	U			1972C0a K(Zn+2e=Zn(s))=-24.65(-0.729V)	(36)	2
Method:Estimated data										
Zn++	oth	alc/w	25°C	100%	U	I		1972C0a K(Zn+2e=Zn(s))=-33.88(-1.002V)	(37)	3
Method:Estimated data. MeOH. K=-30.22(-0.894V,EtOH), -30.22(-0.894V,BuOH), -28.03(-0.829V,PentOH), -26.54(-0.785V,acetone), -33.88(MeCN), -41.96(HCOOH)										
Zn++	EMF	oth/un	500°C	100%	U	T		1972GRb K(Zn + Zn(l)=2Zn+)=-3.65	(38)	4
Medium: ZnBr2; K=-3.63(550 C), -3.32(600 C)										
Zn++	EMF	none	25°C	0.00	U			1971BWa K=-40.74(-1.205V)	(39)	5
K: Zn(OH)4-- + 2e=Zn(s) + 4OH-										
Zn++	oth	none	25°C	0.0	U			1970NMa K(Zn+e=Zn(I))=34(2.0V) K(Zn(I)+e=Zn(s))=-8.5(-500 mV)	(40)	6
Method:Estimated data										
Zn++	oth	none	25°C	0.0	M			1968LCd K(Zn+2e=Zn(s))=-25.83, -764 mV	(41)	7
Zn++	sol	non-aq	702°C	100%	U	T		1966BSb K(Zn(a)+Zn=2Zn+)=-4.4 K'(Zn(a)+Zn=Zn2++)=-2	(42)	8
Medium: liquid ZnCl2. At 777 C: K=-4.15, K'=-1.7										
Zn++	EMF	none	25°C	0.00	U			1954DIa K=-40.94(-1.211V)	(43)	9

Zn++ EMF non-aq 25°C 100% U T 1954PSa (44) 10  
K=-25.59(-757mV) M units

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

Zn++	oth	oth/un	25°C	0.0	U	1990SAa	(1116)	11
*K(Zn3L2(s)+2H=3Zn+2HL)=-8.20								

Zn++	sol oth/un 20°C	dil U	1959CHc (1117)	12
			Kso(Zn3L2)=-26.97	

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Zn++	g1	NaNO3	25°C	1.00M	U	K1=3.95	1984C0a	(1171)	13
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As2W17H2O61----- H8L (2469)  
alpha-Heteropolydiarseno-polytungstate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Zn++	g1	NaNO3	25°C	1.00M	U	K1=7.21	1984C0a	(1182)	14
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K1=5.17 (alpha2 isomer)
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B04H4-	HL	Borate	CAS 10043-35-3 (991)
Borate; B(OH)4-			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Zn++      0.1M KNO3    25°C 0.70M C      K1=0.9    B2=3.32    1984BEa    (1284)    15  
Method: Differential pulse anodic stripping voltammetric (DPASV)

Zn++	sol	none	22°C	0.0	U	1959SHb	(1285)	16
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$K_{so}(Zn(BO_2)_2 \cdot 2H_2O) = -10.18$   
 $B_4 = 11.8$  ?

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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
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Zn++	EMF non-aq 25°C 100% C	HM			2001KTa (1426)	17
				B(Zn(phen)Br <sub>2</sub> )=12.6 B(Zn(phen)2Br <sub>2</sub> )=15.9		
	Medium: DMF, 0.40 M Et <sub>4</sub> NClO <sub>4</sub> . Method: Zn/Hg electrode. By calorimetry, DH(Zn(phen)Br <sub>2</sub> )=9 kJ mol <sup>-1</sup> , DH(Zn(phen)2Br <sub>2</sub> )=-51					
Zn++	dis NaNO <sub>3</sub> 25°C 1.0M C	I	K <sub>1</sub> =0.7		2000TAa (1427)	18
	for 1.5 M NaNO <sub>3</sub> K <sub>1</sub> =1.10; for 2.0 M K <sub>1</sub> =1.32; for 3.0 M K <sub>1</sub> =2.90 for 1 M KNO <sub>3</sub> K <sub>1</sub> =0.84; for 1.5 M K <sub>1</sub> =1.42; for 2.0 M K <sub>1</sub> =2.09					
Zn++	cal non-aq 25°C 100% C	H	K <sub>1</sub> =6.2	B <sub>2</sub> =11.70	1994SKa (1428)	19
			B <sub>3</sub> =15.0			
	Medium: Dimethylacetamide. DH(K <sub>1</sub> )=9.0 kJ mol <sup>-1</sup> , DH(K <sub>2</sub> )=-1.0, DH(K <sub>3</sub> )=-7.8					
Zn++	cal non-aq 25°C 100% U	H	K <sub>1</sub> =6.65	B <sub>2</sub> =10.52	1991AIa (1429)	20
	hexamethylphosphoric triamide solvent with 0.1 M (C <sub>4</sub> H <sub>9</sub> ) <sub>4</sub> NClO <sub>4</sub> DH and DS values also					
Zn++	cal non-aq 25°C 100% U	HM	K <sub>1</sub> =2.9	B <sub>2</sub> =8.48	1990IMa (1430)	21
			B <sub>3</sub> =11.98 B(Zn(bpy)L)=7.6 B(Zn(bpy)2L)=10.19 B(Zn(bpy)L <sub>2</sub> )=11.17			
	In DMF, 0.16 M Et <sub>4</sub> NClO <sub>4</sub> . DH(K <sub>1</sub> )=38, DH(B <sub>2</sub> )=37.2, DH(B <sub>3</sub> )=31.5, DH(Zn(bpy)L)= 0.6, DH(Zn(bpy)2L)=-25, DH(Zn(bpy)L <sub>2</sub> )=15.7 kJ mol <sup>-1</sup> .					
Zn++	ISE mixed 25°C 0.10M C	H	K <sub>1</sub> =5.67	B <sub>2</sub> =12.37	1990PDa (1431)	22
			K <sub>3</sub> =4.55 K <sub>4</sub> =2.89			
	Medium: MeCN, 0.1 M (PyH)CF <sub>3</sub> SO <sub>3</sub> ; DH(K <sub>1</sub> )=0.9, DH(K <sub>2</sub> )=-9.3, DH(K <sub>3</sub> )=-20.8, DH(K <sub>4</sub> )=-4.5 kJ mol <sup>-1</sup>					
Zn++	ISE non-aq 25°C 100% C	H	K <sub>1</sub> =3.82	B <sub>2</sub> =5.65	1990PDa (1432)	23
	Medium: Pyridine, 0.1 M (PyH)CF <sub>3</sub> SO <sub>3</sub> ; DH(K <sub>1</sub> )=0.3, DH(K <sub>2</sub> )=-8.4 kJ mol <sup>-1</sup>					
Zn++	oth non-aq 25°C 100% U		K <sub>1</sub> =1.6	B <sub>2</sub> =4.80	1989HOa (1433)	24
			K <sub>3</sub> =2.2 K <sub>4</sub> =-0.6			
	by Raman spectroscopy in DMSO					
Zn++	EMF NaClO <sub>4</sub> 25°C 5.00M U			B <sub>2</sub> =-0.5 B <sub>4</sub> =-0.64	1988FSa (1434)	25
	molal equilibrium constants: B <sub>2</sub> =-0.68; B <sub>4</sub> =-1.00					
Zn++	cal non-aq 30°C 100% U	H			1988GKa (1435)	26
			K <sub>3</sub> >6 K <sub>4</sub> =2.65			
	Medium: CH <sub>3</sub> CN. DH(K <sub>3</sub> )=-20.5, DH(K <sub>4</sub> )=-15.3 kJ mol <sup>-1</sup> ; DS(K <sub>4</sub> )=0 J K <sup>-1</sup> mol <sup>-1</sup>					
Zn++	ix mixed 25°C 90% C	I	K <sub>1</sub> =4.98	B <sub>2</sub> =8.81	1986KUa (1436)	27

Medium: 90% acetone/H<sub>2</sub>O. In 80% acetone/H<sub>2</sub>O, K<sub>1</sub>=3.77, B<sub>2</sub>=5.97, B<sub>3</sub>=7.61.  
In 70% acetone/H<sub>2</sub>O, K<sub>1</sub>=2.33, B<sub>2</sub>=4.07

Medium: DMSO. In DMF; K1=2, B2=7.1, B3=8.8. Data also in DMSO/H2O & DMF/H2O mixtures. Medium: 0.5 M NH4ClO4

Zn++ ISE non-aq 25°C 100% U K1=3.60 1982SSd (1440) 31  
Medium: dimethylacetamide

Medium: DMSO, 0.1 M NH<sub>4</sub>ClO<sub>4</sub>. Mean values from potentiometry (amalgam) and calorimetry. DH(B1)=22.3; DH(B2)=42.2; DH(B3)=36.3 kJ mol<sup>-1</sup>

Medium: DMSO, 0.1 M NH<sub>4</sub>ClO<sub>4</sub>. DH(K1)=23.7; DH(B2)=43.1; DH(B3)=36.3 kJ mol<sup>-1</sup>

Zn++	ISE non-aq 25°C 100% U	K1=2.78	B2=6.78	1979LTb	(1444)	35
		B3=9.95				
		B4=10.30				
		B5=11.18				
		B6=11.11				

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Zn++      ISE NaClO4 25°C 3.00M U   I M      K1=-0.55  B2=-0.22  1978FKa  (1445)  36
          B3=-1.16
          B(ZnClBr2)=-0.72
          B(ZnCl3Br)=0.32
          B(ZnCl2Br2)=-0.66
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Zn++ EMF oth/un 25°C 1.50M U I K1=-1.05 1978LKd (1446) 37  
K1 defined in molality (Moles per kg) terms: K1=m(ZnBr)/m(Zn).m(Br), ionic  
strength in m(Zn(ClO4)2). K1 (m): -1.05 (2.0), -0.8 (2.5), -0.7 (3.0)

A=Tetraphenylporphyrin. Medium: CH<sub>2</sub>Cl<sub>2</sub>, 0.0124 Bu<sub>4</sub>N.BF<sub>4</sub>

Zn++ ISE non-aq 25°C 100% C H K1=0.85 B2=3.74 1976ABc (1448) 39  
K3=1.34

Medium: Dimethylsulfoxide, 1.0 M NH<sub>4</sub>ClO<sub>4</sub>; DH(K1)=27.8, DH(K2)=9.1,  
DH(K3)=-4.2 kJ mol<sup>-1</sup>

Zn++ ISE non-aq 25°C 100% C K1=0.85 B2= 3.74 1976ABg (1449) 40  
K3=1.34

Medium: 1 M NH<sub>4</sub>ClO<sub>4</sub> in DMSO  
Zn(Hg)-electrode

Zn++ ISE NaClO<sub>4</sub> 25°C 4.00M U I M K1=0.06 1975FCa (1450) 41  
B3=0.28

B4=-0.75

B(ZnBr(SO<sub>4</sub>))=-0.10

B(ZnBr(SO<sub>4</sub>)<sub>2</sub>)=0.50

B(ZnBr<sub>2</sub>(SO<sub>4</sub>))=1.18, B(ZnBr<sub>3</sub>(SO<sub>4</sub>))=-0.22, B(ZnBr<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub>)=0.70, B(ZnBr(SO<sub>4</sub>)<sub>3</sub>)=  
1.00. Data also for I=1,2 and 3 and Cd/Zn polynuclear complexes

Zn++ ix NaClO<sub>4</sub> 20°C 0.69M U K1=0.22 B2=-0.10 1974MId (1451) 42  
B3=-0.60  
B4=-1.21

Medium: HClO<sub>4</sub>

Zn++ EMF R4N.X 55°C ? U T K1=1.36 1974NGb (1452) 43  
Medium: NH<sub>4</sub>NO<sub>3</sub>(H<sub>2</sub>O)<sub>2</sub>. K1=1.38(70 C), 1.41(85 C) x units

Zn++ dis R4N.X 55°C ? U T K1=0.43 B2=0.91 1974NGc (1453) 44  
Medium: NH<sub>4</sub>NO<sub>3</sub>(H<sub>2</sub>O)<sub>2</sub>. K1=0.45, K2=0.48(70 C); K1=0.48, K2=0.54(85 C) m units

Zn++ kin NaClO<sub>4</sub> 25°C 1.0M U K1=-0.32 1973HHb (1454) 45

Zn++ ISE non-aq 25°C 100% U K1=3.30 B2=3.84 1973SLd (1455) 46  
B3=5.08

Medium: DMSO. Zn amalgam electrode. By least squares: K1=3.41, B2=3.79, B3=5.23

Zn++ dis NaClO<sub>4</sub> 25°C 1.0M U K1=-0.5 1972MSc (1456) 47

Zn++ ISE non-aq ? 100% U K1=4.0 B2=7.0 1971KTj (1457) 48  
B3=10.4  
B4=11.1

Medium: DMF, 2 M LiClO<sub>4</sub>. Zn amalgam electrode

Zn++ dis NaClO<sub>4</sub> ? 1.0M U K1=-1.46 B2=-0.99 1970LEa (1458) 49  
K3=-2.24

Zn++ oth oth/un 20°C var U H K1=-1.9 B2=-0.50 1970MPa (1459) 50  
K3=-0.2  
K4=-0.3

Method: Raman. DH(K1)=21.3 kJ mol<sup>-1</sup>, DH(K2)=-13.0, DH(K3)=-3.3,  
DH(K4)=-1.3; DS(K1)=36.4 J K<sup>-1</sup> mol<sup>-1</sup>, DS(K2)=-16, DS(K3)=-14.6, DS(K4)=-10.5

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Zn++      cal NaClO4 25°C 3.0M U   H           1969GEa (1460) 51
DH(K1)=1.46 kJ mol-1, DH(K2)=41.8, DH(K3)=(-8); DS(K1)=-5.9 J K-1 mol-1,
DS(K2)=125, DS(K3)=(-17)
-----
Zn++      dis NaClO4 25°C 1.0M U T H   K1=0.10  B2=-0.12 1969MAa (1461) 52
Medium: HClO4. DH(K1)=24.7 kJ mol-1, DS=83.7 J K-1 mol-1, DH(B2)=23.0,
K1=-0.05, B2=-0.19(10 C); K1=0.41, B2=0.47(40 C)
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Zn++      ISE NaClO4 25°C 4.0M U   I M   K1=0.06  B2=-0.82 1965MRc (1462) 53
                                           B3=0.28
                                           B4=-0.74
Method:amalgam electrode. Medium: LiClO4. In 4 M LiBr: K(Na+ZnL4)=-0.34,
0.09(K),0.17(Rb),0.39(Cs),0.15(NH4). K(Na+ZnL3)=-1.0,-0.5(K) etc.also others
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Zn++      oth NaClO4 25°C 3.0M U   I M   K1=-0.19 B2=-1.15 1965MRc (1463) 54
                                           B3=-0.55
                                           B4=-1.5
Method:amalgam electrode. Medium: LiClO4. In 3M LiBr: K(Na+ZnL4)=-0.41,
0.15(K),0.20(Rb),0.21(Cs),0.08(NH4). K(Na+ZnL3)=-0.85,-0.54(K) etc.
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Zn++      oth non-aq      100% U           1963BCa (1464) 55
                                           K3=5.5
                                           K4=3
Method:from dielectric constants,"Job's method". Medium:Et2O
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Zn++      dis oth/un 20°C var U   M           1962MSc (1465) 56
Medium: HBr. K(H+ZnBr3+3T(org)=HZnBr3T3(org))=1.08; T=TBP, org=C6H6.
K(2H+ZnBr4+2T(org)=H2ZnBr4T2(org)=1.0. K(ZnBr2+2T(org)=ZnBr2T2(org)=0.23.
-----
Zn++      ix  NaClO4 20°C 0.69M U           K1=0.22  B2=-0.10 1961SMc (1466) 57
                                           K3=-0.64
                                           K4=-0.26
                                           B4=-1
Method: cation exchange; medium: HClO4
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Zn++      oth oth/un 25°C var U           K1=-0.5  B2=-0.5 1961YPa (1467) 58
                                           K3.K4=-0.7
Method: Raman spectra.
-----
Zn++      ix  oth/un 25°C var U           K1=0      B2=-0.15 1957HHa (1468) 59
                                           K3=-0.30
                                           K4=-0.52
Method: anion exchange; medium HBr.
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Zn++      EMF oth/un 25°C 4.50M U   H   K1=-0.60 B2=-0.97 1956SLa (1469) 60
                                           K3=-0.73
                                           K4=0.44
Method:Zn/Hg electrode. DH(K1)=0, DH(K2)=0, DH(K3)=110, DH(K4)=-110 kJ mol-1
DS(K1)=-11.5, DS(K2)=-7.1, DS(K3)=357, DS(K4)=-362? J K-1 mol-1

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 Zn++ EMF NaClO4 25°C 3.0M U K1=-0.60 1944SLa (1470) 61  
 Method: Zn/Hg electrode. B2>-1.0 or B3>-1.0  
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Zn++ EMF oth/un 20°C var U K1=1.7 1936FRa (1471) 62  
 Method: Zn/Hg electrode. K1=1.2 to 2.3  
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 BrO3- HL Bromate (6017)  
 Bromate;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	kin	non-aq	230°C	100%	U T		K1=1.1	1961DLa (2394)	63
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Medium: liquid (K,Na)NO3. K1=0.1(250 C), m units  
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 CN- HL Cyanide CAS 74-90-8 (230)  
 Cyanide;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	vlt	NaClO4	25°C	0.50M	U		K1=5.36	2000LTa (2502)	64
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Voltammetry using Hg/CN- electrode.  
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Zn++	cal	NaCl	25°C	1.0M	C IH			1996SMc (2503)	65
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DH(B4)=-118.2 kJ mol<sup>-1</sup>, DS(B4)=-40.3 J mol<sup>-1</sup> K<sup>-1</sup>.  
 In 1.0 M NaClO4, DH(B4)=-116.2 kJ mol<sup>-1</sup>, DS(B4)=-6.7 J mol<sup>-1</sup> K<sup>-1</sup>.  
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Zn++	gl	NaCl	25°C	3.0M	C		K1=4.98 B2=10.19 B3=14.54 B4=18.62 B(ZnH-1L3)=4.08 B(ZnH-2L2)=0.71	1990VHb (2504)	66
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Zn++	gl	NaClO4	25°C	0.10M	C M		B2=10.8 B3=16.12 B4=20.41 B5=22.9 B(ZnL3(OH))=20.4	1988MMb (2505)	67
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Zn++	ISE	oth/un	25°C	3.0M	C TI	R	K1=5.3 B2=11.02 B3=16.68 B4=21.57	1987BEa (2506)	68
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IUPAC evaluation (H Persson, Acta Chem.Scand,25,543)  
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Zn++	ISE	KNO3	25°C	0.10M	C		K1=5.64 B2=11.04 B3=11.38 B4=21.42	1985YWa (2507)	69
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Zn++	gl	R4N.X	23°C	2.0M	U M			1974KBc (2508)	70
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K(ZnA4+L=ZnA3L+A)=3.05

$K(\text{ZnA}_3\text{L}+2\text{L}=\text{ZnA}_2\text{L}_2+\text{A})=2.49$   
 $K(\text{ZnA}_2\text{L}_2+\text{L}=\text{ZnAL}_3+\text{A})=3.31$   
 $K(\text{ZnAL}_3+\text{L}=\text{ZnL}_4+\text{A})=1.9$

Medium:  $\text{NH}_4\text{NO}_3$ .  $\text{A}=\text{NH}_3$

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Zn++	EMF oth/un	25°C	0.50M	U	K1=4.94	B2=9.7	1972CDa	(2509)	71
					B3=14.7				
					B4=18.44				

Method: emf with amalgam electrode. Medium:  $\text{K}_2\text{SO}_4$

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Zn++	gl	oth/un	10°C	0.0	U T H	B2=11.47	1971IJa	(2510)	72
						K3=5.17			
						K4=3.79			

40 C:  $B_2=10.70$ ,  $K_3=4.50$ ,  $K_4=3.10$ .  $\text{DH}(B_2)=-43.9 \text{ kJ mol}^{-1}$ ,  $\text{DH}(K_3)=-38.9$ ,  $\text{DH}(K_4)=-33.1$ . At 10 C, DH values are -43.8, -39.7, -31.0

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Zn++	EMF	$\text{NaClO}_4$	25°C	3.0M	U	K1=5.3	B2=11.0	1971PEc	(2511)	73
						B3=16.7				
						B4=21.6				
						$K_{\text{so}}=-15.5$				

Method: emf with amalgam electrode

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Zn++	gl	$\text{KNO}_3$	25°C	0.10M	U	B2=10.64	1969MBa	(2512)	74
						B3=15.74			
						B4=19.98			

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Zn++	gl	$\text{KNO}_3$	25°C	0.10M	U M	K1=5.27	B2=10.22	1969MBa	(2513)	75
						$K(\text{Zn}(\text{His})+3\text{CN})=13.77$				

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Zn++	vlt	non-aq	195°C	100%	U	B2=5.1	1967ETa	(2514)	76
						$B_3=6.6(6.1?)$			
						B4=8.65			

Medium: molten  $\text{KSCN}$

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Zn++	gl	oth/un	25°C	0.0	U	B2=11.07	1965ICa	(2515)	77
						K3=4.98			
						K4=3.57			
						B4=19.62			

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Zn++	cal	oth/un	25°C	0.0	U H		1965ICa	(2516)	78
						$\text{DH}(B_2)=-45.1$ , $\text{DH}(K_3)=-35.1$ , $\text{DH}(K_4)=-35.9 \text{ kJ mol}^{-1}$			

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Zn++	cal	oth/un	25°C	var	U H		1964GHc	(2517)	79
						$\text{DH}(B_4)=-115.8 \text{ kJ mol}^{-1}$			

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Zn++	EMF	oth/un	?	dil	U		1961PJa	(2518)	80
						K4=5			

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Zn++	oth	oth/un	?	var	U		1960SMa	(2519)	81
						$B_4/B(\text{Zn}(\text{OH})_4)=-1 ?$			



K5.K6=1.5 ?

Method: chemical analysis

Zn++	ISE none	25°C	0.0	U		1959Bgb	(2520)	82
					B4=16.72			
Zn++	ISE none	25°C	0.0	U		1953Sub	(2521)	83
					B4=16.76			
Zn++	ISE oth/un	18°C	var	U		1951STa	(2522)	84
					B4=12.60(?)			
Zn++	cal oth/un	??	?	U	H	1951YAa	(2523)	85
	DH(B4)=-100.0 kJ mol-1							
Zn++	ISE oth/un	18°C	var	U		1941BJa	(2524)	86
					K4=ca.2.7			
Zn++	ISE oth/un	12°C	var	U		1932BDa	(2525)	87
					B4=18.5 to 20			
Zn++	ISE oth/un	18°C	var	U		1931MAa	(2526)	88
					B3=20.25 or B4=17.3			
Zn++	vlt oth/un	rt	var	U		1929PIa	(2527)	89
					B4=16.0			
					B5=20.17			
					Kso(ZnL2)=-12.59			
Zn++	ISE oth/un	18°C	var	U		1904KUa	(2528)	90
					B3=17.52			
Zn++	ISE oth/un	21°C	var	U		1903EUa	(2529)	91
					B4=16.9			

\*\*\*\*\*

CO L Carbon monoxide CAS 630-08-0 (551)  
Carbon monoxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	EMF	NaCl04	20°C	1.0M	U				1971GKc	(2782) 92
								K(Zn+Fe(CO)4)=8.60		
								K(Zn+HFe(CO)4)=1.3		
								K(Zn+ZnFe(CO)4)=1.5		

K(2ZnFe(CO)4+2H2O=(HOZnFe(CO)4)2+2H)=-15.7

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ gl NaClO4 25°C 0.0 C TI 2000PKa (2986) 93  
 $K_{so}(ZnCO_3(s)+2H=Zn+CO_2+H_2O)=7.25$ . Solid is smithsonite.  
 Value derived from data for 1.0-3.0 m NaClO4. Also data at 15-50 C.

-----

Zn++ vlt oth/un ? var C 1995VPa (2987) 94  
 $K_{1eff}=2.90$   
 $B_{2eff}=4.03$   
 pH=7.9 of Pisuerga river water. Ionic strength ranged from 0.01 M to 0.75M.  
 Method: Anodic Stripping Voltammetry.

-----

Zn++ kin NaClO4 25°C 0.10M M M 1992KKb (2988) 95  
 $K(ZnA+HL)=4.0$   
 A:1,5,9-triazacyclododecane

-----

Zn++ dis NaCl 25°C 0.68M C  $K_1=3.30$  1990SBb (2989) 96  
 $K(Zn+HL)=0.85$

-----

Zn++ ISE NaClO4 25°C 3.00M C  $B_2=6.9$  1987FGa (2990) 97  
 $B(Zn(OH)_2L)=12.2$

-----

Zn++ sp NaClO4 25°C 0.01M C TIH 1985EFa (2991) 98  
 $K(Zn+HCO_3)=1.44$   
 Data for 25-45 C and 0.0012-0.05 M NaClO4.  
 $DH(Zn+HCO_3)=8.6 \text{ kJ mol}^{-1}$ .

-----

Zn++ gl none 25°C 0.0 U 1985FGa (2992) 99  
 $K(Zn+HL)=0.8$   
 $B(Zn_2L)=5.1$

-----

Zn++ oth oth/un 25°C 0.0 C H  $K_1=4.80$  1984FCa (2993) 100  
 $K(Zn+HCO_3)=2.20$   
 $K(Zn+HCO_3)$  calc using electrostatic model.  $K_1$  from assessment of lit data.  
 $DH(K_1)=-0.4 \text{ kJ mol}^{-1}$ ,  $DH(Zn+HCO_3)=4.3$  (from DS calc by electrostat model)

-----

Zn++ gl none 10°C 0.0 M T H 1978RBc (2994) 101  
 $K(Zn+HL)=1.42$   
 At 25 C:  $K(Zn+HL)=1.40$ ; 40 C: 1.47; 55 C: 1.57; 70 C: 1.63

-----

Zn++ vlt KNO3 25°C 0.10M U  $K_1=3.9$  1976BHa (2995) 102

-----

Zn++ oth none 50°C 0.0 U T 1969HEa (2996) 103  
 $K_{so}=-10.05$   
 Method: Estimated data. Temp. range 50-300 C, (smithsonite).  $K_{so}=-10.19(60C)$ ;  
 $-10.88(100 C)$ ;  $-11.77(150 C)$ ;  $-12.90(200 C)$ ;  $-14.18(250 C)$ ;  $-15.52(300 C)$

-----

Zn++ sol NaClO4 25°C 0.20M U 1969SRa (2997) 104  
 $*K_{pso}=7.57$   
 $*K_{pso}=7.35$  (0 corr)  
 $*K_{pso}(0.2Zn_5(OH)_6L_2(s)+2H=Zn+0.4CO_2(g)+1.6H_2O)=9.42$ , (9.20, 0 corr)

-----  
 Zn++ sol oth/un 20°C 0.06M U I M 1952SAa (2998) 105  
 Ks=-14.42  
 Ks:  $\text{ZnL0.36(OH)1.28}=\text{Zn}+\text{0.36L}+\text{1.28OH}$ . By Zn electrode, I=0 corr. Kso=-10.84  
 -----

Zn++ oth none 25°C 0.0 U 1935KAa (2999) 106  
 Kso( $\text{ZnCO}_3(\text{s})$ )=-10.00  
 +Kps=-7.51  
 From thermodynamic data. +Kps:  $\text{ZnCO}_3(\text{s})+\text{CO}_2(\text{g})+\text{H}_2\text{O}=\text{Zn}+2\text{HCO}_3$ .  
 By solubility Kso=-10.78  
 -----

Zn++ sol none 25°C 0.0 U T 1918SMa (3000) 107  
 Kso( $\text{ZnCO}_3(\text{s})$ )=-10.68  
 +Kso=-6.82  
 I=0 corr. +Kso:  $\text{ZnCO}_3(\text{s})+\text{H}_2\text{CO}_3=\text{Zn}+2\text{HCO}_3$ . +Kso=-6.78(30 C)  
 -----

Zn++ sol oth/un 25°C var U 1911AVa (3001) 108  
 Kso( $\text{ZnCO}_3(\text{s})$ )=-9.06  
 -----

\*\*\*\*\*  
 C2N3- HL Dicyanamide CAS 504-66-5 (2917)  
 Dicyanamide; (NC.N.CN)-  
 -----

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

Zn++	ISE	non-aq	25°C	100%	C		K1=2.11	1982SSd (3467)	109
------	-----	--------	------	------	---	--	---------	----------------	-----

Medium: dimethylacetamide  
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\*\*\*\*\*  
 C3N3O- HL (2919)  
 Nitrosodicyanmethanide; (ON.C(CN)2)-  
 -----

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

Zn++	ISE	non-aq	25°C	100%	C		K1=1.95	1982SSd (3474)	110
------	-----	--------	------	------	---	--	---------	----------------	-----

Medium: dimethylacetamide  
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\*\*\*\*\*  
 C4N3- HL CAS 454-50-2 (2918)  
 Tricyanomethanide; (C(CN)3)-  
 -----

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

Zn++	ISE	non-aq	25°C	100%	C		K1=2.0	1982SSd (3476)	111
------	-----	--------	------	------	---	--	--------	----------------	-----

Medium: dimethylacetamide  
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\*\*\*\*\*  
 C6N6Co--- H3L Cyanocobaltate (5470)  
 Hexacyanocobaltate; [Co(CN)6]---  
 -----

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

Zn++	con	oth/un	0°C			U	K1=3.5	1969SSb (3481)	112
------	-----	--------	-----	--	--	---	--------	----------------	-----

\*\*\*\*\*

C6N6Fe---- H4L (2191)

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

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

Zn++	con	oth/un	?		U				1970BEa	(3527) 113
------	-----	--------	---	--	---	--	--	--	---------	------------

Kso=-16.8  
Ks(K2Zn3L2=2K+3Zn+2L)=-38.3

Zn++	ISE	oth/un	25°C	0.0	U				1964RPa	(3528) 114
------	-----	--------	------	-----	---	--	--	--	---------	------------

Kso(Zn2L)=-15.68  
Kso(KZn1.5L)=-21.09

Method:amalgam electrode. Medium:0 corr

Zn++	sol	oth/un	25°C	var	U				1961BSb	(3529) 115
------	-----	--------	------	-----	---	--	--	--	---------	------------

Kso=-14.22 ?

Zn++	sol	oth/un	25°C	var	U				1956Tgb	(3530) 116
------	-----	--------	------	-----	---	--	--	--	---------	------------

Kso=-15.39

\*\*\*\*\*

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

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

Zn++	EMF	non-aq	25°C	100%	C	HM			2001KTa	(3933) 117
------	-----	--------	------	------	---	----	--	--	---------	------------

B(Zn(phen)Cl2)=16.4  
B(Zn(phen)2Cl)=16.0  
B(Zn(phen)2Cl2)=18.69

Medium: DMF, 0.40 M Et4NClO4. Method: Zn/Hg electrode. By calorimetry,  
DH(Zn(phen)Cl2)=-19 kJ mol-1, DH(Zn(phen)2Cl)=-57, DH(Zn(phen)2Cl2)=-60

Zn++	ISE	NaNO3	25°C	0	C	TI		K1=0.46	1998RSa	(3934) 118
------	-----	-------	------	---	---	----	--	---------	---------	------------

Method: Cl-ISE, extrapolated to I=0

Zn++	sol	NaCl	200°C	0.10M	C			K1=1.7 B2= 3.00	1998WBa	(3935) 119
------	-----	------	-------	-------	---	--	--	-----------------	---------	------------

Method: solubility of ZnO (zincite) in 0.10 m NaCl.

Zn++	oth	NaCl	25°C	0.0	U	I		K1=0.43 B2= 0.61	1996AEb	(3936) 120
------	-----	------	------	-----	---	---	--	------------------	---------	------------

B3=0.51  
B4=0.20

Method: SIT theory applied to literature data. Medium: LiCl, infinite  
dilution. In 1.0 M LiCl, K1=-0.08, B2=-0.35, B3=-0.34, B4=-0.27.

Zn++	sol	KCl	400°C	var	U	TI		K1=7.70 B2=8.40	1994CHa	(3937) 121
------	-----	-----	-------	-----	---	----	--	-----------------	---------	------------

300-600 C and 0.5-2.0 kbar. Constants at I=0, 1.0 kbar

Zn++	gl	NaClO4	25°C	0.10M	M	M			1994KTa	(3938) 122
------	----	--------	------	-------	---	---	--	--	---------	------------

K(ZnA+L)=1.5

A:1,4,7,10-Tetraazacyclododecane. By kinetic methods, K=1.2

-----  
 Zn++ cal non-aq 25°C 100% C H K1=8.6 B2=16.40 1994SKa (3939) 123  
 B3=21.4  
 B4=23.4

Medium: Dimethylacetamide. DH(K1)=-1.8 kJ mol<sup>-1</sup>, DH(B2)=-22.5, DH(K3)=-39.4, DH(K4)=-50

-----  
 Zn++ kin NaClO4 25°C 0.10M M M 1992KKb (3940) 124  
 K(ZnA+L)=1.3

A:1,5,9-triazacyclododecane

-----  
 Zn++ cal non-aq 25°C 100% U H K1=9.49 B2=16.01 1991AIa (3941) 125  
 K3=3.64  
 K4=2.29

Medium: hexamethylphosphoric triamide, 0.1 M (C4H9)4NClO4. Also DH and DS

-----  
 Zn++ ISE non-aq 25°C 100% C I 1990CHb (3942) 126  
 B3=20.0  
 B4=24.9

Medium: MeCN, 0.1 M Et4NClO4. Also data at 0% MeCN: K1=-0.34, B2=-0.71;  
 5% MeCN: K1=0.0; 10% AN: K1=0.41; 50% AN: K1=2.7, B2=6.25, B3=7.48

-----  
 Zn++ ISE non-aq 25°C 100% C IH K1=8.07 B2=15.26 1990PDa (3943) 127  
 K3=4.87  
 K4=2.89

Medium: MeCN, 0.1 M (PyH)CF3SO3; DH(K1)=-5.8, DH(K2)=-7.1, DH(K3)=-20.0, DH(K4)=-11.3 kJ mol<sup>-1</sup>. In pyridine K1=2.73, K2=2.11; DH(K1)=-2.5, DH(K2)=6.7

-----  
 Zn++ sp non-aq 25°C 100% U H K1=3.5 B2=8.6 1990SIa (3944) 128  
 B3=12.21  
 B4=13.17

Medium: DMSO, 0.4 M Et4NBF4. By calorimetry: DH(K1)=16 kJ mol<sup>-1</sup>, DH(B2)=24.8 DH(B3)=13.3, DH(B4)=6.6

-----  
 Zn++ EMF NaClO4 25°C 5.00M U I B2=0.57 1988FSb (3945) 129  
 B4=0.63

Molal equilibrium constants: B2=0.39; B4=0.27

-----  
 Zn++ cal non-aq 30°C 100% U H 1988GKa (3946) 130  
 K3>6  
 K4=3.34

Medium: CH3CN. DH(K3)=-26.4, DH(K4)=-21.1 kJ mol<sup>-1</sup>; DS(K4)=6 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
 Zn++ ISE non-aq 25°C 100% U K1=4.08 B2=9.8 1988SGa (3947) 131  
 Medium: DMSO, 0.1 M Et4NCl

-----  
 Zn++ sol NaCl 100°C var M TIH K1=1.2 B2= 1.90 1987BBe (3948) 132  
 B3=2.3  
 B4=1.4

Solubility zincate (ZnO) and smithsonite (ZnCO3) in 0-5.0 m NaCl-CO2 soln.

Data 100-350 C. At 100 C, DH=10.0 (K1), 14.6 (B2), 18.8 (B3), 16.3 (B4).

-----  
Zn++ EMF non-aq 25°C 100% U H K1=2.81 1987BCb (3949) 133  
Medium: MeOH, 0.05 M Et4NClO4  
-----

Zn++ cal non-aq 25°C 100% C H K1=4.81 B2=11.80 1987IOa (3950) 134  
K3=5.26  
K4=2.22  
Medium: N,N-dimethylformamide, 0.4mol dm<sup>-3</sup> Et4NClO4. DH(K1)=14.7 kJ mol<sup>-1</sup>,  
DH(K2)=1.4, DH(K3)=-17.6, DH(K4)=-7.9  
-----

Zn++ EMF mixed 25°C 30% U K2=0.76 1987PIa (3951) 135  
B3=1.43  
B4=1.64  
Medium: 30% DMF/H2O  
-----

Zn++ ISE non-aq 30°C 100% U K1=12.1 B2=25.50 1986BWa (3952) 136  
K3=10.1  
K4=5.2  
Medium: Sulfolane  
-----

Zn++ dis NaNO3 25°C 1.1M U I K1=-0.25 B2= 1.89 1986PSa (3953) 137  
For I=0 (extrapolation) K1=0.35  
In 0.1 M KNO3 K1=-0.19; in 0.1 NH4NO3 K1=-0.22  
-----

Zn++ sol oth/un 100°C var U TIH K1=1.80 B2=1.92 1986RSb (3954) 138  
B3=1.36  
B4=2.04  
Constants valid at I=0. I=0.3-3.5 M HCl. 100-350 C.  
DH(K1)=52.7 kJ mol<sup>-1</sup>; DH(K2)=-4.2; DH(K3)=-9.7; DH(K4)=8.7  
-----

Zn++ EMF non-aq 25°C 100% U I K1=3 B2=8.2 1985GSa (3955) 139  
B3=10.7  
Medium: DMF. In DMSO; B2=6.16, B3=8.76. Data also in DMSO/H2O & DMF/H2O  
mixtures. Medium: 0.5 M NH4ClO4  
-----

Zn++ ISE oth/un 25°C 2.0M U I K1=-0.33 B2=-0.46 1985PBc (3956) 140  
Zn-electrode; in Mg(ClO4)2; for I=3.0 M K1=-0.28; B2=-0.38  
in Ca(ClO4)2 (I=2.0) K1=-0.29; B2=-0.42; I=3.0: K1=-0.22;  
-----

Zn++ ISE alc/w 25°C 100% U K1=3.89 B2=8.13 1982DKa (3957) 141  
K3=2.60  
K4=1.41  
-----

Zn++ sp non-aq 25°C 100% U I B2=7.04 1982LPa (3958) 142  
B3=11.32  
Medium: DMSO, 0.2 M M(ClO4)2  
-----

Zn++ ISE non-aq 25°C 100% U K1=3.80 1982SSd (3959) 143  
Medium: dimethylacetamide  
-----

In 99% mol/mol DMSO/H<sub>2</sub>O, 0.5M NH<sub>4</sub>ClO<sub>4</sub>. In 69% DMSO/H<sub>2</sub>O, B<sub>2</sub>=5.38, B<sub>3</sub>=7.35.  
In 58% DMSO/H<sub>2</sub>O, K<sub>1</sub>=0.2, B<sub>2</sub>=4.84, B<sub>3</sub>=6.57. Also data for other compositions

Zn++	ISE non-aq 25°C 100% U	K1=4.0	B2=8.48	1979LTb	(3962) 146
		B3=13.08			
		B4=13.60			
		B5=14.30			
		B6=14.85			

Zn++	dis oth/un 25°C	? U	K1=0.38	B2=0.28	1978BZa	(3963)	147
			B3=-0.17				
			B4=-0.82				

$$B(\text{ZnClI}_2) = -0.72, \quad B(\text{ZnCl}_2\text{I}) = -0.37 \quad \text{and} \quad B(\text{ZnClI}_3) = -0.08.$$

A=Tetraphenylporphyrin. Medium: CH<sub>2</sub>Cl<sub>2</sub>, 0.0124 Bu<sub>4</sub>N.BF<sub>4</sub>

Zn++      dis NaNO3    RT      1M U      K1=0.73    B2= 1.17    1977SKg    (3967) 151  
K3=0.03  
K4=-0.57

Zn++ ISE non-aq 25°C 100% C H K1=1.93 B2=5.83 1976ABc (3968) 152  
K3=2.23  
K4=1.0

Medium: 1 M  $\text{NH}_4\text{ClO}_4$  in DMSO  
Zn(Hg)-electrode

Method: extraction from 0.005-0.5 M HCl solution into Aliquot-336/benzene.

$B(\text{ZnCl}(\text{SO}_4)_2)=0.48$ ,  $B(\text{ZnCl}_3(\text{SO}_4))=1.30$ ,  $B(\text{ZnCl}_2(\text{SO}_4)_2)=0.60$ . Data also for  $I=1, 2$  and  $3$  and  $\text{Cd/Zn}$  polynuclear complexes

At 60 C, I=3: K1=-0.2, B2=0.6, B3=0.8. Method: Zn amalgam and Ag electrodes

Medium: TBP. Method: Ag electrode

Medium: LiCl in tributylphosphate, saturated with H<sub>2</sub>O; AgCl/Cl<sup>-</sup>-electrode

Medium: HCl04

Medium:  $\text{NH}_4\text{NO}_3(\text{H}_2\text{O})_2$ .  $K_1=0.65$ ,  $K_2=1.00$ ,  $K_3=0.51$ ,  $K_4=0.65(70^\circ\text{C})(\text{m units})$

Zn++      ISE non-aq 25°C 100% U      1973AMa (3980) 164  
B3=20.1  
B4=23.4



Medium: MeCN, 0.1 M Et<sub>4</sub>NClO<sub>4</sub>. Method: Zn amalgam electrode

Zn++ EMF non-aq 300°C 100% U 1973BBc (3981) 165  
K<sub>4</sub>=2.15(m units)

Medium: (K,Al)Cl, 51.7% KCl

Zn++ ISE mixed 25°C 50% U K<sub>1</sub>=1.93 B<sub>2</sub>=2.51 1973BMa (3982) 166  
B<sub>3</sub>=2.90

Medium: 50% v/v hexamethylphosphortriamide/H<sub>2</sub>O, 2 M NH<sub>4</sub>NO<sub>3</sub>

Zn++ kin NaClO<sub>4</sub> 25°C 1.0M U K<sub>1</sub>=-0.06 1973HHb (3983) 167

Zn++ ISE non-aq 25°C 100% U K<sub>1</sub>=3.48 B<sub>2</sub>=6.00 1973SLd (3984) 168  
B<sub>3</sub>=8.64

Medium: DMSO, 1 M LiClO<sub>4</sub>. By least squares: K<sub>1</sub>=3.38, B<sub>2</sub>=5.90, B<sub>3</sub>=8.65.

Method: Zn amalgam electrode

Zn++ sol NaClO<sub>4</sub> 25°C 0.20M U K<sub>1</sub>=0.78 1972GSa (3985) 169

Zn++ sol NaClO<sub>4</sub> 25°C 0.20M U I K<sub>1</sub>=0.78 1972GSa (3986) 170  
\*K<sub>so</sub>(Zn(OH)1.6Cl0.4)=8.22  
\*K<sub>so</sub>(Zn(OH)1.8Cl0.2)=9.84

Zn++ dis NaClO<sub>4</sub> 25°C 1.0M U K<sub>1</sub>=0.00 1972MSc (3987) 171

Zn++ EMF non-aq 25°C 100% U B<sub>2</sub>=9.27 1971DTb (3988) 172

Medium: SeOCl<sub>2</sub>, 0.5 M Et<sub>4</sub>NClO<sub>4</sub>

Zn++ EMF NaClO<sub>4</sub> 25°C 3.0M U K<sub>1</sub>=0.00 B<sub>2</sub>=-0.07 1971FCb (3989) 173  
B<sub>3</sub>=0.33

Medium: LiClO<sub>4</sub>

Zn++ ISE NaClO<sub>4</sub> 15°C 3.0M U TI K<sub>1</sub>=-0.11 B<sub>2</sub>=-0.07 1970FCa (3990) 174  
B<sub>3</sub>=0.04  
B<sub>4</sub>=-0.2

Medium: LiClO<sub>4</sub>. K<sub>1</sub>=-0.24, B<sub>2</sub>=-0.34, B<sub>3</sub>=-0.08(I=2); K<sub>1</sub>=-0.05, B<sub>2</sub>=0.46, B<sub>3</sub>=0.74,  
B<sub>4</sub>=0.54(I=4). Method: Zn amalgam electrode. Data from 15 - 65 C

Zn++ dis NaClO<sub>4</sub> ? 1.0M U K<sub>1</sub>=-0.37 B<sub>2</sub>=0.31 1970LEa (3991) 175  
K<sub>3</sub>=-0.30  
K<sub>4</sub>=-0.07

Zn++ ix oth/un ? var U M 1970LEa (3992) 176  
K(ZnBr<sub>2</sub>+L)=0.5  
K(ZnBr<sub>2</sub>L+L)=-0.3

Zn++ cal NaClO<sub>4</sub> 25°C 3.0M U H 1969GEa (3993) 177  
DH(K<sub>1</sub>)=5.5 kJ mol<sup>-1</sup>, DS=15.1 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K<sub>2</sub>)=37.7, DS=113; DH(K<sub>3</sub>)=0, DS=8

Zn++ oth none 50°C 0.0 U T K<sub>1</sub>=0.90 B<sub>2</sub>=1.12 1969HEa (3994) 178

B3=1.14  
B4=0.89

Evaluated from literature data. At 100 C: values: 1.82, 2.13, 2.23, 2.14;  
150 C: 2.78, 3.19, 3.34, 3.35

---

Zn++ ix NaCl ? var U 1969LTa (3995) 179  
K3=-0.3  
K4=-0.1

---

Zn++ dis NaClO4 25°C 1.0M U T H K1=0.83 B2=0.56 1969MAa (3996) 180  
B3=0.66  
Medium: HClO4. K1=0.56, B2=0.32, B3=-0.05(10 C); K1=1.02, B2=0.72, B3=1.05(40 C)  
DH(K1)=26.4 kJ mol<sup>-1</sup>, DS=104 J K<sup>-1</sup> m<sup>-1</sup>; DH(B2)=22.6, DS=88; DH(B3)=52.7, DS=205

---

Zn++ EMF oth/un ? var U B2=0.57 1969SMm (3997) 181  
B3=0.06  
B4=-0.3  
Medium: CaCl<sub>2</sub>; assuming n=coordination number=6. Assuming a c.no. of 4:  
B2=0.60, B3=0.15

---

Zn++ con non-aq 25°C 100% U M 1968LPb (3998) 182  
K(3ZnL2S2+2S=ZnS6+2ZnL2S)=-6.0  
Medium(S): MeCN K=-5.01 in diagram

---

Zn++ oth oth/un 23°C var U K2=0 1968SCc (3999) 183  
K3=0  
Method:electrical migration or transference number. Medium:LiCl var

---

Zn++ ISE oth/un 25°C 0.0 U T 1968SMe (4000) 184  
Ks(Zn(OH)<sub>2</sub>-xClx(H<sub>2</sub>O)<sub>y</sub>)=-13.63  
Data for x=0.5, y=0.7 after 1 hour and times up to 4 months. See also p.2764

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Zn++ oth oth/un var U B2=-1.50 1967GIa (4001) 185  
K3K4=-1.4  
Method:Raman spectra. Medium:(Li,Zn)Cl var

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Zn++ oth oth/un 25°C var U K3=0.8 1967JCa (4002) 186  
Method:from molar volumes

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Zn++ dis oth/un 25°C 0.0 U K1=-0.19 B2=0.18 1966SOa (4003) 187  
B3=-1.4  
B4=-1.52

---

Zn++ ISE oth/un 25°C 4.0M U M 1965RUa (4004) 188  
K(K+ZnCl<sub>3</sub>)=-0.40  
K(K+ZnCl<sub>4</sub>)=0.2  
Method:amalgam electrode. Medium: LiCl

---

Zn++ ISE oth/un 25°C 2.50M U T 1964BMc (4005) 189

B3=1.30

Method:amalgam electrode. Medium:Ca(ClO4)

---

Zn++ ISE NaClO4 25°C 4.0M U M K1=0.3 B2=0 1964MKc (4006) 190  
 K(Na+ZnCl3)=-0.7  
 K(K+ZnCl3)=-0.2  
 K(2K+ZnCl3)=-1  
 K(Rb+ZnCl3)=-0.1  
 K(2Cs+ZnCl3)=-0.5

Method:amalgam electrode. Medium: LiClO4.

---

Zn++ ISE KCl 25°C 4.0M U 1963MIb (4007) 191  
 K(K+ZnCl3)=-0.28  
 K(K+ZnCl4)=0.0

Method:amalgam electrode. Medium: LiCl

---

Zn++ ix none 25°C 0.0 U K1=0.43 B2=0.61 1963MMd (4008) 192  
 B3=0.53  
 B4=0.20

---

Zn++ ix oth/un 25°C 10.0M U 1962MIa (4009) 193  
 K(H+ZnCl4)=0.9  
 K(H+HZnCl4)=0.58

Medium: LiCl

---

Zn++ dis oth/un 20°C var U 1962MSc (4010) 194  
 K(ZnL2+2TBP(C6H6)=ZnL2(TBP)2(C6H6))=-0.8, K(H+ZnL3+3TBP(C6H6)=HZnL3(TBP)3  
 (C6H6))=0.3, K(2H+ZnL4+2TBP(C6H6)=H2ZnL4(TBP)2(C6H6))=-0.4

---

Zn++ ix NaClO4 20°C 0.69M U K1=0.72 B2=0.49 1961SMc (4011) 195  
 K3=-0.68  
 K4=0.37  
 B4=0.18

---

Zn++ ix none 115°C 0.0 U T H B2=2.57 1960KRa (4012) 196  
 I=0 corr. B2=3.30(150 C), DH(B2)=66 kJ mol<sup>-1</sup>

---

Zn++ dis NaClO4 20°C 1.0M U K1=0.2 B2=0.3 1960TDa (4013) 197

---

Zn++ oth oth/un 0°C sat U I K1=0.27 1959KEb (4014) 198  
 Method: freezing point, medium: KClO3 sat. In KClO4 sat. K1=0.68, I=0 corr  
 K1=0.96

---

Zn++ ix none ? 0.0 U K1=-0.5 B2=-1.0 1959Mca (4015) 199  
 K3=1.00  
 K4=-1.0  
 K(H+ZnCl4=HZnCl4)=0.00

---

Zn++ ISE none 25°C 0.0 U 1958ASd (4016) 200  
 Ks(ZnCl0.5(OH)1.5)=-13.4

---

Zn++ ix alc/w 24°C 24% U 1957HHa (4017) 201

K3=1.3  
K4=-1.3  
K(Li+ZnCl4)=1.7  
K(H+ZnCl4)=1.85

Medium: 24 mole % EtOH/H2O. K(2Cs+ZnCl4)=2.7.

Zn++ vlt NaCl04 25°C 2.0M U K1=-0.49 B2=0.02 1957KLa (4018) 202  
K3=-0.09

Zn++ gl NaCl04 25°C 4.0M U I 1957KLb (4019) 203

B(Zn2H-1L)=-7.11

In 4 M NaCl: K(2ZnL3+H2O)=(Zn2L5(OH)+H+L)=7.18

Zn++ cal R4N.X 25°C 25% U H 1957TSa (4020) 204

Medium: 25% NH4Cl/H2O. DH(B4)=29 kJ mol-1

Zn++ oth non-aq 300°C 100% U B2=2.58 1956ARc (4021) 205  
B4=3.29

Method: freezing point, medium: liquid NaNO3, m units

Zn++ ISE oth/un 25°C 4.50M U H K1=-0.32 B2=-0.05 1956SLa (4022) 206  
K3=-0.25  
K4=0.15

Method: Zn/Hg electrode. DH(K1)=0 kJ mol-1, DS=-6 J K-1 m-1; DH(K2)=21.3, DS=77; DH(K3)=59.1, DS=192; DH(K4)=-75.7, DS=-251 ? (misprints in text?)

Zn++ ISE none 25°C 0.0 U 1956TSa (4023) 207  
B4=0.88

Zn++ vlt R4N.X 25°C 20% U 1956TSb (4024) 208  
B4=1

Medium: 20% NH4Cl/H2O

Zn++ gl oth/un 25°C var U 1950FHa (4025) 209  
Ks(ZnCl0.29(OH)1.71)=-14.92  
Ks(ZnCl0.4(OH)1.6)=-14.2

Zn++ ISE NaCl04 25°C 3.0M U K1=-0.19 B2=-0.6 1944SLa (4026) 210  
B3=0.15

Zn++ ISE oth/un 25°C var U K1=0.6 ? 1940RSb (4027) 211

Method: Zn/Hg electrode, medium: ZnCl2

Zn++ con alc/w 25°C 100% U 1934CHa (4028) 212  
K3/K2=-4.80

Medium: EtOH

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

Chlorate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	cal	oth/un	25°C	1.00M	U	H		1975ARa (6021)	213
DH(K1)=-4.37 kJ mol <sup>-1</sup> . DS = -16.9 J K <sup>-1</sup> mol <sup>-1</sup> . Medium: 1.0 M NaClO3									
Zn++	kin	NaClO4	25°C	1.0M	U		K1=-0.12	1973HHb (6022)	214
*****									
ClO4-		HL		Perchlorate			CAS 7001-90-3	(287)	
Perchlorate;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	con	non-aq	25°C	100%	U		K1=1.54	1981LGa (6120)	215
Medium: DMSO; K1 in DMSO/benzene (mole fraction 0.3)=1.77									
Zn++	con	non-aq	25°C	100%	U T		K1=1.7	1973DFa (6121)	216
Medium: MeCN. K1=1.5(-30 C), 1.5(-15 C)									
Zn++	con	none	20°C	0.0	U		K1=1.35	1963FPb (6122)	217
I=0 corr. By Zn electrode, K1=1.6?									
*****									
CrO4--		H2L		Chromate			CAS 7738-94-5	(2382)	
Chromate;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	none	20°C	0.0	U			1954FHa (6453)	218
Ks(Zn(CrO4)0.2(OH)1.6)=-16.3									
*****									
F-		HL		Fluoride			CAS 7644-39-3	(201)	
Fluoride;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ISE	NaClO4	25°C	1.00M	U	I	K1=3.5	1990HTb (6608)	219
Using fluoride ion-selective electrode. Data at 0.01 to 3.0 M NaClO4. B1=3.6, B2=3.8 using amalgam electrodes (1.0 M NaClO4)									
Zn++	ISE	R4N.X	25°C	0.05M	U	I	K1=1.30	1983SBa (6609)	220
Medium: 0.05 M Et4NF. In MeOH, 0.05 Et4NF, K1=3.36									
Zn++	ISE	NaClO4	25°C	1.00M	U	I	K1=1.1	1981KBb (6610)	221
Zn++	sp	non-aq	25°C	100%	U	M		1978NVa (6611)	222
K(ZnA+L) > 4 A=Tetraphenylporphyrin. Medium: CH2Cl2, 0.0124 Bu4N.BF4									
Zn++	ISE	NaClO4	25°C	3.00M	U		K1=0.88	1976KBa (6612)	223

Zn++ cal oth/un 25°C 0.50M U H K1=0.48 1974ARc (6613) 224  
DH(K1)=12.8 kJ mol<sup>-1</sup>, DS=52 J K<sup>-1</sup> mol<sup>-1</sup>

Zn++ ISE NaClO4 25°C 1.0M U K1=0.51 1972BHC (6614) 225  
method:emf with fluoride-ion selective electrode

Zn++      ISE none    25°C   0.0   U      K1=1.15      1971CDb   (6615) 226

Zn++      ISE   NaNO3   16°C   0.50M U      K1=0.45      1970B0a   (6616)   227

Zn++ vlt NaClO4 25°C 1.0M U K1=1.0 1970B0b (6617) 228

Zn++ vlt KNO3 30°C 1.0M U K1=0.95 1969B0a (6618) 229

Zn++ cal NaCl04 25°C 1.0M U H K1=0.75 1969GEa (6619) 230  
DH(K1)=8.3 kJ mol<sup>-1</sup>, DS=42.3 J K<sup>-1</sup> mol<sup>-1</sup>(I=1); DH(K1)=7.66, DS=41.84(I=3)

Zn++ EMF NaCl04 20°C 1.0M U K1=0.81 1969VAa (6620) 231  
Electrode: quinhydrone electrode

Zn++ vlt NaNO3 25°C 0.30M U K1=0.92 1967VKa (6621) 232

Zn++      vlt NaNO3    18°C    1.0M U      K1=1.53      1965SGc    (6622) 233

Zn++ vlt NaCl04 25°C 2.0M U K1=0.85 1963MHa (6623) 234

Zn++ EMF NaClO4 25°C 0.50M U TIH K1=0.73 1958CPa (6624) 235  
K(Zn+HF=ZnF+H)=-2.18  
DH(K1)=6.3 kJ mol<sup>-1</sup>, DS=33 J K<sup>-1</sup> mol<sup>-1</sup>; DH(\*K1)=-9.6, DS=-71. At 15 C: \*K1=-2.15, K1=0.70; 35 C: \*K1=-2.27, K1=0.73. At I=0 corr: K1=1.26

Zn++ EMF NaClO4 20°C 1.00M U K1=0.77 1956ARa (6625) 236

Zn++ EMF NaClO4 25°C 0.50M U TIH K1=0.73 1955PAa (6626) 237  
K1=0.70(15 C), K1=0.73(35 C). DH(K1)=6.3 kJ mol<sup>-1</sup>, DS=33 J K<sup>-1</sup> mol<sup>-1</sup> (25 C)  
At I=0 cor: K1=1.26, DS=54

FCIbRI HL (541)

Halides, comparative (for book data under ligand 80)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++      dis non-aq 200°C 100%   U T H      1968ZAc   (7378) 238

$$K(\text{Zn}+\text{Cl})=5.2$$
$$K(\text{ZnCl}+\text{Cl})=4.9$$
$$K(\text{ZnCl}_2 + \text{Cl}) = 0.85$$
$$K(\text{ZnCl}_2 + \text{Cl}^-) = 0.7$$

Medium: (Li/K)NO<sub>3</sub> eutectic.  $K_d(\text{ZnCl}_2(\text{melt})=\text{ZnCl}_2(\text{polyphenyl eutectic}))=0.34$

Also at 150 C and data for Br, I

Zn++            dis non-aq 200°C 100%   U T   M                            1968ZEa (7379) 239

K(ZnCl<sub>2</sub>+ZnBr<sub>2</sub>=2ZnClBr)=1.28

K(ZnCl<sub>2</sub>+ZnI<sub>2</sub>=2ZnClI)=1.11

K(ZnBr<sub>2</sub>+ZnI<sub>2</sub>=2ZnBrI)=0.96

K(ZnCl<sub>2</sub>+Br)=0.7

Medium:(Li/K)NO<sub>3</sub> eutectic. Data for 150 to 200 C and for many mixed equilib.

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GeW11039-----            H8L                            CAS 37369-86-1 (2466)

alpha-Heteromonogermanium-polytungstate;

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

Zn++            gl   NaNO<sub>3</sub>   25°C 1.00M U            K1=6.32            1984COa (7463) 240

\*\*\*\*\*

HP03--                            H2L            Phosphite            CAS 13598-36-2 (6305)

Phosphite;

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

Zn++            ISE oth/un 20°C   var   U            K1=4.76            1965FPa (7500) 241

B(Zn+HL)=2.28

B(ZnHL+HL)=1.26

K(ZnL+H)=4.07

Other methods: H electrode, conductivity

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H2O                            L            Water            CAS 7732-18-5 (6115)

Water

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

Zn++            vlt alc/w   25°C 100%   U            K1=1.29   B2=2.01   1968LOa (7565) 242

K3=-0.40

K4=-1.43

Medium: MeOH. By chronopotentiometry: K1=1.07, K2=0.64, K3=-0.46, K4=-1.42

-----  
Zn++            vlt alc/w   25°C 100%   U            K1=-0.30   B2=0.22   1961MGa (7566) 243

B3=0.36

Medium: MeOH, 0.01 M NH<sub>4</sub>ClO<sub>4</sub>

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H2P02-                            HL            Hypophosphite            CAS 6303-21-5 (6304)

Hypophosphite;

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

Zn++            nmr NaNO<sub>3</sub>   25°C 4.0M U   I            K1=0.3            B2=0.0            1968HGb (7633) 244

With 4 M NaClO<sub>4</sub>: K1=0.54, B2=0.2

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

Iodide;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
Zn++	EMF	non-aq	25°C	100%	C	HM			B(Zn(phen)I2)=9.3 B(Zn(phen)2I2)=13.9	2001KTa (7669)	245
Medium: DMF, 0.40 M Et4NClO4. Method: Zn/Hg electrode. By calorimetry, DH(Zn(phen)I2)=10 kJ mol-1, DH(Zn(phen)2I2)=-41											
Zn++	cal	non-aq	25°C	100%	C	H		K1=3.8	B2=7.10	1994SKa (7670)	246
Medium: Dimethylacetamide. DH(K1)=21.3 kJ mol-1, DH(B2)=23.7											
Zn++	cal	non-aq	25°C	100%	U	H		K1=4.06	B2=5.60	1991AIa (7671)	247
hexamethylphosphoric triamide solvent with 0.1 M (C4H9)4NClO4 DH and DS values also											
Zn++	cal	non-aq	25°C	100%	U	HM		B2=4.21 B3=5.86 B(Zn(bpy)L)=5.6 B(Zn(bpy)2L)=8.19 B(Zn(bpy)L2)=6.88		1990IMa (7672)	248
In DMF, 0.10 M Et4NClO4. DH(B2)=55, DH(B3)=69, DH(Zn(bpy)L)=3, DH(Zn(bpy)2L)=-32, DH(Zn(bpy)L2)=50 kJ mol-1.											
Zn++	ISE	non-aq	25°C	100%	C	H		K1=4.50 K3=4.18 K4=2.69	B2=11.19	1990PDa (7673)	249
Medium: MeCN, 0.1 M (PyH)CF3SO3; DH(K1)=12, DH(K2)=-5.2, DH(K3)=-14.7, DH(K4)=0.0 kJ mol-1. In pyridine K1=2.45, DH(K1)=20.1											
Zn++	cal	non-aq	30°C	100%	U	H				1988GKa (7674)	250
K3=3.49 Medium: CH3CN. DH(K3)=-12.7 kJ mol-1; DS(K3)=-25 J K-1 mol-1											
Zn++	ix	mixed	25°C	90%	C	I		K1=3.97 B3=7.71	B2=5.55	1986KUa (7675)	251
Medium: 90% acetone/H2O. in 80% acetone/H2O, K1=2.61, B2=4.14											
Zn++	EMF	non-aq	25°C	100%	U	I		K1=0.8 4.3	B2=2.8	1985GSa (7676)	252
Medium: DMF. In DMSO; K1=0.12. Data also in DMSO/H2O & DMF/H2O mixtures. Medium: 0.5 M NH4ClO4											
Zn++	ix	non-aq	25°C	100%	U	I		K1=2.36	B2=3.04	1984KUa (7677)	253
Medium: ethylene glycol											
Zn++	ISE	alc/w	25°C	100%	U			K1=2.81	B2=6.81	1983DSa (7678)	254
Zn++	ISE	non-aq	25°C	100%	C			K1=2.11		1982SSd (7679)	255
Medium: dimethylacetamide											



Zn++ ISE NaClO4 25°C 3.0M U I K1=-0.57 1979FKd (7680) 256

Zn++ ISE non-aq 25°C 100% U K1=1.70 B2=3.30 1979LTb (7681) 257  
B3=5.42  
B4=5.48

Medium: DMF. Method: Zn-electrode

Zn++ ISE NaClO4 25°C 3.00M U I M K1=-0.57 B2=-1.22 1978FKa (7682) 258  
B3=-1.80  
B(ZnClI)=-0.24  
B(ZnCl3I)=-0.08

Zn++ ISE non-aq 25°C 100% C H K1=-0.70 B2=0.71 1976ABc (7683) 259  
K3=0.15

Medium: Dimethylsulfoxide, 1.0 M NH4ClO4; DH(K1)=19.0, DH(K2)=29.4,  
DH(K3)=12.7 kJ mol<sup>-1</sup>

Zn++ ISE non-aq 25°C 100% C K1=-0.70 B2= 0.70 1976ABg (7684) 260  
K3=1.15

Medium: 1 M NH4ClO4 in DMSO  
Zn(Hg)-electrode

Zn++ ISE non-aq 25°C 100% U K1=0.70 B2=1.18 1973SLc (7685) 261  
Medium: DMSO, 1 M LiClO4. Zn amalgam electrode

Zn++ vlt non-aq 25°C 100% U 1972MAc (7686) 262  
B4=18.4

Medium: MeCN, 0.1 M Et4NClO4

Zn++ dis non-aq 150°C 100% U T H K1=7.38 B2=14.58 1968ZAa (7687) 263  
Medium: (Li,Na)NO3. DH(K1)=46.0 kJ mol<sup>-1</sup>, DH(K2)=46.0; K1=6.63, K2=6.43(165 C)  
K1=5.93, K2=5.70(180 C); K1=5.04, K2=4.81(200 C) m units

Zn++ ISE NaClO4 25°C 4.0M U K1=-0.47 B2=-2.00 1967MFb (7688) 264  
K3=1.26  
K4=-0.51

Method: amalgam electrode. Medium: LiClO4. In 4M LiI: K(K+ZnI4)=-0.52,  
K(K+ZnI3)=-1.1

Zn++ EMF oth/un 25°C 4.50M U H K1=-2.93 B2=-1.68 1956SLa (7689) 265  
K3=-0.07  
K4=-0.59

Method: Zn/Hg electrode. DH(K1)=0, DH(K2)=12 kJ m<sup>-1</sup>, DH(K3)=43.1, DH(K4)=-132;  
DS(K1)=-56.1 J K<sup>-1</sup> mol<sup>-1</sup>, DS(K2)=64.4, DS(K3)=143, DS(K4)=-454

Zn++ EMF NaClO4 25°C 3.0M U 1944SLa (7690) 266

Method: Zn/Hg electrode. K1, B2 and B3 all <-1.3

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



-----  
 Zn++ ISE R4N.X 30°C 2.0M U K1=2.32 B2=4.61 1966LMd (8990) 276  
 K3=2.36  
 K4=2.39

Medium: NH4NO3

-----  
 Zn++ dis NaCl04 20°C 0.10M U 1962B0a (8991) 277  
 B(Zn(OH)L)=9.23  
 B(Zn(OH)L2)=10.80  
 B(Zn(OH)L3)=12.00  
 B(Zn(OH)2L)=13.0

B(Zn(OH)2L2)=13.6, B(Zn(OH)3L)=14.5

-----  
 Zn++ vlt none 25°C 0.0 U T H 1959P0b (8992) 278  
 B4=9.40  
 I=0 corr. B4=9.83(15 C), 9.60(20 C), 9.19(30 C), 8.83(40 C).  
 DH(B4)=-70.5 kJ mol<sup>-1</sup>; DS=-56.2

-----  
 Zn++ vlt none 20°C 0.0 U 1958CPc (8993) 279  
 B4=10.49  
 I=0 corr., gelatin in solution. At 25 C, B5=12.75.

-----  
 Zn++ gl R4N.X 25°C 10% U TIH K1=2.59 B2=4.91 1957TSa (8994) 280  
 K3=2.01  
 K4=1.70

Medium: NH4Cl, also 15% and 20%. In 25%: K1=2.31, K2=2.04, K3=1.76, K4=1.39  
 also 30,35 C. DH(B2)=-43 kJ mol<sup>-1</sup>, DH(B4)=-85. Really ZnCl4+2L=ZnCl2L2+2Cl etc

-----  
 Zn++ cal R4N.X 25°C 25% U T H 1957TSa (8995) 281  
 Medium: NH4NO3. DH(B4)=-88 kJ mol<sup>-1</sup>.

-----  
 Zn++ cal R4N.X 27°C 2.0M U H 1957YMa (8996) 282  
 Medium: NH4NO3. DH(K1)=-10.8 kJ mol<sup>-1</sup>, DS=8.8; DH(K2)=-13.0, DS=3.8;  
 DH(K3)=-16.3, DS=-6.3; DH(K4)=-21.8, DS=-31.4

-----  
 Zn++ gl R4N.X 30°C 2.0M U B2=5.26 1954W0a (8997) 283  
 B4=9.52

Medium: NH4NO3.

-----  
 Zn++ gl R4N.X 25°C 2.10M U T H B2=5.01 1953SPc (8998) 284  
 B4=9.80

Medium: NH4NO3. 10-40 C. DH(B2)=-28.0 kJ mol<sup>-1</sup>, DS=1.3; DH(B4)=-59.0, DS=-11

-----  
 Zn++ cal R4N.X rt 3.0M U H 1952FYa (8999) 285  
 Medium: NH4NO3. DH(B4)=-66.5 kJ mol<sup>-1</sup>; DS=-57.3 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
 Zn++ ISE oth/un 18°C var U 1951STa (9000) 286  
 B4=9.37

-----  
 Zn++ gl R4N.X 30°C 2.0M U TIH K1=2.37 B2=4.81 1941BJa (9001) 287

K3=2.50

K4=2.15

B4=9.46

Medium:  $\text{NH}_4\text{NO}_3$ . At  $I=0$  corr.:  $K_1=2.18$ ,  $K_2=2.25$ ,  $K_3=2.31$ ,  $K_4=1.96$ ,  $B_4=8.70$

$\text{DH}(B_4)=-59 \text{ kJ mol}^{-1}$

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Zn++	oth	oth/un	25°C	var	U	B2=4.85	1925WIa	(9002)	288
						B4=9.01			

Method: partial pressure of  $\text{NH}_3$

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Zn++	ISE	oth/un	21°C	var	U	B4=9.58	1903EUa	(9003)	289
------	-----	--------	------	-----	---	---------	---------	--------	-----

\*\*\*\*\*  
NH30 L Hydroxylamine; CAS 5470-11-1 (1808)

Hydroxylamine;  $\text{NH}_2\text{OH}$

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	$\text{NaNO}_3$	20°C	0.50M	U		K1=0.5	1963SZa	(9254)	290
Zn++	vlt	KCl	25°C	1.0M	U		K1=0.40 B2=1.01	1955NYa	(9255)	291

\*\*\*\*\*  
NO2- HL Nitrite CAS 7782-77-6 (635)

Nitrite;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	ISE	$\text{NaClO}_4$	25°C	1.00M	C		K1=0.37 B2=0.49	1988EAa	(9339)	292
Zn++	sp	oth/un	25°C	var	U		K1=0.15 B2=0.10	1971BIa	(9340)	293

Method: Raman spectra

\*\*\*\*\*  
NO3- HL Nitrate CAS 7697-37-2 (288)

Nitrate;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	cal	$\text{NaNO}_3$	25°C	1.00M	U	H		1975ARA	(9489)	294

$\text{DH}(K_1)=-4.69 \text{ kJ mol}^{-1}$ . DS =  $-18.0 \text{ J K}^{-1} \text{ mol}^{-1}$ .

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Zn++	dis	$\text{NaClO}_4$	13°C	1.0M	U	T H	K1=-0.68	1974M0c	(9490)	295
------	-----	------------------	------	------	---	-----	----------	---------	--------	-----

Medium:  $\text{HClO}_4$ .  $K_1=-0.76(25 \text{ C})$ ,  $-0.75(30 \text{ C})$ ,  $-0.81(35 \text{ C})$ .  $\text{DH}(K_1)=-9.0 \text{ kJ mol}^{-1}$

---

Zn++	ISE	$\text{NaClO}_4$	25°C	4.0M	U	I	K1=0.11 B2=-0.82	1973FRA	(9491)	296
						B3=-0.60				
						B4=-1.3				

Method: Zn/Hg electrode. Medium:  $\text{LiClO}_4$ .  $K_1=-0.18(I=0.5)$ .  $-0.20, B_2=-0.64(I=1)$ .  $K_1=-0.14$ ,  $B_2=-0.82$ ,  $B_3=-1.15(I=2)$ .  $K_1=0.42$ ,  $B_2=-0.27$ ,  $B_3=-1.5(I=0 \text{ corr})$

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Zn++	kin	$\text{NaClO}_4$	25°C	1.0M	U		K1=-0.12	1973HHb	(9492)	297
------	-----	------------------	------	------	---	--	----------	---------	--------	-----

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 Zn++ sol KNO3 25°C 1.70M U I 1957NMa (9493) 298  
 Kso(ZnL0.5(OH)1.5)=-7.3  
 In 3 M Na2SO4, 40 C: Kso=-7.1. Zn-OH complexes neglected ?  
 -----

Zn++ sol oth/un 25°C var U 1950FHa (9494) 299  
 Kso(ZnL0.4(OH)1.6)=-13.64  
 -----

\*\*\*\*\*  
 N2H4 L Hydrazine CAS 302-01-2 (2117)  
 Hydrazine; H2N.NH2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	U	M	K(ZnA+L)=1.93 K(ZnAL+L)=0.82	1995KBb (10065)	300

Medium: 0.1 M (NH3NH3)(NO3)2. H3A=NTA  
 -----

Zn++	gl	oth/un	30°C	1.00M	U		K1=3.78 B2=6.90 K3=2.38	1977AGd (10066)	301
------	----	--------	------	-------	---	--	----------------------------	-----------------	-----

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Zn++	gl	NaClO4	30°C	1.0M	U		K1=3.69 B2=6.69	1967BSb (10067)	302
------	----	--------	------	------	---	--	-----------------	-----------------	-----

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Zn++	gl	oth/un	20°C	0.50M	U		K1=2.4 B2=4.2 K3=1.3 K4=0.8 ?	1952SZa (10068)	303
------	----	--------	------	-------	---	--	-------------------------------------	-----------------	-----

Medium: N2H5BF4  
 -----

N3- HL Azide CAS 7782-79-8 (441)  
 Azide;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	cal	oth/un	25°C	0.05M	C	H		1981ABd (10152)	304

Medium: NaN3. DH(K1)=15.39 kJ mol<sup>-1</sup>, DS(K1)=79.2 J K<sup>-1</sup> mol<sup>-1</sup>.  
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Zn++	sp	NaClO4	25°C	1.0M	C		K1=1.7	1978Y0a (10153)	305
------	----	--------	------	------	---	--	--------	-----------------	-----

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Zn++	ISE	none	25°C	0.0	M		K1=1.44 B2=1.14	1976DMa (10154)	306
------	-----	------	------	-----	---	--	-----------------	-----------------	-----

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Zn++	ISE	NaClO4	25°C	1.00M	C	H	K1=0.76 B2=1.32 B3=2.16 B4=2.45	1975AAb (10155)	307
------	-----	--------	------	-------	---	---	---------------------------------------	-----------------	-----

DH(K1)=2.57, DH(K2)=2.3; DH(K3)=7.6; DH(K4)=-6.5 kJ mol<sup>-1</sup>  
 -----

Zn++	ISE	NaClO4	25°C	2.0M	U		K1=0.78 B2=1.34 B3=2.34 B4=2.89	1970NAa (10156)	308
------	-----	--------	------	------	---	--	---------------------------------------	-----------------	-----

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Zn++	vlt	NaClO4	25°C	2.0M	U		K1=0.5 B2=1.19	1962BSc (10157)	309
------	-----	--------	------	------	---	--	----------------	-----------------	-----

OH-                      HL      Hydroxide                      (57)  
Hydroxide;

Method: H2 electrode. Solubility of ZnO in acidic and alkaline media.  
Data for 150-350 C. At 150 C,  $K_{s1}=-0.598$ ,  $K_{s2}=-5.982$ ,  $K_{s3}=-14.496$

Method: H2 electrode. Solubility of zincite (ZnO) in acidic and alkaline media. Data for 150-350 C, extrapolated to 25 C.

Zn++	gl	KCl	25°C 0.10M C	K1=3.53	2002PLb (10628)	313
				B(ZnH2L2)=19.72		
				B(ZnH-1L)=-3.90		

Zn++      gl   NaClO4 25°C 0.10M U      2001PSb (10630) 315  
\*K1=-7.89  
\*B2=-14.92

Zn++      sol oth/un 25°C   0.0   C      1999BPa (10632) 317

Ks (ZnO+H=ZnOH)=2.42

Ks (ZnO+H2O=Zn(OH)2)=-6.68

Ks (ZnO+2H2O=Zn(OH)3+H)=-16.95

Zn++      sol oth/un 25°C   0.0   C      1999BPa (10633) 318

\*K1=-8.75

\*K2=-9.10

\*K3=-10.27

Method: solubility of ZnO (zincite) in 0.03 m NaOH.  
Data for 25-300 C. Analysis by Pt/H<sub>2</sub> electrode and ICP.

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Zn++	gl	NaClO <sub>4</sub>	30°C	0.20M	U		1999PGa (10634)	319
						*K <sub>1</sub> =-7.89		
						*B <sub>2</sub> =-14.80		

---

Zn++	gl	NaNO <sub>3</sub>	30°C	0.20M	U		1999PPa (10635)	320
						*K <sub>1</sub> =-7.89		
						*B <sub>2</sub> =-14.92		

---

Zn++	gl	NaNO <sub>3</sub>	25°C	0.10M	U		1998MSe (10636)	321
						*K <sub>1</sub> =-7.89		
						*B <sub>2</sub> =-14.92		

---

Zn++	sol	oth/un	25°C	0.10M	C	IH	1998WBa (10637)	322
						*K <sub>so</sub> (ZnO)=11.35		

Data for 0.03-1.0 m sodium triflate and 50-290 C. At 25 C, I=0, \*K<sub>so</sub>=11.17  
DH(\*K<sub>so</sub>)=-86.7 kJ mol<sup>-1</sup>, DS(\*K<sub>so</sub>)=-77 J K<sup>-1</sup> mol<sup>-1</sup>. \*K<sub>so</sub>: ZnO(s)+2H=Zn+H<sub>2</sub>O.

---

Zn++	gl	alc/w	25°C	50%	C		1997MGb (10638)	323
						*K <sub>1</sub> =-9.44		
						*B <sub>2</sub> =-16.42		

Medium: 50% v/v EtOH/H<sub>2</sub>O, 0.2 M NaNO<sub>3</sub>.

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Zn++	gl	NaClO <sub>4</sub>	30°C	0.10M	C		K <sub>1</sub> =7.22	1995STa (10639)	324
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Zn++	gl	NaClO <sub>4</sub>	25°C	0.10M	M	M		1994KTa (10640)	325
							K(ZnA+L)=6.00		

A:1,4,7,10-Tetraazacyclododecane

---

Zn++	kin	NaClO <sub>4</sub>	25°C	0.10M	M	M		1992KKb (10641)	326
							K(ZnA+L)=6.4		

A:1,5,9-triazacyclododecane

---

Zn++	gl	alc/w	30°C	50%	C			1991MCb (10642)	327
						*K <sub>1</sub> =-7.15			
						*B <sub>2</sub> =-16.42			

Medium: 50% v/v EtOH/H<sub>2</sub>O, 0.2 M NaNO<sub>3</sub>.

---

Zn++	gl	NaNO <sub>3</sub>	37°C	0.10M	U			1991MGb (10643)	328
						*K <sub>1</sub> =-7.84			
						*B <sub>2</sub> =-14.87			

---

Zn++	gl	alc/w	25°C	50%	U			1989MSi (10644)	329
						*K <sub>1</sub> =-7.44			
						*B <sub>2</sub> =-16.42			

Medium: 50% v/v EtOH/H<sub>2</sub>O, 0.2 M NaNO<sub>3</sub>.

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Zn++	EMF	NaClO <sub>4</sub>	25°C	3.00M	U		B <sub>2</sub> =12.22	1988FSa (10645)	330
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B4=15.40									
Zn++	ISE	NaCl04	25°C	3.00M	C			1987FGa (10646)	331
B4=15.10									
Zn++	gl	NaCl	37°C	0.15M	C			1987HBb (10647)	332
*K1=-8.378									
Zn++	gl	diox/w	30°C	50%	C			1987MSd (10648)	333
*K1=-7.44									
*B2=-16.42									
Medium: 50% v/v dioxane/H2O, 0.2 M NaNO3.									
Zn++	gl	none	25°C	0.0	M	I		1985DHa (10649)	334
K(ZnA(OH)+H)=9.07									
A = trien (1,8-diamino-3,6-diazaoctane). In D2O K=-9.74									
Zn++	gl	none	25°C	0.0	M	I		1985DHa (10650)	335
K(ZnA(OH)+H)=10.30									
A = 2,3,2-tet. In D2O K=-10.91									
Zn++	gl	none	25°C	0.0	M	I		1985DHa (10651)	336
K(ZnA(OH)+H)=10.59									
A = Tren (2,2'2"-nitrilotri(ethylamine)). In D2O, K=-11.21									
Zn++	oth	none	25°C	0.0	U		K1=5.04	B2=11.1	1983RCa (10652) 337
B3=13.6									
B4=14.8									
Recalculation of literature data									
Zn++	vlt	NaCl04	25°C	3.0M	U		K1=6.72	B2=11.52	1983YYa (10653) 338
B3=14.04									
B4=16.30									
Method: polarography.									
Zn++	gl	KNO3	25°C	0.10M	U	M		1979GMA (10654)	339
*K(Zn(EDDA))=-10.56									
Zn++	gl	NaCl04	25°C	3.00M	U	T		1978BYa (10655)	340
*K1=-10.4									
*B(2,1)=-8.72									
Zn++	sp	KNO3	25°C	0.10M	U	I	K1=6.19	B2=10.90	1978NAa (10656) 341
*K1=-7.85									
Zn++	gl	NaCl04	60°C	3.00M	U			1977BGb (10657)	342
*K1=-9.5									
*B(2,1)=-7.62									
Zn++	gl	NaCl04	37°C	0.15M	C			1976MTa (10658)	343



\*B2=-14.80

-----  
Zn++ sol none 100°C 0.0 U T 1975KEa (10659) 344

\*Ks(ZnO(s)+H)=3.19

K(ZnO+2H2O+2OH=Zn(OH)4+2H)=-2

K(ZnO+2H2O+OH=Zn(OH)3+2H)=-3.0

-----  
Zn++ sol oth/un 25°C ? U T K1=6.16 B2=11.18 1975Rmb (10660) 345

B3=13.88, B4=15.57

K(Zn(OH)2(s)+OH=Zn(OH)3)=-2.88

K(Zn(OH)2(s)+2OH=Zn(OH)4)=-1.9

At 12.5 C: Kso(Zn(OH)2)=-16.8. Data up to 75 C

-----  
Zn++ gl NaCl04 25°C 3.00M U 1975ZGa (10661) 346

\*B(4,4)=-26.0

\*B(2,1)=-8.6

-----  
Zn++ gl NaCl 25°C 0.70M U 1974JAb (10662) 347

\*K1=-9.60

\*B(1,3)=-27.6

Medium: seawater

-----  
Zn++ vlt none 20°C 0.00 U B2=9.86 1973BRd (10663) 348

-----  
Zn++ ISE none 25°C 0.00 U 1972DSb (10664) 349

Kso(Zn(OH)2(s)=Zn+2OH)=-16.42

Zn(OH)2=epsilon-Zn(OH)2. Method: emf with Zn amalgam electrode

-----  
Zn++ oth NaCl 20°C 0.15M U 1971PPd (10665) 350

\*Ks=8.2

Ks(Zn(OH)2+2OH=Zn(OH)4)=-28.6

\*Ks: Zn(OH)2(s)+2H=Zn+2H2O. Method: tyndallometry

-----  
Zn++ gl KNO3 37°C 0.15M U 1970CHc (10666) 351

\*K1=-9.03

-----  
Zn++ gl oth/un 40°C U T H 1969NIa (10667) 352

\*K1=-9.6

\*B(2,1)=-8.0

Medium: Zn(NO3)2. DH(\*K1)=71.7 kJ mol<sup>-1</sup>. At 50 C, \*K1=-9.4, \*B(2,1)=-7.9.

60 C, \*K1=-8.7, \*B(2,1)=-7.8. 70 C, \*K1=-8.6, \*B(2,1)=-7.6

-----  
Zn++ gl oth/un 80°C U T 1969NIa (10668) 353

\*K1=-8.3

\*B(2,1)=-7.4

Medium: Zn(NO3)2. 90 C, \*K1=-7.9, \*B(2,1)=-7.1

-----  
Zn++ sol NaCl04 25°C 1.00M U 1968GSd (10669) 354

Kso=-16.76

Zn++	ISE none	25°C	0.0 M		1968SMf (10670)	355
				Kso(Zn(OH)2(H2O)0.1)=-17.33		
-----						
Zn++	sol NaCl04	25°C	1.00M U	K1=6.31 B2=11.19 B3=14.31 B4=17.70 Kso=-16.76	1967GSd (10671)	356
-----						
Zn++	gl NaCl	25°C	3.00M U I	*K1=-9.25 *B(2,1)=-7.50	1965SCc (10672)	357
In 3 M KCl: *K1=-9.26, *B(2,1)=-7.47, *B(4,2)=-13.32 ?						
-----						
Zn++	dis NaCl04	25°C	3.00M U	*B2=-20.10 *B3=-28.83 *B4=-38.72	1965SEb (10673)	358
-----						
Zn++	oth KNO3	25°C	0.20M U I	*Kso=12.48(amorphous) *Kso=11.80(beta 2) *Kso=11.85(delta) *Kso=11.34(active Zn0)	1964SAa (10674)	359
*Kso=11.17(inactive Zn0) plus other forms, and corrected to I=0						
-----						
Zn++	gl KCl	25°C	2.00M U I	*K1=-9.01 *B(2,1)=-7.20	1964SCb (10675)	360
In 2 M NaCl: *K1=-9.11, *B(2,1)=-7.49						
-----						
Zn++	oth NaCl	25°C	3.00M U	B4=13.35 B(2,6)=26.77	1964SCb (10676)	361
-----						
Zn++	sol KNO3	25°C	0.20M U	*Kso=11.72 (epsilon-Zn(OH)2)	1963PEa (10677)	362
*Kso: Zn(OH)2(s)+2H=Zn+2H2O						
-----						
Zn++	sol NaCl04	25°C	0.20M U	*Kso=11.39 to 11.55 (Zn0) *Kso=11.97o(beta-Zn(OH)2) *Kso=11.95 (gamma-Zn(OH)2) *Kso=11.75 (epsilon-Zn(OH)2)	1963SAa (10678)	363
*Kso: ZnO(s)+2H=Zn+H2O; *Kso: Zn(OH)2(s)+2H=Zn+2H2O						
-----						
Zn++	dis NaCl04	20°C	0.10M U	B3=13.58	1962B0a (10679)	364
Method: also glass electrode						
-----						
Zn++	cal NaCl04	25°C	7.0M U		1962LGA (10680)	365

Medium: 7 M NaClO<sub>4</sub>, 0.88 M HClO<sub>4</sub>; DH(\*Kso(Zn(OH)<sub>2</sub>(s))=-75.3 kJ mol<sup>-1</sup>

---

Zn++ gl none 25°C 0.0 U T 1962PEb (10681) 366

\*K<sub>1</sub>=-8.96

\*K<sub>1</sub>=-9.30(15 C), -9.15(20 C), -8.79(30 C), -8.62(36 C), -8.46(42 C);

---

Zn++ gl KNO<sub>3</sub> 25°C 0.20M U I 1962SAc (10682) 367

\*Kso(Zn(OH)<sub>2</sub>+2H)=-11.75

Kso(Zn(OH)<sub>2</sub>(s))=-15.65

Epsilon-Zn(OH)<sub>2</sub>. At I=0 Kso=-16.5

---

Zn++ gl KCl 25°C 2.0M U I 1961SCa (10683) 368

\*K<sub>1</sub>=-9.02

\*B(2,1)=-7.18

Mixed Cl,OH complexes. In 2 M NaCl \*K<sub>1</sub>=-9.14, K(2Zn+H<sub>2</sub>O=Zn<sub>2</sub>OH+H)=-7.47

---

Zn++ gl NaClO<sub>4</sub> 25°C 2.0M U 1961SCa (10684) 369

\*B<sub>2</sub>=-9.55

B(Zn+Cl=Zn(OH)<sub>2</sub>Cl+2H)=-9.14

B(Zn+2Cl=Zn(OH)<sub>2</sub>Cl<sub>2</sub>+2H)=-8.97

B(Zn+3Cl=Zn(OH)<sub>2</sub>Cl<sub>3</sub>+2H)=-8.83

---

Zn++ gl none 25°C 0.0 U 1960BBa (10685) 370

Kso=-17.05 (ZnO, zincite)

Kso: ZnO(s)+H<sub>2</sub>O=Zn+2OH

---

Zn++ gl none 25°C 0.0 U 1960DFa (10686) 371

\*K<sub>1</sub>=-9.05

---

Zn++ sol oth/un 18°C dil U B<sub>2</sub>=12.89 1959ASa (10687) 372

K(Zn(OH)<sub>2</sub>(s)=Zn(OH)<sub>2</sub>)=-4.51

---

Zn++ gl none ? 0.0 U 1959BEa (10688) 373

\*K<sub>1</sub>=-9.29

---

Zn++ vlt KCl 25°C 2.0M U 1959MAc (10689) 374

B<sub>4</sub>=15.3

---

Zn++ gl none 25°C 0.0 U 1958ACa (10690) 375

\*K<sub>1</sub>=-9.36

---

Zn++ gl none 25°C 0.0 U 1958ASd (10691) 376

Kso(Zn(OH)<sub>2</sub>)=-17.4

---

Zn++ vlt oth/un 24°C var U 1958COb (10692) 377

Kso=-15.5 (Zn(OH)<sub>2</sub> amorphous)

Kso=-16.5 (ZnO)

Kso: Zn(OH)<sub>2</sub>(s)=Zn+2OH and ZnO(s)+H<sub>2</sub>O=Zn+2OH

---

Zn++ ISE none 25°C 0.0 U 1954DIa (10693) 378

B4=15.15

Zn++	gl	none	75°C	0.0	U		1954DOa (10694)	379
						Kso(Zn(OH)2)=-17.0		
Zn++	sol	none	25°C	0.0	U		1954DPb (10695)	380
						K(Zn(OH)2(s)+OH)=-3.22		
						K(Zn(OH)2(s)+2OH)=-2.00		
Zn++	sol	none	25°C	0.0	U		1954DPb (10696)	381
						K(Zn(OH)2(s)+OH)=-3.22		
						K(Zn(OH)2(s)+2OH)=-2.22?		
Zn++	sol	none	25°C	0.0	U		1954FSb (10697)	382
						Kso(Zn(OH)2)=-17.15		
						B3=14.23		
						K4=1.26		
						K(Zn(OH)2(s)+OH)=-2.92		
						K(Zn(OH)2(s)+2OH)=-1.66		
Zn++	cal	oth/un	18°C	0.25M	U	H	1953SLa (10698)	383
						DH(*Kso(Zn(OH)2(s)+2H)=-81.5 to -83.2 kJ mol-1		
Zn++	cal	oth/un	25°C	2.0M	U	H	1953SLa (10699)	384
						DH(*Kso(ZnO(s)+2H))=-88.7 kJ M-1(in HClO4), -66.0(HCl), -75.0(HBr), -87.6(HI)		
						DH(*Kso(Zn(OH)2(s)+2H)=-80(HClO4), -81(HNO3), -58(HCl), -67(HBr), -79(HI)		
Zn++	gl	oth/un	?	var	U		1953SPd (10700)	385
						K1=5.7		
						Kso(Zn(OH)2)=-16.4		
Zn++	vlt	oth/un	18°C	var	U		1953VTa (10701)	386
						B3=15.5		
						*Kso=-17.19		
Zn++	gl	KCl	30°C	0.10M	U		1952CCa (10702)	387
						*K1=-8.7		
Zn++	sp	oth/un	25°C	var	U		1951DAa (10703)	388
						K1=4.40		
Zn++	ISE	oth/un	18°C	var	U		1951STa (10704)	389
						B4=14.47		
Zn++	EMF	none	18°C	0.0	U		1950AFa (10705)	390
						Kso(Zn(OH)2)=-16.71		
Method: H and quinhydrone electrodes								
Zn++	ISE	oth/un	20°C	var	U		1950BQa (10706)	391
						B3=16.08		
						B4=15.04		

Zn++	vlt oth/un	0°C	var	U	T	1949KKa (10707)	392
						B3=16.84 K4=0.07 B3=15.86, K4=0.09(20 C); B3=15.45, K4=0.10(30 C)	
Zn++	gl oth/un	16°C	var	U		K1=3.80 *K1=-10.48	1940BCa (10708) 393
Zn++	vlt oth/un	18°C	var	U		B4=16.89	1940SFa (10709) 394
Zn++	gl none	25°C	0.0	U		*K1=-10.19 Kso(Zn(OH)2(s))=-15.47	1939HAa (10710) 395
Zn++	gl none	25°C	0.0	U		Kso(Zn(OH)2(s))=-15.74	1938OKa (10711) 396
Zn++	dis oth/un	20°C	var	U		K1=5.77	1933JEa (10712) 397
Zn++	EMF none	25°C	0.0	U		K1=4.36 *K1=-9.66 Kso(Zn(OH)2(s))=-18 to-17	1931KKa (10713) 398
Zn++	EMF none	25°C	0.0	U		*K1=-9.82 *Kso(Zn(OH)2(s)+2H)=10.62 Kso(Zn(OH)2(s))=-16.89	1931PRa (10714) 399
Zn++	sol none	25°C	0.0	U		Kso(Zn(OH)2(s))=-16.48 B4=15.44	1927DJa (10715) 400
Zn++	sol oth/un	25°C	var	U		Kso(Zn(OH)2(s))=-16.13	1925WJa (10716) 401
Zn++	vlt oth/un	18°C	var	U		Kso(Zn(OH)2(s))=-16.0 B3=14.36?	1923HEa (10717) 402
Zn++	kin oth/un	100°C	0.02M	U		K1=4.51 *K1=-7.87	1913KUa (10718) 403
Zn++	sol oth/un	?	var	U		K(Zn(OH)2(s)+2OH=Zn(OH)4)=-1.0	1912KLa (10719) 404
Zn++	EMF oth/un	25°C	var	U		K1=8.84 *K1=-5.08	1910W0a (10720) 405
Zn++	ISE oth/un	?18	var	U			1904KUa (10721) 406

B4=12.40

-----  
 Zn++ sol oth/un rt var U 1900HEa (10722) 407  
 Kso(Zn(OH)2)=-13.15

\*\*\*\*\*

PO3F-- H2L CAS 13537-32-1 (6520)  
 Monofluorophosphate;

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

-----  
 Zn++ gl KCl 37°C 0.10M C K1=2.86 1991CCa (12772) 408

\*\*\*\*\*

P04--- H3L Phosphate CAS 7664-38-2 (176)  
 Phosphate;

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

-----  
 Zn++ gl NaNO3 25°C 0.10M M K(Zn+HL)=2.52 1996SSa (12976) 409

-----  
 Zn++ vlt oth/un ? var C 1995VPa (12977) 410  
 K1eff=4.16  
 B2eff=7.36

pH=7.9 of Pisuerga river water. Ionic strength ranged from 0.01 M to 0.75M.  
 Method: Anodic Stripping Voltammetry.

-----  
 Zn++ EMF none 25°C 0 M I 1994IUb (12978) 411

K(Zn+H2PO4)=0.9  
 K(Zn+2H2PO4)=2.0  
 K(Zn+HPO4+H2PO4)=4.0  
 K(Zn+2HPO4)=7.1

Method: Zn/Hg electrode. K(Zn+PO4+HPO4)=12.5. In 3 M NaClO4:K(Zn+H2PO4)=0.37  
 K(Zn+2H2PO4)=1.10, K(Zn+2H2PO4=ZnH3(PO4)2+H)=-3.8, K(. .+2H)=-7.11, (+3H)=-12.87

-----  
 Zn++ sol oth/un 25°C var C TIH 1992ZJa (12979) 412

K(ZnO(s)+HPO4)=-5.82  
 K'(NaZnPO4(s)+HPO4)=-12.91  
 K(Zn(OH)2+HPO4)=0.91  
 K(Zn(OH)3+H2PO4)=5.37

Medium:0.0005-0.05 m phosphate. Data for 17-287 C. \*K3=-10.14, \*K4=-12.02.  
 K:ZnO+H2O+HPO4=Zn(OH)2(HPO4), K':NaZnPO4+2H2O+HPO4=Na+Zn(OH)2(HPO4)+H2PO4.

-----  
 Zn++ gl NaNO3 25°C 0.10M C K(Zn+HPO4)=2.4 1981BKb (12980) 413

-----  
 Zn++ gl NaClO4 25°C 0.10M U M K1=2.40 1974RMa (12981) 414  
 Mixed complexes with cysteine, citrate and NTA

-----  
 Zn++ gl NaClO4 25°C 0.10M U M K(Zn+HL)=2.40 1974RMb (12982) 415

Zn++ sol none 25°C 0.0 U 1973NRa (12983) 416  
Kso(Zn3L2(H2O)4)=-35.29(alpha-hopeite)

Zn++            gl   NaClO<sub>4</sub> 25°C 0.1M U   I M                                  1967SBc (12985) 418  
K(Zn+HL)=2.4  
In 10% dioxan, 0.1 M NaClO<sub>4</sub>: K(Zn+HL)=2.4, K(Zn+bpy+HL)=2.4

PW11039----- H7L (2467)  
alpha-Heteromonophospho-polytungstate;

Zn++ gl NaNO3 25°C 1.00M U K1=5.39 1984C0a (13395) 420

P207---- H4L Pyrophosphate CAS 2466-09-3 (198)  
Diphosphate; from  $(\text{HO})_2\text{PO}_0.\text{PO}(\text{OH})_2$

Zn++      gl   R4N.X   25°C   0.50M C      K1=4.09   B2= 4.81   1979DHa (13512) 421  
 K(Zn+HL=ZnL+H)=-4.30  
 K(Zn+2HL=ZnL2+2H)=-12.10  
 K(ZnL+HL=ZnL2+H)=-7.7

Medium: 0.50 M  $\text{Me}_4\text{NCl}$ .  $K_{\text{so}}(\text{Zn}_2\text{P}_2\text{O}_7 \cdot 3\text{H}_2\text{O}) = -15.6$ .

Zn++      kin R4N.X    30°C 0.10M U      K1=9.11      1978KHa (13513) 422

Zn++ sol NaNO3 18°C 0.50M U I B2=5.40 1973VMa (13514) 423  
B2=4.80(I=0.75), 4.29(I=1), 6.48(I=0 corr)

Zn++ vlt NaNO3 25°C 1.0M U K1=5.1 B2=7.19 1968CFd (13515) 424  
Zn/Hg electrode also used

Zn++ ISE NaCl04 25°C 1.0M U I K1=10.52 1967MNe (13516) 425  
Method: Zn/Hg electrode. K1=11.66(I=0.1), 12.80(I=0) and intermediate values

Zn++      gl   none   25°C   0.0   U T      K1=8.7   B2=11.0   1959W0a (13517) 426  
B(Zn(OH)L)=13.1

Additional by Zn electrode. At 40 C: K1=9.2, B2=10.8, B(Zn(OH)L)=13.3

-----  
 Zn++ sol oth/un 25°C var U K1=6.10 B2=7.09 1958PTa (13518) 427  
 Medium: Na4L  
 -----

Zn++ ISE oth/un 42°C var U B2=6.5 1958VRb (13519) 428  
 -----

Zn++ cal oth/un 25°C var U H 1956YVb (13520) 429  
 DH(B2)=11.0 kJ mol<sup>-1</sup>, DS=161 J K<sup>-1</sup> mol<sup>-1</sup>  
 -----

Zn++ ISE oth/un 18°C var U B2=7.24 1951STa (13521) 430  
 -----

Zn++ con oth/un 35°C var U B2=6.50 1950HAa (13522) 431  
 -----

Zn++ vlt oth/un ? var U K1=6.45 1932SAa (13523) 432  
 \*\*\*\*\*  
 P208---- H4L CAS 13825-81-5 (2402)  
 Peroxodiphosphate, also cyclic metaposphates, thiophosphates etc.;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ix	NaClO4	20°C	0.23M	U			1974KOa (13683)	433
Ligand:metaphosphates, cyclic, (PO3) <sub>n</sub> n-, K1=2.86(n=4), 3.95(n=6), 5.02(n=8)									
*****									
P2W17O61----- Polytungstate (2102)									
alpha-Heterodiphospho-polytungstate (usually alpha1 isomer)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	1.00M	U		K1=7.30 K1=5.89 (alpha2 isomer)	1984COa (13703)	434
*****									
P3010----- H5L CAS 10380-08-2 (1001)									
Tripolyphosphate; from (HO)2PO.O.PO(OH).O.PO(OH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	kin	oth/un	30°C	0.10M	U		K1=8.90	1978KHa (13788)	435
-----									
Zn++	gl	KNO3	25°C	0.10M	U T H		K1=6.83 K(Zn+HL)=3.75	1973TRa (13789)	436
At 2 C: K1=7.43, K(Zn+HL)=4.05; 35 C: K1=7.40, K=4.14; 45 C: K1=6.72									
DH(K1)=-18.4, DH(Zn+HL)=-5.9 kJ mol <sup>-1</sup> (25C)									
-----									
Zn++	gl	KNO3	45°C	0.10M	U		K1=6.71 B2=7.31 K(Zn+HL)=3.73 K(ZnL+HL)=1.5 K(ZnL2+H)=9.03	1971TRa (13790)	437
-----									
Zn++	gl	R4N.X	20°C	0.10M	U H		K1=8.35	1965ANa (13791)	438



$$K(\text{ZnL}+\text{H})=5.6$$

Zn++	gl	KCl	25°C 0.10M U	K1=7.62	1964EMb (13792)	439
				K(Zn+HL)=3.92		
				K(ZnL+H)=4.36		

Zn++      gl   none   25°C   0.0   U T      K1=9.7      1959W0a (13794) 441  
B(Zn(OH)L)=13.0

\*\*\*\*\*

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ix	NaClO4	20°C	0.23M	U		K1=1.94	1974K0a (13933)	442

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ix	NaClO4	20°C	0.23M	U		K1=1.94	1974K0a (13985)	443

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	kin	oth/un	30°C	0.10M	U		K1=8.75	1978KHa (14035)	444

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ix	NaClO4	20°C	0.23M	U		K1=3.95	1974K0a (14066)	445

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ix	NaClO4	20°C	0.23M	U		K1=5.02	1974K0a (14078)	446

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ vlt oth/un 25°C 0.72M C 1999AVb (14210) 447

$$K(\text{Zn}+\text{HL})=6.1$$
$$K(\text{Zn}+2\text{HL})=10.2$$

Method: determination of Zn by cathodic stripping voltammetry using oxine as competitive ligand. Medium: seawater, pH 8.0, S=35.

Zn++ vlt NaClO4 24°C 0.50M C I K1=8.31 1999CRb (14211) 448

Ligand is S5--. Method: polarography. Also data for 0.55 M NaCl.

Zn++ vlt oth/un 25°C 0.70M C I 1996LRb (14212) 449

$$K(Zn + HS + OH = ZnS) = 11.74$$
$$K(2Zn + 3HS + 3OH = Zn_2S_3) = 41.09$$

Method: by voltammetry at Hg/HgS electrode

Zn++ vlt NaCl 25°C ? U 1994ZMa (14213) 450

K1eff=6.0  
K2eff=7.7

Medium: sea water, pH=8. Method: cathodic stripping square wave voltammetry

Zn++ sol oth/un 25°C var U I 1993DHa (14214) 451

$$\begin{aligned} K(\text{ZnS(s)} + \text{H}_2\text{S} &= \text{Zn} + 2\text{HS}) = -18.47 \\ K(\text{ZnS(s)} + \text{H}_2\text{S} &= \text{Zn}(\text{HS})_2) = -5.65 \\ K(\text{ZnS(s)} + 2\text{HS} &= \text{ZnS}(\text{HS})_2) = -5.33 \\ K(\text{ZnS(s)} + \text{H}_2\text{S} + 2\text{HS} &= \text{Zn}(\text{HS})_4) = -3.8 \end{aligned}$$

$K(\text{ZnS(s)} + \text{HS} = \text{ZnS(HS)}) = -4.64$ . Constants valid at infinite dilution

Zn++	oth none	?	0	U	1990DKa (14215)	452
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\*Ks(ZnS+H=Zn+HS)=-10.9 (alpha)  
\*Ks(ZnS+H=Zn+HS)=-8.95 (beta)

Alpha is sphalerite; beta is wurtzite. Recalculation of literature data.

Zn++ sol oth/un 25°C 0.10M U TI 1990HSc (14216) 453

$$\begin{aligned} K_s(\text{ZnS} + \text{H}_2\text{S}) &= -5.3 \\ K_s(\text{ZnS} + \text{H}_2\text{S} + \text{HS}^-) &= -3.3 \\ K_s(\text{ZnS} + \text{H}_2\text{S} + 2\text{HS}^-) &= -3.4 \\ K_s(\text{ZnS} + \text{H}_2\text{O} + \text{HS}^-) &= -4.4 \end{aligned}$$

$K_s(\text{ZnS} + \text{H}_2\text{O} + 2\text{HS}) = -4.9$  (sphalerite). 25-240 C. Constants valid at  $I=0$

Zn++ oth none 25°C 0.0 C 1989DYa (14217) 454

$$\begin{aligned} K_{\text{Zn} + \text{HS} = \text{ZnS} + \text{H}^+} &= 4.9 \\ *K_{\text{so}}(\text{ZnS}) &= -9.6 \\ K_{\text{so}}(\text{ZnS}) &= -4.7 \end{aligned}$$

Calculated from literature data, based on  $K(H+S)=17.0$ . ZnS is wurtzite. For sphalerite,  $*K_{so}(ZnS)=-11.8$ ,  $K_{so}(ZnS)=-6.9$ .

Zn++ oth none 25°C 0 U 1988LIa (14218) 455  
Kso(ZnS,sphalerite)=-28.9  
\*Kso(ZnS,sphalerite)=-11.5  
Kso(ZnS,wurtzite)=-26.1  
\*Kso(ZnS,wurtzite)=-8.7  
Derived from thermodynamic data and K(H+S=HS)=17.3.

---

Zn++ oth none 25°C 0 U 1988SBc (14219) 456  
Kso(ZnS,wurtzite)=-28.21  
Kso(ZnS,sphalerite)=-30.32  
Method: recalc. from literature data using K(H+S=HS)=18.57 and K(H+HS)=6.99

---

Zn++ sol oth/un 100°C var M TIH 1987BBe (14220) 457  
K(Zn+2HS)=12.3  
K(Zn+3HS)=14.2  
K(Zn+4HS)=13.0  
K(Zn+OH+HS)=16.7  
Sphalerite (ZnS) solubility in 0-4.0 m NaHS-H2S solution. Data 100-350 C.  
DH(Zn+2HS)=-5.0 kJ m-1, DH(Zn+3HS)=-4.2, DH(Zn+4HS)=1.7, DH(Zn+OH+HS)=-14.2

---

Zn++ sol oth/un 100°C var M TI 1987BBe (14221) 458  
K(ZnS(s)+H2O=Zn(OH)HS)=-6.4  
K(ZnS(s)+H2S=Zn(HS)2)=-5.2  
K(ZnS(s)+H2S+HS=Zn(HS)3)=-3.3  
K(ZnS(s)+H2S+2HS=Zn(HS)4)=-4.6  
Sphalerite (ZnS) solubility in 0-4.0 m NaHS-H2S solution. Data 100-350 C.

---

Zn++ ISE NaCl 24°C 0.10M M 1987PFb (14222) 459  
Kso(alpha-ZnS)=-24.1  
Method: pH2S measured with Ag2S electrode. K(H+S=HS)=13.9 and K(H+HS=H2S)=6.92 assumed

---

Zn++ dis oth/un 25°C 0.69M U 1985DYa (14223) 460  
K(Zn+2H2S=ZnHS2+3H)=-5.55  
K(Zn+2H2S=Zn(HS)2+2H)=0.72

---

Zn++ vlt oth/un 25°C var U 1970CLa (14224) 461  
Kso=-21.4

---

Zn++ oth none 50°C 0.0 M T 1969HEa (14225) 462  
Estimated from literature data. Sphalerite: Kso=-24.44(50 C); -22.48(100 C); -19.81(200 C); -18.17(300 C). Wurtzite: -22.58(50 C); -20.96(100 C); -17.39(300)

---

Zn++ sol NaCl04 25°C 1.0M U 1967GSc (14226) 463  
K(ZnS(s)+H2O=Zn(HS)OH)=-5.87  
Kso=-24.37  
K(Zn+OH+HS)=19.02

---

Zn++ oth none 25°C 0.0 U 1964PCa (14227) 464  
K(ZnL(s)+2H=Zn+H2S(g))=-0.82

From thermodynamic data. ZnL=wurtzite. Alternative values K=-2.69, 2.0

-----  
Zn++ sol oth/un 100°C 1.60M U 1960BAa (14228) 465  
K(ZnS(s)+HS=ZnHS2)=-3.0

Medium: NaOH. 25-195 C

-----  
Zn++ oth none 25°C 0.0 U T 1959CZa (14229) 466  
Kso(ZnL)=-23.82

From thermodynamic data. Kso=-20.92(100 C), -18.48(200 C), -15.82(400 C),  
-14.34(600 C)

-----  
Zn++ oth none 25°C 0.0 U 1952GGc (14230) 467  
Kso(ZnL,sphalerite)=-24.10

From thermodynamic data

-----  
Zn++ oth none 25°C 0.0 U 1952LAb (14231) 468  
Kso(ZnL,sphalerite)=-25.15  
Kso(ZnL,wurtzite)=-22.80

From thermodynamic data

-----  
Zn++ sol none 25°C 0.0 U 1936RAa (14232) 469  
Kso(ZnL)=-25.94  
K(ZnL(s)+2H=Zn+H2S(g))=-3.02

From thermodynamic data Kso(ZnL)=-22.2

-----  
Zn++ sol oth/un 18°C var U 1931K0a (14233) 470  
Kso(ZnL)=-25.10  
K(ZnL(s)+2H=Zn+H2S(g))=-2.14

Alternative values: Kso=-25.3(sphalerite), K=-2.35; Kso=-23.96(wurtzite),  
K=-1.0. By solubility, 1 M H2SO4: Kso=-25.16, K=2.2(sphalerite)

-----  
Zn++ sol oth/un 25°C var U 1907GLa (14234) 471  
K(ZnL(s)+2H=Zn+H2S(g))=-2.67

ZnS=sphalerite. K=-1.35(wurtzite)

\*\*\*\*\*

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

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

-----  
Zn++ EMF non-aq 25°C 100% C HM 2001KTa (14584) 472  
B(Zn(phen)SCN)=9.4  
B(Zn(phen)(SCN)2)=12.5  
B(Zn(phen)2(SCN)2)=15.6

Medium: DMF, 0.40 M Et4NClO4. Method: Zn/Hg electrode. By calorimetry,  
DH(Zn(phen)SCN)=-24, DH(Zn(phen)(SCN)2)=-25, DH(Zn(phen)2(SCN)2)=-70

-----  
Zn++ gl NaClO4 25°C 0.10M M M 1994KTa (14585) 473  
K(ZnA+L)=2.2

A:1,4,7,10-Tetraazacyclododecane. By kinetic methods, K=1.8

-----  
Zn++ kin NaClO4 25°C 0.10M M M 1992KKb (14586) 474  
K(ZnA+L)=2.4  
A:1,5,9-triazacyclododecane  
-----  
Zn++ cal non-aq 25°C 100% U HM T K1=3.33 1990IMa (14587) 475  
B3=10.23  
B(Zn(bpy)L)=7.3  
B(Zn(bpy)2L)=9.8  
B(Zn(bpy)L2)=10.6  
In DMF, 0.1 M Et4NClO4. B4=13.31, B(Zn(bpy)2L2)=12.3. DH(K1)=4.9, DH(B3)=9.5  
DH(B4)=-7.9, DH(Zn(bpy)L)=-13.0, DH(Zn(bpy)2L)=-42.9, DH(Zn(bpy)L2)=-17.5  
-----  
Zn++ ISE NaClO4 25°C 1.0M C K1=0.72 B2= 1.86 1989LWe (14588) 476  
Method: SCN ion-selective electrode.  
-----  
Zn++ ISE alc/w 25°C 100% U T K1=4.31 B2=7 1987DWb (14589) 477  
Medium: MeOH, 0.05 M NaClO4  
-----  
Zn++ cal NaClO4 25°C 5.00M U H T K1=0.917 B2=1.590 1985IYa (14590) 478  
B3=2.167  
B4=2.514  
DH(K1)=-5.0, DH(B2)=2.9, DH(B3)=-6.3 and DH(B4)=-4.4 kJ mol<sup>-1</sup>.  
DS(K1)=1, DS(B2)=23, DS(B3)=-6.3 and DS(B4)=-8 J K<sup>-1</sup> mol<sup>-1</sup>.  
-----  
Zn++ cal NaClO4 25°C 5.00M C H T K1=0.917 B2=1.59 1985IYb (14591) 479  
K3=0.577  
K4=0.347  
DH(K1)=-5.0 kJ mol<sup>-1</sup>, DH(K2)=2.9, DH(K3)=-6.3, DH(K4)=-4.4  
DS(K1)=1 J K<sup>-1</sup> mol<sup>-1</sup>, DS(K2)=23, DS(K3)=-10, DS(K4)=-8  
-----  
Zn++ ISE alc/w 25°C 100% U T K1=5.24 B2=8.83 1983DSa (14592) 480  
K3=3.02  
K4=2.11  
Medium: MeOH  
-----  
Zn++ sp oth/un 25°C ? U K1=0.70 B2=1.87 1982JJa (14593) 481  
B3=1.60  
B4=2.07  
-----  
Zn++ ISE non-aq 25°C 100% C T K1=3.26 1982SSd (14594) 482  
Medium: dimethylacetamide  
-----  
Zn++ vlt NaNO3 25°C 2.0M C K1=0.48 B2= 0.60 1980KJb (14595) 483  
B3=1.0  
Method: polarography.  
-----  
Zn++ ISE non-aq 25°C 100% U T K1=1.95 B2=4.00 1979LTb (14596) 484  
B3=6.48  
B4=8.62

B5=8.60

Medium: DMF. Method: Zn electrode

Zn++	sp	NaClO4	25°C	1.0M	C	K1=1.7	1978Y0a (14597)	485
Zn++	ISE	non-aq	25°C	100%	C	K1=1.38 K3=2.40 K4=1.65	B2= 2.80 1976ABg (14598)	486

Medium: 1 M NH4ClO4 in DMSO  
Zn(Hg)-electrode

Zn++	vlt	KN03	25°C	0.50M	C I	K1=0.60 B4=2.71	B2= 1.58 1975ABd (14599)	487
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Method: polarography. Also data for 10-30% EtOH/H2O, 0.5-1.0 M KN03.  
At I=1.0 M, K1=0.78, B2=0.78, B4=1.59.

Zn++	cal	none	25°C	0.0	U	H		1974RBb (14600)	488
DH(K1)=-8.58 kJ mol-1, DS=-3.3 J K-1 mol-1; DH(K2)=-9.20, DS=5.7; DH(K3)=-31.6, DS=-67.78									
Zn++	kin	NaClO4	25°C	1.0M	U		T K1=0.41	1973HHb (14601)	489
Zn++	ISE	none	25°C	0.0	U		K1=1.33 B3=2.00 B4=1.63	B2=1.91 1973RSc (14602)	490

Method: Zn amalgam electrode

Zn++	ISE	non-aq	25°C	100%	U	T K1=3.57 B3=5.57	B2=4.04 1973SLd (14603)	491
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Medium: DMSO, 1 M LiClO4. Method: Zn amalgam electrode

Zn++	cal	NaClO4	25°C	1.0M	U H T	K1=0.71 B3=1.2 B4=1.5	B2=1.0 1971AKb (14604)	492
DH(K1)=-5.86 kJ mol <sup>-1</sup> , DS=-5.9 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=-1.7, DS=0; DH(B3)=-0.8, DS=0, DH(B4)=-7.5, DS=-18.8. Method: also Zn amalgam electrode								

Zn++	EMF	none	25°C	0.0	U T H	K1=1.49	1971DDb (14605)	493
DH(K1)=-11.3 kJ mol <sup>-1</sup> . K1=1.42(35 C), 1.37(45 C)								

Zn++	vlt	NaClO4	25°C	2.0M	U I	K1=0.34 B4=1.72	B2=1.37 1971M0a (14606)	494
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In 2 M KN03: K1=0.53, B2=0.98, B4=1.33

Zn++	dis	NaClO4	25°C	1.0M	U	T K1=0.56 B3=1.18	B2=1.32 1971MSa (14607)	495
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Zn++	ISE	NaClO4	25°C	2.0M	U	T K1=0.74 B3=1.30 B4=1.68	B2=1.15 1970NAa (14608)	496
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Zn++	kin	NaClO4	25°C	0.25M	U	K1=1.5	1969SUa (14609)	497
Zn++	ix	oth/un	?	0.0	U	K1=1.57 B3=1.51 B4=3.02	1968NPc (14610)	498
Zn++	EMF	oth/un	35°C	0.0	U	K1=1.42	1968PRd (14611)	499
Zn++	cal	oth/un	25°C	0.0	U H	K1=1.85	1967NTa (14612)	500
Medium: 0 corr. DH(K1)=0.8 kJ mol <sup>-1</sup> , DS=38.4 J K <sup>-1</sup> mol <sup>-1</sup>								
Zn++	ISE	NaClO4	25°C	4.0M	U M T	K1=1.11 K(Na+ZnL3)=-1.98 K(K+ZnL3)=-1.38 K(M+ZnL3)=-1.24(M=Rb and NH4) K(Cs+ZnL3)=-0.74	1966MKa (14613)	501
Medium: LiClO4. K(Na+ZnL4)=-1.28, -0.77(K), -0.64(Rb and NH4), -0.14(Cs) B3=2.81, B4=2.80								
Zn++	vlt	oth/un	?	var	U	K1=0.73 B3=0.7 B4=1.6	1966SSa (14614)	502
Zn++	oth	oth/un	?	var	U	K1=0.91	1962FLa (14615)	503
Method: ir								
Zn++	dis	NaClO4	20°C	1.0M	U	K1=-0.3? B3=0.3? B4=0.9 Kd=3.7	1960TDa (14616)	504
Kd: K(Zn+2L=ZnL2(in methyl-isobutyl ketone))								
Zn++	vlt	NaClO4	25°C	3.0M	U	K1=-0.14 B3=1.20 B4=1.29 B5=1.22 B6=0.63	1959THa (14617)	505
Zn++	EMF	KNO3	20°C	3.3?M	U T H	K1=1.46 B3=2.34 B4=2.01	1958GIa (14618)	506
Method: Zn amalgam electrode; DH(B4)=-23.8(40 C); B4=1.74(40 C)								
Zn++	sol	none	25°C	0.0	U	K1=1.19	1958YKa (14619)	507
Zn++	sol	KNO3	25°C	1.70M	U	K1=2.05 B3=2.61	1957NMa (14620)	508
Zn++	sp	KNO3	20°C	0.50M	U I	K1=0.55	1957YTa (14621)	509

K1=0.44(I=1.7 to 3.0), 0.52(I=1.0)

Zn++ EMF KNO3 20°C 1.70M U 1956NMb (14622) 510

K1=1.53?

B3=2.18?

Method: Zn amalgam electrode

Zn++ EMF KNO3 20°C 1.70M U 1956NMb (14623) 511

K(ZnOH+L=ZnOHL)=2.01?

B(ZnOH+3L=Zn(OH)L3)=2.66?

Method: Zn amalgam electrode

Zn++ vlt KNO3 30°C 2.0M U K1=0.48 B2=0.85 1953FHa (14624) 512

B3=0

B4=1.30

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

Sulfate;

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

Zn++ sp none 25°C dil C K1=3.43 2004AZa (15741) 513

H-point standard addition method. Competition with murexide.

Zn++ sol oth/un 200°C 0.10M C K1=2.6 1998WBa (15742) 514

Method: solubility of ZnO (zincite) in 0.01 m Na2S04/0.09 m Na triflate.

Zn++ sp none 25°C 0.0 C K1=2.34 1997CRc (15743) 515

Extrapolated from data for I=0.01-1.20 M Na2S04.

Competitive reaction with xylenol orange.

Zn++ vlt oth/un ? var C K1eff=1.30 1995VPa (15744) 516

pH=7.9 of Pisuerga river water. Ionic strength ranged from 0.01 M to 0.75M.

Method: Anodic Stripping Voltammetry.

Zn++ sp none 25°C 0.0 C K1=2.03 1990WAa (15745) 517

Zn++ con none 25°C 0.0 C T K1=2.35 1989ADa (15746) 518

Data for 10-50C. DH(K1)=-0.18 kJ mol-1, DS(K1)=12.87 J K-1 mol-1.

Zn++ con none 25°C 0.0 C I K1=2.28 1986SDa (15747) 519

Value derived from data for 0.001-0.05 self medium.

Zn++ oth none 25°C 0.0 C H K1=2.12 1981YYa (15748) 520

Calculated from published UV spectrometry data (competition with Cu).

From conductivity data: K1=2.23, DH(K1)=6.64 kJ mol-1, DS(K1)=65.1.

Zn++ cal oth/un 25°C 0.17M U H 1978ARa (15749) 521

DH(K1)=-1.54 kJ mol-1, DS=13.8. In 0.17 M ZnCl2



Zn++	con none	25°C	0.0	C T	K1=2.73	1977STd (15750)	522
At 15 C, K1=2.68; at 40 C, K1=2.80.							
Zn++	con mixed	25°C	?	U T H	K1=2.22	1976KAa (15751)	523
K1=2.09 (0 C); 2.18 (20 C); 2.24 (30 C); 2.29 (40 C); 2.32 (45 C)							
Medium: Water-ethylene glycol mixture							
Zn++	ISE NaClO4	25°C	4.00M	U I M	K1=0.61 B3=1.03 B4=0.75 B(ZnCl(SO4)3)=1.23	1975FCa (15752)	524
Zn++	con none	25°C	0.0	U	K1=2.5	1975TAa (15753)	525
Zn++	sp none	25°C	0.0	C	K1=2.05	1975YYa (15754)	526
Zn++	cal NaClO4	25°C	3.0M	U H	K1=0.21	1974BRa (15755)	527
Medium: LiClO4. DH(K1)=3.0 kJ mol <sup>-1</sup> , DS(K1)=14.6 J K <sup>-1</sup> mol <sup>-1</sup>							
Zn++	dis NaClO4	25°C	1.00M	U	K1=0.69	B2=1.48	1974MSc (15756) 528
Zn++	ISE NaClO4	25°C	3.0M	U TI	K1=0.70 B3=0.90 B4=0.85 B5=1.04	B2=0.69	1973FCa (15757) 529
K1=1.9, B2=3.1(I=0); K1=0.93, B2=1.97(I=0.5); K1=0.89, B2=1.23, B3=1.66, B4=1.67(I=1); 0.76,1.18,1.11,1.38(I=2)							
Zn++	cal none	25°C	0.0	U H		1973HPa (15758)	530
DH(K1)=6.7 kJ mol <sup>-1</sup>							
Zn++	cal none	25°C	0.0	U H		1973POa (15759)	531
DH(K1)=6.1 to 6.6 kJ mol <sup>-1</sup>							
Zn++	oth none	25°C	0.0	C	K1=2.30	B2= 1.70	1972PIa (15760) 532
Calculated from published osmotic coefficient data.							
Zn++	EMF NaClO4	25°C	3.0M	U	K1=0.70 B3=0.90 B4=0.81 B(ZnCl3L)=0.3	B2=0.70	1971FCb (15761) 533
Medium: LiClO4. B(ZnClL)=0.36, B(ZnClL2)=0.62, B(ZnClL3)=0.53; B(ZnCl2L)=0.41, B(ZnCl2L2)=-0.40							
Zn++	con none	25°C	0.0	U	K1=2.33	1971HPa (15762)	534
Zn++	cal none	25°C	0.0	C H		1970LAe (15763)	535
DH(K1)=5.7 kJ mol <sup>-1</sup> , DS(K1)=63.6 J K <sup>-1</sup> mol <sup>-1</sup> . Method: heat of dilution measurements.							

Zn++	oth none	50°C	0.0	U T	K1=2.6	1969HEa (15764)	536
Estimated from literature data. K1=2.7(60 C), 3.2(100 C), 3.8(150 C), 4.6(200 C)							
Zn++	cal none	25°C	0.0	U H	K1=2.49	1969IEa (15765)	537
DH(K1)=2.6 kJ mol <sup>-1</sup> ; DS(K1)=56.5 J K <sup>-1</sup> mol <sup>-1</sup>							
Zn++	con oth/un	25°C	0.0	U T H	K1=2.49	1969NPe (15766)	538
K1=2.60(50 C), 2.67(70 C), 2.73(90 C). DH(K1)=8.1 kJ mol <sup>-1</sup>							
Zn++	con mixed	25°C	20%	U I	K1=2.68	1969SMd (15767)	539
Medium: THF/H2O. In 0% THF: K1=2.11, 50%: 3.16							
Zn++	ISE oth/un	35°C	0.0	U	K1=2.12	1968PRd (15768)	540
Zn++	oth oth/un	25°C	?	U I	K1=2.34	1967FPb (15769)	541
Method:ultrasonic absorption + Bjerrum's equation for K1out. Also in mixed glycol/H2O							
Zn++	oth oth/un	25°C	0.0	U H	K1=2.38	1967HEb (15770)	542
Method:from thermodynamic data. DH(K1)=16 to 17 kJ mol <sup>-1</sup> , DS=100 J K <sup>-1</sup> mol <sup>-1</sup>							
Zn++	sol oth/un	20°C	var	U		1964PCa (15771)	543
Kso(Zn(OH)1.5L0.25)=-13.4							
Zn++	con oth/un	25°C	var	U	K1=2.30	1961PFa (15772)	544
Zn++	oth KNO3	-3°C	sat	U	K1=0.64 B2=1.54	1959RRc (15773)	545
Method: freezing point							
Zn++	oth KNO3	0°C	sat	U I	K1=0.66	1958KEa (15774)	546
Method: freezing point. K1=1.31(KClO3 sat), 1.71(KClO4 sat). K1=2.26 I=0 co.							
Zn++	EMF oth/un	25°C	0.0	U T H	K1=2.38	1958NNa (15775)	547
Method: H electrode. K1=2.08(0 C), 2.27(15 C), 2.34(20 C), 2.47(35 C), 2.53(45 C). DH(K1)=16.8 kJ mol <sup>-1</sup> , DS=102 J K <sup>-1</sup> mol <sup>-1</sup>							
Zn++	oth oth/un	0°C	0.0	U	K1=2.34	1956KEb (15776)	548
Method: freezing point							
Zn++	oth oth/un	0°C	0.0	U	K1=2.2	1955BPb (15777)	549
Method: freezing point. K1=2.00 to 2.38							
Zn++	sol oth/un	75°C	0.0	U		1954DOa (15778)	550
Kso(Zn(OH)1.5L0.25)=-14.3							
Zn++	gl oth/un	25°C	var	U		1939HAa (15779)	551
Kso(Zn(OH)1.5L0.25)=-13.3							

Zn++ con oth/un 18°C 0.0 U K1=2.28 1938DAa (15780) 552  
By Zn/Hg electrode K1=2.27

Zn++ con oth/un 25°C 0.0 U K1=2.31 19380Ga (15781) 553

Zn++ con oth/un 18°C 0.0 U K1=2.35 1927DAb (15782) 554

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

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

Zn++ vlt NaCl04 RT 5.0M C K1=1.30 B2= 2.34 1986MGb (16708) 555  
B3=2.53

Method: polarography, using Cd++ as indicator ion

Zn++ cal oth/un 25°C 0.17M U H 1978ARa (16709) 556  
DH(K1)=9.20 kJ mol<sup>-1</sup>, DS=52.3. In 0.17 M ZnCl2

Zn++ cal R4N.X 25°C 0.50M U H K1=1.12 1974ARa (16710) 557  
DH=9.20 kJ mol<sup>-1</sup>.

Zn++ dis NaCl04 25°C 1.00M U K1=0.62 B2=2.28 1974MSc (16711) 558

Zn++ ISE NaNO3 25°C 2.0M U K1=1.10 B2=1.95 1972NEb (16712) 559  
K3=0.56

Method: Ag electrode

Zn++ ISE NaCl04 25°C 3.0M U K1=0.96 B2=1.94 1970PEa (16713) 560  
B3=3.30  
B(Zn2L4)=5.8(?)

Zn++ vlt oth/un var U I B2=2.04 1969SSf (16714) 561  
B3=1.70  
B4=3.33

Medium: 25% MeOH: B2=2.79, B3=4.0, B4=ca.4.8

Zn++ ISE NaCl04 25°C 0.78M U K1=2.08 B2=4.60 1968JGa (16715) 562  
Method: Zn/Hg electrode + spec., also constants for mixed L/C204 complexes

Zn++ ix oth/un 18°C 0.30M U B2=4.59 1957KPb (16716) 563

Zn++ sol oth/un 40°C 3.00M U K1=1.53 1957NMa (16717) 564  
Medium:Na2SO4

Zn++ cal NaNO3 25°C 1.0M U H K1=1.19 1957YGa (16718) 565  
DH(K1)=14.6 kJ mol<sup>-1</sup>, DS=71 J K<sup>-1</sup> mol<sup>-1</sup>

Zn++ EMF KNO3 20°C 1.70M U I 1956NMb (16719) 566  
B2=2.95?

B(ZnO+2L)=3.13?

Method: Zn/Hg electrode. In 1.7 M Na2SO4 B2=2.18?, 3 M Na2SO4 B2=2.22?  
 K(ZnOH+2L)=2.13(KNO3), 1.28(Na2SO4), 1.37(3 M Na2SO4) ?

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Zn++          sp   none   25°C   0.0   U T H          K1=2.29          1955GMa (16720) 567  
 K1=2.24(15 C), 2.40(35 C). DH(K1)=13.0 kJ mol<sup>-1</sup>, DS=92 J K<sup>-1</sup> mol<sup>-1</sup>

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Zn++          EMF oth/un rt?    var   U          K1=2.3          1936FRa (16721) 568

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Zn++          ISE oth/un    ?    var   U          1904EUa (16722) 569  
 B4<0.6

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Se--                          H2L          Selenide                          (6335)  
 Selenide;

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

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Zn++          oth none    25°C   0.0   U                          1964BUE (16933) 570  
 Kso=-29.4

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SeCN-                          HL          Selenocyanate          CAS 73102-11-2 (440)  
 Selenocyanate;

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

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Zn++          ISE non-aq 25°C 100% C          K1=2.0          1982SSd (16956) 571  
 Medium: dimethylacetamide

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Zn++          cal NaClO4 25°C 1.0M U    H          K1=0.44    B2=0.64    1974AAb (16957) 572  
 DH(K1)=-5.94 kJ mol<sup>-1</sup>, DS=-11.7 J K<sup>-1</sup> mol<sup>-1</sup>, DH(K2)=-0.42, DS=2.9.  
 Zn amalgam electrode also used

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Zn++          EMF mixed   20°C   50%   U    I          K1=2.15    B2=2.64    1970SAe (16958) 573  
 B3=3.80  
 Medium: 50% v/v acetone/H2O. K1=2.30, B2=3.49, B3=4.50(60%);  
 2.74, 4.04, 5.0(75%); 4.95, 5.54, 6.5(90%)

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Zn++          EMF non-aq 20°C 100% U    I          K1=7.88    B2=10.0    1970SAe (16959) 574  
 B3=11.15  
 B4=11.85

Medium: acetone. In acetonitrile: K1=7.3, B2=9.4, B3=10.8, B4=12.25;  
 In DMF:K1=2.6, B2=4.3, B3=4.9

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Zn++          vlt KNO3    30°C   2.0M U                          K1=0.76    B2=1.00    1967HBa (16960) 575

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SeO3--                          H2L          Selenite                          CAS 7783-00-8 (2391)  
 Selenite;

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

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Zn++ con oth/un 18°C dil U 1968RVa (17021) 576  
Kso=-7.72

Zn++ sol oth/un 20°C var U 1956CHe (17022) 577  
Kso(ZnL)=-6.59

\*\*\*\*\*

SeO4-- H2L Selenate CAS 7783-08-6 (459)  
Selenate;

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

Zn++ cal oth/un 25°C 0.17M U H 1978ARa (17087) 578  
DH(K1)=0.21 kJ mol-1, DS=18.0. In 0.17 M ZnCl2

Zn++ dis NaClO4 25°C 1.00M U K1=0.73 B2=1.38 1974MSc (17088) 579

Zn++ sol oth/un 20°C var U 1959BRc (17089) 580  
Kso(Zn(OH)1.5L0.25)=-13.4

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Zn++ con none 25°C 0.0 U K1=2.19 1934BAa (17090) 581

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SiO3-- H2L Silicate CAS 7699-41-4 (747)  
Silicate; SiO2(OH)2--

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ oth none 25°C 0.0 U 1957BAa (17175) 582  
From thermodynamic data. Ks(ZnSiO3(s)+H2O=SiO2(s)+Zn+2OH)=-21.03

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SiW11039----- H8L (2464)  
alpha-Heterosilicon-polytungstate;

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

Zn++ gl NaNO3 25°C 1.00M U K1=7.28 1984COa (17229) 583  
K(beta1 isomer)=6.96  
K(beta2 isomer)=6.88  
K(beta3 isomer)=7.00

\*\*\*\*\*

CHN3S2 HL (7830)  
1,2,3,4-Thiatetrazol-5-thiolate;

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

Zn++ EMF NaClO4 25°C 2.0M U K1=0.25 B2= 0.90 1981NMc (17456) 584  
B3=1.68  
B4=1.55  
B5=2.48

Zn electrode used

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CH2O2                      HL      Formic acid                      CAS 64-18-6    (37)  
Methanoic acid; H.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	70%	M			K1=2.41	1990BSb (17548)	585
Medium: 70% v/v DMSO/H2O, 0.1 M NaNO3										
Zn++	oth	NaClO4	25°C	2.0M	U			K1=0.73	1990FTa (17549)	586
Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.										
Zn++	gl	diox/w	25°C	30%	C	I		K1=1.24	1989LCb (17550)	587
Medium: 30% dioxan/H2O, 0.1 M NaNO3. In 0%, K1=1.07; 50%, K1=1.96.										
Zn++	gl	NaNO3	25°C	0.10M	C	I	M	K1=0.95	1988LTc (17551)	588
								K(Zn(phen)+L)=0.83		
Data also for 50% v/v EtOH/H2O, and 50% v/v Dioxan/H2O mixtures										
Zn++	gl	KNO3	25°C	0.10M	C	I	M	K1=1.07	1985BSd (17552)	589
								K(Zn(phen)+L)=0.90		
In 50% dioxan: K1=1.96, K(Zn(phen)+L)=1.82. In 50% EtOH: K1=1.49, K=1.38										
Zn++	gl	KNO3	25°C	0.10M	C	I	M	K1=1.07	1985SMf (17553)	590
								K(Zn(phen)+L)=0.90		
Also data in 30, 50, 60, 70, and 90% (v/v) Ethanol/water and 10, 30, 50, 60, 70, 80, and 90% (v/v) dioxane/water.										
Zn++	sol	oth/un	25°C	1.00M	U			K1=0.92	1973TRc (17554)	591
Zn++	vlt	oth/un	25°C	1.00M	U			K1=0.73	1973TRc (17555)	592
Zn++	gl	NaNO3	30°C	0.40M	U			K1=0.73	1970BTa (17556)	593
Zn++	EMF	NaClO4	25°C	2.00M	U			K1=0.70	B2=1.08	1970FMa (17557)
								B3=1.20	594	
Zn++	vlt	NaClO4	25°C	2.00M	U			K1=0.70	B2=1.18	1968FPa (17558)
								B3=0.70	595	
Zn++	gl	diox/w	25°C	50%	U	M		K1=1.97	1968GPd (17559)	596
								K(Zn(bpy)+L)=1.83		
Medium: 0.1(NaClO4), 50% dioxan										
Zn++	vlt	NaClO4	25°C	2.0M	U			K1=0.60	B2=1.55	1957HBa (17560)
								K3=0.48	597	
								K4=0.78		

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CH3NO                      L      Formamide                      CAS 75-12-7    (3536)  
Methanoic acid amide; HCO.NH2

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      vlt alc/w      ?   40% U I      B2=0.62      1962MGa (17673) 598
Medium: 40% MeOH, 0.05 NaClO4. B2=0.79(77%), 0.93(85%), 1.9(92%), 3.7(100%)
-----
Zn++      vlt alc/w      ?   90% U I      K1=1.64 B2=1.96 1962MGa (17674) 599
Medium: 90% EtOH, 0.05 NaClO4. K1=2.1(96%), B2=3.5(96%); B3=4.23(96%);
B4=9.0(100%)
*****
CH3NO2      HL      CAS 4312-87-2 (8245)
N-Formylhydroxylamine;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      vlt KNO3      30°C 0.50M C      B2=4.32      1983BNa (17682) 600
Method: polarography.
*****
CH3O5P      H3L      Phosphonoformic CAS 4428-95-9 (5654)
Phosphonoformic Acid; O:P(OH)2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaNO3      25°C 0.10M C      K1=5.64      1994SCa (17693) 601
K(Zn+HL)=2.57
K(ZnL+H)=4.50
*****
CH4N2S      L      Thiourea      CAS 62-56-6 (51)
Thiocarbamide, Thiourea; (H2N)2CS
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      ISE mixed      25°C 82% U      K1=1.77 B2=1.96 1979TBb (17739) 602
Medium: 82% formamide
-----
Zn++      EMF mixed      25°C 90% U I      K1=2.05 B2=3.85 1966SLc (17740) 603
K3=1.65
K4=1.45
K5=0.75
Medium: 0-90% acetone. K1=0.5(0%),1.0(50%),1.75(80%), K2=0.25(0%),0.7(50%),
1.45(80%), K3=0.15(0%), 0.5(50%), 1.20(80%), K4=0.4(80%)
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CH4O      L      Methyl alcohol CAS 67-56-1 (597)
Methanol; CH3.OH
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      cal non-aq      25°C 100% C IH      2002LVa (17871) 604
K(ZnP+L)=2.78
Medium: CCl4. ZnP: Zn(II)tetraphenylporphyrine. DH(ZnP+L)=-13.21 kJ mol-1,

```

DS=9 J K-1 mol-1. Data for related ligands.

-----  
Zn++ vlt alc/w 20°C ? U K1=-0.14 B2=0.04 1981PKb (17872) 605  
B3=1.42  
B4=0.94  
B5=1.36  
B6=2.01  
-----

Zn++ EMF alc/w 20°C 100% U 1964GUa (17873) 606  
K(2Zn+3(H-1L))=12.1

Method: H electrode. Medium: MeOH, 1.0 M Me4NCl

\*\*\*\*\*

CH4O3ClP H2L CAS 2565-58-4 (1973)  
Chloromethylphosphonic acid; Cl.CH2.PO3H2  
-----

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

Zn++ EMF NaNO3 25°C 0.10M U K1=2.11 1970TNa (17922) 607

\*\*\*\*\*

CH4O6Cl2P2 H4L CAS 10596-23-3 (2370)  
Dichloromethanediphosphonic acid; Cl2.C(PO3H2)2  
-----

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

Zn++ gl KCl 25°C 0.10M U K1=6.70 1976DGe (17945) 608  
K(Zn+HL)=4.61

\*\*\*\*\*

CH5N L Methylamine CAS 74-89-5 (155)  
Methylamine; CH3.NH2  
-----

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

Zn++ sol oth/un 19°C 0.10M U B2=<6.3 1933TAa (17996) 609  
B4=7.7

\*\*\*\*\*

CH5N3O L Semicarbazide CAS 563-41-7 (373)  
Semicarbazide, N-Aminourea; H2N.CO.NH.NH2  
-----

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

Zn++ ISE oth/un 30°C 0.10M U K1=2.3 B2=3.7 1969GLa (18050) 610

\*\*\*\*\*

CH5N3S L CAS 79-19-6 (372)  
Thiosemicarbazide; H2N.CS.NH.NH2  
-----

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

Zn++ gl KNO3 25°C 0.50M U K1=1.34 B2=2.58 1979LGa (18062) 611  
B3=3.71  
-----



Zn++ ISE oth/un 30°C 0.10M U B2=2.8 1969GLa (18063) 612  
 \*\*\*\*\*  
 CH5N3Se L CAS 21198-79-8 (371)  
 Selenosemicarbazide; H2N.CSe.NH.NH2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ ISE oth/un 30°C 0.10M U B2=<1 1969GLa (18086) 613  
 \*\*\*\*\*  
 CH5O3P H2L CAS 13590-71-1 (1752)  
 Methylphosphonic acid; CH3.PO3H2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ gl NaNO3 25°C 0.10M M K1=2.60 1992SCa (18112) 614  
 \*\*\*\*\*  
 CH5O4P H2L CAS 86703-09-5 (1751)  
 Methylphosphoric acid; CH3OP(O)(OH)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ gl NaNO3 25°C 0.1M M K1=2.22 1996SSa (18161) 615  
 -----  
 Zn++ gl NaCl 25°C 0.15M U K1=2.175 1990KLb (18162) 616  
 B(ZnH-1L)=-5.12

-----  
 Zn++ sp oth/un 20°C 0.10M U T K1=2.16 1965BRb (18163) 617  
 K1(65 C)=2.67  
 \*\*\*\*\*  
 CH6NO3P H2L AMPA CAS 1066-51-3 (1981)  
 Aminomethylphosphonic acid; H2N.CH2.PO3H2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ gl KNO3 25°C 0.10M C I R K1=5.0 2001PRa (18206) 618  
 K(Zn+HL)=1.70  
 IUPAC Recommended values

-----  
 Zn++ gl NaNO3 25°C 0.10M C K1=4.91 1994SCa (18207) 619  
 K(Zn+HL)=1.72  
 K(ZnL+H)=6.89

-----  
 Zn++ gl KNO3 25°C 0.10M U K1=5.00 1979WNb (18208) 620  
 B(ZnHL)=11.72  
 B(ZnH2L2)=23.6  
 B(ZnH-1L)=-1.9

-----  
 Zn++ gl NaClO4 25°C 0.10M U K1=5.26 B2=8.68 1976SOa (18209) 621  
 B(ZnHL)=12.72  
 -----

Zn++      gl   diox/w 25°C   70%   M      K1=1.78      1990BSb (18389) 628

\*\*\*\*\*

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Medium: 70% v/v DMSO/H<sub>2</sub>O, 0.1 M NaNO<sub>3</sub>

\*\*\*\*\*

Glyoxylic acid;  $\text{OHC}\cdot\text{COOH}$

---

See glycine, alanine and 2-aminoisobutanoic acid for ternary complexes

\*\*\*\*\*

Ethanedioic acid; (COOH)<sub>2</sub>

$$K(\text{ZnL}+\text{A})=6.10$$

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$$B(\text{ZnL}(\text{cytidine})) = 9.40$$

7n++ g] KNO3 35°C 0.10M C K1=5.31 1985BRh (18636) 637

Zn++ oth NaClO4 40°C 0.10M C M B2=5.11 1984SIa (18637) 638

$$B(\text{ZnL}(\text{nta})) = 6.58$$

---

B3=6.00

---

Zn++	sol	oth/un	20°C	2.10M	U	M	K1=5.40	1978KUa (18640)	641
							B(ZnL(glycolate))=6.47		
							B(ZnL(glycolate)2)=6.95		
							B(ZnL(lactate))=6.88		
							B(ZnL(lactate)2)=7.16		
Zn++	dis	NaClO4	23°C	1.00M	U		K1=3.26	B2=6.63	1978PSb (18641) 642
Zn++	gl	NaClO4	37°C	0.15M	C		K1=4.05	1976MTa (18642)	643
							B(Zn2HL2)=13.29		
Zn++	dis	NaClO4	25°C	1.00M	U		K1=3.42	B2=6.16	1974MSc (18643) 644
Zn++	sol	oth/un	20°C	2.10M	U		K1=5.51	1971KSd (18644)	645
Zn++	sp	oth/un	43°C	1.0M	U			1967GPb (18645)	646
							K3=0.57		
Medium: 1(?) Zn(NO3)2									
Zn++	EMF	KCl	25°C	2.00M	U		K1=3.48	B2=5.48	1967KCa (18646) 647
							B3=7.08		
Zn++	gl	KNO3	25°C	1.0M	U	M	K1=3.44	B2=6.48	1967KWa (18647) 648
							K3=0.76		
							B(Zn(en)L)=9.21		
							B(Zn(en)2L)=12.31		
							K(ZnLen+en=Zn(en)2+L)=1.64		
							B(Zn(en)L2)=10.76, K(ZnL(en)2+en=Zn(en)3+L)=0.38, K(Zn(en)+L)=3.49		
Zn++	dis	oth/un	25°C	0.0	U		K1=4.85	B2=7.55	1966Rmb (18648) 649
Zn++	dis	NaClO4	20°C	0.10M	U		B2=7.59	1963STc (18649)	650
Zn++	gl	oth/un	25°C	0.10M	U		K1=4.9	1958GHc (18650)	651
Zn++	ix	NaCl	25°C	0.10M	U		K1=3.88	B2=6.40	1958SLb (18651) 652
							K(Zn+HL)=1.72		
							K(Zn+2HL)=3.12		
Zn++	ix	oth/un	?	?	U		K2=7.11	1957KPb (18652)	653
Zn++	gl	oth/un	25°C	>0.1	U		B2=7.60	1956Z0a (18653)	654
Zn++	sol	oth/un	25°C	0.0	U		K1=5.00	B2=12.36	1940VBa (18654) 655
Zn++	EMF	oth/un	25°C	0.0	U		K1=4.68	B2=7.04	1937CVa (18655) 656
Zn++	con	oth/un	18°C	0.0	U		K1=4.89	1932MDa (18656)	657
Zn++	EMF	oth/un	18°C	0.60M	U			1904KUa (18657)	658

B3=8.15

\*\*\*\*\*  
 C2H3NO4 HL CAS 625-75-2 (2968)  
 Nitroacetic acid; O2N.CH2.COOH

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ kin oth/un 18°C 0.20M U K1=0.03 1949PEa (19201) 659  
 Medium: Ba(NO3)2

\*\*\*\*\*  
 C2H3N3 HL 1,2,4-Triazole CAS 288-88-0 (381)  
 1,2,4-Triazole; cyclo(-NH.N:CH.N:CH-) C2H3N3

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ cal NaNO3 25°C 1.00M U H 1986ARa (19221) 660  
 K(Zn+HL)=1.19

DH(Zn+HL) = -15.6 kJ mol<sup>-1</sup>

-----  
 Zn++ gl KNO3 25°C 0.50M U 1980LKb (19222) 661  
 K(Zn+HL)=1.19  
 K(Zn+2HL)=2.04  
 K(Zn+3HL)=2.56

\*\*\*\*\*  
 C2H3N3O2 HL Urazole CAS 3232-84-6 (3540)  
 1,2,4-Triazolidin-3,5-dione;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ gl NaClO4 20°C 0.10M U K1=1.87 1963COb (19238) 662

\*\*\*\*\*  
 C2H3N3S L CAS 4005-51-0 (1426)  
 2-Amino-1,3,4-thiadiazole; C2HN2S.NH2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ gl KNO3 25°C 0.50M U K1=0.32 B2=0.45 1982GLa (19250) 663

\*\*\*\*\*  
 C2H3O2Br HL Bromoacetic acid CAS 79-08-3 (1309)  
 Bromoethanoic acid; Br.CH2.COOH

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ gl diox/w 25°C 0.10M U K1=1.75 1969GPb (19274) 664  
 0.1 M NaClO4 in 50% dioxane/H2O

\*\*\*\*\*  
 C2H3O2Cl HL Chloroacetic CAS 79-11-8 (34)  
 Chloroethanoic acid; ClCH2.COOH

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

Zn++	gl	diox/w	25°C	70%	M	K1=2.23	1990BSb (19336)	665
Medium: 70% v/v DMSO/H2O, 0.1 M NaNO3								
Zn++	gl	NaNO3	30°C	0.40M	U	K1=0.56	1970BTa (19337)	666
Zn++	EMF	NaClO4	18°C	2.00M	U	K1=0.40	1970FMa (19338)	667
Zn++	gl	diox/w	25°C	0.10M	U	K1=1.83	1969GPb (19339)	668
0.1 M NaClO4 in 50% dioxane/H2O								
Zn++	gl	diox/w	25°C	50%	U	K1=1.83	1969SGa (19340)	669
Medium: 50% dioxan, 0.1 M NaClO4								
Zn++	EMF	NaClO4	25°C	1.0M	U	K1=0.96 B2=0.0? B3=0.7? B4=1.5(?)	1963LCa (19341)	670

Method: quinhydrone electrode.

\*\*\*\*\*

C2H3O2F HL Fluoroacetic ac CAS 144-49-0 (4222)  
Fluoroethanoic acid; F.CH2.COOH

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

Zn++	gl	diox/w	25°C	0.10M	U		K1=1.75	1969GPb (19401)	671
0.1 M NaClO4 in 50% dioxane/H2O									

\*\*\*\*\*

C2H3O2I HL Iodoacetic acid CAS 64-69-7 (1312)  
Iodoethanoic acid; ICH2.COOH

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

Zn++	gl	diox/w	25°C	0.10M	U		K1=1.77	1969GPb (19414)	672
0.1 M NaClO4 in 50% dioxane/H2O									

\*\*\*\*\*

C2H4 L Ethylene CAS 74-85-1 (478)  
Ethene; H2C:CH2

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

Zn++	dis	none	40°C	0.0	U T		K1=-1.52	1984DWa (19420)	673
------	-----	------	------	-----	-----	--	----------	-----------------	-----

\*\*\*\*\*

C2H4N4 HL CAS 61-82-5 (1265)  
3-Amino-1,2,4-triazole; C2H2N3.NH2

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

Zn++	gl	KNO3	25°C	0.10M	U I			1997DBa (19471)	674
------	----	------	------	-------	-----	--	--	-----------------	-----

K(Zn+HL)=2.14  
K(Zn+2HL)=4.04

K(Zn+3HL)=5.66

Data also for I=0.5 and 1.0 M

\*\*\*\*\*

C2H4N4 HL CAS 584-13-4 (819)

4-Amino-1,2,4-triazole; C2H2N3.NH2

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

Zn++ gl KNO3 25°C 0.50M U 1980LKb (19484) 675

K(Zn+HL)=1.14

K(Zn+2HL)=2.56

K(Zn+3HL)=2.56

\*\*\*\*\*

C2H4N4O2 HL Urazine; CAS 21531-96-4 (3541)

4-Amino-1,2,4-triazolidin-3,5-dione;

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

Zn++ gl NaClO4 20°C 0.10M U K1=2.17 1963COb (19490) 676

\*\*\*\*\*

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  
-----

Zn++ gl KNO3 25°C 0.10M C K1=4.01 2003AHa (19494) 677

\*\*\*\*\*

C2H4OS HL Thioacetic acid CAS 507-09-5 (4223)

Thiolethanoic acid; CH3.CO.SH

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

Zn++ gl diox/w 30°C 60% U K1=4.8 B2=8.90 19720Tc (19505) 678

Medium: 60% dioxan, 1 M (K,Na)NO3

\*\*\*\*\*

C2H4OS2 HL CAS 2042-42-4 (592)

(Methoxy)dithiomethanoic acid; CH3O.CS.SH

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

Zn++ vlt KNO3 25°C 0.40M C 1984HSb (19510) 679

B3=8.05

Method: polarography.

\*\*\*\*\*

C2H4O2 HL Acetic acid CAS 64-19-7 (36)

Ethanoic acid; CH3.CO.OH

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

Zn++ gl NaClO4 25°C 0.10M M M 1994KTa (19742) 680

A:1,4,7,10-Tetraazacyclododecane. By kinetic methods, K=1.6										
Zn++	kin	NaClO4	25°C	0.10M	M			1992KKb (19743)	681	
K(ZnA+L)=1.9 K(ZnA+L)=2.6										
A:1,5,9-triazacyclododecane										
Zn++	EMF	oth/un	50°C	0.30M	C	TI	K1=1.9 B3=4.1	B2=3.4	1991GDa (19744)	682
50-295 C;I=0.03-1.0 M. Constants at I=0										
Zn++	vlt	KNO3	25°C	0.10M	C		K1=2.40	B2= 3.92	1991KNb (19745)	683
Method: polarography, medium pH 8.5.										
Zn++	gl	diox/w	25°C	70%	M		K1=2.89		1990BSb (19746)	684
Medium: 70% v/v DMSO/H2O, 0.1 M NaNO3										
Zn++	oth	NaClO4	25°C	2.0M	U		K1=0.90		1990FTa (19747)	685
Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.										
Zn++	gl	diox/w	25°C	30%	C	I	K1=1.62		1989LCb (19748)	686
Medium: 30% dioxan/H2O, 0.1 M NaNO3. In 0%, K1=1.11; 50%, K1=2.31.										
Zn++	gl	NaNO3	25°C	0.10M	C	I M	K1=0.93 K(Zn(phen)+L)=0.81		1988LTc (19749)	687
Data also for 50% v/v EtOH/H2O, and 50% v/v Dioxan/H2O mixtures										
Zn++	nmr	none	20°C	0.0	U				1986DHa (19750)	688
K(ZnA+L)=0.8 In D2O. A = trien										
Zn++	gl	KNO3	25°C	0.10M	C	I M	K1=1.11 K(Zn(phen)+L)=0.90		1985BSd (19751)	689
In 50% dioxan: K1=2.31, K(Zn(phen)+L)=2.15. In 50% EtOH: K1=1.86, K=1.81										
Zn++	gl	KNO3	25°C	0.10M	C	I M	K1=1.11 K(Zn(phen)+L)=0.90		1985SMf (19752)	690
Also data in 30, 50, 60, 70, and 90% (v/v) Ethanol/water and 10, 30, 50, 60, 70, 80, and 90% (v/v) dioxane/water.										
Zn++	gl	KCl	25°C	0.10M	U		K1=1.14		1983LTa (19753)	691
Zn++	gl	NaNO3	25°C	0.10M	C		K1=0.86		1981BKb (19754)	692
Zn++	ix	none	23°C	0.0	U		K1=0.91	B2=1.10	1980PSb (19755)	693
Zn++	ISE	NaCl	25°C	1.00M	C	I	K1=0.63	B2=1.10	1979BJd (19756)	694
In 1.0 M NaClO4: K1=0.90										



Zn++	sp	NaClO4	25°C	1.0M	C	K1=1.4	1978Y0a (19757)	695
Zn++	gl	oth/un	25°C	0.10M	U	K1=4.04 B3=9.2 B4=12.4	B2=7.00 1975SNb (19758)	696
Medium: 0.1 M LiClO4/CH3COOH. K1: Zn(ClO4)2+LiOAc=ZnLClO4+LiClO4. Bn: Zn(ClO4)2+nLiOAc=Zn(L)n+nLiClO4								
Zn++	kin	KCl	25°C	0.10M	U	K1=1.248	1974CLa (19759)	697
Zn++	kin	NaClO4	25°C	1.00M	U	K1=0.63	1973HHb (19760)	698
Zn++	gl	NaClO4	25°C	3.00M	U	K1=0.91 B3=1.57	B2=1.36 1971PEa (19761)	699
Zn++	vlt	oth/un	25°C	1.00M	U	K1=-0.15	B2=1.02 1971TRb (19762)	700
Zn++	sol	oth/un	25°C	1.00M	U	K1=-0.10	B2=1.51 1971TRb (19763)	701
Zn++	gl	NaNO3	30°C	0.40M	U	K1=0.91	1970BTa (19764)	702
Zn++	EMF	NaClO4	25°C	2.00M	U	K1=0.85	B2=1.36 1970FMa (19765)	703
Zn++	gl	diox/w	25°C	0.10M	U	K1=2.32	1969GPb (19766)	704
0.1 M NaClO4 in 50% dioxane/H2O								
Zn++	ISE	NaClO4	25°C	3.00M	U	K1=0.78 B3=1.72	B2=1.25 1969WAa (19767)	705
Zn++	vlt	NaClO4	25°C	2.00M	U	K1=1.04 B3=1.60 B4=1.36	B2=0.78 1968FPa (19768)	706
Zn++	gl	diox/w	25°C	50%	U M	K1=2.32 K(Zn(bpy)+L)=2.21	1968GPd (19769)	707
Medium: 50% dioxan, 0.1 M NaClO4								
Zn++	gl	oth/un	25°C	0.0	U	K1=1.57	1964AMa (19770)	708
Zn++	EMF	NaClO4	25°C	1.0M	U	K1=1.03	1963LCa (19771)	709
Method: quinhydrone electrode								
Zn++	vlt	NaNO3	25°C	4.0M	U	K1=0.96	1963MAc (19772)	710
Zn++	gl	NaClO4	20°C	0.10M	U	K1=1.28	B2=2.09 1962KPa (19773)	711
Zn++	vlt	oth/un	25°C	0.20M	U T	K1=0.66	1960TKb (19774)	712
K1=0.76(15 C), 0.57(35 C)								
Zn++	gl	oth/un	25°C	0.10M	U	K1=1.0	1960YYa (19775)	713

Zn++	oth	oth/un	?	?	U	K1=1.57	1956YFa (19776)	714
Zn++	sol	oth/un	35°C	->0	U	K1=1.59	1955BAa (19777)	715
Zn++	EMF	oth/un	35°C	->0	U	K1=1.46	1955BAa (19778)	716
Zn++	EMF	KCl	?	0.20M	U	K1=1.03	1938CKa (19779)	717
*****								
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
Zn++	gl	alc/w	30°C	5%	U		K1=7.86	1995RRb (20285)	718
Medium: 5% v/v EtOH/H2O, 0.10 M KNO3.									
Zn++	gl	KNO3	25°C	0.10M	M	M		1989SHd (20286)	719
							K(Zn(nta)+L)=4.95		
Zn++	gl	NaCl04	30°C	0.10M	U		K1=8.01    B2=15.26	1988NDa (20287)	720
Zn++	gl	NaCl04	20°C	0.10M	U		K1=8.36    B2=15.18	1970AMa (20288)	721
Zn++	ISE	NaCl04	20°C	0.10M	U		K1=7.80    B2=14.96	1967PSe (20289)	722
							B3=17.80		
							K(Zn2L3)=25.2		
							K(Zn3L4)=36.47		
Zn++	gl	KCl	0°C	0.10M	U	T	K1=8.3    B2=15.9	1958LEa (20290)	723
15 C: K1=7.95, B2=15.0; 35 C: K1=7.95, B2=15.48; 40 C: K1=8.0, B2=15.0									
Zn++	gl	KNO3	25°C	0.15M	U		K1=7.44    B2=14.41	1955LMa (20291)	724
*****									
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
Zn++	ix	none	23°C	0.0	U		K1=1.78    B2=2.70	1980PSb (20456)	725
Zn++	sol	oth/un	20°C	2.10M	U	M		1978KUa (20457)	726
							B(ZnL(oxalate))=6.47		
							B(ZnL2(oxalate))=6.95		
Zn++	dis	NaCl04	23°C	1.00M	U		K1=1.85    B2=5.17	1978PSb (20458)	727
Zn++	vlt	NaNO3	25°C	3.00M	U		K1=1.45    B2=2.57	1971AMa (20459)	728
							K3=0.29		
							K4=-0.38		

-----  
 Zn++ vlt NaClO4 18°C 2.00M U K1=1.93 B2=2.94 1970FBa (20460) 729  
 B3=3.48  
 B4=3.00  
 -----

Zn++ EMF NaClO4 25°C 2.00M U K1=1.72 B2=2.88 1970FMa (20461) 730  
 B3=3.00  
 -----

Zn++ ix oth/un ? ? U M 1969LEa (20462) 731  
 K(ZnL2+ZnA2=2ZnAL)=0.88  
 HA=2-hydroxyisobutanoic acid  
 -----

Zn++ ISE NaClO4 25°C 3.00M U K1=1.79 B2=2.61 1969WAa (20463) 732  
 B3=3.27  
 -----

Zn++ gl diox/w 25°C 50% U M K1=3.26 1968GPd (20464) 733  
 K(Zn(bpy)+L)=3.02  
 Medium: 50% dioxan, 0.1 m NaClO4  
 -----

Zn++ EMF NaClO4 25°C 1.0M U T K1=1.92 B2=2.93 1963LCa (20465) 734  
 B3=3.00  
 B4=4.04  
 -----

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

-----

Zn++	cal	NaNO3	25°C	0.50M	C	H		2003ZKa (21237) 735	
								DH(K1)= -18.03 kJ mol <sup>-1</sup>	
								DH(B3)= -45.77	
								DH(B2)= -29.53	

for 1.0 M NaNO3 DH(K1): - 19.77; DH(B2)=-33.05; DH(B3)=- 49.21  
 for 1.5 M NaNO3 DH(K1)=: - 21.06; DH(B2)=-35.95; DH(B3)= - 51.01  
 -----

Zn++	gl	NaNO3	25°C	0.10M	C	M	K1=5.46 B2= 9.96	2000KAb (21238) 736	
								K(ZnA+L)=3.58	

H2A=Dipicolinic acid.  
 -----

Zn++	gl	NaNO3	25°C	0.10M	C	M	K1=5.29 B2= 9.17	2000ZLa (21239) 737	
								B(ZnLA)=11.49	

A=12-Pentyl-1,4,7,10-tetraazacyclotridecane-11,13-dione.  
 -----

Zn++	gl	KNO3	25°C	0.10M	C	M	K1=5.30	1999AAa (21240) 738	
								K(ZnL+A)=3.62	
								B(ZnLA)=8.92	
								K(ZnHL+B)=2.83	
								K(ZnHL+C)=1.89	

K(ZnHL+D)=2.13. HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.





Zn++ gl KNO3 35°C 0.10M C M K1=5.22 1985RRc (21264) 762  
 K(Zn+HL+cytidine)=8.23  
 K(ZnL(cytidine)+H)=5.54

-----  
 Zn++ gl KNO3 35°C 0.10M C K1=5.22 1985RRh (21265) 763  
 -----

Zn++ gl oth/un 30°C 0.20M U M K1=5.22 1984JOb (21266) 764  
 K(Zn(bpy)+L)=4.81

Medium: not stated.

-----  
 Zn++ vlt KNO3 30°C 0.30M C M K1=4.75 B2= 8.50 1983APa (21267) 765  
 B3=10.30  
 B(ZnAL)=7.24  
 B(ZnAL2)=8.21  
 B(ZnA2L)=9.35

Method: polarography. Medium: 0.30 M KNO3, pH 8.0. H2A is oxalic acid.  
 B(Zn(en)L)=10.57, B(Zn(en)L2)=12.55, B(Zn(en)2L)=13.24

-----  
 Zn++ oth NaClO4 35°C 0.10M C K1=5.85 B2= 8.53 1983PYa (21268) 766  
 B3=10.77

Method: paper electrophoresis.

-----  
 Zn++ gl NaNO3 37°C 0.15M U M 1982ESa (21269) 767  
 B(ZnLA)=7.911  
 B(ZnHLAB)=24.560  
 B(ZnH2LAB)=31.020

A= Imidazole and B= Pyridoxamine.

-----  
 Zn++ gl NaClO4 37°C 0.15M C M K1=4.832 B2= 8.93 1981ABe (21270) 768  
 B3=10.767  
 B(ZnHL)=10.073  
 B(ZnH-1L2)=-0.572  
 B(ZnAL)=10.623

B(ZnHAL)=16.576; B(ZnHBL)=19.922, B(ZnBL2)=16.166, B(ZnHBL2)=24.752,  
 B(ZnB2L)=19.747. HA=histidine, H2B=cysteine.

-----  
 Zn++ gl NaNO3 30°C 0.20M C M K1=5.02 B2= 9.22 1981RSd (21271) 769  
 K(Zn(asp)+L)=4.29  
 B(Zn(asp)L)=10.08

H2asp is aspartic acid.

-----  
 Zn++ gl NaNO3 30°C 0.20M C M 1981RSe (21272) 770  
 B(Zn(ida)L)=10.97  
 K(Zn(ida)+L)=3.99

-----  
 Zn++ gl KNO3 30°C 0.10M U M 1980MSb (21273) 771  
 B(Zn(His)+L)=4.51

-----  
 Zn++ gl NaClO4 25°C 1.00M C K1=5.05 B2=9.41 1979BJc (21274) 772  
 B3=12.1

Alternative method: Ion selective electrode

Data available for various media concentrations: 10 to 70% Dioxan (V/V).

Medium: Et4NC104

B(ZnL(His))=11.08  
B(ZnL(Histamine))=9.92  
B(ZnL2(His))=12.77

Zn++      gl   NaCl04 37°C 0.15M U      T K1=4.909 B2=8.997 1975Cma (21280) 778  
B3=11.306  
B(ZnHL)=9.297  
B(ZnH-1L)=-2.706

[illegible]

Zn++	g1	NaNO3	25°C	0.20M	U	K1=4.95	B2=9.08	1974FSa (21284)	782
						B(ZnLA)=6.87			
						B(ZnLB)=6.90			
						B(ZnLC)=6.77			
						B(ZnLD)=6.48			

A=succinyl dihydrazide; B=1,6-hexanedioic acid dihydrazide;  
C=acetylhydrazide; D=Benzoyl hydrazide

Medium: 20% DMF, 0.1M KNO<sub>3</sub>. Also data for 40%, 50%, 60%, 70%, 75%, 80% DMF

Also data for 20%, 40%, 50%, 60%, 70%, 75%, 80% Dioxan, 0.1M NaClO4

Zn++	nmr	oth/un	32°C	0.50M	U	K1=5.92	B2=10.05	1973HAb (21287)	785
35Cl	probe								
Zn++	gl	KNO3	25°C	1.00M	U	M T K1=4.89	B2=9.07	1972BPa (21288)	786
						B3=11.51			
						B(ZnL(NH3))=7.52			
						B(ZnL(NH3)2)=9.46			
						B(ZnL2(NH3))=10.85			
Zn++	gl	none	25°C	0.00	U T	T K1=5.38	B2=9.81	1972IJb (21289)	787
						K3=2.52			
						10 C: K1=5.50, K2=4.57, K3=2.63; 40 C: K1=5.29, K2=4.29, K3=2.40			
Zn++	gl	KNO3	25°C	0.10M	U T M			1972IVc (21290)	788
						K(ZnA+L)=4.41			
						H2A=methyliminodiethanoic acid. 15 C: K=4.53; 50 C: 4.13			
Zn++	cal	KCl	25°C	0.05M	U	H T K1=5.06	B2=9.44	1971GNa (21291)	789
						DH(K1)=-8.4 kJ mol <sup>-1</sup> , DS=67 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=-13.3, DS=38			
Zn++	gl	NaClO4	25°C	0.10M	U	T K1=4.96	B2=9.19	1971GSb (21292)	790
Zn++	gl	oth/un	25°C		U	K1=5.24	B2=9.65	1970CBb (21293)	791
Zn++	gl	KCl	25°C	0.50M	U	T K1=4.85	B2=9.14	1970FEa (21294)	792
						B3=11.81			
Zn++	gl	NaClO4	25°C	0.50M	U I	R K1=4.81	B2=9.00	1970FRa (21295)	793
						K3=2.51			
						Medium: LiClO4. Other media: 54.3% MeOH, 0.5 M LiClO4: K1=5.38, K2=4.75, K3=2.91; 48.1% dioxan, 0.5 M LiClO4: K1=5.71, K2=5.09, K3=3.21			
Zn++	gl	KNO3	37°C	0.15M	U	R K1=4.90	B2=9.01	1969CPc (21296)	794
						B3=11.31			
						K(ZnL+H2O=Zn(OH)L+H)=-8.89			
						K(Zn+HL)=0.02			
Zn++	gl	KNO3	25°C	0.10M	U	K1=4.96	B2=9.20	1969GEb (21297)	795
Zn++	gl	KCl	25°C	0.50M	U	M R K1=4.88	B2=9.11	1968LBa (21298)	796
						B3=11.56			
						Ternary complexes with NTA, salicylaldehyde, pyridoxal, solochrome violet R			
Zn++	cal	NaClO4	25°C	0.10M	U	H		1967BBd (21299)	797
						DH(K1)=-14.2 kJ mol <sup>-1</sup> , DS=57.7 J K <sup>-1</sup> mol <sup>-1</sup>			
Zn++	cal	KNO3	20°C	0.10M	U	H		1967SSl (21300)	798
						DH(B2)=-25.1 kJ mol <sup>-1</sup> , DS=92.4 J K <sup>-1</sup> mol <sup>-1</sup>			



Zn++	g1	KCl	25°C	0.50M	U	M	T	K1=4.88	B2=9.01	1966LHc	(21301)	799
								B3=11.02				
								B(ZnAL)=7.60				
								B(ZnBL)=6.75				
								B(ZnAL2)=11.9				

Zn++      g1   KCl   40°C 0.20M U T H      K1=5.07   B2=9.14   1965SMb (21302) 800  
K1=5.27(15 C), 5.19(25 C); K2=4.31(15 C), 4.21(25 C);  
DH(K1)=-13.8 kJ mol<sup>-1</sup>, DS=54.3 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-16.7, DS=25.1

Method: paper electrophoresis

10 C: K1=4.96, B2=9.24, B3=11.9; 25 C: DH(K1)=-8.8 kJ mol<sup>-1</sup>, DH(B2)=-24.7.  
DH(ZnAL)=-7.9, DH(ZnA2L2)=-31.4

Zn++      gl    KN03    25°C 0.10M U      K1=5.03    B2=9.30    1955MMa (21306) 804

Zn++      gl   KCl      20°C 0.10M U      T K1=5.16      B2=9.50      1954IRa (21307) 805

Zn++ gl oth/un 25°C 0.01M U K1=5.0 1954PEa (21308) 806

Zn++		gl	diox/w	30°C	75%	U	K1=8.3	B2=15.1	1954UFa (21309)	807
							K3=3.80			

Zn++ gl oth/un 20°C 0.01M U K1=5.2 B2=14.5 1953ALa (21310) 808

Zn++ gl oth/un 22°C 0.01M U B2=9.2 1952PEa (21311) 809

Medium: ZnSO<sub>4</sub>

Zn++ gl oth/un 25°C ->0 U K1=5.52 B2=9.96 1951M0a (21312) 810

Zn++ gl oth/un 25°C 0.01M U K1=5.33 B2=9.72 1950MMa (21313) 811

Zn++	g1	KN03	20°C	0.50M	U	K1=4.80	B2=8.94	1945FLa (21314)	812
						K3=(2.56)			

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C2H5NO2	HL	Acetohydroxamic	CAS 546-88-3	(2766)
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Acetohydroxamic acid, N-Hydroxyacetamide;  $\text{CH}_3\text{CO.NHOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C	M			2000FEa (21791)	813
B(Zn(en)L)=11.15 B(Zn(bpy)L)=10.65 B(Zn(gly)L)=9.78 B(Zn(tiron)L)=13.57 B(Zn(en)L2)=14.07, B(Zn(en)2L)=14.4, B(ZnH-1(en)L)=1.77, B(Zn(bpy)L2)=14.3, B(Zn(bpy)2L)=14.93, B(ZnH-1(bpy)L)=2.08, B(Zn(gly)2L)=13.08										
Zn++	gl	KCl	25°C	0.20M	C	M		K1=5.18 B2=9.45	1993FBa (21792)	814
B(ZnH-1L)=-3.40 B(ZnAL)=9.28 B(ZnAL2)=11.98										

HA: alanine.

Zn++	gl	NaCl	31°C	0.15M	U	I		K1=5.46	1992SKa (21793)	815
Also data for 25 and 50% v/v EtOH/H2O.										
Zn++	gl	KNO3	25°C	0.10M	C	M		K1=5.22 B2= 9.09	1991DAc (21794)	816
K(Zn(ida)+L)=3.76 K(Zn(bpy)+L)=5.26 K(ZnA+L)=5.24 K(Zn(phen)+L)=5.40 K(ZnB+L)=5.66, K(ZnC+L)=5.13. A: 2,2'-dipyridylamine; B: 5-nitro-1,10-phenanthroline; C: 5-methyl-1,10-phenanthroline.										

Zn++	gl	KNO3	25°C	0.10M	C	M		K1=5.22 B2= 9.09	1989DAb (21795)	817
B(Zn(ida)L)=11.00 B(Zn(mida)L)=11.32 B(Zn(nta)L)=14.16 B(Zn(bpy)L)=10.39 B(Zn(phen)L)=11.80, B(ZnAL)=11.85 where H3A is N-(2-carboxyphenyl)-iminodiethanoic acid										

Zn++	vlt	KNO3	30°C	0.50M	C			K1=5.10	1983BNa (21796)	818
Method: polarography.										
*****										
C2H5NO3 HL CAS 2921-14-4 (1892)										
Aminooxyethanoic acid; H2N.O.CH2.COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U			K1=2.90	1985WTa (21826)	819
*****										
C2H5N3O2 L Biuret CAS 108-19-0 (1126)										
Carbomoylurea (Allophanic acid); H2N.CO.NH.CO.NH2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ gl NaClO4 25°C 0.01M U T H K1=10.25 1979SBa (21845) 820  
DH(K1)=-119 kJ mol<sup>-1</sup>

Zn++ gl NaClO4 25°C 0.01M U K1=10.25 1975SSb (21846) 821  
\*\*\*\*\*

C2H5O5P H2L CAS 590-54-5 (1764)  
Acetylphosphoric acid; CH<sub>3</sub>.CO.O.PO<sub>3</sub>H<sub>2</sub>

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

Zn++ gl KNO<sub>3</sub> 37°C 0.15M M M K1=5.35 B2=8.79 1979SPb (21868) 822  
K(Zn+HL)=2.63

Data for ternary complexes with Gly and His

\*\*\*\*\*

C2H6N<sub>2</sub>O L Glycinamide CAS 598-41-4 (60)  
2-Aminoethanoic acid amide; H<sub>2</sub>N.CH<sub>2</sub>.CO.NH<sub>2</sub>

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

Zn++ gl NaClO<sub>4</sub> 37°C 0.15M U M K1=3.57 B2=6.18 1990NJ a (21945) 823  
B(ZnL(His))=8.32  
B(ZnL(histamine))=8.17  
B(ZnL(imidazole))=5.14

Zn++ gl oth/un 25°C 0.15M U K1=3.28 1958L Ca (21946) 824  
\*\*\*\*\*

C2H6N<sub>2</sub>O L Acethydrazide CAS 1068-57-1 (2566)  
Ethanoic acid hydrazide, Acetylhydrazine; CH<sub>3</sub>.CO.NH.NH<sub>2</sub>

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

Zn++ gl NaNO<sub>3</sub> 25°C 0.20M U K1=1.93 B2=3.42 1974FSa (21961) 825

Zn++ vlt NaClO<sub>4</sub> 25°C 1.0M U K1=2.48 B2=3.65 1968SUa (21962) 826  
B3=4.68

\*\*\*\*\*

C2H6N<sub>2</sub>O<sub>2</sub> HL CAS 5549-80-4 (833)  
2-Amino-N-hydroxyacetamide, Glycine hydroxamic acid; H<sub>2</sub>N.CH<sub>2</sub>.CO.NH.OH

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

Zn++ gl NaCl 35°C 0.15M U I K1=5.85 B2=10.41 1995SKc (21984) 827  
Also data for 42% v/v MeOH/H<sub>2</sub>O, 52% v/v EtOH/H<sub>2</sub>O, 59% v/v i-PrOH/H<sub>2</sub>O,  
61% v/v dioxan/H<sub>2</sub>O.

Zn++ gl NaClO<sub>4</sub> 25°C 0.10M C K1=5.38 B2=10.07 1987PCa (21985) 828  
B(ZnHL)=12.40  
B(ZnH-1L)=-1.46  
B(Zn2L3)=19.45

\*\*\*\*\*

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
Zn++	cal	KNO3	25°C	0.50M	U	H		1974BHa (22053)	829
							B(Zn2L3)=18.32 B(Zn3L6)=38.625 B(Zn4L9)=57.81 B(Zn5L12)=77.18		
B(Zn6L15)=95.92. DH(Zn6L15)=-280.3 kJ mol <sup>-1</sup> , DH(Zn3L6)=-154.4, DH(Zn4L9)=-221.8, DH(Zn5L12)=-167.4									

Zn++	gl	KNO3	25°C	0.50M	U			1971BPc (22054)	830
							B(2Zn+3L)=18.32 B(3Zn+6L)=38.52 B(4Zn+9L)=57.80 B(5Zn+12L)=77.20		
B(6Zn+15L)=95.92									

Zn++	gl	oth/un	?	0.0	U			1961AMa (22055)	831
							B3=17.31		

\*\*\*\*\*

C2H6S                      L                      CAS 75-18-3 (151)  
 Dimethyl sulfide; CH3.S.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	nmr	alc/w	34°C	50%	C		K1=-1.4	1980SSa (22184)	832
Also in D2O, K1=-1.4									

\*\*\*\*\*

C2H7N                      L                      Ethylamine                      CAS 75-04-7 (156)  
 Ethylamine; CH3.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.50M	U	M	K1=2.30    B2=4.33	1971LLa (22253)	833
							B3=6.0 B(ZnLA)=7.78 B(ZnL2A2)=14.9		

HA=salicylaldehyde

\*\*\*\*\*

C2H7NO                      L                      Ethanolamine                      CAS 141-43-5 (1057)  
 2-Aminoethanol; H2N.CH2.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	R4N.X	25°C	2.00M	C	I	K1=2.70    B2=5.18	1983DBa (22358)	834
Zn++	gl	oth/un	25°C	0.10M	U		K1=2.41	1981HAa (22359)	835

Medium: 0.1 M HOCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>.HNO<sub>3</sub>

Zn++ vlt NaNO<sub>3</sub> 25°C 0.10M U I B2=7.93 1975KMa (22360) 836  
B3=9.18

Medium: LiNO<sub>3</sub>. In 40% EtOH/H<sub>2</sub>O, B3=9.72

Zn++ vlt oth/un 25°C 0.10M U I M B2=7.93 1974MKc (22361) 837  
B3=9.18  
B(ZnL<sub>2</sub>(en))=12.11  
B(ZnL(en)<sub>2</sub>)=13.13

In 20% EtOH/H<sub>2</sub>O (v/v) B2=8.15, B3=9.13

Zn++ gl oth/un 25°C 2.0M U K1=2.62 B2=4.83 1970URa (22362) 838  
K3=1.84

Zn++ gl oth/un 25°C 0.10M U K1=3.7 B2=6.00 1965DOb (22363) 839  
K3=1.9  
K4=1.5

Zn++ vlt alc/w 25°C 100% U I B2=12.30 1962MSa (22364) 840  
B3=13.30  
B4=13.72

Medium:100% EtOH, 0.01 M NaClO<sub>4</sub>. 0%:B2=8.00,B3=9.48; 20%:B2=8.95,B3=9.78;  
60%:B2=8.70,B3=10.42; 94%:B2=11.85,B3=12.23,B4=13.00

Zn++ vlt KNO<sub>3</sub> 25°C 0.10M U B4=9.2 1959MPa (22365) 841

\*\*\*\*\*  
C<sub>2</sub>H<sub>7</sub>NS HL CAS 60-23-1 (588)  
2-Aminoethanethiol; H<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>.SH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl KCl 25°C 0.10M C K1=8.77 B2=15.72 1995LMa (22466) 842  
B(ZnH-1L)=1.94

Zn++ gl KNO<sub>3</sub> 25°C 0.20M C 1992AHa (22467) 843  
K(Zn+2HL)=9.10  
\*K(Zn(HL)<sub>2</sub>)=-5.80  
K(ZnHL<sub>2</sub>+HL)=3.78  
\*K(ZnHL<sub>2</sub>)=-7.15

Zn++ gl KNO<sub>3</sub> 25°C 0.10M M M 1989SHd (22468) 844  
K(Zn(nta)+L)=5.56  
K(Zn(nta)+H+L)=13.99

Zn++ vlt oth/un 25°C 0.26M U B2=6.17 1961KPb (22469) 845  
Medium: 0.264 M phosphate buffer

Zn++ gl KCl 25°C 0.10M U K1=8.07 1955FRa (22470) 846

$$K(\text{Zn+HL})=3.98$$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.15M	U		K1=9.90 B2=18.74	1955LMa (22471)	847

Zn++	gl	KNO3	30°C	1.0M	U		K1=10.22 B2=18.90	1951G0a (22472)	848
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C2H7N3O L CAS 67015-05-8 (2702)

2-Aminoacetamidoxime; H2N.CH2.C(:NOH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaClO4	25°C	1.00M	C		K1=4.09 B2=7.82	19860Sa (22506)	849
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B3=9.46

B(ZnH-1L2)=-0.89

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C2H7O3P H2L CAS 71778-99-9 (1978)

Ethylphosphonic acid; CH3.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaNO3	25°C	0.10M	M		K1=2.67	1992SCa (22560)	850
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C2H8NO3P H2L CAS 6323-97-3 (1862)

1-Aminoethanephosphonic acid; CH3.CH(NH2).PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KCl	25°C	0.20M	C		K1=5.66	1998KMa (22605)	851
------	----	-----	------	-------	---	--	---------	-----------------	-----

B(ZnHL)=12.93

Zn++	gl	KCl	25°C	0.20M	C		K1=5.99	1987KBb (22606)	852
------	----	-----	------	-------	---	--	---------	-----------------	-----

B(ZnHL)=11.79

Zn++	gl	KNO3	25°C	0.20M	C		K1=5.67	1978MAb (22607)	853
------	----	------	------	-------	---	--	---------	-----------------	-----

K(Zn+HL)=1.70

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C2H8NO3P H2L CAS 2041-14-7 (1863)

2-Aminoethanephosphonic acid; H2N.CH2.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KCl	25°C	0.20M	C		K1=6.09 B2=10.94	1987KBb (22625)	854
------	----	-----	------	-------	---	--	------------------	-----------------	-----

B(ZnHL)=12.93

Zn++	gl	KNO3	25°C	0.10M	U		K1=6.16	1979WNb (22626)	855
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B(ZnHL)=12.99

B(ZnH2L2)=26.2

B(ZnH-1L)=-1.70

Zn++	gl	KNO3	25°C	0.20M	C			1978MAb (22627)	856
------	----	------	------	-------	---	--	--	-----------------	-----

K(Zn+HL)=1.96

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C2H8NO4P H2L CAS 1071-23-4 (1864)  
2-Aminoethyl-dihydrogenphosphoric acid; H2N.CH2.CH2.OPO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U		K1=5.17 K(Zn+HL)=2.77	1987BPb (22654)	857

Zn++	gl	KNO3	25°C	0.20M	C		K(Zn+HL)=1.77	1978MAb (22655)	858
------	----	------	------	-------	---	--	---------------	-----------------	-----

Zn++	gl	KNO3	25°C	0.20M	C		K(Zn+HL)=1.77	1978MAc (22656)	859
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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
Zn++	gl	alc/w	25°C	50%	C		K1=5.52	1997MGb (22983)	860

Zn++	gl	NaClO4	25°C	0.20M	M		K1=5.70	1996VBa (22984)	861
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Zn++	gl	KNO3	30°C	0.10M	U		K1=5.87	1994RSa (22985)	862
------	----	------	------	-------	---	--	---------	-----------------	-----

Zn++	gl	KCl	25°C	0.20M	C		K1=5.60 B2=10.26 B3=13.01	1993KKb (22986)	863
------	----	-----	------	-------	---	--	---------------------------------	-----------------	-----

Zn++	gl	mixed	25°C	0.30M	U		K1=6.89 B2=13.44 K3=4.3 For 100% H2O K2=2.40 For 100% H2O K1=5.84 For 100% H2) K3=0.9	1993LSa (22987)	864
------	----	-------	------	-------	---	--	--	-----------------	-----

Medium: 0.3 M NaClO4 in 0.5 mol parts DMSO in H2O  
for 0.97 mol parts DMSO K1=7.01; K2=6.63; K3=4.8

Zn++	cal	KNO3	25°C	1.50M	U	HM		1989KCa (22988)	865
------	-----	------	------	-------	---	----	--	-----------------	-----

DH(Zn(IDA)+L)=-19.8 kJ mol<sup>-1</sup>

Zn++	cal	oth/un	25°C	dil	C	H	K1=5.69 B2=10.62 B3=13.24	19890Fa (22989)	866
------	-----	--------	------	-----	---	---	---------------------------------	-----------------	-----

Medium: NH4Cl/NH3 buffer, pH 10. DH(K1)=-24.48 kJ mol<sup>-1</sup>,  
DH(B2)=-46.02, DH(B3)=-64.22.

Zn++	gl	KNO3	35°C	0.10M	U	M	K1=5.54 K(Zn(thiodipropionate)+L)=5.50	1989RSb (22990)	867
------	----	------	------	-------	---	---	---	-----------------	-----

Zn++	gl	KNO3	35°C	0.20M	U	M	K1=5.62 B2=10.17	1989RVa (22991)	868
------	----	------	------	-------	---	---	---------------------	-----------------	-----

K(ZnA+L)=4.71

A=bis(imidazol-2-yl)methane

Zn++	nmr	none	20°C	0.0	U			1986DHa	(22992)	869
						K(ZnA+L)=2.7				
						K(ZnA+HL)=0.6				
In D2O. A = trien										

Zn++	nmr	none	20°C	0.0	U			1986DHb	(22993)	870
						K(ZnA+L)=1.26				
In D2O. A = tren										

Zn++	EMF	KCl	25°C	0.10M	U		K1=6.10	1985SNa	(22994)	871
						K1=6.32 by spectrophotometry				

Zn++	gl	NaClO4	25°C	3.00M	U		K1=6.49	B2=12.44	1985WIa	(22995)	872
						B3=14.88 (Zn/Hg electrode)					
						B(ZnHL)=1.03					
						B(ZnL2H)=7.47					
						B(ZnL3H)=12.81					

Additinoal method: Zn(Hg) electrode

Zn++	gl	NaClO4	25°C	0.10M	U	M		1984MSb	(22996)	873
						K(Zn(thiolactate)+L)=4.40				

Zn++	gl	none	20°C	0.0	C	TIH	R	K1=5.77	B2=10.83	1984PAa	(22997)	874
IUPAC evaluation												

Zn++	vlt	KNO3	30°C	0.3M	C			K1=6.20	B2=11.65	1983APa	(22998)	875
						B3=13.74						
Method: polarography. Medium: 0.30 M KNO3, pH 8.0.												

Zn++	gl	KNO3	25°C	0.10M	U	M		K1=5.98	1982KJa	(22999)	876
						K(Zn2(CDTA)+2L)=11.81					

Zn++	gl	NaNO3	30°C	0.50M	M			K1=6.15	B2=10.98	1982MAd	(23000)	877
						B3=13.76						

Zn++	gl	NaNO3	20°C	2.00M	U			K1=6.23	B2=10.00	1982SSg	(23001)	878
						B3=13.35						
						B(ZnHL)=12.92						
						B(ZnH2L2)=26.26						
						B(ZnH3L3)=39.0						

Zn++	gl	NaNO3	30°C	0.20M	C	M		K1=5.92	B2=10.82	1981RSd	(23002)	879
						K(Zn(asp)+L)=5.32						
						B(Zn(asp)L)=11.11						

H2asp is aspartic acid.

Zn++	gl	NaNO3	30°C	0.20M	C	M			1981RSe	(23003)	880
------	----	-------	------	-------	---	---	--	--	---------	---------	-----



B(Zn(ida)L)=12.17

K(Zn(ida)+L)=5.19

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Zn++ gl KCl 25°C 0.20M C HM K1=5.78 B2=10.73 1979SGb (23004) 881  
-----

Zn++ gl KCl 25°C 0.20M U M K1=5.78 B2=10.73 1978SKa (23005) 882  
-----

Zn++ vlt NaNO3 25°C 0.10M U I B2=12.78 1975KMa (23006) 883  
B3=14.52

Medium: LiNO3. In 40% EtOH/H2O B2=12.84, B3=14.52  
-----

Zn++ vlt oth/un 25°C 0.10M U I B2=12.78 1974MKc (23007) 884  
B3=14.52  
-----

Zn++ gl KNO3 25°C 0.10M C I K1=5.91 B2=10.72 1974MMa (23008) 885  
K3=2.10

Also data for 55%, 60%, 65%, 70%, 75%, 80% MeOH, 0.1M KNO3  
-----

Zn++ gl mixed 25°C 20% C I K1=6.18 B2=11.22 1974MMa (23009) 886  
K3=2.28

Medium: 20% DMF, 0.1M KNO3. Also data for 40%, 50%, 60%, 70%, 75%, 80% DMF  
-----

Zn++ gl NaClO4 25°C 0.10M C I K1=5.85 B2=10.54 1974MMa (23010) 887  
K3=1.94

Also data for 20%, 40%, 50%, 60%, 70%, 75%, 80% Dioxan, 0.1M NaClO4  
-----

Zn++ gl NaClO4 30°C 0.15M U M K1=6.24 1974PBb (23011) 888  
B(ZnL(bpy))=5.40  
-----

Zn++ gl NaClO4 25°C 0.10M U K1=5.59 B2=10.61 1971GSb (23012) 889  
K3=3.78  
-----

Zn++ gl KNO3 25°C 0.10M U K2=5.15 1970DNa (23013) 890  
-----

Zn++ gl NaClO4 25°C 0.50M U I K1=5.75 B2=10.84 1970FRa (23014) 891  
Medium: LiClO4. Other media: 54.3% MeOH, 0.5 M LiClO4: K1=6.02, K2=5.30  
48.1% dioxan, 0.5 M LiClO4: K1=6.52, K2=5.73  
-----

Zn++ gl KNO3 37°C 0.15M U M K1=5.53 B2=10.28 1969PSb (23015) 892  
B3=12.70  
B(ZnLA)=10.37  
B(ZnL(Ser))=9.86  
B(ZnL(Ser)2)=12.47  
-----

A=histamine.

-----  
Zn++ ISE non-aq 25°C 100% U K1=7.18 B2=13.85 1969PSd (23016) 893  
B3=18.70  
-----

Medium: DMSO, 0.1 M KClO4  
-----

Zn++ gl diox/w 30°C 50% U K1=6.30 B2=11.51 1968HOa (23017) 894  
-----

Constants corrected to zero ionic strength

Zn++ vlt KCl 30°C 0.50M U M B2=11.2 1967SSk (23018) 895  
B3=12.3

Ternary complexes with oxalic acid

Zn++ cal KCl 25°C 1.0M U H 1960CPa (23019) 896  
DG(K1)=-33.02, DH=-27.8, DS=18; DG(B2)=-60.19, DH=-58.26, DS=9.2;  
DG(B3)=-70.22, DH=-86.6, DS=-55

Zn++ gl none 10°C 0.0 U T K1=5.85 B2=10.98 1959MBa (23020) 897  
K3=3.26  
20 C: K1=5.77, K2=5.06, K3=3.28; 30 C: K1=5.55, K2=4.89, K3=3.22;  
40 C: K1=5.51, K2=4.76, K3=3.18

Zn++ gl oth/un 10°C ->0 U T H 1959MBa (23021) 898  
10-40 C: DG(K)=-31.76 kJ mol<sup>-1</sup>, DH=-21, DS=38; DG(K2)=-27.59, DH=-22, DS=-21

Zn++ gl oth/un 25°C 1.40M U K1=5.92 B2=11.07 1957PBa (23022) 899  
K3=1.86

Zn++ vlt oth/un 25°C 0.10M U K1=5.71 B2=10.37 1956MOa (23023) 900  
K3=1.72

Zn++ oth oth/un 25°C 1.0M U H 1956RAa (23024) 901  
DS(Zn(NH3)4+2L=ZnL2+4NH3)=88

Zn++ vlt KNO3 25°C 0.10M U B2=13.65 1955NMa (23025) 902  
K3=0.83

Zn++ gl KNO3 25°C 0.50M U K1=6.00 B2=11.08 1955NMa (23026) 903  
K3=2.07

Zn++ ISE KNO3 25°C 0.50M U K1=6.00 B2=10.81 1955NMa (23027) 904  
K3=2.17

Zn++ cal KCl 25°C 0.10M U H 1954DSa (23028) 905  
DH(B2)=-48.1 kJ mol<sup>-1</sup>, DS=31.8 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B3)=-77.3, DS=41.0

Zn++ gl diox/w 30°C 75% U K1=6.8 1954UFa (23029) 906

Zn++ gl oth/un 30°C ->0 U K1=5.56 B2=10.43 1953MCA (23030) 907

Zn++ gl KNO3 25°C 2.15M U H K1=6.15 B2=11.49 1953SPb (23031) 908  
DH(K1)=-28 kJ mol<sup>-1</sup>, DH(B2)=-52.3

Zn++ gl KNO3 25°C 1.0M U K1=5.92 B2=11.07 1945BAa (23032) 909  
K3=1.86

Zn++ gl KCl 30°C 1.0M U K1=5.71 B2=10.37 1945CMA (23033) 910

K3=1.72

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C2H8N4S L CAS 35771-42-7 (4227)  
S-Methylisothiocarbohydrazide; H2N.N:C(S.CH3).NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.50M	U		K1=4.27 B2=7.62	1972BMc (23250)	911

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=10.3 K(ZnL+H)=6.27 K(ZnHL+H)=3.8	1997DBb (23314)	912

Zn++	vlt	NaCl	37°C	0.15M	C		K1=10.30 K(ZnL+2H)=9.88 K(ZnH2L+2H)=5.50 K(ZnL+Zn)=6.16 K(ZnL+OH)=4.93	1997ZJa (23315)	913
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Also estimat.via linear free energy relationship K(Sm+L)=10.1;K(SmL+H)=9.1  
K(Ho+L)=10.4; K(HoL+H)=9.1

Zn++	gl	KNO3	25°C	0.10M	U		K1=8.6 B(ZnHL)=8 B(ZnH2L)=17 B(Zn(OH))=6.1 B(Zn(OH)2)=9.9	1995DSa (23316)	914
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Zn++	cal	R4N.X	25°C	0.04M	U T H		K(2Zn+HL)=8.6 K(Zn+ZnHL)=2.6 B(Zn2L)=16.0 K(Zn+ZnL)=5.2	1995VKa (23317)	915
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Medium: Bu4NNO3. Also at 15,35 C. DH(2Zn+HL)=14.8 kJ mol<sup>-1</sup>, DS=214 J K<sup>-1</sup> m<sup>-1</sup>  
DH(Zn+ZnHL)=0.8, DS=52; DH(2Zn+L)=30.5, DS=409; DH(Zn+ZnL)=29.8, DS=200

Zn++	cal	oth/un	25°C	0.02M	U TI		K1=10.8 K(Zn+HL)=6.0 K(Zn+H2L)=2.85	1987VKb (23318)	916
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DH(K1)=0.7 kJ mol<sup>-1</sup>, DS=209 J K<sup>-1</sup> mol<sup>-1</sup>; DH(Zn+HL)=14.0,  
DS=162; DH(Zn+H2L)=7.1, DS=70

Zn++	gl	KNO3	25°C	0.10M	U		K1=7.36 K(Zn+HL)=4.51 K(Zn+H2L)=3.10	1980ZRc (23319)	917
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Zn++ gl KCl 25°C 0.10M U K1=8.19 1976DGe (23320) 918  
K(Zn+HL)=5.00

Zn++ gl KCl 25°C 0.10M U K1=10.73 1967KLa (23321) 919  
K(Zn+HL)=5.66  
K(2Zn+H-1L)=22.36  
K(2Zn+L)=15.03  
K(2Zn+HL)=8.13

\*\*\*\*\*  
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  
Zn++ gl KNO3 25°C 0.1M C K1=9.03 1985MMa (23441) 920  
B(ZnHL)=15.52  
B(ZnH2L)=18.9

\*\*\*\*\*  
C2H16N5O4Co HL (231)  
Pentaammineoxalatocobalt(III); Co(NH3)5(HC2O4)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ sp NaClO4 28°C 0.30M U K1=1.81 1974NDa (23470) 921  
\*\*\*\*\*  
C3H3NO2 HL Cyanoacetic CAS 372-09-8 (38)  
Cyanoethanoic acid; NC.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl NaClO4 25°C 2.0M U K1=0.50 1981MFA (23507) 922  
\*\*\*\*\*  
C3H3NS L Isothiazole CAS 288-16-4 (383)  
Isothiazole; cyclo(-S.N:CH.CH:CH-) C3H3NS

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl KNO3 25°C 0.50M U K1=0.36 1978KLa (23516) 923  
\*\*\*\*\*  
C3H3NS L Thiazole CAS 288-47-1 (382)  
Thiazole; cyclo(-S.CH:N.CH:CH-) C3H3NS

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl KNO3 25°C 0.50M U K1=1.20 B2=1.99 1974LKb (23524) 924  
B3=2.38

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C3H4N2 L Pyrazole CAS 288-13-1 (367)  
1,2-Diazole, pyrazole; cyclo(-NH.N:CH.CH:CH-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=0.95 B2=1.53	1977BBb (23556)	925

Zn++	gl	KNO3	25°C	0.50M	U		K1=1.38 B2=2.43 B3=3.10 B4=3.43	1977LNa (23557)	926
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C3H4N2 L Imidazole CAS 288-32-4 (90)  
1,3-Diazole, imidazole; C3H4N2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=2.53	2001PSb (23746)	927
Zn++	gl	KNO3	35°C	0.10M	C	M	K1=2.69 B(ZnAL)=3.25	1999DSb (23747)	928

A is thiamine hydrochloride.

Zn++	gl	NaClO4	30°C	0.20M	U		K1=2.53	1999PGa (23748)	929
Zn++	gl	NaNO3	30°C	0.20M	U		K1=2.48	1999PPa (23749)	930
Zn++	gl	NaNO3	25°C	0.50M	M		K1=2.58	1998KSa (23750)	931
Zn++	gl	NaNO3	25°C	0.10M	U	M	K1=2.97	1998MSe (23751)	932
Zn++	sp	non-aq	25°C	100%	C	H	K(ZnP+L)=4.20	1998RZa (23752)	933

Medium: CH2Cl2. Data for 20-35 C. P is meso-tetra(3-methylphenyl)porphyrin  
DH=-34.0 kJ mol<sup>-1</sup>, DS=-33.8 J K<sup>-1</sup> mol<sup>-1</sup>. Data for 3-NO2-, 3-Cl-, 3-OCH3-

Zn++	gl	NaNO3	37°C	0.10M	U		K1=2.54	1997MGa (23753)	934
Zn++	gl	KNO3	35°C	0.10M	C	M	K1=2.74 K(ZnL+A)=6.86	1997PSb (23754)	935

H2A is thiamine orthophosphoric acid.

Zn++	gl	KCl	25°C	0.10M	C	TIH R	K1=2.56 B2=4.93 K3=2.23 K4=2.03	1997SJa (23755)	936
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IUPAC evaluation. DH(K1)=-15.9 kJ mol<sup>-1</sup>(I=0.16).  
I=0: K1=2.55, K2=2.35, K3=2.22, K4=2.02. I=3.0: 2.91, 2.01

Zn++	gl	KNO3	25°C	0.10M	C	H	K1=2.28 B2=4.91 K3=2.26	1994AIa (23756)	937
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DH(K1)=-19.7, DH(K2)=-6.7, DH(K3)=-15.5 kJ mol<sup>-1</sup>. DS(K1)=-22.2, DS(K2)=25.0, DS(K3)=-16.7 J K<sup>-1</sup> mol<sup>-1</sup>.

Zn++	gl	NaNO3	37°C	0.10M	U		K1=2.54	1994MGc (23757)	938
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Zn++      gl    NaNO3    25°C   0.10M   M    M    K1=2.50    1993JCa (23758) 939  
K(ZnA+L)=2.81

Zn++	gl	KN03	35°C	0.10M	U	M	K1=2.55	1991RSb (23759)	940
							B(Zn(Cys)L)=13.60		
							B(Zn(Cys)L2)=17.10		

Data for ternary complexes with gly, ala and val.

Zn++      dis oth/un 25°C 0.00   U      K1=7.64      1987WCa (23762) 943

Zn++ g1 NaNO3 37°C 0.15M U K1=2.982 B2=5.632 1983ERa (23763) 944

Zn++      gl    NaNO3    37°C   0.10M U      M                          1983ERa (23764) 945  
B(ZnL(Gly))=7.911  
B(ZnL4(Gly))=16.693

Zn++	g1	KN03	25°C	0.50M	U	K1=2.70	B2=5.25	1983LWa	(23765)	946
						B3=7.48				
						B4=9.48				
						B5=11.00				

Zn++ sp non-aq 25°C 100% U TIH K(ZnA+L)=4.92 1982CFa (23766) 947

Medium: BuCl. A=tetraphenylporphyrin. Also in PhCl

Zn++	g1	NaCl04	37°C	0.15M	U	M	K1=2.55	B2=4.98	1982NVa (23767)	948
							B3=7.40			
							B4=9.59			
							B(ZnL(histamine))=8.25			
							B(ZnL(His))=9.50			

Zn++      g1    NaNO3    25°C   0.10M   A      M      1982SSa (23768) 949  
K(Zn(ATP)+L)=2.41

Zn++      gl    NaNO3    25°C 0.10M A      M    K1=2.51                  1982SSa (23769) 950  
K(Zn(ATP)+L)=2.41  
K(ZnA+L)=2.54

A=uridine-5'-triphosphate

Zn++      g1   NaClO4 37°C 0.15M C      K1=2.185   B2= 4.40   1979KBf (23770) 951  
B3=6.877

B4=8.651

-----  
Zn++          gl   NaCl04   25°C   3.00M   C   I   M   K1=2.92   B2=4.93   1977F0a (23771) 952  
B3=8.77  
B4=11.41  
B(-4,1,3)=-22.97  
B(-4,2,3)=-20.94

B(p,q,r): pH+qZn+rHL=Hp(Zn)q(HL)r  
Data also in 3.0M NaCl

-----  
Zn++          gl   NaCl04   25°C   3.00M   C   I   M   1977F0b (23772) 953  
K(ZnCl+L)=3.64  
K(ZnCl+2L)=6.16  
K(ZnCl+3L)=9.77  
K(ZnCl+4L)=11.15

K(ZnCl+5L)=12.98; K(ZnCl3+L)=3.45

-----  
Zn++          gl   NaCl04   25°C   0.50M   C   TIH   K1=2.618   1974LVa (23773) 954  
B3=7.596  
B4=10.041

-----  
Zn++          ISE   R4N.X   29°C   0.50M   U   K1=2.56   B2=4.89   1971BLb (23774) 955  
B3=7.16  
B4=9.19

Medium: NH4NO3

-----  
Zn++          gl   NaCl04   25°C   0.10M   U   M   K1=2.60   1968ISa (23775) 956  
K(Zn(NTA)+L)=2.73  
K(Zn(EDTA)+L)=1.79

-----  
Zn++          nmr   non-aq   36°C   100%   U   M   1966WLa (23776) 957  
B4=6.2  
K(ZnAL+3L=ZnL4+A)=4.5  
K(ZnL+B)=1.23

Medium: DMSO. A=cytosine, B=purine

-----  
Zn++          gl   KNO3   25°C   0.20M   U   K1=2.13   1963CCb (23777) 958

-----  
Zn++          gl   KCl   0°C   .058M   U   T   K1=3.36   B2=6.42   1961SMa (23778) 959  
25 C: K1=3.15, K2=2.95; 45 C: K1=3.20, K2=2.84

-----  
Zn++          gl   oth/un   25°C   0.16M   U   K1=2.52   B2=4.84   1958KKc (23779) 960  
K3=2.32  
K4=2.05

-----  
Zn++          gl   oth/un   25°C   0.16M   U   K1=2.57   B2=4.93   1957NGa (23780) 961  
K3=2.22  
K4=2.01

-----  
Zn++          gl   NaNO3   4°C   0.16M   U   T   K1=2.76   B2=5.26   1954EFa (23781) 962

K3=2.35

K4=2.20

24 C: K1=2.58, K2=2.37, K3=2.23, K4=2.02

\*\*\*\*\*

C3H4N2O2                      HL      Hydantoin                      CAS 461-72-3    (389)  
2,4-Imidazolidinedione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U	H	K1=3.09    B2= 5.55 B3=8.80	1979BEc (23942)	963

By calorimetry: DH(K1)=-8.2 kJ mol<sup>-1</sup>, DS(K1)=31 J K<sup>-1</sup> mol<sup>-1</sup>;

DH(B2)=-17, DS(B2)=50; DH(B3)=-27, DS(B3)=77.

\*\*\*\*\*

C3H4N2S                      L                      CAS 95-50-4    (821)  
2-Aminothiazole; C3H2NS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=0.74    B2=1.24	1982GKa (23956)	964

Zn++              gl    KNO3    25°C    0.10M    U    T    H              K1=1.76              1978BBd (23957)    965

Data for 30, 35 and 40 C. DH(K1)=-15 kJ mol<sup>-1</sup>, DS(K1)=-17 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C3H4N2S                      HL      Imidazolethiol                      CAS 872-35-5    (1823)  
2-Mercaptoimidazole; C3H3N2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=6.61	1977STc (23967)	966

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	2.00M	U		K1=0.72    B2=0.54	1980MKb (24030)	967

Zn++              gl    KCl              25°C    0.50M    U              M                      1970SFb (24031)    968

B(ZnL(Ala))=7.09

B(ZnL2(Ala))=11.08

B(ZnL2(Ala)2)=13.28

B(ZnL(Glu))=6.97

B(ZnL2(Glu))=10.64; B(ZnL2(Glu)2)=12.38

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sol	KCl	25°C	0.50M	U	M	K1=1.26    B2=1.98	1966LHb (24032)	969

Ternary complexes with glycine, b-alanine, isoleucine, alanine

Zn++              gl    KCl              25°C    0.65M    U    T              K1=1.28              1964LSa (24033)    970

At 10 C: K1=0.90



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

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

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Zn++	gl	KNO <sub>3</sub>	35°C	0.10M	C	M	K <sub>1</sub> =2.82 K(ZnL+A)=4.63	1997PSb (24292)	971
------	----	------------------	------	-------	---	---	---------------------------------------	-----------------	-----

H<sub>2</sub>A is thiamine orthophosphoric acid.

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Zn++	vlt	oth/un	25°C	0.1M	U		K <sub>1</sub> =3.0	1995FFa (24293)	972
------	-----	--------	------	------	---	--	---------------------	-----------------	-----

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Zn++	gl	NaCl	25°C	0.50M	C		K <sub>1</sub> =2.38	1989FRa (24294)	973
------	----	------	------	-------	---	--	----------------------	-----------------	-----

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Zn++	gl	NaClO <sub>4</sub>	37°C	0.15M	C	M	K <sub>1</sub> =2.740    B <sub>2</sub> = 4.46 B(Zn <sub>2</sub> L <sub>2</sub> )=7.306 B(Zn(histamine)L)=7.627 B(ZnH(histamine)L)=13.792	1987BVa (24295)	974
------	----	--------------------	------	-------	---	---	--	-----------------	-----

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Zn++	gl	NaNO <sub>3</sub>	30°C	0.20M	C	M	K <sub>1</sub> =2.69 K(Zn(asp)+L)=2.01 B(Zn(asp)L)=7.80	1981RSd (24296)	975
------	----	-------------------	------	-------	---	---	---	-----------------	-----

H<sub>2</sub>asp is aspartic acid.

---

Zn++	gl	NaNO <sub>3</sub>	30°C	0.20M	C	M	K <sub>1</sub> =2.69 B(Zn(ida)L)=8.94 K(Zn(ida)+L)=1.96	1981RSe (24297)	976
------	----	-------------------	------	-------	---	---	---	-----------------	-----

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Zn++	ix	none	23°C	0.0	U		K <sub>1</sub> =2.75    B <sub>2</sub> =4.37	1980PSb (24298)	977
------	----	------	------	-----	---	--	--	-----------------	-----

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Zn++	gl	diox/w	25°C	50%	C	I	K <sub>1</sub> =5.57    B <sub>2</sub> =9.11 K <sub>3</sub> =2.8	1978RZa (24299)	978
------	----	--------	------	-----	---	---	---	-----------------	-----

Data available for 10 to 50% v/v dioxan/H<sub>2</sub>O

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Zn++	gl	NaClO <sub>4</sub>	37°C	0.15M	C		K <sub>1</sub> =2.637 B <sub>3</sub> =5.786 B(ZnHL)=5.85 B(ZnHL <sub>3</sub> )=10.62 B(ZnH-1L <sub>3</sub> )=-0.98	1976MTa (24300)	979
------	----	--------------------	------	-------	---	--	--	-----------------	-----

B(ZnHL<sub>3</sub>)=14.70, B(Zn<sub>2</sub>L<sub>2</sub>)=7.26, B(Zn<sub>2</sub>HL<sub>2</sub>)=10.92

---

Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	C	M	K <sub>1</sub> =2.85 B(Zn(bpy) <sub>2</sub> L)=7.95	1975D0c (24301)	980
------	----	------------------	------	-------	---	---	--	-----------------	-----

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Zn++	vlt	NaClO <sub>4</sub>	25°C	1.00M	U		K(Zn+HL)=0.59	1975TQa (24302)	981
------	-----	--------------------	------	-------	---	--	---------------	-----------------	-----

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Zn++	dis	NaClO <sub>4</sub>	25°C	1.00M	U		K <sub>1</sub> =2.47    B <sub>2</sub> =3.80	1974MSc (24303)	982
------	-----	--------------------	------	-------	---	--	--	-----------------	-----

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Zn++	gl	NaClO <sub>4</sub>	25°C	0.10M	U		K <sub>1</sub> =2.95	19700Va (24304)	983
------	----	--------------------	------	-------	---	--	----------------------	-----------------	-----

Zn++	gl	KNO3	25°C	0.10M	U		K1=2.97	B2=4.45	1969PJb (24305)	984
Zn++	gl	NaCl04	25°C	0.10M	U		K1=2.95		19680Va (24306)	985
							K(Zn+HL)=0.99			
Zn++	dis	oth/un	25°C	0.0	U		K1=3.85	B2=5.95	1966RMb (24307)	986
Zn++	EMF	oth/un	25°C	0.0	U	H	K1=3.82		1965NAa (24308)	987
							K1=8.89-0.0415T+0.0000918T^(2)			
Method: H electrode. 0-45 C. DH(K1)=12.5 kJ mol <sup>-1</sup> , DS=114.5 J K <sup>-1</sup> mol <sup>-1</sup>										
Zn++	gl	NaCl04	20°C	0.10M	U		K1=2.97		1963CAa (24309)	988
							K(Zn+HL)=1.24			
Zn++	gl	oth/un	25°C	0.10M	U		K1=2.7		1960YYa (24310)	989
Zn++	con	alc/w	25°C	20%	U		K1=4.40		1951JAa (24311)	990
Medium: 20.5% EtOH										
Zn++	EMF	KCl	25°C	0.20M	U		K1=2.78		1938CKa (24312)	991
							K(Zn+HL)=0.84			
Zn++	con	oth/un	25°C	->0	U		K1=3.68		1932MDa (24313)	992
Zn++	con	oth/un	25°C	.001M	U		K1=3.35		1931IRb (24314)	993
Zn++	con	oth/un	25°C	0.01M	U		K1=3.26		1929RFa (24315)	994
*****										
C3H4O5                      H2L      Tartronic acid      CAS 80-69-3 (839)										
Hydroxypropanedioic acid; HO.CH(COOH)2										
*****										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Zn++	gl	NaCl04	20°C	0.10M	U		K1=3.22		1963CAa (24609)	995
							K(Zn+HL)=1.91			
*****										
C3H5NO2S2                      H2L                      CAS 29596-83-6 (3558)										
N-(Dithiocarboxy)aminoethanoic acid; HS.CS.NH.CH2.COOH										
*****										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Zn++	oth	oth/un	25°C	0.10M	U		K1=3.4	B2=6.6	1973RBc (24656)	996
							B3=8.9			
*****										
C3H5NO4                      H2L      Aminomalonic ac      CAS 1068-84-4 (2980)										
2-Aminopropanedioic acid; HOOC.CH(NH2).COOH										
*****										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo

Zn++ EMF oth/un 20°C ->0 U K1=6.48 1945SKa (24667) 997  
Method: H electrode

\*\*\*\*\*

C3H5N3S L CAS 108-33-8 (1428)

2-Amino-5-methyl-1,3,4-thiadiazole; C2N2S(NH2)(CH3)

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

Zn++ gl KNO3 25°C 0.50M U K1=0.70 1982GLa (24681) 998

\*\*\*\*\*

C3H5N3S L CAS 17467-35-5 (1425)

5-Amino-3-methyl-1,2,4-thiadiazole; C2N2S(NH2)(CH3)

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

Zn++ gl KNO3 25°C 0.50M U K1=0.23 1982GLa (24687) 999

\*\*\*\*\*

C3H5O2Br HL 3-Br-propionic CAS 590-92-1 (1314)

3-Bromopropionic acid; Br.CH2.CH2.COOH

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

Zn++ gl diox/w 25°C 0.10M U K1=1.98 1969GPb (24704)1000

0.1 M NaClO4 in 50% dioxane/H2O

\*\*\*\*\*

C3H5O2Cl HL CAS 107-94-8 (1436)

3-Chloropropionic acid; Cl.CH2.CH2.COOH

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

Zn++ gl diox/w 25°C 0.10M U K1=2.17 1969GPb (24726)1001

0.1 M NaClO4 in 50% dioxane/H2O

-----  
Zn++ gl diox/w 25°C 50% U K1=2.17 1969SGa (24727)1002

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C3H5O2F HL (6999)

3-Fluoropropionic acid;

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

Zn++ gl diox/w 25°C 0.10M U K1=1.99 1969GPb (24741)1003

0.1 M NaClO4 in 50% dioxane/H2O

\*\*\*\*\*

C3H5O2I HL 3-I-Propionic CAS 141-76-4 (1315)

3-Iodopropionic acid; I.CH2.CH2.COOH

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

Zn++ gl diox/w 25°C 0.10M U K1=2.04 1969GPb (24748)1004

0.1 M NaClO4 in 50% dioxane/H2O

\*\*\*\*\*

C3H6 L Propylene CAS 115-07-1 (702)  
Propene; CH3.CH:CH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ dis none 40°C 0.0 U T K1=-2.0 1984DWa (24751)1005

\*\*\*\*\*

C3H6NO2Cl HL (8169)  
3-Chloroalanine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 25°C 0.10M C K1=4.63 B2= 8.65 1981TMe (24758)1006  
B3=10.9

Also data for the schiff based formed with pyridoxal.

\*\*\*\*\*

C3H6N2O2 L D-Cycloserine CAS 68-41-7 (907)  
D-4-Amino-1,2-oxazolidine-3-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 25°C 0.50M U K1=1.00 B2=2.11 1983GWa (24788)1007  
B3=3.36  
B4=4.36  
B5=4.49

-----  
Zn++ gl KCl 25°C 0.10M U K1=1.71 1981BD b (24789)1008  
K(Zn+H-1L)=3.43  
K(Zn+2H-1L)=6.09

-----  
Zn++ gl oth/un 25°C 0.01M U B2=6.0 1956NEb (24790)1009  
\*\*\*\*\*

C3H6N2S L CAS 1779-81-3 (1400)  
2-Amino-2-thiazoline; C3H4NS.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaCl 37°C 0.15M U M K1=3.15 1982HFa (24829)1010  
B(ZnL(Ala))=7.25

-----  
Zn++ gl NaCl 37°C 0.15M C M K1=3.15 1981HMa (24830)1011  
B(ZnL(Ala))=7.25

\*\*\*\*\*

C3H6O L Acetone CAS 67-64-1 (1912)  
Propan-2-one, acetone; CH3.CO.CH3

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

Zn++ cal non-aq 25°C 100% C IH 2002LVa (24853)1012

K(ZnP+L)=1.82

Medium: CCl<sub>4</sub>. ZnP: Zn(II)tetraphenylporphyrine. DH(ZnP+L)=-2.89 kJ mol<sup>-1</sup>, DS=25 J K<sup>-1</sup> mol<sup>-1</sup>. Data for related ligands.

\*\*\*\*\*

C3H6OS2 HL Xanthic acid CAS 151-01-9 (590)  
(Ethoxy)dithiomethanoic acid; CH<sub>3</sub>.CH<sub>2</sub>O.CSSH

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

Zn++ vlt KNO<sub>3</sub> 25°C 0.40M C 1984HSb (24867)1013

B3=8.93

Method: polarography.

-----  
Zn++ vlt oth/un 25°C 1.0M U 1967KHc (24868)1014

B3=4.63

Medium: LiCl

\*\*\*\*\*

C3H6O2 HL Propionic acid CAS 79-09-4 (35)  
Propanoic acid; CH<sub>3</sub>.CH<sub>2</sub>.COOH

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

Zn++ vlt NaClO<sub>4</sub> 25°C 1.0M C K1=2.58 B2= 3.98 1995KDa (24948)1015

Method: polarography. Medium pH 8.50.

-----  
Zn++ oth NaClO<sub>4</sub> 25°C 2.0M U K1=0.99 1990FTa (24949)1016

Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.

-----  
Zn++ gl diox/w 25°C 50% C M K1=2.40 1985STb (24950)1017

K(Zn(phen)+L)=2.29

-----  
Zn++ vlt oth/un 25°C 1.00M U K1=0.4 B2=1.15 1971TRb (24951)1018

-----  
Zn++ sol oth/un 25°C 1.00M U K1=0.42 B2=1.29 1971TRb (24952)1019

-----  
Zn++ EMF NaClO<sub>4</sub> 25°C 2.00M U K1=0.98 B2=0.96 1970FMa (24953)1020

B3=2.13

-----  
Zn++ gl diox/w 25°C 0.10M U K1=2.41 1969GPb (24954)1021

0.1 M NaClO<sub>4</sub> in 50% dioxane/H<sub>2</sub>O

-----  
Zn++ vlt NaClO<sub>4</sub> 25°C 2.00M U K1=1.08 B2=1.18 1968FPa (24955)1022

B3=1.51

B4=1.36

-----  
Zn++ gl diox/w 25°C 50% U M K1=2.41 1968GPd (24956)1023

K(Zn(bpy)+L)=2.38

Medium: 50% dioxan, 0.1 M NaClO<sub>4</sub>

-----  
Zn++ EMF KCl 20°C 0.20M U K1=1.01 1938CKa (24957)1024  
Method: H electrode

\*\*\*\*\*

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  
-----  
Zn++ gl NaCl04 30°C 0.10M U K1=7.64 B2=14.55 1988NDa (25119)1025  
-----

Zn++ gl NaCl04 25°C 0.10M U M 1985MSa (25120)1026  
K(ZnL+dientriamine)=6.08

-----  
Zn++ gl NaCl04 25°C 0.10M U M K1=7.88 B2=14.71 1984MSb (25121)1027  
K(ZnL+en)=4.40  
-----

Zn++ cal KNO3 25°C 0.50M U H K1=6.849 B2=14.336 1975BGa (25122)1028  
B(Zn2L2)=17.157  
B(Zn3L4)=34.742  
DH(B2)=-13 kJ mol<sup>-1</sup>, DS(B2)=23 J mol<sup>-1</sup> K<sup>-1</sup>, DH(Zn3L4)=79

-----  
Zn++ gl NaCl04 20°C 0.10M U T K1=8.03 B2=15.21 1974SSa (25123)1029  
At 30 C: K1=7.80, B2=15.28; 40 C: K1=7.71, B2=15.34

\*\*\*\*\*

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  
-----

Zn++ gl KNO3 25°C 0.10M M M 1989SHd (25195)1030  
K(Zn(nta)+L)=4.05

-----  
Zn++ gl KNO3 25°C 0.50M U K1=3.44 B2=12.18 1976BCa (25196)1031  
B(Zn2L2)=11.95  
B(Zn3L4)=30.40  
-----

Zn++ gl KNO3 20°C 0.10M U T K1=6.32 B2=12.38 1968SGb (25197)1032  
K1(30 C)=6.43, K2(30 C)=6.22. K1(40 C)=6.53, K2(40 C)=6.28.  
Conductivity also used.

\*\*\*\*\*

C3H6O2S HL CAS 2365-48-2 (8896)  
Mercaptoethanoic acid methyl ester;

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

Zn++ gl KCl 25°C 0.10M C B2=8.87 2002CDc (25237)1033  
B3=13.51  
B(Zn2L2)=12.54  
B(Zn2H-1L2)=5.04

$$B(\text{Zn}2\text{H}-3\text{L}2)=-11.27$$

$$B(\text{Zn}2\text{H}-4\text{L}2)=-20.89.$$

\*\*\*\*\*

C3H6O3 HL CAS 81598-26-7 (2521)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	2.00M	U		K1=0.86 B2=1.11 B3=1.43	1976KGa (25253)	1034

Zn++	EMF	NaCl04	25°C	2.00M	U		K1=0.86 B2=1.11 B3=1.43	1973FPa (25254)	1035
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C3H6O3 HL L-Lactic acid CAS 79-33-4 (82)

L-2-Hydroxypropanoic acid; CH3.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sol	oth/un	20°C	2.10M	U	M		1978KUa (25352)	1036
							B(ZnL(oxalate))=6.88 B(ZnL2(oxalate))=7.16		

Zn++	dis	NaCl04	23°C	1.00M	U		K1=1.93 B2=2.83	1978PSb (25353)	1037
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Zn++	gl	NaCl04	25°C	2.00M	U		K1=1.67 B2=2.65 B3=2.94	1976KGa (25354)	1038
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Zn++	EMF	NaCl04	25°C	1.0M	U		K1=1.61 B2=2.85 K3=0.3	1967TGa (25355)	1039
------	-----	--------	------	------	---	--	------------------------------	-----------------	------

Method: quinhydrone electrode.

Zn++	EMF	oth/un	25°C	->0	U		K1=2.20 B2=3.75	1954DMb (25356)	1040
------	-----	--------	------	-----	---	--	--------------------	-----------------	------

Method: H electrode

Zn++	con	oth/un	25°C	?	U		K1=2.239	1954EMa (25357)	1041
------	-----	--------	------	---	---	--	----------	-----------------	------

Zn++	EMF	KCl	20°C	0.20M	U		K1=1.86	1938CKa (25358)	1042
------	-----	-----	------	-------	---	--	---------	-----------------	------

Method: H electrode

\*\*\*\*\*

C3H6O4 HL Glyceric acid CAS 473-81-4 (2520)

2,3-Dihydroxypropanoic acid; HO.CH2.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	2.00M	U		K1=1.46 B2=2.36 B3=2.69	1979KF a (25623)	1043

Zn++	EMF	KCl	20°C	0.20M	U		K1=1.80	1938CKa (25624)	1044
------	-----	-----	------	-------	---	--	---------	-----------------	------

Method: H electrode

C3H7NO2                      HL      Alanine                      CAS 56-41-7    (86)  
2-Aminopropanoic acid; H2N.CH(CH3).COOH

A=12-Pentyl-1,4,7,10-tetraazacyclotridecane-11,13-dione.

HC:2-[o-hydroxyphenylazo]-2-cyanomethyl benzimidazole. 40% EtOH/H<sub>2</sub>O, I=0.15  
H<sub>2</sub>A:5-[o-hydroxyphenylazo] barbituric acid. K(ZnL+C)=4.49, K(ZnC+L)=4.82.

H2A is thiamine orthophosphoric acid.

Method: Tast polarography.

Data for 25-45 C.  $\Delta H(K1) = -5.4 \text{ kJ mol}^{-1}$ ,  $\Delta S(K1) = 5.4 \text{ J K}^{-1} \text{ mol}^{-1}$ ;  $\Delta H(\text{Zn}(\text{bpy})\text{L}) = -18$ ,  $\Delta S(\text{Zn}(\text{bpy})\text{L}) = 38$ .

Zn++      gl   KCl    25°C 0.20M C      K1=4.56   B2=8.51   1993FBa (26004)1055  
B(ZnH-1L)=-3.60  
B(ZnH-1L2)=-0.15

Zn++ g1 NaCl04 25°C 0.20M U T M K1=5.17 B2= 9.27 1993PPa (26005)1056  
K(ZnA+L)=4.92



A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

-----  
Zn++ gl KCl 25°C 0.10M C IH T K1=4.63 B2=8.66 1993SKa (26006)1057  
IUPAC evaluation. DH(K1)=-7.8 kJ mol<sup>-1</sup>, DH(B2)=-17.5  
-----

Zn++ gl NaCl04 25°C 0.20M U M K1=5.43 B2=9.81 1992VBa (26007)1058  
B(ZnL(Trp))=9.92  
B(ZnL(phen))=9.86  
-----

Zn++ gl NaCl 37°C 0.15M U M 1991HWa (26008)1059  
B(ZnLA)=7.919  
B(ZnHLA)=15.811  
B(Zn2LA)=18.919  
-----

H2A is 7-oxabicyclo-[2,2,1]-hept-5-ene-2,3-dicarboxylic acid

-----  
Zn++ vlt KNO3 25°C 0.10M C M K1=4.73 B2= 8.80 1991KNb (26009)1060  
B3=11.22  
B(ZnAL)=6.38  
B(ZnA2L)=9.06  
B(ZnAL2)=10.53  
-----

Method: polarography, medium pH 8.5. HA is ethanoic acid.

-----  
Zn++ gl KNO3 37°C 0.15M C M K1=4.51 B2= 8.70 1990KKc (26010)1061  
B(ZnH-2L)=-11.62  
B(ZnHL(imidazole))=14.35  
B(ZnL(imidazole)3)=12.32  
-----

Zn++ gl KNO3 37°C 0.15M U M K1=4.51 B2= 8.70 1990KKc (26011)1062  
B(ZnH-2L)=-11.62  
B(ZnA3L)=12.32  
B(ZnHAL)=14.35  
-----

A: imidazole

-----  
Zn++ gl KNO3 35°C 0.10M U K1=4.50 1990RSe (26012)1063  
-----

Zn++ gl KNO3 25°C 0.10M C M 1989MAd (26013)1064  
K(ZnA+L)=4.36  
B(ZnAL)=11.21  
-----

H2A is N-(2-acetamido)imino diethanoic acid.

-----  
Zn++ gl KNO3 35°C 0.20M U M K1=4.80 B2=8.85 1989RVa (26014)1065  
K(ZnA+L)=4.33  
-----

A=bis(imidazol-2-yl)methane

-----  
Zn++ gl KNO3 25°C 0.20M U M K1=5.29 1988BSc (26015)1066  
K(Zn(bpy)+L)=4.90  
-----

Zn++ gl NaCl04 27°C 0.20M U M K1=5.17 B2= 9.27 1988PPc (26016)1067  
K(ZnA+L)=4.92  
-----

A is 2,2'-dipyridylamine.

-----  
Zn++ nmr none 20°C 0.0 U 1986DHa (26017)1068

K(ZnA+L)=2.5  
K(ZnA+HL)=0.6

In D2O. A = trien

-----  
Zn++ nmr none 20°C 0.0 U 1986DHb (26018)1069

K(ZnA+HL)=0.30  
K(ZnA+L)=1.30

In D2O. A = tren

-----  
Zn++ gl NaCl 37°C 0.15M U M 1986XHa (26019)1070

B(ZnL(His))=12.77  
B(ZnH-1L(His))=2.98

-----  
Zn++ gl NaCl 37°C 0.15M U K1=4.440 1985CFb (26020)1071

B(ZnH-1L)=-3.17

-----  
Zn++ ISE KNO3 25°C 0.10M U M K1=5.01 B2=9.57 1985DVa (26021)1072

B3=11.37  
K(ZnL+H)=8.10  
K(ZnH-1L+H)=8.52  
K(Zn(IDA)+L)=6.24

-----  
Zn++ gl KNO3 25°C 0.10M U K1=4.55 1985MKa (26022)1073

-----  
Zn++ gl oth/un 30°C 0.20M U M K1=5.17 1984JOb (26023)1074

K(Zn(bpy)+L)=4.54

Medium: not stated.

-----  
Zn++ gl KCl 25°C 0.20M C M 1984KDb (26024)1075

K(Zn(DOPA)+L)=4.13  
B(ZHL(DOPA))=24.26  
K(Zn(Dopamine)+L)=4.18  
B(ZnHL(Dopamine))=24.39

K(ZnA+L)=3.98, B(ZnHLA)=23.10; K(ZnB+L)=4.12, B(ZnHLB)=23.87  
A=Noradrenaline, B=Adrenaline, H3DOPA=3,4-dihydroxyphenylalanine

-----  
Zn++ gl KNO3 25°C 0.10M C H T K1=4.65 B2=8.79 1983ACb (26025)1076  
DH(K1)=-7.45; DH(B2)=-17.6 kJ mol<sup>-1</sup>.

-----  
Zn++ vlt KNO3 30°C 0.30M C M K1=4.65 B2= 7.88 1983APa (26026)1077

B(ZnAL)=6.99  
B(ZnAL2)=7.96  
B(ZnA2L)=8.68

Method: polarography. Medium: 0.30 M KNO3, pH 8.0. H2A is oxalic acid.  
B(Zn(en)L)=10.33, B(Zn(en)L2)=11.76, B(Zn(en)2L)=13.95

-----  
Zn++ gl NaCl04 25°C 0.10M U K1=4.62 B2=8.85 1980FSa (26027)1078

K3=3.31

By NMR: K1=4.8

-----  
Zn++ gl NaClO4 25°C 0.10M C M 1980FSa (26028)1079

B(Zn(bpy)L)=9.72  
K(Zn(bpy)+L)=4.42  
B(ZnL(phen))=11.15  
K(Zn(phen)+L)=4.60

-----  
Zn++ gl NaClO4 25°C 3.00M C K1=4.3 B2=8.0 1979BJa (26029)1080

B(ZnHL)=11.36  
B(ZnHL2)=15.60  
B(ZnH2L2)=22.6

-----  
Zn++ gl NaClO4 25°C 1.00M C K1=4.65 B2=8.75 1979BJb (26030)1081

B(ZnHL)=9.90

Alternative method: Ion selective electrode

-----  
Zn++ gl KNO3 30°C 0.10M M M K1=5.21 B2= 9.54 1978MSi (26031)1082

K(Zn(his)+L)=4.54  
B(Zn(his)L)=11.21

-----  
Zn++ gl NaClO4 30°C 0.20M U K1=5.17 B2=9.27 1975JBb (26032)1083

-----  
Zn++ gl KNO3 25°C 1.00M U M T K1=4.55 B2=8.54 1972BPa (26033)1084

B3=10.65  
B(ZnL(NH3))=7.17  
B(ZnL(NH3)2)=9.22  
B(ZnL2(NH3))=10.54

-----  
Zn++ gl none 25°C 0.00 U T T K1=4.952 B2=9.23 1971GKa (26034)1085

K1(35 C)=4.910, K2(35 C)=4.235

-----  
Zn++ gl KCl 25°C 0.05M U T H T K1=4.604 B2=8.67 1971GKa (26035)1086

K1(35 C)=4.562, K2(35 C)=4.026

DH(K1)=-9.6 kJ mol<sup>-1</sup>, DH(K2)=-7.1, DS(K1)=54 J K<sup>-1</sup> mol<sup>-1</sup>, DS(K2)=54

-----  
Zn++ gl KCl 25°C 0.50M U M 1971LLa (26036)1087

B(ZnLA)=9.56  
B(ZnL2A2)=16.23

HA=salicylaldehyde

-----  
Zn++ gl oth/un 25°C U K1=5.16 B2=9.26 1970CBb (26037)1088

-----  
Zn++ gl KCl 25°C 0.50M U T K1=4.57 B2=8.56 1970FEa (26038)1089

B3=10.59

-----  
Zn++ gl NaClO4 25°C 0.10M U T K1=4.51 1970GPa (26039)1090

-----  
Zn++ gl KCl 25°C 0.50M U T K1=4.56 B2=8.56 1970SFb (26040)1091

B3=10.58

-----  
 Zn++ gl KNO3 37°C 0.15M U T K1=4.57 B2=8.56 1969CPc (26041)1092  
 B3=10.65  
 K(ZnL+H2O=Zn(OH)L+H)=-8.53  
 -----

Zn++ oth NaCl04 25°C 0.50M U T K1=4.67 B2=8.95 1967RPd (26042)1093  
 Method: optical rotation  
 -----

Zn++ vlt KCl 30°C 0.50M U B2=8.85 1967SSk (26043)1094  
 -----

Zn++ gl KCl 25°C 0.50M U M T K1=4.56 B2=8.52 1966LHc (26044)1095  
 B3=10.51  
 B(ZnAL)=6.79  
 B(ZnBL)=6.32  
 B(ZnAL2)=9.4  
 HA=pyruvic acid, HB=glyoxylic acid. B(ZnBL2)=10.17, B(ZnA2L2)=13.01,  
 B(ZnB2L2)=12.03  
 -----

Zn++ gl KNO3 20°C 0.37M U K1=4.63 B2=9 1966SWa (26045)1096  
 -----

Zn++ gl KCl 40°C 0.20M U T H K1=4.80 B2=8.66 1965SMb (26046)1097  
 K1=4.98(15 C), 4.88(25 C); K2=4.12(15 C), 3.96(25 C)  
 DH(K1)=-12.5 kJ mol<sup>-1</sup>, DS=50.2 J K<sup>-1</sup> mol<sup>-1</sup>, DH(K2)=-18.0, DS=16.7  
 -----

Zn++ oth KNO3 20°C 0.10M U K1=5.7 B2=9.60 1964J0a (26047)1098  
 K3=2.3  
 Method: paper electrophoresis  
 -----

Zn++ gl KCl 20°C 0.10M U T K1=4.55 B2=8.65 1963IPa (26048)1099  
 -----

Zn++ gl oth/un 25°C 0.01M U K1=4.9 1954PEa (26049)1100  
 -----

Zn++ gl oth/un 21°C 0.01M U B2=9.1 1952PEa (26050)1101  
 Medium: 0.005-0.01 M ZnSO4  
 -----

Zn++ gl oth/un 25°C ->0 U T K1=5.21 B2=9.54 1951M0a (26051)1102  
 -----

Zn++ gl oth/un 25°C 0.01M U K1=5.16 B2=9.50 1950MMa (26052)1103  
 -----

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

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

Zn++ gl KCl 25°C 0.10M C TIH T K1=4.15 1993SKa (26408)1104  
 IUPAC evaluation. DH(B2)=-17 kJ mol<sup>-1</sup>(T)  
 -----

Zn++ oth NaNO3 35°C 0.10M U M 1985V5a (26409)1105  
 K(Zn(NTA)+L)=3.42  
 By electrophoresis

-----  
 Zn++ vlt KNO3 30°C 0.3M C M K1=4.25 B2= 6.55 1983APa (26410)1106  
 B(ZnAL)=6.47  
 B(ZnAL2)=6.93  
 B(ZnA2L)=7.15

Method: polarography. Medium: 0.30 M KNO3, pH 8.0. H2A is oxalic acid.  
 B(Zn(en)L)=9.80, B(Zn(en)L2)=10.10, B(Zn(en)2L)=12.15

-----  
 Zn++ gl NaNO3 20°C 0.10M U K1=4.10 1978LEb (26411)1107

-----  
 Zn++ gl oth/un 25°C dil U K1=5.15 1970CBb (26412)1108

-----  
 Zn++ gl KCl 25°C 0.50M U M K1=3.90 B2=7.20 1970CBb (26413)1109  
 B3=10.40  
 B(ZnLA)=8.40  
 B(ZnL2A2)=16.20

HA=salicylaldehyde

-----  
 Zn++ vlt KCl 30°C 0.50M U K1=4.2 B2=7.0 1967SSk (26414)1110

-----  
 Zn++ cal KNO3 22°C 0.10M U H 1967SSl (26415)1111  
 DH(B2) < -17.1 kJ mol<sup>-1</sup>

-----  
 Zn++ gl KCl 25°C 0.50M U M K1=3.9 1966LHb (26416)1112  
 B(ZnAL)=7.08  
 B(ZnA2L2)=12.1

HA=pyruvic acid

-----  
 Zn++ gl KCl 40°C 0.20M U T K1=3.82 1965SMb (26417)1113  
 K1=4.10(15 C)

-----  
 Zn++ gl KCl 20°C 0.10M U K1=4 1954IRa (26418)1114  
 \*\*\*\*\*  
 C3H7NO2 HL DL-Alanine CAS 302-72-7 (189)  
 DL-2-Aminopropanoic acid; H2N.CH(CH3).COOH

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

-----  
 Zn++ gl NaCl 37°C 0.15M U K1=4.44 1982HFa (26528)1115  
 K(Zn+L=Zn(OH)L+H)=-3.18

-----  
 Zn++ gl KCl 20°C 0.15M U M K1=4.71 1982VDa (26529)1116

-----  
 Zn++ gl KCl 25°C 0.20M C M K1=4.56 B2=8.51 1981GEa (26530)1117  
 B(ZnH-1L)=-3.60  
 B(ZnH-1L2)=-0.2

Ternary complexes with His-L-Ala and His-D-Ala

-----  
 Zn++ gl NaNO3 30°C 0.20M C M K1=4.81 B2= 8.83 1981RSd (26531)1118  
 K(Zn(asp)+L)=3.94

H2asp is aspartic acid.

H2A=dopamine.

Zn++ g1 KCl 25°C 0.20M C K1=4.51 B2= 8.35 200FEC (26617)1125  
\*\*\*\*\*

C3H7NO2 HL (7502)

Propanohydroxamic acid; C2H5CONHOH

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=5.07 B2= 9.51 B3=11.6 B(ZnH-1L2)=-0.32	2000FEc (26629)	1126

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\*\*\*\*\*

C3H7NO2S H2L Cysteine CAS 52-90-4 (96)

2-Amino-3-mercaptopropanoic acid; H2N.CH(CH2.SH)COOH

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	37°C	0.15M	C	M		1996NAa (26710)	1127
							B(ZnHLA)=23.24 B(ZnLA)=16.34 K(ZnHA+L)=9.63 K(ZnL+A)=6.70		

---

HA is DL-2,3-diaminopropanoic acid, HC is DL-2,4-diaminobutanoic acid.

B(ZnH2LC)=30.11, B(ZnHLC)=24.37, B(ZnLC)=17.18, K(ZnHC+L)=10.15, K(ZnL+C)=7.54

---

Zn++	gl	NaCl04	37°C	0.15M	C	M		1996NAa (26711)	1128
							B(Zn(orn)H2L)=30.78 B(Zn(orn)HL)=24.05 B(Zn(orn)L)=16.35 K(Zn(orn)H+L)=9.49		

---

K(ZnL+orn)=6.71, K(Zn(orn)+L)=9.66.

---

Zn++	gl	NaCl	37°C	0.15M	C	TI	R B2=17.9	1995BEa (26712)	1129
------	----	------	------	-------	---	----	-----------	-----------------	------

IUPAC evaluation. Tentative values: 0.2 M KCl, 25 C:K1=8.2, B2=18.05,  
B(ZnHL)=14.76, B(ZnHL2)=24.43, B(ZnH2L2)=29.93, B(Zn3L4)=42.11

---

Zn++	gl	NaCl04	25°C	0.10M	M		K1=8.97 B2=17.86	1993GVa (26713)	1130
------	----	--------	------	-------	---	--	------------------	-----------------	------

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Zn++	gl	NaCl04	37°C	0.15M	C	M	K1=9.64 B2=17.81	1993NAC (26714)	1131
------	----	--------	------	-------	---	---	------------------	-----------------	------

B(ZnHL2)=24.63  
B(ZnH2L2)=29.93  
B(ZnH2L(his))=27.42  
B(ZnHL(his))=22.07

---

B(ZnL(his))=15.97. Also data for ternary complexes with histamine.

---

Zn++	gl	NaCl04	37°C	0.15M	C	M	K1=9.64 B2=17.81	1993NAC (26715)	1132
------	----	--------	------	-------	---	---	------------------	-----------------	------

B(ZnHL2)=24.63  
B(ZnH2L2)=29.93

---

Data for ternary complexes with imidazole, histamine and histidine.

B(ZnH2L(his))=27.42, B(ZnHL(his))=22.07, B(ZnL(his))=15.97, K(ZnL+his)=6.3

---

Zn++	gl	NaCl	37°C	0.15M	U	M		1991Hwa (26716)	1133
------	----	------	------	-------	---	---	--	-----------------	------

B(ZnHLA)=19.632

							B(ZnH2LA)=25.603	
							B(ZnH3LA)=29.766	
H2A is 7-oxabicyclo-[2,2,1]-hept-5-ene-2,3-dicarboxylic acid								
Zn++	gl	KNO3	25°C	0.10M	M		1989SHd (26717)	1134
							K(Zn(nta)+L)=6.51	
							K(Zn(nta)+H+L)=14.02	
Zn++	gl	NaCl	37°C	0.15M	U	M T	B2=17.77	1985CFb (26718)
							B(ZnHL)=14.67	1135
							B(Zn2L3)=30.26	
							B(Zn2HL3)=36.14	
							B(Zn2H2L3)=41.73	
Ternary complex with glutamate								
Zn++	gl	NaClO4	37°C	0.15M	U		K1=9.17	B2=17.29
							B(ZnHL2)=23.32	1980AMa (26719)
							B(Zn2L3)=20.75	1136
Zn++	gl	KCl	25°C	0.20M	U		K1=8.2	B2=18.05
							B(ZnHL)=14.76	1979SGa (26720)
							B(ZnHL2)=24.43	1137
							B(ZnH2L2)=29.93	
							B(Zn2L3)=29.20	
B(Zn3L4)=42.11, B(Zn3HL4)=49.01								
Zn++	gl	NaClO4	37°C	0.15M	C	T	B2=17.91	1978BMa (26721)
							B(ZnHL)=14.60	1138
							B(ZnHL2)=24.11	
							B(Zn3L4)=42.28	
							B(Zn3H2L4)=54.08	
Zn++	gl	NaClO4	25°C	3.00M	C		B2=19.39	1976Cwa (26722)
							B(ZnHL2)=25.86	1139
							B(ZnH2L2)=31.88	
							B(Zn3L4)=46.25	
							B(Zn3HL4)=52.50	
Zn++	gl	NaClO4	25°C	0.10M	U	M	K1=9.24	1974RMa (26723)
								1140
Mixed complexes with HPO4(B=14.14), citrate(16.59) and NTA(26.2)								
Zn++	nmr	oth/un	32°C	0.50M	U		K1=8.91	B2=17.61
							K(Zn+HL)=4.80	1973HAb (26724)
35Cl probe								
Zn++	gl	KCl	25°C	0.10M	U		K1=9.19	B2=18.19
							K(Zn+HL+L)=24.47	1972RJa (26725)
DL cysteine: K1=9.15, B2=18.18, K(Zn+HL+L)=24.50								
Zn++	gl	NaClO4	20°C	0.10M	U		B2=18.21	1968PSe (26726)
								1143



B(ZnHL2)=24.79  
 B(ZnH2L2)=30.6  
 B(Zn3L4)=43.5  
 B(Zn3HL4)=49.5

-----  
 Zn++ gl KNO3 25°C 0.10M U K1=9.04 B2=17.54 1964LMa (26727)1144  
 -----

Zn++ gl KNO3 25°C 0.15M U K1=9.86 B2=18.70 1955LMa (26728)1145  
 -----

Zn++ gl oth/un 20°C 0.00 U B2=17.1 1953PEa (26729)1146  
 Medium: 0.0025 M Hg(NO3)2  
 -----

Zn++ gl oth/un 20°C 0.01M U B2=18.2 1952ALa (26730)1147  
 \*\*\*\*\*

C3H7NO3 HL Serine CAS 56-45-1 (49)  
 2-Amino-3-hydroxypropanoic acid; H2N.CH(CH2.OH)COOH  
 -----

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

Zn++ gl KNO3 25°C 0.10M C M K1=5.10 1999AAa (27039)1148  
 K(ZnL+A)=3.61  
 B(ZnLA)=8.71  
 K(ZnL+B)=3.52  
 B(ZnLB)=8.62

HA=MOPSO, HB=MOPS.  
 -----

Zn++ vlt NaClO4 25°C 1.0M C M B(ZnLA)=5.12 1999VKc (27040)1149  
 B(ZnLA2)=8.18  
 B(ZnL2A)=10.40

Method: polarography. Medium pH: 8.5. A is 4-picoline.  
 -----

Zn++ gl KNO3 35°C 0.10M C M K1=4.50 B2= 8.75 1998ZWa (27041)1150  
 B(ZnH-1L2)=0.56  
 B(ZnH-2L2)=-7.93

Data for ternary complexes with 3,3,9,9-tetramethyl-4,8-diazaundecane-  
 2,10-dione dioxime  
 -----

Zn++ gl KNO3 25°C 0.10M M M K1=6.40 1996AEa (27042)1151  
 Data for ternary complexes with dipicolinic acid.  
 -----

Zn++ gl NaClO4 37°C 0.15M C T R K1=4.47 B2=8.29 1995BEa (27043)1152  
 B(ZnH-1L2)=-1.14

IUPAC evaluation  
 -----

Zn++ gl NaClO4 25°C 1.0M U M K1=4.41 B2= 8.05 1995KDa (27044)1153  
 K3=2.21  
 B(ZnLA)=6.43  
 B(ZnLA2)=8.91  
 B(ZnL2A)=10.31

Medium pH 8.50. HA is propanoic acid.

-----  
Zn++ gl NaClO4 25°C 0.20M U T M K1=5.06 B2= 9.17 1993PPa (27045)1154  
K(ZnA+L)=4.71

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

-----  
Zn++ gl KNO3 25°C 0.10M U I K1=4.47 B2=8.66 1990Rab (27046)1155  
Data also for 10% w/w EtOH/H2O (K1=4.72; B2=8.79) and 25% (5.24; 9.56)

-----  
Zn++ gl KNO3 25°C 0.10M C M 1989MAd (27047)1156  
K(ZnA+L)=4.17  
B(ZnAL)=11.02

H2A is N-(2-acetamido)imino diethanoic acid.

-----  
Zn++ gl KNO3 35°C 0.20M U M K1=4.66 B2=8.49 1989RVa (27048)1157  
K(ZnA+L)=4.13

A=bis(imidazol-2-yl)methane

-----  
Zn++ gl KNO3 25°C 0.10M M M 1989SHd (27049)1158  
K(Zn(nta)+L)=2.99

-----  
Zn++ gl NaClO4 27°C 0.20M U M K1=5.06 B2= 9.17 1988PPc (27050)1159  
K(ZnA+L)=4.71

A is 2,2'-dipyridylamine.

-----  
Zn++ gl KNO3 25°C 0.10M U K1=4.62 1985MKa (27051)1160

-----  
Zn++ gl oth/un 30°C 0.20M U M K1=5.06 1984JOb (27052)1161  
K(Zn(bpy)+L)=4.79

Medium: not stated.

-----  
Zn++ gl NaClO4 37°C 0.15M C K1=4.475 B2= 8.26 1982BKc (27053)1162  
B(ZnH-1L2)=10.250

-----  
Zn++ gl KCl 25°C 0.20M C M T K1=4.45 B2=8.16 1981GEa (27054)1163  
B(ZnH-1L)=-3.73  
B(ZnH-1L2)=-2.4

B(ZnL(His))=10.14

-----  
Zn++ gl NaNO3 30°C 0.20M C M K1=4.68 B2= 8.39 1981RSd (27055)1164  
K(Zn(asp)+L)=3.89  
B(Zn(asp)L)=9.68

H2asp is aspartic acid.

-----  
Zn++ gl NaNO3 30°C 0.20M C M K1=4.68 B2= 8.39 1981RSe (27056)1165  
B(Zn(ida)L)=10.56  
K(Zn(ida)+L)=3.58

-----  
Zn++ vlt KNO3 25°C 0.50M U T H K1=4.60 B2=9.12 1979SSc (27057)1166  
-----

Zn++ gl NaClO4 25°C 3.00M U K1=4.90 B2=9.28 1973WIa (27058)1167  
B3=11.91

Zn++ gl KCl 25°C 0.05M U T K1=4.65 B2=8.68 1972GMb (27059)1168  
K1(20 C)=4.69, K2=4.07; K1(30 C)=4.61, K2=4.00; K1(35 C)=4.58, K2=3.96

Zn++ gl KNO3 37°C 0.15M U M T K1=4.47 B2=8.31 1969PSb (27060)1169  
B3=10.56  
B(ZnLA)=9.67  
B(ZnLA2)=13.04  
B(ZnL2A)=13.04

A=histamine

Zn++ gl KNO3 40°C 0.20M U T H K1=4.58 B2=8.22 1968Rmb (27061)1170  
K1=4.71(15 C), 4.66(25 C); K2=3.77(15 C), 3.72(25 C)  
DH(B2)=-18.0 kJ mol<sup>-1</sup>, DS=100 J K<sup>-1</sup> mol<sup>-1</sup>

Zn++ cal KNO3 22°C 0.10M U H 1967SSl (27062)1171  
DH(B2) < 28 kJ mol<sup>-1</sup>

Zn++ gl oth/un 25°C 0.10M U I K1=4.94 B2=9.22 1964SYa (27063)1172  
I=0: K1=5.30, K2=4.45; I=0.01: K1=5.22, K2=4.46; I=0.02: K1=5.19, K2=4.45;  
I=0.05: K1=5.08, K2=4.40

Zn++ gl oth/un 20°C .005M U B2=8.6 1953PEa (27064)1173  
Medium: 0.005 M ZnSO4

\*\*\*\*\*  
C3H7NO3 HL CAS 2786-22-3 (1893)  
2-Aminooxypropanoic acid; CH3.CH(O.NH2).COOH

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

Zn++ gl KNO3 25°C 0.50M U K1=2.34 1985WTa (27209)1174

\*\*\*\*\*  
C3H7NO3 HL iso-Serine CAS 632-12-2 (351)  
DL-3-Amino-2-hydroxypropanoic acid; H2N.CH2.CH(OH).COOH

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

Zn++ gl KNO3 25°C 0.10M C M 1988ACa (27226)1175  
B(ZnHL)=11.03  
B(Zn2H-2L2)=-3.50  
B(ZnH-2L2)=-9.1

Also B(CoZnH-2L2)=-3.74.

Zn++ gl KCl 25°C 0.10M U B2=15.821 1976BMe (27227)1176  
B(ZnH2L)=24.019  
B(Zn2L2)=22.779  
K(Zn+L=ZnH-1L+H)=-0.496

\*\*\*\*\*

C3H7NO5S                      H2L      Cysteic acid                      CAS 23537-25-9    (2603)  
 2-Amino-3-sulfonatopropanoic acid; HO3S.CH2.CH(NH2).COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaClO4	37°C	0.15M	C	M		1996NAa (27249)	1177
							B(ZnHLA)=17.86 B(ZnLA)=11.13 K(ZnHA+L)=4.25 B(ZnH2LC)=25.95		

HA is DL-2,3-diaminopropanoic acid, HC is DL-2,4-diaminobutanoic acid.  
 B(ZnHLC)=18.92, K(ZnHC+L)=4.36.

---

Zn++	gl	NaClO4	37°C	0.15M	C	M		1996NAa (27250)	1178
							B(Zn(orn)H2L)=25.95 B(Zn(orn)HL)=18.92 K(ZnH(orn)+L)=4.36		

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Zn++	gl	NaClO4	37°C	0.15M	C	M	K1=3.77    B2= 6.02	1993NAc (27251)	1179
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Data for ternary complexes with imidazole, histamine and histidine.  
 B(ZnHL(his))=17.63, B(ZnL(his))=11.15, K(ZnL+his)=7.38, K(Zn(his)+L)=4.74.

---

Zn++	gl	KNO3	25°C	0.50M	U		K1=5.60    B2=9.70	1979DZb (27252)	1180
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C3H7NS2                      HL                      CAS 128-04-1    (2125)  
 Dimethyldithiocarbamic acid; (CH3)2N.CSSH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	EMF	non-aq	25°C	100%	U		B2=11.4	1987USa (27268)	1181
------	-----	--------	------	------	---	--	---------	-----------------	------

Medium: DMF, 0.1 M LiClO4

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Zn++	dis	oth/un	25°C	0.01M	U		B2=9.1	1973SSa (27269)	1182
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Zn++	sol	non-aq	25°C	100%	U	HM		1965CRa (27270)	1183
							K(ZnL+A)=3.41 K(ZnL+B)=2.58 K(ZnL+C)=3.16 K(ZnL+D)=3.4		

Medium:toluene. A=ethylamine, B=t-butylamine, C=n-butylamine, D=pyrrolidine  
 DH(ZnL+B)=-41 kJ mol<sup>-1</sup>, DH(ZnL+C)=-31. K(ZnL+aniline)=0.04

---

Zn++	sol	non-aq	25°C	100%	U	HM		1965CRa (27271)	1184
							K(ZnL+A)=1.91 K(ZnL+B)=2.34 K(ZnL+C)=1.05 K(ZnL+D)=3.11		

Medium:toluene. A=pyridine, B=4-Mepyridine, C=2-Mepyridine, D=morpholine  
 DH(ZnL+A)=-32 kJ mol<sup>-1</sup>, DH(ZnL+B)=-40, DH(ZnL+C)=-29. Other ternary also

\*\*\*\*\*

C3H7N5 L (6903)

5-(2-Aminoethyl)-1H-tetrazole; NH2.CH2.CH2.CHN4

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

Zn++ gl NaNO3 20°C 0.10M U K1=4.73 1978LEb (27289)1185

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C3H7O5P H3L CAS 5926-41-4 (3549)

2-Phosphonopropanoic acid; CH3.CH(PO3H2).COOH

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

Zn++ gl R4N.X 25°C 0.25M U K1=2.96 1957Wba (27297)1186

Medium: 0.1-0.4 M (C3H7)4NI

\*\*\*\*\*

C3H7O6P H2L (6830)

3-Hydroxy-2-oxopropylphosphoric acid; CH2(OH).CO.CH2.OPO3H2

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

Zn++ gl NaNO3 25°C 0.10M U K1=2.01 1992LCb (27317)1187

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C3H7O7P H3L CAS 28474-06-8 (3552)

D-2,3-Dihydroxypropanoic acid 2-phosphate (D-2-phosphoglyceric acid)

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

Zn++ gl R4N.X 25°C 0.25M U K1=3.40 1957Wba (27327)1188

Medium: 0.1-0.4 M (C3H7)4NI

\*\*\*\*\*

C3H8NO5P H3L 3-Phosphono-Ala CAS 20263-06-3 (1509)

2-Amino-3-phosphonatopropanoic acid; (H2O3P)CH2.CH(NH2).COOH

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

Zn++ gl KCl 25°C 0.20M C K1=7.15 B2=12.16 1989KFb (27344)1189  
B(ZnHL)=13.1

Zn++ gl KNO3 25°C 0.20M C K1=6.63 B2=11.79 1978MAb (27345)1190  
K(Zn+HL)=2.16  
K(ZnL+HL)=2.45

\*\*\*\*\*

C3H8NO5P H3L CAS 23052-80-4 (1508)

3-Amino-3-phosphonatopropanoic acid; (H2O3P)(NH2)CH.CH2.COOH

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

Zn++ gl KCl 25°C 0.20M C K1=6.62 B2=10.82 1989KFb (27358)1191  
B(ZnH2L)=17.92  
B(ZnHL)=13.03



K(ZnHL+L)=1.94

K(ZnL+H)=5.88

\*\*\*\*\*

C3H8N2O2 HL CAS 71292-18-7 (356)

2,3-Diaminopropanoic acid; H2N.CH2.CH(NH2).COOH

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

Zn++ gl NaClO4 37°C 0.15M U M 1990NTb (27542)1201

B(Zn(glu)HL)=19.48

B(Zn(glu)L)=10.72

K(Zn(glu)+H+L)=14.09

K(ZnHL+glu)=5.87

K(Zn(glu)+L)=5.33.

-----  
Zn++ gl NaClO4 37°C 0.15M C M B2=13.70 1986NPb (27543)1202

B(ZnHL)=13.61

B(ZnH2L2)=25.70

B(ZnH2LA)=25.44, A=histamine. B(ZnH2L(His))=25.66

-----  
Zn++ gl KCl 25°C 0.20M C K1=6.31 B2=11.66 1981FGb (27544)1203

B(ZnHL)=12.59

B(ZnH2L2)=24.62

B(ZnHL2)=18.43

B(ZnH-1L)=0.94

-----  
Zn++ gl NaCl 37°C 0.15M C M K1=6.38 B2=11.67 1981JMa (27545)1204

B(ZnL(His))=12.04

B(ZnHL)=12.44

B(ZnHL(His))=18.50

B(ZnHL2)=17.97

-----  
Zn++ gl oth/un 20°C 0.01M U B2=11.5 1952ALa (27546)1205

\*\*\*\*\*

C3H8N2O2 HL Ala-hydroxamic CAS 16707-85-0 (1582)

2-Amino-N-hydroxypropanamide, Alanine hydroxamic acid; CH3.CH(NH2).CO.NH.OH

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

Zn++ gl KCl 25°C 0.20M C M K1=5.29 B2= 9.32 2002KKa (27571)1206

B(ZnHL)=12.27

B(Zn2L3)=18.77

B(ZnH-1L)=-2.26

B(ZnL(dien))=13.60

B(ZnH-1L(dien))=2.89, B(ZnHL(trien))=24.88, B(ZnL(trien))=17.32,

B(ZnH-1L(trien))=6.69.

-----  
Zn++ gl KCl 25°C 0.20M C K1=5.29 B2=9.32 1989FSa (27572)1207

B(ZnHL)=12.27

B(ZnH-1L)=-2.26

B(Zn2L3)=18.77

\*\*\*\*\*

C3H8N2O2 HL (6666)  
beta-Alaninehydroxamic acid; NH2.CH2.CH2.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C	M	B2=11.19 B(ZnHL)=14.66 B(ZnH2L2)=28.51 B(ZnHL2)=20.36 B(ZnH-1L2)=1.16	2002KKa (27601)	1208
B(ZnHL(dien))=22.77, B(ZnL(dien))=14.04, B(ZnH2L(trien))=32.12, B(ZnHL(trien))=27.04, B(ZnL(trien))=17.75.									

Zn++	gl	KCl	25°C	0.20M	C		B2=10.85 B(ZnHL)=14.16 B(ZnH2L2)=27.59 B(ZnHL2)=19.65 B(ZnH-1L2)=1.05	1993KFa (27602)	1209
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Zn++	gl	KCl	25°C	0.20M	C		B2=11.19 B(ZnHL)=14.66 B(ZnH-1L2)=1.16 B(ZnHL2)=20.36 B(ZnH2L2)=28.51	1993KKb (27603)	1210
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C3H8OS2 H2L BAL CAS 59-52-9 (379)  
2,3-Dimercaptopropan-1-ol; HS.CH2.CH(SH).CH2(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	30°C	0.10M	U		K1=13.48 B2=23.3	1961LTa (27656)	1211

\*\*\*\*\*

C3H8O2S HL 1-Thioglycerol CAS 96-27-5 (1848)  
3-Mercapto-1,2-propanediol HS.CH2.CH(OH).CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	20°C	0.10M	U	TI	K1=10.26 B2=28.29	1986NDb (27704)	1212
Zn++	cal	KNO3	25°C	0.50M	U	H	B(Zn2L3)=18.09 B(Zn3L6)=37.805 B(Zn4L9)=56.54 B(Zn5L12)=74.74	1974BHa (27705)	1213
B(Zn6L15)=93.87. DH(Zn6L15)=-305.4 kJ mol <sup>-1</sup> , DH(Zn3L6)=-154.8, DH(Zn4L9)=-133.9, DH(Zn5L12)=-125.5									

Zn++	gl	KNO3	25°C	0.50M	U			1971BPc (27706)	1214
------	----	------	------	-------	---	--	--	-----------------	------



B(2Zn+3L)=18.00  
B(3Zn+6L)=37.85  
B(4Zn+9L)=56.75  
B(5Zn+12L)=74.75

B(6Zn+15L)=95.84

\*\*\*\*\*

C3H8O3S3                      H3L                      (1324)  
1,3-Dimercaptopropanesulfonic acid; HS.CH2.CH2.CH(SH).SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	KNO3	20°C	0.10M	U		K1=14.49 B2=25.71	1967PRa (27761)	1215

\*\*\*\*\*

C3H8O3S3                      H3L                      Unithiol                      CAS 74-61-3 (1271)  
2,3-Dimercaptopropanesulfonic acid; HS.CH2.CH(SH).CH2.SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	37°C	0.15M	U		B2=27.56 B(Zn2L2)=33.58 B(Zn2HL3)=52.63	1984JSb (27772)	1216

Zn++	EMF	KNO3	20°C	0.10M	U		K1=14.09 B2=24.96	1967PRa (27773)	1217
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C3H8O10P2                      H5L                      (6577)  
2,3-Diphospho-D-glyceric acid; H2O3PO.CH2.CH(COOH)OP03H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		B2=7.59 B(ZnHL)=10.38 B(ZnH2L2)=19.98 B(ZnHL2)=14.53 B(ZnH-1L2)=-0.85	1990SKc (27801)	1218

\*\*\*\*\*

C3H9N                      L                      n-Propylamine                      CAS 107-10-8 (2356)  
1-Aminopropane; H2N.CH2.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ISE	R4N.X	25°C	2.00M	U		K1=2.42 B2=4.85 K3=2.53 K4=2.11	1969PMc (27818)	1219

Medium: NH4NO3

Zn++	sol	oth/un	19°C	0.01M	U		B2=5.5 B4=6.1	1933TAa (27819)	1220
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\*\*\*\*\*

C3H9N                      L                      iso-Propylamine                      CAS 75-31-0 (157)  
2-Propylamine; CH3.CH(CH3).NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ISE	R4N.X	25°C	2.00M	U		K1=2.37 K3=2.47 K4=2.30	1970PMa (27839)	1221

Medium: NH4NO3

\*\*\*\*\*

C3H9NO	L	CAS 2799-16-8	(905)
1-Aminopropan-2-ol; H2N.CH2.CH(OH).CH3			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	KNO3	25°C	0.10M	U		K1=6.54 B2=7.34 B3=8.70	1981AAa (27872)	1222

\*\*\*\*\*

C3H9NO	L	CAS 109-83-1	(899)
2-(Methylamino)ethanol; HO.CH2.CH2.NH.CH3			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	KNO3	25°C	0.10M	U		K1=5.30 B2=6.20 B3=6.95	1980AAa (27885)	1223

Zn++	gl	oth/un	25°C	0.10M	U		K1=3.9 K3=2.4 K4=2.2	1965D0a (27886)	1224
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C3H9NO	L	CAS 156-87-6	(906)
3-Aminopropan-1-ol; HO.CH2.CH2.CH2.NH2			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	KNO3	25°C	0.10M	U		K1=7.88	1981AAa (27914)	1225

\*\*\*\*\*

C3H9N2O4P	H2L	CAS 30211-73-5	(7117)
Glycylaminomethylphosphonic acid;			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=4.17 B(ZnHL)=10.04	1995HLA (27965)	1226

\*\*\*\*\*

C3H9N3O	L	CAS 19728-65-5	(2703)
2-(Methylamino)acetamidoxime; CH3.NH.CH2.C(:NOH)NH2			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	1.00M	C		K1=3.53 B(ZnH-1L2)=-2.23	19860Sa (27974)	1227

\*\*\*\*\*  
 C3H9N3O2 HL CAS 471915-95-4 (8549)  
 2,3-Diamino-N-hydroxypropanamide;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		B2=11.20 B(ZnHL)=13.58 B(ZnH2L2)=26.29 B(ZnHL2)=19.64 B(ZnH-1L2)=0.25	2002ECa (27981)	1228

\*\*\*\*\*  
 C3H9O4P H2L (6694)  
 (Phosphonylmethoxy)ethane; H2O3P.CH2.O.CH2.CH3  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	M		K1=2.74	1992SCa (28015)	1229

\*\*\*\*\*  
 C3H9O6P HL CAS 17181-54-3 (7537)  
 1,3-Dihydroxypropyl-2-phosphoric acid; HOCH2CH(OPO3H2)CH2OH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.15M	U		K1=2.137 B(ZnH-1L)=-5.63	1990KLb (28028)	1230

\*\*\*\*\*  
 C3H9O6P H2L CAS 57-03-4 (2984)  
 2,3-Dihydroxypropylphosphoric acid, Glycerol 1-phosphate; HO.CH2.CH(OH).CH2.OPO3H2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	U		K1=2.13	1992LCb (28039)	1231

\*\*\*\*\*  
 C3H10NO3P H2L (1986)  
 1,1-Dimethyl-1-aminomethylphosphonic acid; H2N.C(CH3)2.PO3H2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	U		K1=6.13 B2=11.97 K(Zn+HL)=3.44	1969DMd (28070)	1232

\*\*\*\*\*  
 C3H10NO3P H2L CAS 35869-68-2 (1989)  
 Dimethylaminomethylphosphonic acid; (CH3)2N.CH2.PO3H2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=5.45 K(ZnL+H)=7.46	1993SKc (28095)	1233

\*\*\*\*\*

C3H10N2 L CAS 78-90-0 (2905)  
 1,2-Diaminopropane; CH3.CH(NH2)CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	vlt	NaCl04	30°C	1.5M	C			K1=12.60 B2=15.00	1980Gcb (28151)	1234
Method: polarography.										
Zn++	gl	NaCl04	30°C	0.15M	U	M		K1=6.66 B(ZnL(bpy))=6.12	1974PBb (28152)	1235
Zn++	gl	KCl	25°C	var	U			K1=5.69+0.458I-0.245I^(3/2)-0.0286I^(2). In I NaCl04: K1=5.69+0.908I-0.851I^(3/2)+0.285I^(2), K2=4.94+1.31I-1.07I^(3/2)+0.325I^(2)	1962NMc (28153)	1236
Zn++	gl	KCl	30°C	0.50M	U			K1=5.89 B2=10.87 K3=1.70	1945Cma (28154)	1237

\*\*\*\*\*

C3H10N2 L Propanediamine CAS 109-76-2 (123)  
 1,3-Diaminopropane; H2N.CH2.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaCl04	20°C	0.10M	U			B(ZnHL)=14.96 B(ZnHL2)=20.22	1991Wba (28266)	1238
Zn++	nmr	none	20°C	0.0	U			K(ZnA+L)=2.2 K(ZnA+HL)=1.6	1986DHa (28267)	1239
In D20. A = trien										
Zn++	nmr	none	20°C	0.0	U			K(ZnA+HL)=0.60 K(ZnA+L)=1.30	1986DHb (28268)	1240
In D20. A = tren										
Zn++	gl	KNO3	25°C	0.10M	U	M		K1=6.00 K(Zn2(CdTA)+2L)=13.31	1982KJa (28269)	1241
Zn++	vlt	NaCl04	30°C	1.5M	C	M		K1=12.70 B2=14.00 B(Zn(en)L)=15.48	1980Gcb (28270)	1242

Method: polarography.

\*\*\*\*\*

C3H10N2 L CAS 109-81-9 (1308)  
 N-Methyl-1,2-diaminoethane; CH3.NH.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	1.00M	C	H		K1=5.66 B2=10.18	1982ABc (28353)	1243

By calorimetry: DH1=-12.1 kJ mol<sup>-1</sup>, DS1=67.7; DH(B2)=-27.4, DS(B2)=102.9

-----  
Zn++ gl oth/un 10°C ->0 U T H K1=5.47 B2=9.96 1959MBa (28354)1244  
DH(K1)=-21 kJ mol<sup>-1</sup>, DS=4 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-14, DS=4. 20 C: K1=5.39,  
K2=4.36; 30 C: K1=5.29, K2=4.23; 40 C: K1=5.08, K2=4.26  
\*\*\*\*\*

C3H10N2O L CAS 616-29-5 (1910)  
1,3-Diaminopropane-2-ol; H2N.CH2.CH(OH).CH2.NH2  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	30°C	1.0M	U		K1=4.60 B2=9.02	1955GFa (28380)	1245

-----

C3H11NO6P2 H4L (6772)  
(Dimethylamino)-N-methylenediphosphonic acid; (CH3)2N.CH(PO3H2)2  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	M		K1=9.27 K(Zn+HL)=7.19	1978GMf (28407)	1246

-----

C3H11NO6P2 H4L (6735)  
N-Methylimino-N,N-bis(methylenephosphonic acid); CH3.N(CH2PO3H2)2  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=9.68	1999MKa (28431)	1247

-----

B(ZnHL)=15.47  
B(ZnH2L)=19.58  
B(ZnH-1L)=-0.25  
B(ZnH-2L)=-11.95  
\*K(ZnL)=-9.93; K(ZnOH+L)=9.14; K(ZnOH+ZnL=Zn(OH)L+Zn)=-0.54  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=10.44 K(ZnL+H)=5.83	1993SKc (28432)	1248

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=8.90 B2=14.62	1988LDa (28433)	1249

-----

B(ZnHL)=15.46  
B(ZnH2L2)=31.44  
\*\*\*\*\*  
C3H11NO7P2 H4L CAS 40291-99-9 (1346)  
1-Hydroxy-3-aminopropyl-1,1-diphosphonic acid; (H2O3P)2C(OH).CH2.CH2.NH2  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	37°C	0.15M	C		K1=14.55	1999ZJa (28455)	1250

-----

K(ZnL+H)=6.33  
K(ZnHL+Zn)=4.86  
K(ZnL+3H)=14.80  
\*\*\*\*\*

C3H11N3 L CAS 21292-99-6 (2975)  
 Propane-1,2,3-triamine; H2N.CH2.CH(NH2).CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C			K1=6.50 B2=11.42 B(ZnHL)=13.75 B(ZnH-1L)=-2.89 B(ZnH-2L)=-12.80 B(ZnHL2)=19.08	1998ZMa (28479)	1251
B(ZnH-1L2)=0.81.										

Zn++	gl	NaCl	25°C	0.15M	C	H		K1=6.66 B2=11.55 B(ZnHL)=13.97 B(ZnHL2)=19.49	1997CSa (28480)	1252
By calorimetry: DH(K1)=-22 kJ mol <sup>-1</sup> , DS=53 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-26, DS=6; DH(Zn+HL)=-20, DS=-16; DH(ZnL+HL)=-21, DS=-9; DH(ZnHL+L)=-23, DS=30										

Zn++	gl	KCl	20°C	0.10M	U			K1=6.75 K(Zn+HL)=4.25	1950PSa (28481)	1253
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\*\*\*\*\*  
 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
Zn++	gl	KNO3	25°C	0.10M	C			K1=16.3 K(ZnL+H)=6.1 K(ZnH2L+H)=4.0 K(ZnHL+H)=4.89 K(ZnH3L+H)=2.5	1997DBb (28527)	1254

Zn++	cal	KNO3	25°C	1.00M	U	TIH			1990V0a (28528)	1255
DH(K1)=-11.4 kJ mol <sup>-1</sup> ; DS=240 J K <sup>-1</sup> mol <sup>-1</sup> . DH(Zn+HL)=42.9, DS=295										

Zn++	gl	KNO3	25°C	0.10M	C			K1=14.6 K(ZnL+H)=6.34 K(ZnHL+H)=5.12 K(ZnH2L+H)=3.9	1989SAa (28529)	1256
------	----	------	------	-------	---	--	--	--	-----------------	------

Zn++	gl	KNO3	25°C	0.10M	U			K1=14.75 K(Zn+HL)=8.98 K(Zn+H2L)=6.84 K(Zn+H3L)=4.92	1988Vsa (28530)	1257
------	----	------	------	-------	---	--	--	---	-----------------	------

Zn++	gl	alc/w	25°C	10%	U			K1=14.71 K(ZnL+H)=6.24 K(ZnHL+H)=5.19 K(ZnH2L+H)=4.10	1987SHa (28531)	1258
------	----	-------	------	-----	---	--	--	--	-----------------	------

In 10% ethanol/H2O; I=0.1 M NaClO4.



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	50%	U		K1=3.21	1973CSb (28715)	1264
Medium: 50% dioxan, 0.1 M NaClO4									
*****									
C4H4N2		L	Pyridazine				CAS 289-80-5	(1484)	
1,2-Diazine, Pyridazine; cyclo(-N:N.CH:CH.CH:CH-)									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=0.18 B2=0.93	1988KLa (28767)	1265
*****									
C4H4N2		L	Pyrazine				CAS 290-37-9	(620)	
1,4-Diazine, Pyrazine;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	non-aq	?	100%	U	M		1990AHb (28785)	1266
							K(ZnA+L)=2.26		
Medium: CH2Cl2. A=biphenyl capped mesoporphyrin. Data for other porphyrin Zn complexes									
*****									
C4H4N2O2		HL	Uracil				CAS 66-22-8	(412)	
2,4-Dihydroxypyrimidone, 2,4-Pyrimidinedione;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	C			2001BBb (28842)	1267
							K(ZnA+L)=3.45		
							K(ZnAL+OH)=4.36		
							K(Zn2A+L)=5.0		
							K(Zn2AL+L)=4.7		
Medium: 0.10 M NMe4NO3. K(Zn2AL2+20H)=7.9.									
A is 1,4,7,16,19,22-hexaza-10,13,25,28-tetraoxacyclotriacontane.									
-----									
Zn++	gl	NaNO3	37°C	0.10M	U	M	K1=3.78	1994MGd (28843)	1268
							B(ZnAL)=5.03		
HA is 6-aminopenicillanic acid.									
-----									
Zn++	gl	NaNO3	37°C	0.15M	U		K1=2.39	1990CIa (28844)	1269
							B(ZnH-1L)=-4.89		
-----									
Zn++	gl	KNO3	35°C	0.10M	U	M	K1=4.98	1989SRc (28845)	1270
							K(Zn(thiamine)+L)=4.35		
-----									
Zn++	gl	KNO3	25°C	0.10M	U	T H	K1=5.13	1983KSa (28846)	1271
-----									
Zn++	gl	KNO3	35°C	0.10M	U		K1=4.98 B2=9.45	1981TSa (28847)	1272



Zn++ gl KNO3 45°C 0.10M U K1=3.5 1974KKa (28848)1273  
\*\*\*\*\*

C4H4N2O2 H2L CAS 123-33-1 (8346)  
3,6-Dihydroxypyridazine;

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

Zn++ vlt mixed 25°C 30% C T H K1=8.48 1992SBb (28874)1274

Method: polarography. Medium: 30% DMSO/H2O, 0.10 M LiClO4.

Data for 15 and 35 C. DH(K1)=-54.5 kJ mol<sup>-1</sup>, DS(K1)=-30 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

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  
-----

Zn++ gl NaClO4 31°C 0.10M U T H K1=6.74 B2=11.88 1984SJa (28881)1275

Also data for 18 and 42 C. DH(K1)=-84.3 kJ mol<sup>-1</sup>, DS(K1)=-149 J K<sup>-1</sup> mol<sup>-1</sup>

DH(K2)=-51.5, DS(K2)=-71.4.

\*\*\*\*\*

C4H4N2S HL CAS 1450-85-7 (1521)

2-Mercapto-1,3-diazine, 2-Mercaptopyrimidine; C4H3N2.SH

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

Zn++ gl KNO3 35°C 0.10M C K1=3.52 1996RRa (28929)1276

Zn++ gl KNO3 45°C 0.10M C K1=3.92 1986KZa (28930)1277

\*\*\*\*\*

C4H4N6 L 8-Azaadenine CAS 1123-54-2 (1884)

8-Aza-6-aminopurine;

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

Zn++ gl KNO3 45°C 0.10M U K1=4.1 1973TKa (28948)1278

\*\*\*\*\*

C4H4N6O L 8-Azaguanine CAS 134-58-7 (114)

2-Amino-6-hydroxy-8-azapurine;

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

Zn++ gl alc/w 25°C 50% U M K1=7.68 1978MCb (28960)1279

K(Zn(bpy)+L)=7.35

K(Zn(phen)+L)=7.36

K(Zn(NTA)+L)=4.03

\*\*\*\*\*

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  
-----

-----  
 Zn++ gl NaCl 37°C 0.15M C M K1=2.19 B2=4.67 1988BCc (29027)1280  
 B(ZnH2L2)=15.72  
 B(ZnHL2)=10.52  
 B(ZnH-1L)=-5.54

Ternary complex with enalapril. Other models contain B(ZnH-1L2)=-3.22 in place of B(ZnH-1L)

-----  
 Zn++ gl NaCl04 37°C 0.15M C M K1=2.044 B2= 3.95 1987BVa (29028)1281  
 B3=5.309  
 B(ZnHL2)=9.988  
 B(ZnH2L2)=15.236  
 B(ZnH-1L)=-5.172

B(Zn(histamine)L)=7.245, B(ZnH(histamine)L)=13.637,  
 B(Zn(histamine)2L)=11.924.

-----  
 Zn++ vlt NaCl04 25°C 2.00M U K1=1.70 B2=2.20 1977GSa (29029)1282  
 B3=3.35

-----  
 Zn++ gl oth/un 25°C 0.10M U K1=2.0 1960YYa (29030)1283  
 \*\*\*\*\*  
 C4H4O5 H2L Oxobutanedioic CAS 328-42-7 (1733)  
 2-Oxosuccinic acid, Oxalacetic acid; HOOC.CH2.CO.COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaCl04	25°C	0.50M	U	TI	K1=2.00	1990MOf (29249)	1284
At 0.1 M, K1=2.39; at 0.2 M, K1=2.23. At 30 C and 0.5 M, K1=1.97.									

-----  
 Zn++ kin oth/un 25°C 0.27M U K1=9.0 1987TLa (29250)1285  
 Result given for enol form. For ligand hydrate, K1=9.3

-----  
 Zn++ kin KCl 25°C 0.50M U I K1=1.99 1982BLb (29251)1286  
 K(2Zn+L=Zn2H-1L+H)=-2.70  
 K(ZnL(keto)=ZnL(enol))=0.70

Also in 50% dioxan/H2O

-----  
 Zn++ gl KCl 25°C 0.10M U K1=2.412 1976RLa (29252)1287  
 B(Zn2H-1L)=-1.134

-----  
 Zn++ kin KCl 25°C 0.10M U K1=2.411 1974CLa (29253)1288  
 B(ZnH-1L)=-1.135

-----  
 Zn++ gl oth/un 25°C 0.10M U K1=3.2 1958GHc (29254)1289  
 K(ZnL+Zn)=2.3

\*\*\*\*\*  
 C4H5NO L Methylisoxazole CAS 5765-44-6 (2045)  
 5-Methylisoxazole; C3H2NO.CH3

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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-----  
Zn++ EMF KNO3 25°C 0.50M U K1=-0.17 B2=-0.96 1977LKa (29288)1290  
\*\*\*\*\*

C4H5NO2 HL Succinimide CAS 123-56-8 (390)  
Succinic acid imide; (CH2.CO)2NH

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

Zn++ gl NaClO4 25°C 0.10M M M 1994KTa (29305)1291  
K(ZnA+L)=5.60

A:1,4,7,10-Tetraazacyclododecane. By kinetic methods, K=5.2

\*\*\*\*\*

C4H5NS L 4-Methiazole CAS 693-95-5 (820)  
4-Methylthiazole; C3H2NS.CH3

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

Zn++ gl KNO3 25°C 0.50M U K1=0.55 B2=0.76 1976LKb (29323)1292  
\*\*\*\*\*

C4H5N2Cl L CAS 872-49-1 (7589)  
5-Chloro-1-methylimidazole;

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

Zn++ gl NaNO3 25°C 0.50M M K1=1.97 1998KSa (29330)1293  
\*\*\*\*\*

C4H5N3 L CAS 109-12-6 (1480)  
2-Amino-1,3-diazine; C4H3N2.NH2

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

Zn++ gl KNO3 25°C 0.50M U K1=0.29 B2=0.88 1988KLa (29341)1294  
\*\*\*\*\*

C4H5N3O HL Cytosine CAS 71-30-7 (1096)  
2-Oxy-6-aminopyrimidine;

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

Zn++ gl R4N.X 25°C 0.10M C 2001BBb (29386)1295  
K(Zn2A+L)=6.74  
K(Zn2AL+OH)=5.85

Medium: 0.10 M NMe4NO3.

A is 1,4,7,16,19,22-hexaza-10,13,25,28-tetraoxacyclotriacontane.

-----  
Zn++ gl NaClO4 25°C 0.10M M 1995LWa (29387)1296  
K(Zn+HL)=1.13  
K(Zn(atp)+HL)=1.67

-----  
Zn++ gl NaNO3 37°C 0.10M U M K1=1.55 1994MGd (29388)1297  
B(ZnAL)=2.83

HA is 6-aminopenicillanic acid.

---

Zn++	gl	KNO3	35°C	0.10M	U	M	K1=2.23	1989SRe (29389)1298
							B(ZnHLAsp)=8.16	
							B(ZnLAsp)=6.37	
							K(ZnL+Gly)=5.08	

---

Zn++	gl	KNO3	35°C	0.10M	U	M		1986RRe (29390)1299
							K(Zn+HL+HA)=8.61	
							K(Zn(HL)A+H)=5.70	
							K(Zn+HL+D)=9.21	
							K(Zn+HL+C)=11.05	

HA is glycine; H2D is oxalic acid; C is histamine.

---

Zn++	gl	KNO3	35°C	0.10M	U	T H		1983KSa (29391)1300
							K(Zn+HL)=2.23	
							K(Zn+2HL)=3.38	

---

Zn++	gl	KNO3	45°C	0.10M	U			1978KJa (29392)1301
							K(Zn+HL)=2.46	
							K(ZnHL+HL)=3.14	

---

Zn++	gl	KNO3	45°C	0.10M	U			1974KKa (29393)1302
							K(Zn+HL)=2.8	

---

Zn++	nmr	non-aq	36°C	100%	U	M		1966WLa (29394)1303
							K(Zn+HL)=1.39	

Medium: DMSO. Ternary complexes with imidazole

\*\*\*\*\*

C4H5N3O2                      HL                      (1327)

4-Oximino-3-methyl-2-pyrazolin-5-one;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	20°C	50%	U T		K1=2.91    B2=5.68	1981SSc (29427)1304	
At 30 C: K1=2.76, B2=5.58									

---

C4H6N2                      L    2-Me-Imidazole    CAS 693-98-1 (122)

2-Methyl-1,3-diazole; C3H3N2.CH3

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	30°C	0.20M	U		K1=2.82	1999PGa (29464)1305	
Zn++	gl	NaNO3	30°C	0.20M	U		K1=2.83	1999PPa (29465)1306	
Zn++	sp	non-aq	25°C	100%	C	H		1998RZa (29466)1307	
							K(ZnP+L)=4.75		

---

Medium: CH2Cl2. Data for 20-35 C. P is meso-tetra(3-methylphenyl)porphyrin  
 DH=-33.8 kJ mol<sup>-1</sup>, DS=-22.6 J K<sup>-1</sup> mol<sup>-1</sup>. Data for 3-NO2-, 3-Cl-, 3-OCH3-



-----  
Zn++ cal NaNO3 25°C 1.0M C 1983ARa (29553)1316  
DH(K1)=-20.71 kJ mol-1, DS(K1)=-17.8 J K-1 mol-1.  
-----

Zn++ gl KNO3 25°C 0.50M M K1=2.70 B2= 4.80 1977LBb (29554)1317  
B3=7.41  
B4=9.32  
B5=10.23  
-----

\*\*\*\*\*  
C4H6N2O L CAS 13148-65-7 (2050)  
2,5-Dimethyl-1,3,4-oxadiazole; C2N2O(CH3)2  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ ISE KNO3 25°C 0.50M U K1=0.23 1977LGA (29612)1318  
Competition with Ag  
-----

\*\*\*\*\*  
C4H6N2O5 H2L CAS 25081-31-6 (3003)  
N-Nitrosoiminodiethanoic acid; O:N.N(CH2.COOH)2  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KCl 30°C 0.10M U K1=1.4 1957TBb (29628)1319  
-----

\*\*\*\*\*  
C4H6N2O6 H2L CAS 25081-33-8 (3004)  
N-Nitroiminodiethanoic acid; O2N.N(CH2.COOH)2  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KCl 30°C 0.10M U K1=1.6 1957TBb (29634)1320  
-----

\*\*\*\*\*  
C4H6N2S L CAS 27464-82-0 (1457)  
2,5-Dimethyl-1,3,4-thiadiazole; C2N2S(CH3)2  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 25°C 0.50M U K1=-0.09 1985GLa (29640)1321  
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\*\*\*\*\*  
C4H6N2S L CAS 7063-91-4 (1422)  
2-Amino-4-methylthiazole; C3HNS(CH3).NH2  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 25°C 0.50M U K1=0.72 1982GKa (29647)1322  
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\*\*\*\*\*  
C4H6N2S HL Methimazole CAS 60-56-0 (1824)  
N-Methyl-2-mercaptoimidazole; C3H2N2(CH3).SH  
-----

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

Zn++ EMF KNO3 25°C 0.50M C 1977LWa (29656)1323

B4=2.24

Method: Ag electrode; competitive complexation with Ag(I).

Zn++ gl NaClO4 25°C 0.10M U K1=7.31 B2=13.81 1977STc (29657)1324

\*\*\*\*\*

C4H6N4O L CAS 1672-50-0 (5993)

4,5-Diamino-6-hydroxypyrimidine;

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

Zn++ gl KNO3 45°C 0.10M C 1986KZa (29679)1325

K(Zn+HL)=2.75

K(ZnHL+HL)=3.7

\*\*\*\*\*

C4H6N4O3S2 L (6481)

2-Acetylamino-1,3,4-thiadiazole-5-sulphonamide;

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

Zn++ kin NaClO4 25°C 0.10M M M 1992KKb (29688)1326

K(ZnA+L)=4.9

A:1,5,9-triazacyclododecane

Zn++ gl alc/w 25°C 50% U K1=3.99 B2=8.159 1990FBb (29689)1327

\*\*\*\*\*

C4H6O2S2 HL CAS 2224-02-4 (1225)

1,2-Dithiolane-3-carboxylic acid, Tetranorlipoic acid; C3H5S2.COOH

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

Zn++ gl NaClO4 25°C 0.10M C K1=2.14 1978SPd (29739)1328

\*\*\*\*\*

C4H6O3 HL CAS 600-18-0 (5474)

2-Ketobutanoic acid; CH3.CH2.CO.COOH

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

Zn++ gl KCl 25°C 0.10M C K1=1.69 1982KMc (29745)1329

\*\*\*\*\*

C4H6O3 HL Acetoacetic aci CAS 541-50-4 (5475)

3-Ketobutanoic acid; CH3.CO.CH2.COOH

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

Zn++ gl KCl 25°C 0.10M C K1=0.83 1982KMc (29749)1330

\*\*\*\*\*

C4H6O4 H2L Succinic acid CAS 110-15-6 (112)

1,4-Butanedioic acid; HOOC.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.1M	C		K1=2.0 K(Zn+HL)=1.29	1999VZa (29872)	1331
Zn++	vlt	oth/un	25°C	0.1M	U		K1=2.3	1995FFa (29873)	1332
Zn++	gl	NaCl	25°C	0.50M	C		K1=0.85	1989FRa (29874)	1333
Zn++	gl	NaCl04	37°C	0.15M	C		K1=2.96 B2=5.09 B(ZnHL)=7.46	1977RWc (29875)	1334
Zn++	dis	NaCl04	25°C	1.00M	U		K1=1.48 B2=2.00	1974MSc (29876)	1335
Zn++	nmr	oth/un	3°C	0.50M	U		K1=2.33 K(Zn+HL)=2.14	1973HAb (29877)	1336

35Cl probe

Zn++	ISE	oth/un	25°C	0.0	U		K1=2.47 K(Zn+HL)=1.51	1967Mnc (29878)	1337
Zn++	cal	KCl	25°C	0.10M	U	H		1967Mnc (29879)	1338
DH(K1)=18.4 kJ mol <sup>-1</sup> , DS=109 J K <sup>-1</sup> mol <sup>-1</sup>									
Zn++	dis	oth/un	25°C	0.0	U		K1=3.22	1966RMb (29880)	1339
Zn++	gl	NaCl04	20°C	0.10M	U		K1=1.76 K(Zn+HL)=0.96	1963CAa (29881)	1340
Zn++	gl	oth/un	25°C	0.10M	U		K1=1.6	1960YYa (29882)	1341
Zn++	gl	oth/un	25°C	?	U		K1=2.5	1958GHc (29883)	1342
Zn++	EMF	KCl	25°C	0.20M	U		K1=1.78 K(Zn+HL)=0.90	1938CKa (29884)	1343

\*\*\*\*\*

C4H6O4 HL Acetoxyacetic a CAS 13831-30-6 (4249)  
Acetoxyethanoic acid; CH3.CO2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	30°C	0.40M	U		K1=0.67	1970BTa (30082)	1344
C4H6O4		H2L							
Me-Malonic Acid CAS 516-15-2 (816)									
Methylpropanedioic acid; HOOCH(CH3).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	H	K1=2.64 B2=4.04 K(Zn+HL)=1.05	1989ABa (30107)	1345



B(ZnL(bpy))=7.64  
DH(K1)=12.8 kJ mol<sup>-1</sup>, DS(K1)=93.3 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Zn++ gl NaClO4 25°C 0.10M U K1=2.55 19680Va (30108)1346  
-----

Zn++ con oth/un 25°C .001M U K1=3.10 1931IRb (30109)1347

\*\*\*\*\*

C4H6O4S H2L Thiodiacetic CAS 123-93-3 (140)  
2,2'-Thiodiglycolic acid, Thiodiethanoic acid; HOOC.CH2.S.CH2.COOH

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

Zn++ gl KNO3 35°C 0.10M C M K1=3.70 1999DSb (30195)1348

B(ZnAL)=6.48

A is thiamine hydrochloride.

-----  
Zn++ gl KNO3 35°C 0.10M U M 1990RSd (30196)1349

B(Zn(asp)L)=5.61

K(ZnL+en)=5.49

K(ZnL+his)=6.62

K(ZnL+A)=2.30

K(ZnL+met)=4.58, K(ZnL+B)=4.52, K(ZnL+trp)=4.38,

K(ZnL+HC)=4.34. A is imidazole, HB is phenylalanine, H2C is tyrosine.

-----  
Zn++ gl NaClO4 25°C 0.10M U TIH K1=3.20 B2= 5.87 1982DBb (30197)1350

Data for 0.2, 0.3 M. At I=0, K1=3.14, K2=2.62. Data for 35 and 45 C.

DH(K1)=-11.6 kJ mol<sup>-1</sup>, DS(K1)=21.6 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-3.5, DS(K2)=38.6.

-----  
Zn++ gl oth/un 25°C 0.10M U K1=2.9 1960YYa (30198)1351  
-----

Zn++ gl KCl 30°C 0.10M U K1=3.0 1957TBb (30199)1352

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C4H6O4S H3L Thiomalic acid CAS 70-49-5 (109)

2-Mercaptosuccinic acid, 2-Sulfanyl-1,4-butanedioic acid; HOOC.CH(SH).CH2.COOH

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

Zn++ gl KCl 25°C 0.10M C B2=14.16 2002CDc (30295)1353

B(Zn2L2)=18.74

B(Zn2H-1L2)=10.26

B(Zn2H-2L2)=0.82

B(ZnHL2)=20.3

-----  
Zn++ gl NaClO4 30°C 0.10M U K1=7.04 B2=13.43 1988NDa (30296)1354  
-----

Zn++ gl NaCl 37°C 0.15M C B2=14.586 1986FIa (30297)1355

B(ZnHL)=12.569

B(Zn2HL2)=23.360

B(Zn2L2)=19.365

-----

Zn++ gl KNO3 20°C 0.10M U K1=8.09 1977CAAd (30298)1356  
K(Zn+HL)=2.12

Zn++ gl NaClO4 20°C 0.10M U K1=8.36 B2=14.88 1970AMa (30299)1357

Zn++ gl KNO3 25°C 0.10M U K1=8.82 B2=14.71 1969PPa (30300)1358  
K(Zn+HL)=2.53

Zn++ gl KNO3 35°C 0.10M U T H K1=8.86 B2=15.79 1968SGg (30301)1359  
K1=8.75(25 C),8.85(30 C); K2=6.82(25 C),6.75(30 C)  
DH(B2)=-22.1 kJ mol<sup>-1</sup>, DS=226(?) J K<sup>-1</sup> mol<sup>-1</sup>

Zn++ gl KNO3 25°C 0.10M U I K1=8.24 B2=14.56 1965LMa (30302)1360  
K(ZnLOH+H)=8.36

At I=1.0 M: K1=7.52, K(ZnLOH+H)=8.01

Zn++ gl oth/un 25°C ? U K1=8.47 B2=13.75 1959CFa (30303)1361

\*\*\*\*\*

C4H6O4S2 H4L CAS 2418-14-6 (4264)

2,3-Dimercaptobutanedioic acid; HOOC.CH(SH).CH(SH).COOH

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

Zn++ gl KCl 25°C 0.10M C 2002CDc (30389)1362

B(Zn2L2)=33.29

B(Zn2HL2)=39.73

B(Zn2H2L2)=44.10

Zn++ gl NaCl 37°C 0.15M U B2=19.46 1984JSb (30390)1363

B(Zn2L2)=34.08

B(Zn2HL2)=40.07

B(Zn2H2L2)=44.57

B(ZnHL3)=34.35

\*\*\*\*\*

C4H6O4S2 H2L CAS 505-73-7 (3585)

Dithiodiethanoic acid; HOOC.CH2.S.S.CH2.COOH

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

Zn++ gl NaClO4 25°C 0.10M U TIH K1=2.73 1982DBb (30408)1364

Data for 0.2, 0.3 M. At I=0, K1=2.52. Data for 35 and 45 C.

DH(K1)=-3.6 kJ mol<sup>-1</sup>, DS(K1)=38.8 J K<sup>-1</sup> mol<sup>-1</sup>.

Zn++ gl NaClO4 25°C 0.10M U K1=1.6 1968SKd (30409)1365

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C4H6O4S2 H4L CAS 304-55-2 (3002)

meso-2,3-Dimercaptobutanedioic acid (meso-dithiotartaric acid)

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

$B(\text{ZnHL}) = 20.08$   
 $B(\text{Zn}2\text{H}-1\text{L}2) = 23.6$   
 $B(\text{Zn}2\text{L}2) = 33.6$   
 $B(\text{Zn}2\text{HL}2) = 39.6$

$$K1=15.82$$
$$K(Zn+ZnL)=3.85$$
$$\begin{aligned} K(\text{ZnL}+\text{Zn}) &= 4.07 \\ K(\text{ZnL}+\text{H}) &= 5.7 \\ K(\text{ZnHL}+\text{H}) &= 3.4 \end{aligned}$$

K1=14.42    B2=17.74  
K(Zn+H2L)=3.8  
K(Zn+HL)=9.3  
K(ZnLOH+H)=10.11  
K(ZnL2OH+H)=9.4

K1=15.82 B2=19.39  
K(ZnL+Zn)=3.85  
K(Zn+HL)=9.6  
K(Zn+H2L)=2.8  
K(Zn+ZnL)=3.57

\*\*\*\*\*

C4H6O4Se H2L CAS 6228-62-2 (984)  
Selenodiethanoic acid; HOOC.CH2.Se.CH2.COOH

K1=2.18  
K(Zn+HL)=1.05

K1=2.1

\*\*\*\*\*

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

K1=3.007 B2= 5.32 1987BVa (30548)1373  
B(ZnH2L)=9.834  
B(ZnHL)=6.815  
B(ZnHL2)=9.686  
B(ZnH2L2)=13.389

$$B(\text{ZnH-1L})=-1.655, \quad B(\text{Zn(histamine)L})=7.739, \quad B(\text{ZnH(histamine)L})=13.970.$$

K1=2.90

B(ZnHL)=6.24  
 B(ZnH-1L)=-3.64  
 B(ZnH2L)=8.87

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Zn++	gl	NaCl04	20°C	0.10M	U		1963CAa (30550)1375
						K(Zn+H2L)=1.66 K(Zn+HL)=2.93	

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Zn++	kin	oth/un	25°C	->0	U	K1=3.32 K(Zn+HL)=2.00	1951BWa (30551)1376
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Zn++	EMF	KCl	25°C	0.20M	U	K1=2.80 K(Zn+HL)=1.57	1938CKa (30552)1377
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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
Zn++	gl	NaCl04	25°C	0.10M	U	M	K1=3.52 B(ZnAL)=7.56 B(ZnBL)=6.76	1989NDb (30824)1378	

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H2A is maleic acid; H2B is malonic acid.

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Zn++	gl	KCl	25°C	0.10M	C		K1=3.65	1984MMg (30825)1379
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Zn++	gl	NaCl04	25°C	0.10M	U	TI M	K1=3.79	1982DBb (30826)1380
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Data for 0.2, 0.3 M. At I=0, K1=3.71. Data for 35 and 45 C.  
 DH(K1)=-6.95 kJ mol-1, DS(K1)=47.7 J K-1 mol-1.

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Zn++	gl	KNO3	25°C	0.10M	C		K1=3.59 B(ZnHL)=6.03	1975FCc (30827)1381
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Zn++	gl	KNO3	25°C	0.10M	U		K1=3.58	1975MTc (30828)1382
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Zn++	gl	oth/un	25°C	0.10M	U		K1=3.6	1960YYa (30829)1383
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Zn++	gl	KCl	30°C	0.10M	U		K1=3.6	1957TBb (30830)1384
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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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	20°C	1.00M	M	M	B(ZnHLAscorbate)=7.19	1985M0a (30999)1385	

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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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ix	oth/un	30°C	dil	C T		K1=2.75	1992LHb (31136)	1386
Medium: 0.2-5.0 mM tartaric acid eluent. At 40 C, K1=2.76									
Zn++	gl	NaClO4	37°C	0.15M	C	M	K1=2.245 B3=6.447 B(ZnHL)=5.479 B(Zn2L2)=7.659 B(ZnH-1L2)=-2.222	1987BVa (31137)	1387
B(Zn(histamine)L)=7.536, B(ZnH-1(histamine)L)=0.219.									
Zn++	vlt	oth/un	25°C	2.0M	U	M	K1=2.0 B2=3.0 B3=4.3	1983KJa (31138)	1388
Zn++	dis	NaClO4	23°C	1.00M	U		K1=3.22	1978PSb (31139)	1389
Zn++	gl	NaClO4	37°C	0.15M	C		K1=2.58 B2=4.50 B(ZnHL)=5.59 B(ZnHL2)=8.22	1976MTa (31140)	1390
Zn++	dis	oth/un	25°C	0.0	U		K1=3.31 B2=5.16	1966RMb (31141)	1391
Zn++	ISE	oth/un	20°C	var	U		K1=3.09 B2=4.98 K(Zn+H-1L)=6.33 K(Zn+HL)=1.22 Kso=-6.54	1963FLb (31142)	1392
Zn++	dis	NaClO4	20°C	0.10M	U		K1=2.69	1963STc (31143)	1393
Zn++	ix	oth/un	?	?	U		K2=5.62	1957KPb (31144)	1394
Zn++	EMF	KCl	25°C	0.20M	U		K1=2.68 K(Zn+HL)=1.44	1938CKa (31145)	1395

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C4H7NO2 HL (8137)  
(S)-Azetidine-2-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=5.5 B2=10.60	1989ARa (31438)	1396
*****									
C4H7NO2S HL Thioproline CAS 444-27-9 (1183) Thiazolidine-4-carboxylic acid; C3H6NS.CO0H									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	37°C	0.15M	C	M	K1=3.190 B2=5.753 B3=7.883 B(ZnL(His))=8.87	1981HMa (31468)	1397

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Zn++ gl NaClO4 25°C 0.15M U K1=3.103 B2=5.629 1976FJa (31469)1398  
\*\*\*\*\*

C4H7N02S2 H2L CAS 2030-77-5 (4281)  
2-Dithiocarbaminopropanoic acid; CH3.CH(NH.CSSH).COOH  
-----

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

Zn++ EMF NaClO4 25°C 1.00M U K1=3.55 B2=6.47 1972RBb (31475)1399  
\*\*\*\*\*

C4H7N02S2 H2L CAS 40520-03-4 (4280)  
N-(Dithiocarboxy)aminopropanoic acid; HSSC.NH.CH2.CH2.COOH  
-----

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

Zn++ oth oth/un ? ? U K1=3.55 B2=6.47 1973RBc (31479)1400  
\*\*\*\*\*

C4H7N03 HL CAS 543-24-8 (3586)  
N-Acetylglycine; CH3.CO.NH.CH2.COOH  
-----

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

Zn++ gl NaNO3 30°C 0.40M U K1=0.71 1970BTa (31494)1401  
\*\*\*\*\*

C4H7N04 H2L Aspartic acid CAS 56-84-8 (21)  
Aminobutanedioic acid; H2N.CH(CH2.COOH).COOH  
-----

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

Zn++ gl KNO3 25°C 0.10M C M K1=8.01 2003AHa (31718)1402  
K(ZnL+A)=3.90

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

Zn++ gl NaNO3 25°C 0.10M C M K1=6.82 B2=11.64 2000KAb (31719)1403  
K(ZnA+L)=7.08

H2A=Dipicolinic acid.  
-----

Zn++ gl NaNO3 25°C 0.10M C K1=5.69 B2= 9.77 2000MSa (31720)1404  
B(ZnH-1L)=-3.20  
-----

Zn++ gl KNO3 25°C 0.10M C M K1=7.05 1999AAa (31721)1405  
K(ZnL+A)=3.52  
B(ZnLA)=10.57  
K(ZnL+B)=3.70  
B(ZnLB)=10.75

K(ZnHL+C)=1.61. HA=MOPSO, HB=MOPS, HC=TAPSO.  
-----

Zn++ gl NaNO3 30°C 0.20M U M K1=5.78 1999PPa (31722)1406  
B(ZnAL)=8.86  
B(ZnCL)=8.71

B(ZnDL)=8.68  
A is imidazole, C is 2-Me-imidazole, D is 2-Et-imidazole.

-----  
Zn++ vlt NaClO4 25°C 1.0M C M 1999VKc (31723)1407

B(ZnLA)=6.48  
B(ZnLA2)=9.91  
B(ZnL2A)=11.04

Method: polarography. Medium pH: 8.5. A is 4-picoline.

-----  
Zn++ gl NaNO3 25°C 0.10M U M K1=5.69 B2= 9.77 1998MSe (31724)1408

B(ZnH-1L)=-3.20  
B(ZnAL)=9.88  
B(ZnH-1AL)=-2.90  
B(Zn2AL2)=18.73

B(Zn2(H-1A)L2)=12.18. A is imidazole.

-----  
Zn++ gl NaClO4 25°C 0.20M U M K1=5.74 B2= 9.83 1997PJa (31725)1409

K(Zn(bpy)+L)=4.89  
K(Zn(phen)+L)=5.68  
K(ZnA+L)=5.24  
K(Zn(his)+L)=4.69

A is 2,2'-bipyridylamine. K(Zn(ida)+L)=4.97.

-----  
Zn++ gl KNO3 25°C 0.10M M M K1=8.01 1996AEa (31726)1410

Data for ternary complexes with dipicolinic acid.

-----  
Zn++ gl NaClO4 25°C 1.0M U M K1=5.67 B2= 9.03 1995KDa (31727)1411

K3=1.26  
B(ZnLA)=6.83  
B(ZnLA2)=9.81  
B(ZnL2A)=11.05

Medium pH 8.50. HA is propanoic acid.

-----  
Zn++ gl NaClO4 25°C 0.20M U T M K1=5.74 B2= 9.83 1993PPa (31728)1412

K(ZnA+L)=5.52

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

-----  
Zn++ gl NaClO4 37°C 0.15M U M K1=5.71 B2=9.65 1992NAa (31729)1413

B(ZnLA)=11.70  
B(ZnLB)=11.73  
B(ZnL(Orn))=12.28

HA=2,3-Diaminopropanoic acid, HB=2,4-diaminobutanoic acid

-----  
Zn++ gl KNO3 30°C 0.10M U 1990APa (31730)1414

K(Zn+H2L=ZnL+2H)=-7.35  
\*K(ZnL)=-8.71  
K(Zn+2H2L=ZnL2+4H)=-16.50  
K(Zn+HL=ZnL+H)=-3.95

-----  
Zn++ gl NaClO4 25°C 1.00M U K1=5.64 B2=9.62 1990BFa (31731)1415

B3=12.38  
 B(ZnHL)=10.49  
 B(ZnHL2)=16.12  
 B(ZnH2L3)=26.50

Zn(Hg) and glass electrodes

-----  
 Zn++ gl KNO3 25°C 0.10M C M 1989MAd (31732)1416  
 K(ZnA+L)=9.15  
 B(ZnAL)=16.00

H2A is N-(2-acetamido)imino diethanoic acid.

-----  
 Zn++ gl KNO3 35°C 0.20M U M K1=5.23 B2=9.32 1989RVa (31733)1417  
 K(ZnA+L)=4.57

A=bis(imidazol-2-yl)methane

-----  
 Zn++ gl NaClO4 27°C 0.20M U M K1=5.74 B2= 9.83 1988PPc (31734)1418  
 K(ZnA+L)=5.52

A is 2,2'-dipyridylamine.

-----  
 Zn++ ISE KNO3 25°C 0.10M U M K1=5.76 B2=10.09 1985DVa (31735)1419  
 K(ZnL+H)=7.75  
 K(Zn(IDA)+L=Zn(IDA)L)=3.85

-----  
 Zn++ gl NaClO4 21°C 0.10M U K1=5.90 B2=10.17 1983LWb (31736)1420

-----  
 Zn++ gl KNO3 25°C 0.10M M K1=5.77 B2= 9.82 1981GVa (31737)1421

-----  
 Zn++ gl NaNO3 30°C 0.20M C K1=5.79 B2=10.05 1981RSd (31738)1422

-----  
 Zn++ gl NaClO4 25°C 0.31M M K1=5.66 B2=10.14 1979GRb (31739)1423

-----  
 Zn++ gl KCl 30°C 0.10M U M K1=5.85 B2=10.17 1979SJB (31740)1424  
 K(ZnL+Thiomalate)=6.57  
 K(ZnL+Thiodiglycolate)=6.93

-----  
 Zn++ gl NaClO4 37°C 0.15M C K1=6.01 B2=10.10 1976MTa (31741)1425  
 B(ZnHL)=11.88  
 B(ZnL2H-2)=-10.41

-----  
 Zn++ gl NaClO4 30°C 0.20M U K1=5.74 B2=9.83 1975JBb (31742)1426

-----  
 Zn++ nmr oth/un 32°C 0.50M U K1=5.40 B2=8.55 1973HAb (31743)1427  
 K(Zn+HL)=1.19

35Cl probe

-----  
 Zn++ nmr oth/un 24°C 0.10M U K2=4.5 1973IYa (31744)1428  
 K(ZnL+H)=5.3

Mediun: 0.1 M aspartic acid

-----  
 Zn++ gl oth/un 15°C .005M U B2=10.4 1953PEa (31745)1429



Medium: 0.005 M ZnSO4

-----  
Zn++ gl oth/un 20°C 0.01M U B2=10.4 1952ALa (31746)1430  
-----

Zn++ gl KCl 30°C 0.10M U K1=5.84 B2=10.15 1952CMb (31747)1431

\*\*\*\*\*

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  
-----

Zn++ gl KNO3 35°C 0.10M C M K1=7.79 1999DSb (32128)1432

B(ZnAL)=10.04

A is thiamine hydrochloride.

-----  
Zn++ gl NaNO3 25°C 0.10M M K1=7.04 1996KSc (32129)1433  
-----

Zn++ gl NaClO4 25°C 0.20M M M 1996VBa (32130)1434

K(Zn(ala)+L)=4.50

K(Zn(phe)+L)=4.03

K(Zn(try)+L)=3.91

K(Zn(trp)+L)=4.11

K(Zn(gly-gly)+L)=2.99, K(Zn(gly-ala)+L)=2.93, K(Zn(en)+L)=4.94

-----  
Zn++ gl NaClO4 25°C 0.50M U K1=6.97 B2=12.39 1992GLa (32131)1435

B(ZnH-1L)=-1.31

B3=11.76

-----  
Zn++ gl NaClO4 37°C 0.15M U M K1=7.00 B2=12.39 1992NAa (32132)1436

B(ZnLA)=12.04

B(ZnL(Orn))=12.45

HA=2,4-diaminobutanoic acid

-----  
Zn++ gl NaClO4 37°C 0.15M U M K1=7.00 B2=12.39 1992RAC (32133)1437

B(ZnHL2)=18.17

B(CuLZn)=13.13, B(CuL2Zn)=20.13; B(NiLZn)=10.99, B(NiL2Zn)=18.44

-----  
Zn++ gl KNO3 25°C 0.10M C M K1=7.24 1991DAc (32134)1438

Data for ternary complexes with acetohydroxamic acid

-----  
Zn++ gl KNO3 25°C 0.10M C M K1=7.24 1990DAb (32135)1439

K(ZnL+A)=4.01

B(ZnLA)=11.25

H2A: salicylaldehyde

-----  
Zn++ gl KNO3 25°C 0.10M C M K1=7.24 1990DAc (32136)1440

K(ZnL+A)=3.59

B(ZnAL)=10.83

HL: benzohydroxamic acid  
-----

Zn++	EMF KCl	25°C 0.10M U	K1=7.44	1985SNa (32137)1441
			K1=7.63 by spectrophotometry	
-----				
Zn++	cal KNO3	25°C 0.50M U H		1983VRa (32138)1442
		DH(K1)=-11.34 kJ mol <sup>-1</sup> , DH(B2)=-27.91		
-----				
Zn++	gl NaClO4	25°C 0.10M U TIH	K1=5.95 B2=10.37	1982DBb (32139)1443
		Data for 0.2, 0.3 M. At I=0, K1=5.08, K2=3.96. Data for 35 and 45 C.		
		DH(K1)=-5.77 kJ mol <sup>-1</sup> , DS(K1)=91.5 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-4.23, DS(K2)=68.2.		
-----				
Zn++	gl KNO3	25°C 0.10M U I	K1=7.2 B2=12.45	1981FMb (32140)1444
		Interpolated from graph. Data also for 20, 50, 80% v/v MeOH/H2O		
-----				
Zn++	gl NaNO3	30°C 0.20M C	K1=6.98 B2=12.12	1981RSe (32141)1445
-----				
Zn++	gl KCl	25°C 0.10M U T HM		1978KCC (32142)1446
		K(ZnL+A)=6.74		
		K(ZnL+B)=11.69		
		K(ZnL+C)=11.08		
		DH(K1)=-17.6 kJ mol <sup>-1</sup> , DS=70 J K <sup>-1</sup> mol <sup>-1</sup> . H2A=oxalic acid, H2B=malonic acid, H2C=phthalic acid		
-----				
Zn++	nmr oth/un	32°C 0.10M U	K1=6.11 B2=11.03	1973HAb (32143)1447
	35Cl probe			
-----				
Zn++	gl KNO3	25°C 0.10M U M		1971TSh (32144)1448
		K(ZnL+Ala)=3.98		
		K(ZnL+Gly)=4.38		
		K(ZnL+Asp)=4.59		
-----				
Zn++	gl KNO3	30°C 0.10M U M		1971TSj (32145)1449
		K(ZnL+A)=5.14		
		A=1,2-diaminopropane		
-----				
Zn++	gl oth/un	25°C 1.50M U M		1970FDa (32146)1450
		B(ZnL(SCN)(NH3)2)=11.35		
		B(ZnL(NH3)(SCN)2)=10.25		
		B(ZnL(SCN)3)=9.02		
		B(ZnL(S2O3)(NH3)2)=11.92		
		B(ZnL(NH3)(S2O3)2)=11.59; B(ZnL(S2O3)3)=11.15		
-----				
Zn++	gl oth/un	25°C 1.50M U M	K1=7.03	1970FDa (32147)1451
		B(ZnL(NH3))=9.42		
		B(ZnL(py))=7.98		
		B(ZnL(NH3)2)=11.02		
		B(ZnL(py)2)=8.33		
		Data for other ternary complexes also given		
-----				
Zn++	EMF oth/un	30°C 0.10M U M		1970STf (32148)1452
		K(ZnL+en)=4.96		

$$K(\text{ZnL}+\text{A})=5.14$$

A=1,2-diaminopropane

-----  
 Zn++ gl KNO3 20°C 0.10M U H K1=7.27 B2=12.60 1964ANa (32149)1453  
 By calorimetry: DH(K1)=-9.2 kJ mol<sup>-1</sup>, DS=107.4 J K<sup>-1</sup> mol<sup>-1</sup>  
 DH(B2)=-24.7, DS=157  
 -----

Zn++ gl oth/un 25°C 0.10M U K1=7.03 B2=12.17 1957SYb (32150)1454  
 -----

Zn++ gl KCl 30°C 0.10M U K1=7.03 B2=12.17 1952CMa (32151)1455  
 \*\*\*\*\*

C4H7NO5 H2L (1234)  
 N-Hydroxyiminodiethanoic acid; HO.N(CH<sub>2</sub>.COOH)<sub>2</sub>  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=5.5 B2=9.46	1987AKa (32420)	1456

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Zn++	gl	KNO3	25°C	0.10M	U		K1=5.5 B2=9.46	1987BKa (32421)	1457
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 C4H7N3S L CAS 14068-53-2 (1456)  
 2-Amino-5-ethyl-1,3,4-thiadiazole; C<sub>2</sub>N<sub>2</sub>S(C<sub>2</sub>H<sub>5</sub>).NH<sub>2</sub>  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=0.56	1985GLa (32443)	1458

\*\*\*\*\*  
 C4H7N3S L CAS 13275-68-8 (1427)  
 2-Ethylamino-1,3,4-thiadiazole; C<sub>2</sub>H<sub>2</sub>N<sub>2</sub>S.NHC<sub>2</sub>H<sub>5</sub>  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=0.53 B2=0.61	1982GLa (32449)	1459

\*\*\*\*\*  
 C4H8NO2Cl HL (8170)  
 3-Chloro-2-aminobutanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=4.75 B2= 8.67	1981TMe (32467)	1460

Also data for the schiff based formed with pyridoxal.  
 \*\*\*\*\*

C4H8NO4P H2L (7286)  
 5-Oxopyrrolidine-2-phosphonic acid; PO<sub>3</sub>H<sub>2</sub>.C<sub>4</sub>H<sub>6</sub>NO  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=2.09	1996MKa (32471)	1461

B(ZnH-1L)=-5.97  
 B(ZnH-2L)=-13.96

K(Zn+OH+L)=8.97

K(Zn+2OH+L)=13.54

Additional method: nmr. Data also for 2-methyl and 2-methyl-2-phenyl analogs

\*\*\*\*\*

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
Zn++	gl	diox/w	25°C	50%	U		K1=7.7 B2=13.9	1954CFa (32518)	1462

\*\*\*\*\*

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
Zn++	gl	KNO3	25°C	0.10M	M	M	K1=5.82	1996AEa (32644)	1463

Data for ternary complexes with dipicolinic acid.

Zn++	EMF	NaCl	25°C	1.00M	C		K1=4.43 B2=7.95 B3=9.35	1996BFa (32645)	1464
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Method: Zn/Hg electrode

Zn++	vlt	KNO3	25°C	0.10M	C	M	K1=4.40 B2= 8.52 B3=10.43 B(ZnAL)=6.13 B(ZnA2L)=8.48 B(ZnAL2)=9.83	1991KNb (32646)	1465
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Method: polarography, medium pH 8.5. HA is ethanoic acid.

Zn++	gl	NaClO4	21°C	0.10M	M	M	K1=4.25 B2= 8.02 B(Zn(gly)L)=10.01 B(ZnH-1(gly)L)=2.63	1989WLa (32647)	1466
------	----	--------	------	-------	---	---	--	-----------------	------

Zn++	gl	NaClO4	21°C	0.10M	U		K1=4.52 B2=7.86	1983LWb (32648)	1467
------	----	--------	------	-------	---	--	-----------------	-----------------	------

Zn++	gl	KNO3	25°C	0.10M	U	T H	B2=8.62	1980ZYb (32649)	1468
------	----	------	------	-------	---	-----	---------	-----------------	------

Zn++	gl	NaClO4	25°C	3.00M	C	H T	K1=5.070 B2=9.426 B3=12.300	1974BWa (32650)	1469
------	----	--------	------	-------	---	-----	-----------------------------	-----------------	------

Zn++	gl	oth/un	15°C	.005M	U		B2=8.5	1953PEa (32651)	1470
------	----	--------	------	-------	---	--	--------	-----------------	------

Medium: 0.005 M ZnSO4

Zn++	gl	oth/un	20°C	0.01M	U		B2=8.7	1950ALa (32652)	1471
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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
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Zn++	vlt	KN03	25°C	1.0M	U	K1=3.70	B2=6.97	1974NBa (32958)	1485
Zn++	gl	KN03	25°C	0.10M	U	K1=3.45	B2=6.31	1972BBc (32959)	1486
Zn++	gl	oth/un	25°C	0.14M	U T	K1=3.59	B2=6.56	1972PEb (32960)	1487
Temperature range 10-40C K1(10 C)=3.72, K1(40 C)=3.27, B2(10 C)=7.06, B2(40 C)=6.06									
Zn++	gl	diox/w	25°C	45%	U T	K1=5.02	B2=9.05	1972PEb (32961)	1488
Temperature range 10-40C K1(10 C)=5.43, K1(40 C)=4.75, B2(10 C)=9.60, B2(40 C)=8.57									
Zn++	gl	alc/w	25°C	70%	U I	K1=4.91	B2=8.86	1972PEb (32962)	1489
K1(39.1%)=4.09, B2(39.1%)=7.49									
Zn++	gl	diox/w	25°C	60%	U	K1=5.87	B2=10.43	1972PEb (32963)	1490
Zn++	nmr	oth/un	25°C	0.80M	U	K1=3.13		1972RLb (32964)	1491
K(Zn+HL)=0.64 Medium: 0.8M, 0.2 Zn(NO3)2									
Zn++	gl	KCl	25°C	.058M	U T	K1=3.91	B2=7.22	1961SMa (32965)	1492
0 C: K1=4.06, K2=3.50									
Zn++	gl	KCl	20°C	1.0M	U	K1=2.62		1959PEc (32966)	1493
Zn++	gl	oth/un	25°C	0.01M	U	K1=3.6		1954PEa (32967)	1494
Zn++	gl	oth/un	21°C	0.01M	U	B2=6.4		1952PEa (32968)	1495
Medium: ZnSO4									
Zn++	gl	oth/un	25°C	->0	U	K1=3.80	B2=6.57	1951M0a (32969)	1496
*****									
C4H8N2O4                      H2L              HDA                      CAS 19247-05-3      (1025)									
Hydrazine-N,N'-diethanoic acid; HOOC.CH2.NH.NH.CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	30°C	0.10M	U		K1=6.0      B2=10.7	1957TBb (33076)	1497
Zn++	gl	oth/un	20°C	0.01M	U		K1=6.7	1956ARb (33077)	1498
*****									
C4H8N2O4                      H2L                                      (6369)									
N(1)-Hydroxyasparagine, aspartyl-beta-hydroxamic acid; H2N.CH(CH2.CO.NHOH).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

Zn++      gl   KCl      25°C 0.20M C      K1=7.44      1993FBa (33129)1499  
 B(ZnHL)=13.91  
 B(Zn2HL)=20.30  
 B(Zn2L)=11.72  
 B(Zn2H-1L)=2.11

Zn++      gl   KCl      25°C 0.20M C      K1=7.44    B2=11.72    1990FBa (33130)1500  
 B(ZnHL)=13.91  
 B(ZnHL2)=20.30  
 B(ZnH-1L2)=2.11

\*\*\*\*\*

C4H8OS2      HL      CAS 6253-38-9 (589)  
 (Propoxy)dithiomethanoic acid; CH3.CH2.CH2O.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	vlt	KNO3	25°C	0.40M	C				1984HSb (33194)	1501
								B3=9.00		

Method: polarography.

Zn++      dis   KNO3      25°C 1.00M U      K1=3.2    B2=6.3    1983SAa (33195)1502

\*\*\*\*\*

C4H8OS2      HL      CAS 108-25-8 (8865)  
 Isopropoxydithiomethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	vlt	KNO3	25°C	0.40M	C				1984HSb (33199)	1503
								B3=10.15		

Method: polarography.

\*\*\*\*\*

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
Zn++	gl	NaNO3	25°C	0.10M	C	I M		K1=1.01 K(Zn(phen)+L)=0.90	1988LTc (33219)	1504

Data also for 50% v/v EtOH/H2O, and 50% v/v Dioxan/H2O mixtures

\*\*\*\*\*

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
Zn++	oth	NaCl04	25°C	2.0M	U			K1=0.95	1990FTa (33306)	1505

Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.

Zn++	EMF	NaCl04	25°C	2.00M	U			K1=0.97    B2=1.65	1973FPa (33307)	1506
------	-----	--------	------	-------	---	--	--	--------------------	-----------------	------

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B3=1.73
B4=2.57
-----
Zn++      EMF NaClO4 25°C 2.00M U      K1=0.98  B2=0.70  1970FMa (33308)1507
B3=2.16
-----
Zn++      vlt NaClO4 25°C 2.00M U      K1=1.00  B2=1.11  1968FPa (33309)1508
B3=1.18
B4=1.53
-----
Zn++      EMF KCl 25°C 0.20M U      K1=1.00  1938CKa (33310)1509
Method: H electrode
*****
C4H8O2S      H2L      CAS 26473-48-3 (3018)
2-Mercaptobutanoic acid; CH3.CH2.CH(SH)COOH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl KCl 30°C 0.10M U      1964PCa (33360)1510
K(Zn+HL)=2.20
*****
C4H8O2S      HL      CAS 623-51-8 (4265)
Ethyl-2-mercaptoacetate; HS.CH2.CO2.C2H5
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      vlt NaClO4 25°C 1.00M U      K1=6.20  B2=9.20  1972TBc (33363)1511
B4=15.85
*****
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
-----
Zn++      cal NaNO3 25°C 1.0M U H      K1=0.74  B2= 1.20  1977ARa (33393)1512
K3=-0.06
DH(K1)=5 kJ mol-1, DH(K2)=0, DH(K3)=37
-----
Zn++      gl diox/w 25°C 50% U      K1=2.22  1972SGa (33394)1513
K(Zn(bpy)+L)=2.18
Medium: 50% dioxan, 0.1 M NaClO4
-----
Zn++      ISE NaClO4 25°C 1.00M U      K1=0.73  B2=1.20  1970SAa (33395)1514
B3=1.15
-----
Zn++      gl diox/w 25°C 50% U      K1=2.22  1969SAa (33396)1515
Medium: 50% dioxan, 0.1 M NaClO4
-----
Zn++      gl diox/w 30°C 50% U      K1=3.14  1956IFa (33397)1516
*****

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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
Zn++	EMF	NaClO4	25°C	1.0M	U		K1=1.70 B2=2.99 K3=0.4	1967TGa (33436)	1517

Method: quinhydrone electrode

\*\*\*\*\*

C4H8O3 HL CAS 965-70-8 (423)  
2-Hydroxybutanoic acid; CH3.CH2.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	oth	NaClO4	25°C	2.0M	U		K1=1.72	1990FTa (33567)	1518

Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.

Zn++	EMF	NaClO4	25°C	2.00M	U		K1=1.72 B2=3.02 B3=3.84 B4=4.24	1973FPa (33568)	1519
------	-----	--------	------	-------	---	--	--	-----------------	------

Zn++	gl	KCl	30°C	0.10M	U		K1=2.05	1938CKa (33569)	1520
------	----	-----	------	-------	---	--	---------	-----------------	------

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C4H8O3 HL CAS 300-85-6 (30)  
3-Hydroxybutanoic acid; CH3.CH(OH).CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	oth	NaClO4	25°C	2.0M	U		K1=0.99	1990FTa (33606)	1521

Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.

Zn++	gl	NaClO4	37°C	0.15M	C		K1=5.81	1976MTa (33607)	1522
------	----	--------	------	-------	---	--	---------	-----------------	------

Zn++	EMF	NaClO4	25°C	2.00M	U		K1=0.99 B2=1.71 B3=1.49 B4=2.50	1973FPa (33608)	1523
------	-----	--------	------	-------	---	--	--	-----------------	------

Zn++	EMF	KCl	25°C	0.20M	U		K1=1.06	1938CKa (33609)	1524
------	-----	-----	------	-------	---	--	---------	-----------------	------

Method: H electrode

\*\*\*\*\*

C4H8O3 HL CAS 591-81-1 (39)  
4-Hydroxybutanoic acid; HO.CH2.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	EMF	NaClO4	25°C	2.00M	U		K1=0.96 B2=1.56 B3=1.53 B4=2.38	1973FPa (33648)	1525
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C4H8O3 HL Ethoxyacetic ac CAS 627-03-2 (2996)  
Ethoxyacetic acid; C2H5.O.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	cal	NaNO3	25°C	1.0M	U	H	K1=1.13 B2= 1.87 K3=-0.09	1977ARa (33668)	1526
DH(K1)=4.5 kJ mol <sup>-1</sup> , DH(K2)=5.0, DH(K3)=15									

Zn++	ISE	NaClO4	25°C	1.00M	U		K1=1.13 B2=1.87 B3=1.8	1970SAa (33669)	1527
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C4H8S L CAS 110-01-0 (150)  
Tetrahydrothiophene; cyclo(-CH2.CH2.S.CH2.CH2-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	50%	C		K1=-0.21	1979SRa (33726)	1528

\*\*\*\*\*

C4H9NO L Morpholine CAS 110-91-8 (318)  
Perhydro-1,4-oxazine, Tetrahydro-1,4-oxazine; C4H8NO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	oth/un	25°C	?	U	M		1981CKb (33783)	1529
K(Zn(C6H5)4porphin+L)=-0.30									
Zn++	ISE	R4N.X	25°C	2.00M	U		K1=2.26 B2=4.46 K3=2.26 K4=2.20	1969PDa (33784)	1530

Medium: NH4NO3

\*\*\*\*\*

C4H9NO2 HL Aminoisobutyric CAS 144-90-1 (188)  
2-Amino-2-methylpropanoic acid; H2N.C(CH3)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	35°C	0.10M	C	M	K1=4.78 B2= 9.21	1998ZWa (33829)	1531
Data for ternary complexes with 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime									
Zn++	gl	KCl	25°C	0.50M	U	M	K1=3.85 B2=8.88 B(ZnAL)=6.28 B(ZnA2L2)=12.6 (pptn.)	1966LHC (33830)	1532

HA=glyoxylic acid

Zn++	gl	KCl	20°C	0.10M	U		K1=4.55 B2=8.55	1963IPa (33831)	1533
Zn++	gl	oth/un	19°C	0.01M	U		B2=8.8	1952PEa (33832)	1534

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H2A is histidine methyl ester. Data for 35 and 45 C

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$K(\text{Zn}+\text{L}=\text{ZnLOH}+\text{H})=0.41$

$K(\text{ZnLOH}+\text{H})=7.8$

-----  
Zn++ gl KNO3 25°C 0.15M U K1=2.35 1955LMa (34052)1544

\*\*\*\*\*

C4H9NO2S HL Methylcysteine CAS 1187-84-4 (84)

2-Amino-3-methylmercaptopropanoic acid;  $\text{H}_2\text{N}.\text{CH}(\text{CH}_2.\text{S}.\text{CH}_3)\text{COOH}$

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

-----  
Zn++ gl NaCl04 25°C 0.10M M K1=4.30 B2=12.12 1993GVa (34082)1545

-----  
Zn++ oth NaCl04 30°C 0.10M C M K1=4.55 B2= 8.70 1991TSc (34083)1546

$K(\text{Zn}(\text{nta})+\text{L})=3.72$

Method: electrophoresis. Medium: pH 5.8.

-----  
Zn++ gl KNO3 25°C 0.10M M M 1989SHd (34084)1547

$K(\text{Zn}(\text{nta})+\text{L})=2.84$

-----  
Zn++ gl KNO3 25°C 0.10M U K1=4.46 B2=8.52 1964LMa (34085)1548

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C4H9NO2S HL CAS 29768-80-7 (2597)

2-Amino-4-mercaptobutanoic acid;  $\text{HOOC}.\text{CH}(\text{NH}_2).\text{CH}_2.\text{CH}_2.\text{SH}$

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

-----  
Zn++ gl KNO3 25°C 0.10M M M 1989SHd (34110)1549

$K(\text{Zn}(\text{nta})+\text{L})=4.91$

$K(\text{Zn}(\text{nta})+\text{H}+\text{L})=13.83$

\*\*\*\*\*

C4H9NO3 HL Threonine CAS 72-19-5 (48)

2-Amino-3-hydroxybutanoic acid;  $\text{H}_2\text{N}.\text{CH}(\text{CH}(\text{OH}).\text{CH}_3)\text{COOH}$

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

-----  
Zn++ vlt NaCl04 25°C 1.0M C M 1999VKc (34244)1550

$B(\text{ZnLA})=4.96$

$B(\text{ZnLA}_2)=7.93$

$B(\text{ZnL}_2\text{A})=10.16$

Method: polarography. Medium pH: 8.5. A is 4-picoline.

-----  
Zn++ gl NaCl04 25°C 1.0M U M K1=4.34 B2= 7.46 1995KDa (34245)1551

$K_3=2.16$

$B(\text{ZnLA})=6.27$

$B(\text{ZnLA}_2)=8.69$

$B(\text{ZnL}_2\text{A})=10.09$

Medium pH 8.50. HA is propanoic acid.

-----  
Zn++ gl NaCl04 25°C 0.20M U T M K1=5.16 B2= 9.35 1993PPa (34246)1552

$K(\text{ZnA}+\text{L})=4.85$

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

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Zn++	gl	NaCl	37°C	0.15M	U	M		1991Hwa	(34247)	1553
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B(ZnLA)=9.161  
B(ZnHLA)=16.330  
B(ZnH2LA)=20.398

H2A is 7-oxabicyclo-[2,2,1]-hept-5-ene-2,3-dicarboxylic acid

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Zn++	gl	KNO3	25°C	0.10M	C	M		1989MAd	(34248)	1554
------	----	------	------	-------	---	---	--	---------	---------	------

K(ZnA+L)=4.14  
B(ZnAL)=10.99

H2A is N-(2-acetamido)imino diethanoic acid.

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Zn++	gl	KNO3	35°C	0.20M	U	M	K1=4.69	B2=8.53	1989RVa	(34249)	1555
------	----	------	------	-------	---	---	---------	---------	---------	---------	------

K(ZnA+L)=4.21

A=bis(imidazol-2-yl)methane

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Zn++	gl	NaCl04	27°C	0.20M	U	M	K1=5.16	B2= 9.35	1988PPc	(34250)	1556
------	----	--------	------	-------	---	---	---------	----------	---------	---------	------

K(ZnA+L)=4.85

A is 2,2'-dipyridylamine.

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Zn++	gl	NaCl	37°C	0.15M	U	M	K1=4.52	B2=7.89	1986XHa	(34251)	1557
------	----	------	------	-------	---	---	---------	---------	---------	---------	------

B(ZnHL)=10.13  
B(ZnH-1L)=-2.93  
B(ZnL(His))=10.70  
B(ZnH-1L(His))=1.832

B(ZnL(His)2)=14.66

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Zn++	gl	KNO3	25°C	0.10M	U		K1=4.66		1985MKa	(34252)	1558
------	----	------	------	-------	---	--	---------	--	---------	---------	------

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Zn++	gl	oth/un	30°C	0.20M	U	M	K1=5.16		1984JOb	(34253)	1559
------	----	--------	------	-------	---	---	---------	--	---------	---------	------

K(Zn(bpy)+L)=4.89

Medium: not stated.

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Zn++	gl	KCl	25°C	0.20M	C	M	K1=4.53	B2=8.38	1981GEa	(34254)	1560
------	----	-----	------	-------	---	---	---------	---------	---------	---------	------

B(ZnH-1L)=-4.09  
B(ZnH-1L2)=-1.5

B(ZnL(His))=10.10. Ligand: L-Threonine

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Zn++	gl	KCl	25°C	0.20M	C	M	K1=4.54	B2=8.40	1981GEa	(34255)	1561
------	----	-----	------	-------	---	---	---------	---------	---------	---------	------

B(ZnH-1L)=-4.0  
B(ZnH-1L2)=-1.5

B(ZnL(His))=10.48. Ligand: D-Threonine

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Zn++	gl	KCl	25°C	0.20M	C		K1=4.54	B2=8.45	1981GEa	(34256)	1562
------	----	-----	------	-------	---	--	---------	---------	---------	---------	------

B(ZnH-1L)=-4.2  
B(ZnH-1L2)=-1.4

DL-isomer

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Zn++	gl	NaCl04	37°C	0.15M	U	T	K1=4.47	B2=8.28	1980KBa	(34257)	1563
------	----	--------	------	-------	---	---	---------	---------	---------	---------	------

B(ZnH-1L)=-1.16

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Zn++ gl KCl 25°C 0.05M U T K1=4.67 B2=8.66 1972GMb (34258)1564  
20-35C  
K1(20 C)=4.71, K1(35 C)=4.60, K2(20 C)=4.02, K2(35 C)=3.92  
-----

Zn++ gl KNO3 40°C 0.20M U T H K1=4.76 B2=8.44 1968RMb (34259)1565  
K1=4.79(15 C),4.74(25 C); K2=3.85(15 C),3.77(25 C)  
DH(B2)=-18.8 kJ mol<sup>-1</sup>, DS=100.3 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Zn++ gl oth/un 20°C .005M U B2=8.6 1953PEa (34260)1566  
Medium: 0.005 ZnSO4  
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\*\*\*\*\*  
C4H9NO3 HL Homoserine CAS 1927-25-9 (578)  
2-Amino-4-hydroxybutanoic acid; HO.CH2.CH2.CH(NH2).COOH  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	U			K1=4.54 B2=8.06	1971BDc (34353)	1567
*****										
C4H9NO3		HL						CAS 4385-95-9 (1894)		
2-Aminooxybutanoic acid; CH3.CH2.CH(O.NH2).COOH										

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U			K1=1.95	1985WTa (34363)	1568
*****										
C4H10NO5P		H3L						(6029)		
2-Amino-3-phosphonatobutanoic acid; CH3.CH(H2O3P).CH(NH2).COOH										

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U			K1=7.13 K(Zn+HL)=2.78	1987BDc (34448)	1569
*****										
C4H10NO5P		H3L						CAS 6323-99-5 (6043)		
2-Amino-4-phosphonatobutanoic acid; H2O3P.CH2.CH2.CH(NH2)COOH										

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C			K1=5.94 B2=10.48 B(ZnHL)=12.39	1996MKa (34458)	1570
Additional method: nmr.										

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Zn++	gl	KCl	25°C	0.20M	C			K1=6.55 B2=10.72 B(ZnHL)=13.18	1989KFb (34459)	1571
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Zn++	gl	KCl	20°C	0.10M	U			K1=6.08 K(Zn+HL)=3.68	1987BDc (34460)	1572
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C4H10NO5P                      H3L                      CAS 18865-31-1 (7285)  
 4-Amino-4-phosphonobutanoic acid; H2N(P(=O)(OH)CH2CH2COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KCl	25°C	0.20M	C		K1=6.51	1996MKa (34466)	1573
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Additional method: nmr.

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C4H10NO6P                      H2L                      CAS 6401-59-8 (2399)

O-Phospho-2-methylserine;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.20M	C		K1=5.93    B2=10.38	1978MAc (34472)	1574
------	----	------	------	-------	---	--	---------------------	-----------------	------

K(Zn+HL)=1.90

K(ZnHL+L)=1.89

K(ZnL+H)=6.04

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C4H10NO6P                      H2L                      CAS 1114-81-4 (2400)

O-Phospho-threonine;

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

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Zn++	gl	KNO3	25°C	0.20M	C		K1=6.00    B2=10.29	1978MAc (34480)	1575
------	----	------	------	-------	---	--	---------------------	-----------------	------

K(Zn+HL)=2.25

K(ZnL+H)=5.92

\*\*\*\*\*

C4H10N2                      L                      CAS 56123-06-9 (8023)

1,3-Diamino-2-methylenepropane;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.50M	U		K1=4.63    B2= 9.35	1975HSb (34487)	1576
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C4H10N2O2                      HL                      CAS 1883-09-6 (45)

2,4-Diaminobutanoic acid; H2N.CH2.CH2.CH(NH2)COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaClO4	37°C	0.15M	U		K1=7.84    B2=12.55	1993NAd (34559)	1577
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B(Zn2L2)=20.32

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Zn++	gl	NaClO4	37°C	0.15M	U	M		1990NTb (34560)	1578
------	----	--------	------	-------	---	---	--	-----------------	------

B(Zn(glu)L)=11.29

K(Zn(glu)+L)=5.9

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Zn++	gl	NaClO4	37°C	0.15M	C	M	B2=13.44	1986NPa (34561)	1579
------	----	--------	------	-------	---	---	----------	-----------------	------

B(ZnHL)=14.22

B(ZnH2L2)=27.04

B(ZnHL2)=21.47

Zn++	gl	KCl	25°C 0.20M C	K1=6.70	B2=12.30	1981FGb (34562)1580
				B(ZnHL)=13.97		
				B(ZnH2L2)=27.55		
				B(ZnHL2)=20.32		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KN03	25°C	0.10M	C			K1=5.98 B(ZnHL)=13.22 B(ZnH2L2)=24.9 B(ZnHL2)=18.97 B3=14.54	1989N0a	(34573)1582

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.50M	C		K1=8.064 B2=13.655	1985LEa	(34586)1583
Zn++	vlt	NaClO4	25°C	0.30M	U		K1=8.22	1974K0b	(34587)1584
Zn++	vlt	oth/un	25°C	0.20M	U		K1=8.20	1970FUa	(34588)1585
Medium: Na ethanoate									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KN03	25°C	0.10M	C	M		K1=4.39	2001AAa (34615)	1586
Also data for ternary complexes with 5'-GMP, 5'-IMP and 5'-CMP.										
Zn++	gl	KN03	25°C	0.10M	C			K1=3.85	2000ADa (34616)	1587

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	g1	NaNO3	25°C	0.20M	U			K1=1.95 B2=4.24	1974FSa	(34644)1588



Zn++ vlt NaClO4 25°C 1.0M U K1=2.26 B2=4.34 1968SUa (34645)1589  
B3=5.10  
B4=4.63

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C4H10O2S L CAS 111-48-8 (4275)  
3-Thiapentane-1,5-diol; HO.CH2.CH2.S.CH2.CH2.OH

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

Zn++ gl NaClO4 25°C 1.0M C K1=-0.18 1979SRa (34675)1590

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C4H10O2S2 H2L Dithiothreitol CAS 3483-12-3 (8164)  
Threo-2,3-Dihydroxy-1,4-dithiobutane

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

Zn++ gl KNO3 25°C 0.10M C K1=11.06 B2=17.95 2001KLb (34693)1591  
B(Zn3L4)=50.9  
B(ZnH-1L2)=7.5

B(ZnH-1L2) by spectrophotometry.

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C4H11N L Butylamine CAS 109-73-9 (159)  
1-Aminobutane; CH3.CH2.CH2.CH2.NH2

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

Zn++ cal non-aq 25°C 100% C IH 2002LVa (34745)1592  
K(ZnP+L)=3.66  
K(ZnPL+L)=3.02

Medium: CCl4. ZnP: Zn(II)tetraphenylporphyrine. DH(ZnP+L)=-48.37 kJ mol<sup>-1</sup>,  
DS=-92 J K<sup>-1</sup> mol<sup>-1</sup>; DH(ZnPL+L)=-15.16, DS=7. Data for related alkylamines.

-----  
Zn++ sp non-aq 25°C 100% U 1994IUa (34746)1593  
K(ZnP+L)=4.88

Medium: CHCl3. ZnP is a zinc porphyrin host.

-----  
Zn++ sp non-aq 15°C 100% U M 1993MEa (34747)1594  
K(ZnA+L)=3.65  
K(ZnB+L)=3.20

In chloroform. A=5,15-Bis(2-hydroxy-1-naphthyl)-2,3,7,8,12,13,17,18-octa-  
ethylporphine, B=5,15-Bis(2-methoxy-1-naphthyl) deriv. of A

\*\*\*\*\*

C4H11N L Diethylamine CAS 109-89-7 (1331)  
Diethylamine, 3-azapentane; (C2H5)2NH

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

Zn++ sp non-aq 25°C 100% U 1994IUa (34801)1595  
K(ZnP+L)=4.08

Medium: CHCl3. ZnP is a zinc porphyrin host.

-----  
 Zn++ ISE R4N.X 25°C 2.00M U K1=2.97 B2=5.57 1968PMc (34802)1596  
 K3=2.34  
 K4=1.92  
 B4=9.82

Medium: NH4NO3

\*\*\*\*\*

C4H11NO L CAS 110-73-6 (900)  
 2-(Ethylamino)ethanol; CH3.CH2.NH.CH2.CH2.OH

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	KNO3	25°C	0.10M	U		K1=5.34 B2=6.18 B3=7.15	1980AAa (34834)	1597

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\*\*\*\*\*

C4H11NO2 L Diethanolamine CAS 111-42-2 (89)  
 2,2'-Iminodiethanol; HN(CH2.CH2.OH)2

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	R4N.X	25°C	2.00M	C	I	K1=2.52 B2=4.40	1983DBa (34932)	1598
Zn++	gl	KNO3	25°C	2.00M	U		K1=2.38	1970URa (34933)	1599
Zn++	vlt	alc/w	25°C	100%	U	I	B2=14.85 B3=15.30	1964MSd (34934)	1600

 -----

Medium: EtOH, 0.01 NaCl 0.4. B2=6.6(0%), 7.48(20%), 8.15(40%), 8.18(60%), 9.18(80%), 11.6(94%); B3=8.08(0%), 8.43(20%), 9.46(40%), 12.48(94%); B4=9.11(0%), 16.52(100%)  
 \*\*\*\*\*

C4H11NO3 L Tris buffer CAS 77-86-1 (550)  
 2-Amino-2-(hydroxymethyl)-propan-1,3-diol; (HO.CH2)3C.NH2

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	NaCl	25°C	0.50M	C	I	K1eff=2.47 (pH 8) B2eff=3.23 (pH 8)	1990PAa (35036)	1601

 -----

Method: polarography. At pH 9, K1eff=3.44, B2eff=3.66.

-----  

Zn++	gl	NaCl	25°C	0.15M	C		K1=2.271	1983BSa (35037)	1602
Zn++	gl	KNO3	25°C	0.10M	C	M	K1=1.94 K(Zn(ATP)+L) < 1.8	1979FHa (35038)	1603

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\*\*\*\*\*

C4H11NO8P2 H5L CAS 2439-99-8 (2129)  
 N-Carboxymethyl-N,N-bis(methylenephosphonic acid); HOOCH2.N(CH2.PO3H2)2

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=14.46	2000SDa (35093)	1604

 -----

K(ZnL+H)=5.25  
K(ZnHL+H)=4.22  
K(ZnH2L+H)=2.7  
K(ZnL+OH)=2.6

-----  
Zn++ ix NaNO3 RT 0.10M U K1=14.7 1985PMc (35094)1605  
-----

Zn++ gl KCl 25°C 0.10M U K1=13.48 1974NKa (35095)1606  
K(Zn+HL)=8.18  
K(Zn+H2L)=6.02

\*\*\*\*\*  
C4H11NS HL CAS 108-02-1 (1792)  
1-Mercapto-2-(N,N-dimethyl)aminoethane; HS.CH2.CH2.N(CH3)2  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 20°C 0.25M U I K1=6.92 B2=13.44 1973MSd (35132)1607  
0.25 KNO3, 25% MeOH: K1=7.30, K2=6.89, 25% EtOH, K1=7.71, K2=7.38  
-----

\*\*\*\*\*  
C4H11N2O4P H2L (7118)  
Alanylaminomethylphosphonic acid;  
-----

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

Zn++ gl KNO3 25°C 0.10M C K1=3.817 1995HLA (35151)1608  
B(ZnH-1L)=-3.79

\*\*\*\*\*  
C4H11N3 L CAS 171868-16-9 (7833)  
cis-3,4-Diaminopyrrolidine;  
-----

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

Zn++ gl KCl 25°C 0.10M C K1=4.93 B2= 8.89 2001KSa (35160)1609  
B(ZnHL)=12.68  
B(ZnH-1L2)=-0.38  
-----

\*\*\*\*\*  
C4H11N3O L (2704)  
2-(Dimethylamino)acetamidoxime; (CH3)2N.CH2.C(:NOH)NH2  
-----

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

Zn++ gl NaClO4 25°C 1.00M C K1=2.50 B2=4.19 19860Sa (35166)1610  
-----

C4H11N3O2 HL CAS 471915-94-3 (8550)  
2,4-Diamino-N-hydroxybutanamide;  
-----

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

Zn++ gl KCl 25°C 0.20M C K1=7.13 B2=12.05 2002ECa (35173)1611  
B(ZnHL)=14.34

B(ZnH-1L)=-0.96

B(ZnHL2)=20.77

B(ZnH-1L2)=1.6

\*\*\*\*\*

C4H11N2O3P HL (7917)

(Glycylamino)methyl(methylphosphinic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=3.571 B2= 6.19 B(ZnHL)=9.61 B(ZnH-2L)=-13.50	2001LKa (35198)	1612

\*\*\*\*\*

C4H11O2PS2 HL CAS 995-79-9 (4283)

O-Ethyl hydrogen P-ethylphosphonodithioate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	alc/w	?	90%	U		B2=5.5	1971TCa (35203)	1613

Medium: 90% EtOH, 0.15 M NaCl04

\*\*\*\*\*

C4H11O2PS2 H3L CAS 298-06-6 (210)

O,O'-Diethyldithiophosphoric acid; (C2H5O)2P(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	mixed	RT	50%	C		B3=2.47	1986HSd (35221)	1614

Medium: 50% v/v DMF/H2O. Method: polarography.

Zn++	vlt	alc/w	?	90%	U		B2=4.5	1971TCa (35222)	1615
------	-----	-------	---	-----	---	--	--------	-----------------	------

Medium: 90% EtOH, 0.15 M NaCl04

\*\*\*\*\*

C4H11O4P H2L (5867)

n-Butyl phosphoric acid; C4H9.O.PO(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	C		K1=2.30	1988MSa (35281)	1616

\*\*\*\*\*

C4H11PS2 HL CAS 886-54-6 (3591)

Diethylphosphinodithioic acid; (CH3.CH2)2PSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	alc/w	?	90%	U		B2=6.4	1971TCa (35292)	1617

Medium: 90% EtOH, 0.15 M NaCl04

\*\*\*\*\*

C4H12NO3P H2L AMPPH CAS 18108-24-2 (222)

1-Amino-2-methylpropylphosphonic acid; (CH3)2.CH.CH(NH2).PO3H2

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3    24°C 0.10M U          K1=6.31      1989YKa (35305)1618
*****
C4H12N2                L                      CAS 563-86-0 (59)
DL-2,3-Diaminobutane; H2N.CH(CH3).CH(CH3).NH2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3    25°C 0.10M U   H   K1=5.944  B2=11.26  1977PSb (35377)1619
                                B(ZnHL)=11.59
                                B3=14.76
By calorimetry, DH1=-18.0 kJ mol-1, DS1=53.4 J K-1 mol-1, DH(B2)=-29.9,
DS(B2)=115.4
*****
C4H12N2                L   Dimeen          CAS 110-70-3 (125)
N,N'-Dimethyl-1,2-diaminoethane; CH3.NH.CH2.CH2.NH.CH3
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KCl     25°C 0.20M C   HM   K1=4.47   B2=7.90   1979SGb (35414)1620
*****
C4H12N2                L   Butanediamine  CAS 20759-15-3 (58)
meso-2,3-Diaminobutane; H2N.CH(CH3).CH(CH3).NH2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3    25°C 0.10M U   H   K1=5.45   B2=10.77  1977PSb (35487)1621
                                B(ZnHL)=11.6
                                B3=14.63
By calorimetry, DH1=-13.9 kJ mol-1, DS1=57.7 J K-1 mol-1, DH(B2)=-30.3,
DS(B2)=105
*****
C4H12N2O                L                      CAS 2752-17-2 (312)
Bis-(2-aminoethyl)ether; H2N.CH2.CH2.O.CH2.CH2.NH2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3    25°C 0.50M U   H   K1=5.74   B2=9.86   1974BVa (35499)1622
                                K(ZnL+OH)=5.11
                                K(ZnL+2OH)=8.37
By calorimetry: DH(K1)=-20.1 kJ mol-1, DS=41.4, DH(K2)=-30.1, DS=-16,
DH(ZnLOH)=1.6, DS=105
*****
C4H12N2O                L                      CAS 111-41-1 (648)
N-(2-Hydroxyethyl)diaminoethane, 1,4-Diaza-7-oxaheptane; H2N.CH2.CH2.NH.CH2.CH2.OH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----

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Zn++ gl NaNO3 25°C 0.10M U K1=5.28 B2=10.07 1986TSa (35535)1623

Zn++ gl oth/un 25°C 0.50M U K1=4.75 B2=10.15 1960Hda (35536)1624

\*\*\*\*\*

C4H12N2S L CAS 871-76-1 (1854)

1,5-Diamino-3-thiapentane; H2N.CH2.CH2.S.CH2.CH2.NH2

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

Zn++ gl KNO3 30°C 1.0M U T K1=5.31 B2=8.88 1951GOa (35560)1625

0 C: K1=5.78, K2=4.34; 50 C: K1=5.15, K2=3.44

\*\*\*\*\*

C4H12O7P2 H3L CAS 52811-47-9 (7665)

N-Butyldiphosphoric acid;

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

Zn++ gl NaNO3 25°C 0.10M M K1=4.40 1999SSa (35580)1626

\*\*\*\*\*

C4H13NO6P2 H4L CAS 5995-26-6 (1336)

N-Ethyliminobis(methylenephosphonic) acid; C2H5N(CH2PO3H2)2

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

Zn++ gl KCl 25°C 0.20M C K1=9.33 1999MKa (35599)1627

B(ZnHL)=15.78

B(ZnH2L)=20.04

B(ZnH-1L)=-0.22

B(ZnH-2L)=-11.72

\*K(ZnL)=-9.55; K(ZnOH+L)=9.17; K(ZnOH+ZnL=Zn(OH)L+Zn)=-0.16.

\*\*\*\*\*

C4H13N3 L CAS 14478-63-8 (3000)

1,3-Diamino-2-aminomethylpropane; H2N.CH2.CH(CH2.NH2).CH2.NH2

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

Zn++ gl KNO3 20°C 0.10M U 1962ANb (35629)1628

K(Zn+HL)=3.80

K(Zn+H2L)=1.70

\*\*\*\*\*

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

Zn++ gl KCl 25°C 0.20M C K1=8.94 B2=13.96 2002KKa (35718)1629

B(ZnHL2)=22.26

Zn++ gl NaClO4 25°C 0.10M U H K1=8.92 1996IFb (35719)1630

$\Delta H(K1) = -28.9 \text{ kJ mol}^{-1}$ ,  $\Delta S(K1) = 73.9 \text{ J K}^{-1} \text{ mol}^{-1}$ .

Zn++            gl   NaClO4 25°C 0.20M M       K1=8.81            1996VBa (35720)1631  
B(Zn(ala)L)=13.53  
B(Zn(phe)L)=13.01  
B(Zn(tyr)L)=12.88  
B(Zn(trp)L)=13.12  
B(Zn(gly-gly)L)=11.88, B(Zn(gly-ala)L)=11.95, B(Zn(en)L)=13.85.

Zn++ gl oth/un 21°C var U M K2=4.30 1987HMa (35721)1632  
K(ZnL2+H=ZnHL2)=2.70

Ternary complexes with alanine, glycine, acetate, en, pn.

Zn++      gl   NaCl04 25°C 0.10M U      M    K1=8.92   B2=14.91   1985MSa (35722)1633  
K(Zn(thiolactate)+L)=6.08

Zn++ oth KNO3 25°C 0.10M U H 1977FZa (35723)1634  
DH(K1)=-27.0 kJ mol<sup>-1</sup>; DS=77.3 J K<sup>-1</sup> mol<sup>-1</sup>

Zn++      gl   KN03   25°C 0.10M U      K1=9.1   B2=14.00   1973AHc (35724)1635  
K(Zn+HL)=4.1

Zn<sup>++</sup> cal KCl 25°C 0.10M U H 1961CPa (35725)1636  
 DG(K1)=-50.16 kJ mol<sup>-1</sup>, DH=-27.0, DS=77; DG(K2)=-31.35, DH=-42.5, DS2=-38

Zn++ gl oth/un 20°C 0.0 U T H 1959MBa (35726)1637  
 DG(K1)=-49.3 kJ mol<sup>-1</sup>, DH=-27, DS=75. DG(K1)=48.1(10 C), 50.2(40 C)

Zn++ gl oth/un 20°C ->0 U T K1=8.78 1953Mca (35727)1638  
30 C: K1=8.57, 40 C: K1=8.37

Zn++ gl oth/un 35°C 1.0M U H 1952JHa (35728)1639  
DH(K1)=-33.4 kJ mol<sup>-1</sup>

Zn++ g1 KCl 30°C 1.0M U T K1=9.14 1952JHa (35729)1640  
40 C: K1=8.95

Zn++      gl    KCl      20°C 0.10M U      K1=8.9      B2=14.4      1950PSa (35730)1641

C4H14N2O4P2                      H2L                      CAS 37107-07-6    (4287)

Ethylenebis(iminomethylenephosphonous acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++      g1    KNO3    25°C 0.10M U      K1=6.16      1971MMh (35826)1642

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

1,2-Diaminoethane-N,N'-bis(methylenephosphonic) acid; (H<sub>2</sub>O<sub>3</sub>P.CH<sub>2</sub>.NH.CH<sub>2</sub>)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	KCl	25°C	0.10M	C		K1=9.12 B(ZnHL)=18.67 B(Zn2HL)=23.87	2002MNa (35857)	1643

Also other constants

\*\*\*\*\*

C5H2O2F6                      HL      HFA                      CAS 1522-22-1    (195)  
1,1,1,5,5,5-Hexafluoropentane-2,4-dione; F3C.CO.CH2.CO.CF3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	dis	NaClO4	25°C	1.0M	C	M	K1=1.0 K(ZnL2(org)+A(org))=7.0 K(ZnL2(org)+2A(org))=11.6	1977SMe (35916)	1644

Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylphosphine oxide (A). K(Zn+2HL(org)=ZnL2(org)+2H)=-5.2.

Zn++	dis	NaClO4	25°C	0.10M	U	I	K1=1.6	1971SIa (35917)	1645
------	-----	--------	------	-------	---	---	--------	-----------------	------

K1(I=1)=1.0, K1(I=3)=1.1

\*\*\*\*\*

C5H3N2O4Br                      H2L      5-Bromoorotic      CAS 15018-62-9    (3629)  
1,2,3,6-Tetrahydro-2,6-dioxo-5-bromo-4-pyrimidinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	U		K1=3.26	1964TTa (35958)	1646

Medium: Me4NBr

\*\*\*\*\*

C5H3N2O4I                      H2L      5-Iodoorotic      CAS 17687-22-8    (3630)  
1,2,3,6-Tetrahydro-2,6-dioxo-5-iodo-4-pyrimidinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	U		K1=3.77	1964TTa (35965)	1647

Medium: Me4NBr

\*\*\*\*\*

C5H3N3O6                      H2L      5-Nitroorotic      CAS 17687-24-0    (3615)  
1,2,3,6-Tetrahydro-2,6-dioxo-5-nitro-4-pyrimidinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	KNO3	25°C	0.10M	U		K1=2.58	1964TTa (35972)	1648
Zn++	gl	KCl	25°C	0.10M	U		K1=2.51	1961TDa (35973)	1649

By ion-exchange: K1=2.54

\*\*\*\*\*

C5H3N4Cl                      L      6-Chloropurine      CAS 87-42-3    (3032)  
6-Chloropurine;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	45°C	0.10M	U		K1=6.5	1971TKc (35985)	1650
*****									
C5H4NBr			L				CAS 1120-87-2	(8780)	
4-Bromopyridine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.50M	C		K1=0.76	2002KSb (35998)	1651
*****									
C5H4NCl			L				CAS 626-60-8	(322)	
3-Chloropyridine; C5H4N.Cl									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.50M	C		K1=0.57	2002KSb (36014)	1652
*****									
C5H4N2O3S			H2L				Thioorotic acid	(4335)	
1,2,3,6-Tetrahydro-2-thio-6-oxo-4-pyrimidinecarboxylic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	20°C	0.15M	U		K1=4.97 K(Zn+HL)=2.53	1979DZe (36071)	1653
*****									
C5H4N2O3S			H2L				2-Thioisoorotic acid	CAS 6953-78-2 (3631)	
1,2,3,6-Tetrahydro-2-thio-6-oxo-5-pyrimidinecarboxylic acid, 2-thioisoorotic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ix	NaCl04	25°C	0.10M	U		K1=3.94	1966DTa (36079)	1654
*****									
C5H4N2O4			H2L				Orotic acid	CAS 65-86-1 (624)	
1,2,3,6-Tetrahydro-2,6-dioxo-4-pyrimidinecarboxylic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	37°C	0.15M	C		K1=5.94 B2=10.57 B(ZnH-1L2)=1.48	2002HTc (36096)	1655
-----									
Zn++	gl	KCl	20°C	0.15M	U	M	K(Zn+HL)=2.64	1982Vda (36097)	1656
-----									
Zn++	gl	NaCl	20°C	0.15M	U		K1=6.04 K(Zn+HL)=2.64	1979DZe (36098)	1657
-----									
Zn++	gl	NaCl04	25°C	0.50M	U		K1=6.88	1979MDa (36099)	1658
-----									
Zn++	gl	R4N.X	25°C	0.10M	U		K1=6.42	1967TKc (36100)	1659

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By ion-exchange:  $K(\text{Zn}+\text{HL})=2.65$

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Zn++ gl KNO3 45°C 0.10M U K1=6.6 1971TKc (36220)1668

Zn++ gl diox/w 25°C 50% U K1=5.90 1959CFb (36221)1669

\*\*\*\*\*

C5H4O2S HL 2-Thenoic acid CAS 527-72-0 (2312)

Thiophene-2-carboxylic acid; C4H3S.CO0H

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

Zn++ gl KNO3 25°C 0.10M U T M K1=2.42 1988NSc (36243)1670

B(ZnAL)=9.28

HA is pyridine-2-carboxylic acid. At 40 C, K1=2.32, B(ZnAL)=7.04.

Zn++ cal NaNO3 25°C 1.00M U H 1979ARa (36244)1671

DH(ZnL)=0.50 kJ mol-1; DS=40.3.

Zn++ gl NaClO4 30°C 0.20M U T H K1=2.08 1976SKc (36245)1672

At 40 C:K1=2.10; 50 C:2.16

Zn++ gl diox/w 25°C 50% U K1=2.05 1968EGb (36246)1673

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C5H4O3 HL Pyromeconic aci CAS 496-63-9 (3600)

3-Hydroxy-4H-pyran-4-one;

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

Zn++ gl NaClO4 25°C 0.50M U K1=5.03 B2=9.18 1967CBb (36271)1674

\*\*\*\*\*

C5H5N L Pyridine CAS 110-86-1 (31)

Pyridine, Azine;

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

Zn++ gl NaNO3 25°C 0.50M C K1=1.15 2002KSb (36457)1675

Zn++ sp NaCl 23°C 0.10M U M 1997DDa (36458)1676

K(ZnP+L)=3.58

P:2,3,7,8,12,13,17,18-octabromo-5,10,15,20-tetrakis(N-methyl-4-pyridinio)porphyrin. Data for other porphyrins and L=imidazole, 4-CN-, 3-Cl- and 3-F-pyr.

Zn++ sp non-aq 25°C 100% U 1994IUa (36459)1677

K(ZnP+L)=4.95

Medium: CHCl3. ZnP is a zinc porphyrin host.

Zn++ cal non-aq 25°C 100% U H K1=3.9 B2=7.0 1994K0a (36460)1678

B3=9.3

B4=10.6

Medium: CH3CN. DH(K1)=-32.3, DH(B2)=-61, DH(B3)=-76, DH(B4)=-97 kJ mol-1.

Zn++ cal non-aq 25°C 100% U H K1=1.06 B2=0.79 1993K0a (36461)1679  
Medium: dimethylformamide, 0.1 M Et4NClO4. DH(K1)=-18.1, DH(B2)=-41.8 kJ m-1

-----  
Zn++ sp non-aq 25°C 100% U M 1993SSc (36462)1680

K(ZnA+L)=3.366

K(ZnB+L)=3.748

K(ZnC+L)=4.125

Medium:Toluene. H2A:Octaethylporphyrin. H2B: t-Octaethylchlorin.

H2C: ttt-Octaethylisobacteriochlorin.

-----  
Zn++ sp non-aq 25°C 100% U M 1992INb (36463)1681

K(ZnA+L)=3.46

K(ZnB+L)=4.38

K(ZnC+L)=3.52

Medium:toluene. A:bis-roof porphyrin. B:picket fence porphyrin.

C:meso-tetrakis(p-methylphenyl)porphyrin. Data for many other basic ligands

-----  
Zn++ sp non-aq 25°C 100% U HM 1992UNa (36464)1682

K(ZnA+L=ZnAL)=4.15

K(Zn2B+L=Zn2BL)=1.30

K(ZnC+L=ZnCL)=4.58

Medium: CHCl3. A,C=substituted porphyrins, B=substituted porphyrin dimer.

-----  
Zn++ sp non-aq ? 100% U M 1990AHb (36465)1683

K(ZnA+L)=3.11

Medium: CH2Cl2. A=biphenyl capped mesoporphyrin. Data for other porphyrin  
Zn complexes

-----  
Zn++ sp non-aq ? 100% U M 1990HMa (36466)1684

K(Zn2A+L=LZn(A)Zn)=2.02

K(LZn(A)Zn+L=LZn(A)ZnL)=2.31

Medium: CH2Cl2. A=cyclic porphyrin dimer

-----  
Zn++ sp non-aq 25°C 100% U IH 1990IKa (36467)1685

K(ZnP+L)=4.38

In toluene. P=pivalamido picket fence porphyrin. DH=-44.4 kJ mol-1; DS=-  
64.4 J K-1 mol-1. Also data for other solvents and picket substituents.

-----  
Zn++ vlt oth/un 25°C 0.10M U K1=0.83 B2=1.52 1984GLa (36468)1686  
Recalculation of literature data

-----  
Zn++ dis non-aq 25°C 100% U 1983SSa (36469)1687

K((NBu4)2ZnCl4+L)=0.07

K((NBu4)2ZnCl3L+L)=-1.70

In 1,2-dichloroethane. Also data for L=4Me-py, 3Me-py, 2Me-py, 2Et-py,  
4MeO-py and 4CN-py.

-----  
Zn++ sp non-aq 25°C 100% U TIH 1982CFa (36470)1688

K(ZnA+L)=4.22

Medium: BuCl. A=tetraphenylporphyrin. Also in PhCl and PhCH3



Zn++ ISE NaCl04 30°C 0.10M U K1=1.10 B2=1.71 1966DKa (36482)1700  
B3=1.92

Zn++      gl    NaClO4 25°C 0.10M U      K1=1.07      1964KSb (36484)1702

Zn++      gl   NaCl04 25°C   1.0M U   H   K1=2.08   B2=3.77   1963ABa (36485)1703  
K3=1.03  
K4=0.64

By calorimetry: DH<sub>i</sub>(average)=-10.9 kJ mol<sup>-1</sup>, DS(K1)=4 J K<sup>-1</sup> mol<sup>-1</sup>, DS(K2)=-4  
DS(K3)=-16, DS(K4)=-25

Zn++      vlt KCl      25°C 0.10M U      K1=1.41      B2=1.11      1953NYa (36486)1704  
K3=0.50  
K4=0.32

Zn++ g1 oth/un 25°C 0.50M U K1=0.95 B2=1.45 1950BJa (36487)1705  
Medium: 0.5 M C5H5N.HNO3

\*\*\*\*\*  
C5H5NO L 3-Pyridinol CAS 109-00-2 (1475)  
3-Hydroxypyridine; C5H4N.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	g1	KN03	25°C	0.50M	U			K1=0.70 B3=1.84	B2=1.65	1978LRa (36703)1707

C5H5NOS L CAS 1121-31-9 (3052)  
3-Mercaptopyridine 1-oxide; C5H4N(-O)(SH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	oth/un	20°C	0.01M	U			K1=5.9 B2=11.3	1956ARb	(36729)1708
*****										
C5H5NO2			HL					CAS 13161-30-3	(5582)	
1-Hydroxypyridin-2(1H)-one, 2-Hydroxypyridine 1-oxide;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C			K1=4.87 B2= 9.04 B3=11.80	2000FEc	(36744)1709

Zn++      g1    KCl    25°C 0.10M U      K1=5.09    B2=9.25    1993LMc (36745)1710  
K3=2.78

Zn++ gl oth/un 20°C 0.01M U K1=5.5 B2=9.8 1956ARb (36746)1711  
\*\*\*\*\*

C5H5N02 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  
-----

Zn++ gl KNO3 37°C 0.15M C M K1=5.57 B2=10.12 1980SHb (36771)1712  
K3=2.18  
K(ZnH-1L2+H)=10.3  
-----

Zn++ gl diox/w 25°C 50% U K1=7.40 B2=13.39 1970GDa (36772)1713  
Medium: 50% dioxan, 0.1 M NaClO4  
-----

Zn++ gl NaClO4 25°C 0.10M U K1=5.82 B2=11.48 1970GDa (36773)1714  
\*\*\*\*\*

C5H5N02 CAS 1121-47-7 (6252)  
2-Furancarboxaldehyde oxime, 2-Furfuraldoxime; C4H3O.CH:NOH

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

Zn++ gl diox/w 20°C 60% U I K1=6.90 B2=12.96 1979GBd (36802)1715  
B(ZnHL2)=23.26  
-----

\*\*\*\*\*  
C5H5N02 HL CAS 35940-93-3 (3618)  
3-Furancarboxaldehyde oxime (3-Furfuraldoxime); C4H3O.CH(:N.OH)

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

Zn++ gl diox/w 15°C 75% U T K1=6.79 B2=13.17 1963ASa (36810)1716  
Medium: 75% dioxan, 0.104 M NaClO4. K1=6.71(25 C),6.74?(35 C); K2=6.02(25 C)  
\*\*\*\*\*

C5H5N02 HL CAS 1121-23-9 (2315)  
3-Hydroxypyridin-4(1H)-one;

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

Zn++ gl KNO3 37°C 0.15M C K1=6.81 B2=12.54 1980SHb (36823)1717  
K3=2.1  
K(ZnH-1L2+H)=10.7  
-----

\*\*\*\*\*  
C5H5N2Br L CAS 1072-97-5 (2630)  
5-Bromo-2-aminopyridine; C5H3N(Br)(NH2)

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

Zn++ gl NaNO3 25°C 0.50M C K1=0.07 2002KSb (36853)1718  
\*\*\*\*\*

C5H5N3O4 H2L 5-Aminoorotic CAS 7164-43-4 (3619)  
1,2,3,6-Tetrahydro-2,6-dioxo-5-amino-4-pyrimidinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	U		K1=5.38	1967TKc (36863)	1719
Medium: Me4NBr									
*****									
C5H5N3O4		H2L					CAS 59048-06-5	(6096)	
N-Methylvioluric acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.50M	C		K1=2.00	1978VNa (36874)	1720
*****									
C5H5N5		L		Adenine			CAS 73-24-5	(237)	
6-Aminopurine; H2N.C5H3N4									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	C	M	K1=8.01 K(Zn+HL)=4.02 K(Zn+HL+OH)=12.02 K(ZnHL+OH)=8.06 K(Zn+L+OH)=13.37	2000SSd (36942)	1721
Also data for ternary complexes.									
Zn++	gl	NaNO3	25°C	0.10M	U		K1=5.77	1996SGa (36943)	1722
Zn++	gl	NaClO4	25°C	0.10M	M		K(Zn+HL)=1.24 K(Zn(atp)+HL)=1.67	1995LWa (36944)	1723
Zn++	gl	NaNO3	37°C	0.10M	U	M	K1=8.28 B(ZnAL)=10.55 *K(ZnAL)=-8.05 *K(Zn(OH)AL)=-9.32	1994MGd (36945)	1724
HA is 6-aminopenicillanic acid.									
Zn++	gl	KNO3	35°C	0.10M	U	M	K1=2.17 B(ZnHLAsp)=8.02 B(ZnLAsp)=6.49 K(ZnL+Gly)=5.19	1989SRe (36946)	1725
Zn++	gl	KNO3	35°C	0.10M	U	T H	K(Zn+HL)=2.17 K(Zn+2HL)=3.13	1983KSa (36947)	1726
Zn++	gl	NaCl	37°C	0.15M	C		K(Zn+HL)=1.62	1974Mwa (36948)	1727
Zn++	gl	KNO3	45°C	0.10M	U		K1=8.16	1971TKc (36949)	1728



-----  
 Zn++ gl diox/w 25°C 50% U K1=6.42 1959CFb (36950)1729  
 \*\*\*\*\*

C5H5N5O HL Guanine CAS 73-40-5 (5387)  
 2-Amino-6-hydroxypurine;  
 -----

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

Zn++ gl NaNO3 37°C 0.10M U M K1=8.54 1994MGd (36995)1730  
 B(ZnAL)=10.82  
 \*K(ZnAL)=-8.01  
 \*K(Zn(OH)AL)=-9.26

HA is 6-aminopenicillanic acid.

\*\*\*\*\*

C5H5N5O L CAS 700-02-7 (3033)  
 Adenine N-Oxide;  
 -----

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

Zn++ gl oth/un 25°C ? U K1=3.47 1960PEb (37001)1731  
 \*\*\*\*\*

C5H5N5S H3L 6-Thioguanine CAS 3647-48-1 (4307)  
 2-Amino-6-mercaptapurine;  
 -----

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

Zn++ gl KNO3 45°C 0.10M U K(Zn+H2L)=3.2 1973TKa (37008)1732  
 \*\*\*\*\*

C5H5N5S H3L CAS 154-42-7 (4308)  
 2-Mercapto-6-aminopurine;  
 -----

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

Zn++ gl KNO3 45°C 0.10M U K(Zn+H2L)=3.4 1973TKa (37016)1733  
 \*\*\*\*\*

C5H5O2F3 HL CAS 367-57-7 (163)  
 1,1,1-Trifluoropentane-2,4-dione; CF3.CO.CH2.CO.CH3  
 -----

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

Zn++ gl NaClO4 25°C 0.50M C K1=2.72 1993HTa (37042)1734  
 -----

Zn++ dis NaClO4 25°C 1.0M C M K1=2.72 B2= 4.48 1977SMe (37043)1735  
 K(ZnL2(org))+A(org))=6.70

Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylphosphine  
 oxide (A). K(Zn+2HL(org)=ZnL2(org)+2H)=-8.76.  
 -----

Zn++ dis NaClO4 25°C 0.10M U I K1=3.18 B2=5.28 1971SIa (37044)1736

B3=6.14

I=1: K1=2.72, B2=4.48, B3=5.42. I=3: K1=3.24, B2=5.52, B3=5.68

\*\*\*\*\*

C5H6N2 L CAS 1072-63-5 (8709)

1-Vinylimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=2.08 B3=4.78 B4=7.08	1989LKc	(37084)1737

\*\*\*\*\*

C5H6N2 L 2-Aminopyridine CAS 504-29-0 (1478)

2-Aminoazine, 2-Pyridylamine; C5H4N.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.50M	C		K1=0.05	2002KSb	(37110)1738
Zn++	gl	KNO3	25°C	0.10M	U	TIH	K1=2.72 B2=4.64	1976BBc	(37111)1739

\*\*\*\*\*

C5H6N2 L 3-Aminopyridine CAS 462-08-8 (1477)

3-Aminoazine, 3-Pyridylamine; C5H4N.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=1.23 B3=2.51	1978LRa	(37151)1740
Zn++	ISE	NaClO4	30°C	0.10M	U		K1=1.34 B3=2.78	1966DKa	(37152)1741

\*\*\*\*\*

C5H6N2O L CAS 16867-03-1 (2903)

2-Amino-3-hydroxypyridine; C5H3N(OH)(NH2)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	20°C	0.10M	U	TIH	K1=3.90 B2= 7.38	1982KMe	(37186)1742

Data for 0.05-0.20 M KNO3. At I=0, K1=4.36, K2=3.95.  
Data for 30 and 40 C. DH(B2)=-40.4 kJ mol<sup>-1</sup>, DS(B2)=3.6 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C5H6N2O HL (3035)

2-Aminopyridine 1-oxide; C5H4N(-O)(NH2)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=<8.71	1963SBd	(37199)1743

At I=0.5 M K(Zn+HL)=0.17

\*\*\*\*\*

C5H6N2O2 HL Thymine CAS 65-71-4 (413)

2,4-Dihydroxy-5-methylpyrimidine; C<sub>4</sub>H<sub>4</sub>N<sub>2</sub>(CH<sub>3</sub>)(OH)<sub>2</sub>

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

Zn++	gl	R4N.X	25°C	0.10M	C			2001BBb (37258)	1744
------	----	-------	------	-------	---	--	--	-----------------	------

K(ZnA+L)=4.1  
K(ZnAL+OH)=4.7  
K(Zn2A+L)=5.3  
K(Zn2AL+L)=5.0

Medium: 0.10 M NMe<sub>4</sub>NO<sub>3</sub>. K(Zn2AL2+2OH)=7.7.

A is 1,4,7,16,19,22-hexaza-10,13,25,28-tetraoxacyclotriacontane.

Zn++	gl	NaNO <sub>3</sub>	37°C	0.10M	U	M	K1=3.79	1994MGd (37259)	1745
------	----	-------------------	------	-------	---	---	---------	-----------------	------

B(ZnAL)=4.94

HA is 6-aminopenicillanic acid.

Zn++	gl	KNO <sub>3</sub>	35°C	0.10M	U	M	K1=5.23	1989SRc (37260)	1746
------	----	------------------	------	-------	---	---	---------	-----------------	------

K(Zn(thiamine)+L)=4.97

Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	U	T H	K1=5.32	1983KSa (37261)	1747
------	----	------------------	------	-------	---	-----	---------	-----------------	------

Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	C	T H	K1=5.32	B2= 5.25	1983KSd (37262)	1748
------	----	------------------	------	-------	---	-----	---------	----------	-----------------	------

Also data for 15-45 C. DH(K1)=-22.1 kJ mol<sup>-1</sup>, DH(B2)=20.1

Zn++	gl	KNO <sub>3</sub>	35°C	0.10M	U		K1=5.23	B2=10.42	1982TSa (37263)	1749
------	----	------------------	------	-------	---	--	---------	----------	-----------------	------

Zn++	gl	KNO <sub>3</sub>	45°C	0.10M	U		K1=4.0	1974KKa (37264)	1750
------	----	------------------	------	-------	---	--	--------	-----------------	------

\*\*\*\*\*

C<sub>5</sub>H<sub>6</sub>N<sub>2</sub>O<sub>2</sub> HL CAS 3326-71-4 (2607)

2-Furanecarboxylic acid hydrazide; C<sub>4</sub>H<sub>3</sub>O<sub>3</sub>CONH.NH<sub>2</sub>

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

Zn++	gl	none	25°C	0.0	C	I	K1=2.186	B2= 4.01	1996RRb (37299)	1751
------	----	------	------	-----	---	---	----------	----------	-----------------	------

Data for 10-60% v/v DMF/H<sub>2</sub>O and 10-50% dioxane/H<sub>2</sub>O. In 50% DMF/H<sub>2</sub>O,

K1=3.447, B2=5.377. In 50% dioxane/H<sub>2</sub>O, K1=1.756.

Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	U	M	K1=3.79	B2=7.36	1990NAa (37300)	1752
------	----	------------------	------	-------	---	---	---------	---------	-----------------	------

K(Zn(Oxine)+L)=3.89

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C<sub>5</sub>H<sub>6</sub>N<sub>2</sub>O<sub>2</sub> HL CAS 645-65-8 (3620)

4(or 5)-Imidazolylethanoic acid; C<sub>3</sub>H<sub>3</sub>N<sub>2</sub>.CH<sub>2</sub>.COOH

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

Zn++	gl	NaClO <sub>4</sub>	25°C	0.10M	C		K1=3.81	B2= 7.15	1998TSa (37315)	1753
------	----	--------------------	------	-------	---	--	---------	----------	-----------------	------

B3=9.48

Zn++	gl	KCl	0°C	0.25M	U	T H	K1=3.86	B2=7.29	1965AZa (37316)	1754
------	----	-----	-----	-------	---	-----	---------	---------	-----------------	------

K3=2.80

K1=3.83(15 C),3.86(25 C),3.59(40 C); K2=3.32,3.24,3.33; K3=2.63(15 C), 2.70 (25 C).At 15 C: DH(K1)=-9.6 kJ mol<sup>-1</sup>, DH(K2)=0.0, DH(K3)=-14.2

\*\*\*\*\*

C5H6N2O2S HL CAS 15112-09-1 (8298)

N-Methyl-2-thiobarbituric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	31°C	0.10M	U	T H	K1=6.85 B2=12.09	1984SJa (37323)	1755

Also data for 18 and 42 C. DH(K1)=-90.7 kJ mol<sup>-1</sup>, DS(K1)=-168 J K<sup>-1</sup> mol<sup>-1</sup>  
DH(K2)=-53.4, DS(K2)=-75.8.

\*\*\*\*\*

C5H6N6 HL Diaminopurine CAS 1904-98-9 (4290)

2,6-Diaminopurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	45°C	0.10M	U		K1=7.8	1973TKa (37334)	1756

\*\*\*\*\*

C5H6O5 HL CAS 98-02-2 (4309)

Furfurylmercaptan; C4H3O.CH2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U	T	K1=6.77 B2=13.24	1973SSf (37343)	1757

Medium: 50% EtOH, 0.1 M NaClO4

\*\*\*\*\*

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
Zn++	vlt	KCl	25°C	0.10M	C	M	K1=2.65 B2= 3.90 B3=5.64 B(CdAL)=3.93 B(CdA2L)=3.95 B(CdAL2)=5.00	1987SPb (37352)	1758

Method: polarography. A is gamma-picoline.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U		K1=1.8	1960YYa (37353)	1759

\*\*\*\*\*

C5H6O4 H2L CAS 598-10-7 (70)

Cyclopropane-1,1-dicarboxylic acid; C3H4(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=3.50	1972RVh (37384)	1760

\*\*\*\*\*

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

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

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  oth/un 25°C 0.10M U      K1=1.9      1960YYa (37405)1761
*****
C5H6O5      H2L      Ketoglutaric      CAS 328-50-7 (1146)
2-Ketoglutaric acid; H0OC.CH2.CH2.CO.COOH
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KCl      25°C 0.50M U      K1=1.13      B2=1.7      1970SFb (37470)1762
-----
Zn++      gl  KCl      25°C 0.50M U      M      1970SFb (37471)1763
                                B(ZnL(Ala))=5.97
                                B(ZnL2(Ala))=10.00
                                B(ZnLA)=5.64

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H2A=glutamic acid

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*****
C5H6O5      H2L      CAS 642-93-3 (5476)
3-Methyl-2-oxobutanedioic acid H0OC.CO.CH(CH3).COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KCl      25°C 0.10M C      K1=3.13      1982KMc (37478)1764
                                K(Zn+H-1L)=7.4
*****
C5H6O7      H3L      (8107)
Carboxymethyltartronic acid;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KCl      25°C 0.10M C      K1=4.87      1984MMg (37484)1765
                                K(ZnL+H)=2.42
*****
C5H7NO2      HL      Glutarimide      CAS 1121-89-7 (4312)
Piperidine-2,6-dione;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  alc/w 45°C 50% C      K1=7.07      1996MMc (37506)1766
Medium: 50% v/v MeOH/H2O, 0.10 M KNO3.
*****
C5H7NO4S2      H3L      CAS 36061-59-3 (1953)
Bis(carboxymethyl)dithiocarbamic acid; (H0OC.CH2)2.N.CSSH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      dis KNO3 20°C 0.10M U      B2=<4.5      1967HMc (37552)1767
*****
C5H7NS      L      CAS 541-58-2 (1421)

```

2,4-Dimethylthiazole; C3HNS(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=-1.30 B2=-0.65	1982GKa	(37567)1768
*****									
C5H7N3		L					CAS 42166-50-7	(4291)	
2-Pyridylhydrazine; C5H4N.NH.NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	NaNO3	20°C	0.10M	U		K1=5.40 B2=9.95 K3=3.35	1971ANa	(37580)1769
*****									
C5H7N3O2		L					(6254)		
1-Carbamido-3-methyl-pyrazol-5-one; CH3.C3H2N2(:O).CO.NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=6.88 B2=12.40	1979PDa	(37595)1770
*****									
C5H8N2		L					CAS 1759-84-0	(173)	
1,2-Dimethylimidazole; C3H2N2(CH3)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=2.48	1981LKa	(37612)1771
Zn++	gl	KNO3	25°C	0.50M	U		K1=1.92 B2=4.32 B3=7.11 B4=9.00 B5=9.62	1980LBa	(37613)1772
*****									
C5H8N2		L					CAS 7098-07-9	(2053)	
1-Ethylimidazole; C3H3N2.C2H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=2.50 B2=4.79 B3=7.40 B4=9.30 B5=10.10	1979LBa	(37637)1773
*****									
C5H8N2		L					CAS 1072-62-4	(929)	
2-Ethylimidazole; C3H3N2.C2H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	30°C	0.20M	U		K1=2.82	1999PGa	(37656)1774

Zn++	gl	NaNO3	30°C	0.20M	U	K1=2.80	1999PPa	(37657)	1775
Zn++	gl	KNO3	25°C	0.50M	U	K1=1.80 B3=6.30 B4=8.60	B2=4.48	1982LKb	(37658)1776
*****									
C5H8N2	L	Di-Me-Pyrazole	CAS	67-51-6	(369)				
3,5-Dimethyl-1,2-diazole; C3H2N2(CH3)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U	K1=-0.15 B3=2.15	B2=0.65	1977LGb	(37672)1777
*****									
C5H8N2O	L	(1429)							
5-Amino-3,4-dimethylisoxazole; C3NO(CH3)2(NH2)									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ISE	KNO3	25°C	0.50M	U	K1=0.78	1983Gwa	(37683)	1778
Constant determined by means of the competitive potentiometric method using Ag(I) as the auxilliary cation, silver electrode applied.									
*****									
C5H8N2O2S	HL	cyclo-(Gly-Cys)	CAS	24814-12-8	(7983)				
cyclo-(Glycyl-cysteinyI);									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	M	K1=4.71 B(ZnH-1L)=-3.93 B(ZnH-1L2)=-3.00 B(ZnH-2L2)=-10.52	B2=10.46	2001Gva	(37692)1779
*****									
C5H8N2O3	HL	(6597)							
2,3-Dehydro-N-glycyl-alanine; NH2.CH2.CO.NH.C(COOH):CH2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	C	K1=2.80 B(ZnH-1L)=-3.93 B(ZnH-1L2)=-3.00 B(ZnH-2L2)=-10.52	1994Jba	(37696)	1780
*****									
C5H8N2O5	H2L	beta-ODPA	CAS	5302-45-4	(6480)				
b-N-Oxalyl-L-alfa,beta-diaminopropionic acid, N-oxalylamino-alanine; H2N.CH(COOH).CH2.NH.CO.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U	K1=4.74 B(ZnH-2L2)=-9.82	B2=8.66	1990DNa	(37719)1781
*****									
C5H8O5	HL	(4314)							

1-Mercapto-1,3-dimethylprop-1-en-3-one; HS.C(CH<sub>3</sub>):CH.CO.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	dis	oth/un	25°C	0.10M	C		B2=10.81	1979LJa (37734)	1782
------	-----	--------	------	-------	---	--	----------	-----------------	------

Method: 65Zn extraction from 0.10 M buffer into CHCl<sub>3</sub>.

Zn++	gl	diox/w	30°C	75%	U		K1=9.33 B2=18.62	1969UTa (37735)	1783
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\*\*\*\*\*  
C<sub>5</sub>H<sub>8</sub>O<sub>2</sub> HL Acetylacetone CAS 123-54-6 (164)  
Pentane-2,4-dione; CH<sub>3</sub>.CO.CH<sub>2</sub>.CO.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaClO <sub>4</sub>	25°C	0.50M	C		K1=4.68	1993HTa (37856)	1784
------	----	--------------------	------	-------	---	--	---------	-----------------	------

Zn++	oth	NaClO <sub>4</sub>	25°C	0.10M	C	I R	K1=4.70 B2=8.3	1982SLc (37857)	1785
------	-----	--------------------	------	-------	---	-----	----------------	-----------------	------

IUPAC evaluation. I=0 corr.: K1=5.03, B2=8.8. I=1 M: K1=4.6

Zn++	vlt	NaNO <sub>3</sub>	25°C	0.10M	C		K1=5 B2=10.00 B3=14.30	1980KJc (37858)	1786
------	-----	-------------------	------	-------	---	--	------------------------	-----------------	------

Method: polarography. Medium pH 6.0

Zn++	gl	diox/w	24°C	50%	U		K1=6.1	1979ACa (37859)	1787
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Zn++	cal	oth/un	25°C	0.05M	U		K1=4.68 B2= 8.03	1979PKc (37860)	1788
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DH(K1)=-7.40 kJ/mol  
DH(B2)=-20.2

Zn++	gl	diox/w	30°C	75%	U		K1=9.69	1977AHb (37861)	1789
------	----	--------	------	-----	---	--	---------	-----------------	------

Zn++	dis	NaClO <sub>4</sub>	25°C	1.0M	C	M	K1=4.58 B2= 7.76	1977SMe (37862)	1790
------	-----	--------------------	------	------	---	---	------------------	-----------------	------

K(ZnL<sub>2</sub>(org))+A(org))=3.07  
K(ZnL<sub>2</sub>(org))+2A(org))=4.66  
Method: distribution from 1.0 M NaClO<sub>4</sub> into CCl<sub>4</sub>/HL/tri-octylphosphine oxide (A). K(Zn+2HL(org))=ZnL<sub>2</sub>(org)+2H)=-11.40.

Zn++	dis	non-aq	20°C	100%	C		K3=1.50	1976SSh (37863)	1791
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K(ZnL<sub>2</sub>+piperidine)=3.80

Medium: benzene, 0.10 M NaClO<sub>4</sub>.

Zn++	cal	non-aq	30°C	100%	U	M	K(ZnL <sub>2</sub> +py)=2.53	1973DGb (37864)	1792
------	-----	--------	------	------	---	---	------------------------------	-----------------	------

Medium: benzene

Zn++	dis	NaClO <sub>4</sub>	25°C	0.10M	U	I	K1=4.85 B2=8.22 B3=9.43	1971SIa (37865)	1793
------	-----	--------------------	------	-------	---	---	-------------------------	-----------------	------

K1(I=1)=4.58, K1(I=3)=4.93, B2(I=1)=7.76, B2(I=3)=8.46, B3(I=1)=9.16, B3(I=3)=10.26



-----  
Zn++           dis NaClO4 20°C 0.10M U       M                           1970VAa (37866)1794

K(ZnL2+py)=1.34  
K(ZnL2+2py)=2.20  
K(ZnL2+B)=2.17  
K(ZnL2+2B)=3.20

B=2-methylpyridine. K(ZnL2+C)=1.59, K(ZnL2+2C)=2.70 C=4-methylpyridine  
Data for ternary complexes with aniline, 2- and 3-methylaniline also

-----  
Zn++           gl NaClO4 25°C 0.10M U       H       K1=4.68   B2=7.92   1968GFa (37867)1795  
By calorimetry:DH(K1)=-6.3 kJ mol<sup>-1</sup>,DS=66.9 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-14.2,DS=100

-----  
Zn++           gl alc/w 25°C 50% U       H       K1=5.36   B2=9.85   1967MKa (37868)1796  
Medium: 50% MeOH. By calorimetry:DH(K1)=-5.4 kJ mol<sup>-1</sup>,DS=83.6 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(K2)=-5.9, DS=66.9

-----  
Zn++           gl alc/w 30°C 100% U           K1=5.6   B2=10.40   1960DRa (37869)1797  
Medium: EtOH, 0.025 M NaClO4

-----  
Zn++           gl diox/w 30°C 75% U           K1=9.52   B2=17.57   1959MFa (37870)1798

-----  
Zn++           gl oth/un 20°C 0.0 U T H       K1=5.07   B2=9.02   1955IFc (37871)1799  
DH(K1)=-7.9 kJ mol<sup>-1</sup>, DS=71. 10 C: K1=5.14, K2=4.02; 30 C: K1=4.98, K2=3.83;  
40 C: K1=5.00, K2=3.88

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Zn++           gl diox/w 30°C 75% U           K1=9.11   B2=17.20   1953UFb (37872)1800

\*\*\*\*\*  
C5H8O2S                           HL                           CAS 19418-11-2 (408)  
Tetrahydrothiophene-2-carboxylic acid; C4H7S.COOH

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

-----  
Zn++           gl diox/w 25°C 50% U           K1=2.35           1969SGa (38157)1801  
Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*  
C5H8O3                           HL       Laevulinic acid   CAS 123-76-2 (941)  
4-Ketopentanoic acid; CH3.CO.CH2.CH2.COOH

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

-----  
Zn++           gl KCl       25°C 0.10M U           K1=1.13           1983LTa (38167)1802

\*\*\*\*\*  
C5H8O3                           HL                           CAS 16874-33-2 (2493)  
Tetrahydrofuran-2-carboxylic acid; C4H7O.COOH

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

-----  
Zn++           gl diox/w 25°C 50% U       M       K1=3.07           1968GPd (38179)1803  
K(Zn(bpy)+L)=2.79

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C5H8O4                      H2L                      CAS 595-46-0 (1144)  
 Dimethylmalonic acid; HOOC.C(CH3)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	H	K1=2.20 B2=4.00 B(Zn(bpy)L)=7.30	1989ABa (38200)	1804
DH(K1)=18.7 kJ mol <sup>-1</sup> , DS(K1)=104.6 J K <sup>-1</sup> mol <sup>-1</sup>									

Zn++	gl	NaClO4	25°C	0.10M	U		K1=2.20	19700Va (38201)	1805
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Zn++	con	oth/un	25°C	.001M	U		K1=2.74	1931IRb (38202)	1806
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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
Zn++	gl	NaClO4	25°C	0.10M	U		K1=2.53	19680Va (38228)	1807
Zn++	con	oth/un	25°C	.001M	U		K1=3.04	1931IRa (38229)	1808

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C5H8O4                      H2L                      Glutaric acid                      CAS 110-94-1 (420)  
 Pentanedioic acid; HOOC.CH2.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	30°C	0.10M	U		K1=1.60	1981MSa (38296)	1809
Zn++	dis	NaClO4	25°C	1.00M	U		K1=1.25 B2=1.74	1974MSc (38297)	1810
Zn++	dis	oth/un	25°C	0.0	U		K1=2.85	1966RMb (38298)	1811
Zn++	gl	oth/un	25°C	0.10M	U		K1=1.6	1960YYa (38299)	1812
Zn++	EMF	KCl	25°C	0.20M	U		K1=1.60 K(Zn+HL)=0.84	1938CKa (38300)	1813

\*\*\*\*\*

C5H8O4S                      H2L                      CAS 36303-63-6 (988)  
 3-Thiahexane-1,6-dioic acid; HOOC.CH2.S.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=1.70	1975LPa (38378)	1814

\*\*\*\*\*

C5H8O4S2                      H2L                      CAS 2068-24-8 (908)  
 2,2'-(Methylenebis(thio))bis-ethanoic acid; HOOC.CH2.S.CH2.S.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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 Zn++ gl oth/un 20°C ? U T K1=2.88 B2=5.60 1984SPa (38391)1815  
 Temperatures: 30,40 C DH(B2)=-86.5 kJ mol<sup>-1</sup>, DS=-169.0 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C5H8O4S2 H3L CAS 73618-85-6 (7720)  
 meso-2,3-Dimercaptobutanedioc acid monomethyl ester;

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KCl	25°C	0.10M	C			2002CDc (38400)1816	
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B(Zn4HL4)=62.7

B(Zn4L4)=57.4

B(Zn4H-1L4)=48.2

B(Zn2H2L4)=53.6

B(Zn2HL4)=46.0, B(Zn2L4)=35.4.

\*\*\*\*\*

C5H9NO2 H2L CAS 69651-97-4 (1164)  
 2-Amino-(2-allyl)ethanoic acid; H2N.CH(CH2.CH:CH2)COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	C		K1=4.502 B2=8.51	1975IPb (38464)1817	
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C5H9NO2 HL Proline CAS 147-85-3 (44)  
 Pyrrolidine-2-carboxylic acid; C4H8N.COOH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	35°C	0.10M	C	M	K1=5.24 B2= 9.98	1998ZWa (38578)1818	
------	----	------	------	-------	---	---	------------------	---------------------	--

Data for ternary complexes with 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime

-----  

Zn++	vlt	NaClO4	25°C	1.0M	C	M	K1=5.15 B2= 9.72	1997KKb (38579)1819	
------	-----	--------	------	------	---	---	------------------	---------------------	--

B3=12.40

B(ZnAL)=5.53

B(ZnA2L)=10.00

B(ZnAL2)=12.65

Method: polarography. HA is pyridoxine (vitamin B6). Medium pH 8.50.

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Zn++	gl	KNO3	25°C	0.10M	U		K1=5.27	1985MKa (38580)1820	
------	----	------	------	-------	---	--	---------	---------------------	--

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Zn++	gl	NaClO4	37°C	0.15M	C		K1=5.82 B2=10.2	1976MTa (38581)1821	
------	----	--------	------	-------	---	--	-----------------	---------------------	--

B(ZnHL)=12.52

B(ZnH-1L)=-1.97

B(ZnH-2L)=-10.9

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Zn++	gl	KCl	20°C	0.10M	U		K1=5.36	1970GVa (38582)1822	
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Zn++	gl	KNO3	37°C	0.15M	U		K1=5.13 B2=9.69	1969CPc (38583)1823	
------	----	------	------	-------	---	--	-----------------	---------------------	--

B3=11.26

$K(\text{ZnL}+\text{H}_2\text{O}=\text{Zn}(\text{OH})\text{L}+\text{H})=-8.35$   
 $K(\text{ZnL}_2+\text{H}_2\text{O}=\text{Zn}(\text{OH})\text{L}_2+\text{H})=-9.73$

-----  
 Zn++ gl oth/un 17°C 0.01M U B2=9.9 1952PEa (38584)1824  
 Medium: ZnSO4  
 -----

Zn++ gl oth/un 20°C 0.03M U B2=10.2 1950ALa (38585)1825  
 \*\*\*\*\*  
 C5H9NO3 HL Hydroxyproline CAS 51-35-4 (416)  
 4-Hydroxy-2-pyrrolidinecarboxylic acid; C4H7N(OH)(COOH)  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	NaClO4	25°C	1.0M	C	M	K1=5.04 B2= 9.63 B3=12.36 B(ZnAL)=5.40 B(ZnA2L)=9.92 B(ZnAL2)=12.60	1997KKb (38704)	1826

Method: polarography. HA is pyridoxine (vitamin B6). Medium pH 8.50.  
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Zn++	vlt	NaClO4	25°C	0.10M	C		K1=5.3 B2=10.30 B3=16.9	1983KVb (38705)	1827
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Method: polarography. pH 6.0  
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Zn++	gl	KNO3	30°C	0.10M	C		K1=5.08 B2=9.74	1979HAa (38706)	1828
------	----	------	------	-------	---	--	-----------------	-----------------	------

Zn++	vlt	NaClO4	30°C	0.50M	C		K1=1.48 B2= 3.54	1977GCa (38707)	1829
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Method: polarography. Medium pH not stated.  
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Zn++	gl	NaClO4	37°C	0.15M	C		K1=5.84 B2=10.27 B(ZnHL)=12.11 B(ZnH-1L)=-2.6 B(ZnH-1L2)=1.03	1976MTa (38708)	1830
------	----	--------	------	-------	---	--	--	-----------------	------

-----  
 Zn++ gl oth/un 17°C 0.01M U B2=9.6 1952PEa (38709)1831  
 Medium: ZnSO4  
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\*\*\*\*\*  
 C5H9NO3S H2L Thiopronin CAS 1953-02-2 (2162)  
 N-2-Mercaptopropanoyl-glycine; CH3.CH(SH).CO.NH.CH2.COOH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaCl	37°C	0.15M	C		K1=5.371 B2=10.086 B3=13.285	1985FWa (38777)	1832
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 Zn++ gl KNO3 22°C 0.10M U K1=5.72 B2=10.45 1975SHa (38778)1833  
 \*\*\*\*\*  
 C5H9NO3S H2L N-Acetyl-Cys CAS 616-91-1 (1187)  
 N-Acetylcysteine; CH3.CO.NH.CH(CH2.SH)COOH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	M		K1=4.90 B2=11.48 B(ZnHL2)=18.39 B(Zn(OH)L2)=2.71	1993GVa	(38807)1834
Zn++	gl	NaCl	37°C	0.15M	C		K1=5.444 B2=11.28 B3=14.801 B(ZnH-1L)=-2.700 B(Zn2H-1L)=0.917	1992BHc	(38808)1835
Zn++	gl	KNO3	25°C	0.10M	M	M	K(Zn(nta)+L)=3.39	1989SHd	(38809)1836
Zn++	gl	oth/un	25°C	0.10M	U		K1=6.35 B2=12.11	1975IMa	(38810)1837
Medium not stated.									
*****									
C5H9NO4 H2L Glutamic acid CAS 56-86-0 (22)									
2-Aminopentanedioic acid; H2N.CH(CH2.CH2.COOH)COOH									
Zn++	gl	KNO3	25°C	0.10M	C		K1=5.69	2003AHa	(38974)1838
Zn++	gl	KCl	30°C	0.16M	U	I	K1=4.89 B2= 9.01 B(ZnHL)=10.63	2001BRa	(38975)1839
Data for 5.8-36.8% w/w urea/H2O, 0.16 M KCl. At 36.8%, K1=4.87, B2=9.30.									
Zn++	gl	NaNO3	25°C	0.10M	C	M	K1=5.70 B2= 9.74 K(ZnA+L)=5.95	2000KAb	(38976)1840
H2A=Dipicolinic acid.									
Zn++	gl	KNO3	25°C	0.10M	C	M	K1=4.50 K(ZnL+A)=3.48 B(ZnLA)=7.98 K(ZnHL+B)=3.65	1999AAa	(38977)1841
HA=MOPSO, HB=MOPS.									
Zn++	gl	NaNO3	30°C	0.20M	U	M	K1=4.90 B(ZnAL)=7.48 B(ZnCL)=7.33 B(ZnDL)=7.80	1999PPa	(38978)1842
A is imidazole, C is 2-Me-imidazole, D is 2-Et-imidazole.									
Zn++	vlt	NaClO4	25°C	1.0M	C	M	B(ZnLA)=6.32 B(ZnLA2)=9.66 B(ZnL2A)=10.81	1999VKc	(38979)1843
Method: polarography. Medium pH: 8.5. A is 4-picoline.									

Medium pH 8.50. HA is propanoic acid.

Zn++      g1    KCl      25°C 0.50M U      K1=4.49    B2=8.25    1970SFb (38991)1855  
B3=9.8

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Zn++      oth KNO3   20°C 0.10M U      K1=5.6    B2=8.80    1964J0a (38992)1856
Method: paper electrophoresis
-----
Zn++      vlt NaClO4 20°C 0.20M U      K1=5.73    B2=9.6     1961JDa (38993)1857
-----
Zn++      gl  oth/un 25°C 0.02M U      K1=5.45          1961JDa (38994)1858
-----
Zn++      vlt oth/un 25°C    ?  U      K1=9.0          1959MHa (38995)1859
-----
Zn++      gl  oth/un 25°C 0.02M U      K1=5.45    B2=9.46    1954REa (38996)1860
-----
Zn++      gl  oth/un 15°C .005M U      B2=8.8          1953PEa (38997)1861
Medium: 0.005 ZnSO4
-----
Zn++      gl  oth/un 20°C 0.01M U      B2=8.5          1952ALa (38998)1862
*****
C5H9NO4          H2L          CAS 1948-48-7 (3038)
3-Carboxymethylaminopropanoic acid; HOOC.CH2.NH.CH2.CH2.COOH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KCl    30°C 0.10M U      K1=6.17    B2=10.48    1952CMb (39154)1863
*****
C5H9NO4          H2L      MIDA          CAS 4408-64-4 (190)
N-Methyliminodiethanoic acid; CH3.N(CH2.COOH)2
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaClO4 25°C 0.50M U      K1=7.44    B2=13.70    1992GLa (39205)1864
B(ZnH-1L)=-0.48
-----
Zn++      gl  KNO3   25°C 0.10M C      M    K1=7.63          1990DAb (39206)1865
K(ZnL+A)=3.90
B(ZnLA)=11.53
H2A: salicylaldoxime
-----
Zn++      gl  KNO3   25°C 0.10M C      M    K1=7.63          1990DAc (39207)1866
K(ZnL+A)=3.52
B(ZnAL)=11.15
HL: benzohydroxamic acid
-----
Zn++      gl  KNO3   35°C 2.0M U      K1=7.44    B2=13.61    1977MGb (39208)1867
-----
Zn++      nmr oth/un 32°C 0.50M U      K1=7.06    B2=13.25    1973HAb (39209)1868
35Cl probe
-----
Zn++      cal KNO3   20°C 0.10M U      H          1965ANa (39210)1869
DH(K1)=-9.1 kJ mol-1, DS=115.8 J K-1 mol-1; DH(B2)=-24.4, DS=185.6
-----

```

Zn++ EMF oth/un 20°C ->0 U K1=9.66 B2=17.26 1945SKa (39211)1870  
Method: H electrode

-----  
Zn++ gl KCl 20°C 0.10M U K1=7.66 B2=14.09 1945SKa (39212)1871  
\*\*\*\*\*

C5H9NO4S H2L (1736)  
3-(Carboxymethyl)thio-L-alanine; HOOC.CH2.S.CH2.CH(NH2)COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaCl 37°C 0.15M C K1=4.988 B2=8.588 1989BVa (39306)1872  
B(ZnH-1L)=-3.496

-----  
Zn++ gl NaClO4 25°C 2.00M U K1=5.04 B2=9.07 1980MAc (39307)1873

-----  
Zn++ gl KNO3 25°C 0.10M C K1=5.12 B2=9.26 1974NBb (39308)1874  
\*\*\*\*\*

C5H9NS2 HL CAS 25769-03-3 (3623)  
Pyrrolidine-N-carboxydithioic acid; C4H8N-CSSH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ vlt oth/un 25°C 0.70M U I K1=4.40 1985BEa (39328)1875  
Medium: seawater salinity(S)=36. When S=24: K1=4.36; S=12: 4.43; S=2.3: 4.87

-----  
Zn++ dis oth/un 22°C 0.01M U B2=10.1 1973SSa (39329)1876

-----  
Zn++ vlt KCl 25°C 1.00M U B2=10.5 1973SSa (39330)1877  
\*\*\*\*\*

C5H9N3 L Histamine CAS 51-45-6 (103)  
4(5)-(2'-Aminoethyl)imidazole; C3H3N2.CH2.CH2.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaCl 25°C 0.10M C T K1=5.15 B2= 9.97 1998TGa (39484)1878  
B(ZnHL)=10.87  
B(ZnH-1L)=-3.04  
At 90 C: K1=4.5, B2=8.6, B(ZnHL)=10.87, B(ZnH-1L)=-2.0.

-----  
Zn++ gl KCl 25°C 0.10M C H R K1=5.21 B2=10.13 1997SJa (39485)1879  
B(ZnHL)=11.72  
IUPAC evaluation. DH(K1)=-23.9 kJ mol<sup>-1</sup>, DH(K2)=-19.6, DH(CuHL)=-60.0

-----  
Zn++ gl NaNO3 25°C 0.10M U K1=4.95 B2= 8.69 1993GAa (39486)1880

-----  
Zn++ gl KNO3 35°C 0.10M U M K1=6.11 1991RSb (39487)1881  
B(Zn(Cys)L)=18.30

-----  
Zn++ gl KNO3 35°C 0.10M C M K1=6.11 1985RRc (39488)1882  
B(ZnL(cytidine))=11.73



-----  
 Zn++ cal KNO3 25°C 0.10M C H 1984ACb (39489)1883  
 DH(K1)=-23.9 kJ mol<sup>-1</sup>, DS=19.6 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-43.5, DS=50;  
 DH(ZnHL)=-60.6, DS=16.  
 -----

Zn++ gl KCl 25°C 0.10M U M K1=5.17 B2=9.73 1984DMc (39490)1884  
 -----

Zn++ gl KNO3 25°C 0.50M U K1=5.69 1983LWa (39491)1885  
 -----

Zn++ gl NaCl04 37°C 0.15M C M K1=4.867 B2= 9.66 1982BKc (39492)1886  
 B(ZnH-1L)=-2.736  
 B(Zn(ser)L)=9.257  
 B(ZnH(lys)L)=19.366  
 B(ZnH2(lys)L)=25.987  
 -----

Zn++ gl NaCl04 37°C 0.15M U M K1=5.93 B2=10.45 1982NVa (39493)1887  
 B(ZnHL)=11.91  
 B(ZnL(His))=11.78  
 B(ZnHL(His))=18.58  
 B(ZnH2L(His))=24.2  
 -----

Zn++ gl NaCl04 37°C 0.15M U M 1980KBa (39494)1888  
 B(ZnLA)=14.59  
 B(ZnHLA)=21.13  
 -----

A=Cysteine. Also with histidine, threonine, citric acid and glutamine  
 -----

Zn++ gl KNO3 25°C 0.20M C K1=5.27 B2=10.23 1979MBa (39495)1889  
 K(Zn+HL)=1.53  
 -----

Zn++ gl KCl 25°C 0.20M U M K1=5.56 B2=10.29 1978SKa (39496)1890  
 B(ZnHL)=11.78  
 B(ZnH-1L)=-2.83  
 B(ZnL(Gly))=9.97, B(ZnL(en))=10.60, B(ZnL(His))=11.48  
 -----

Zn++ gl KNO3 25°C 0.10M C K1=5.25 B2=10.20 1977DOb (39497)1891  
 B(ZnHL)=11.64  
 -----

Zn++ gl KNO3 25°C 0.20M U T K1=5.15 B2=9.99 1971RMD (39498)1892  
 K1(15 C)=5.19, K1(40 C)=4.96, K2(15 C)=4.95, K2(40 C)=4.72  
 -----

Zn++ gl KNO3 37°C 0.15M U K1=5.03 B2=9.81 1969PSb (39499)1893  
 B3=12.09  
 -----

Zn++ gl KNO3 25°C 0.20M U K1=5.62 1963CCb (39500)1894  
 -----

Zn++ gl KCl 25°C .058M U T K1=5.38 B2=9.84 1961SMa (39501)1895  
 0 C: K1=5.66, K2=4.72; 45 C: K1=5.02, K2=4.41  
 -----

Zn++ gl oth/un 20°C .005M U B2=9.6 1953PEa (39502)1896  
 Medium: 0.005 ZnSO4  
 -----

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-----
Zn++      gl  oth/un 20°C .015M U      B2=8.7      1952ALa (39503)1897
-----
Zn++      gl  KNO3  30°C 1.0M U T      K1=5.77      B2=16.27      1952HAa (39504)1898
50 C: K1=5.96, K2=4.49
*****
C5H9N3O4S      H2L      CAS 16907-58-7 (2106)
Thiosemicarbazone-diethanoic acid; H2N.CS.NH.N(CH2.COOH)2
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KCl  30°C 0.10M U      K1=5.8      1967GNb (39559)1899
K(Zn+HL)=4.4
-----
Zn++      cal KNO3  30°C 0.10M U H      1967Gnc (39560)1900
DH(K1)=13.0 kJ mol-1, DS=155 J K-1 mol-1
*****
C5H9N3O5      H2L      CAS 85594-21-4 (9125)
2-(Acetylamino)-N,N'-dihydroxypropanediamide;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      vlt KNO3  25°C 0.10M C      2004YYa (39580)1901
K1eff=9.00
Method: square wave voltammetry. Medium pH 7.0.
*****
C5H9N3O5      H2L      CAS 4438-86-2 (3622)
Semicarbazone-1,1-diethanoic acid; H2N.CO.NH.N(CH2.COOH)2
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KCl  30°C 0.10M U      K1=6.6      1967GNb (39589)1902
K(Zn+HL)=5.1
-----
Zn++      cal KNO3  30°C 0.10M U H      1967Gnc (39590)1903
DH(K1)=-1.7 kJ mol-1, DS=121 J K-1 mol-1
*****
C5H9N3S      HL      (1822)
2-Mercaptohistamine;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaClO4 25°C 0.10M U      K1=9.17      B2=15.72      1977STc (39604)1904
*****
C5H10NO7P      H4L      PMIDa      CAS 5994-61-6 (2433)
N-(Phosphonomethyl)iminodiethanoic acid; H2O3P.CH2.N(CH2.COOH)2
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3  25°C 0.10M C      K1=12.36      2000SDa (39645)1905

```

$$K(\text{ZnL}+\text{OH})=3.3$$
$$K(\text{Zn(phen)} + \text{L}) = 12.75$$
$$B(\text{ZnH-1L})=1.23$$
$$K(\text{Zn}+\text{HL})=5.9$$

Dimethylglyoxime O-methyl ether; CH3.C(:N.OH).C(:N.O.CH3).CH3

Piperazine-2-carboxylic acid; C<sub>4</sub>H<sub>9</sub>N<sub>2</sub>.COOH

2-Aminopentanedioic acid 5-amide;  $\text{H}_2\text{N} \cdot \text{CH}(\text{CH}_2 \cdot \text{CH}_2 \cdot \text{CO} \cdot \text{NH}_2) \text{COOH}$

$$B(\text{ZnAL}_2) = 9.61$$

Method: polarography, medium pH 8.5. HA is ethanoic acid.

Zn++ gl NaCl 37°C 0.15M U M T K1=4.215 B2=7.808 1985CFb (39791)1914  
B(ZnH-1L2)=-1.35

Ternary complex with cysteine

Zn++ gl NaCl04 37°C 0.15M U T K1=4.174 B2=7.66 1980KBa (39792)1915  
B(ZnH-1L)=-2.1

Zn++ gl NaCl04 25°C 0.10M U K1=4.17 B2=7.75 1973TSb (39793)1916

Zn++ gl NaCl04 25°C 3.00M U T K1=4.83 B2=9.17 1973WIa (39794)1917  
B3=11.84

Zn++ gl oth/un 15°C .005M U B2=8.4 1953PEa (39795)1918  
Medium: 0.005 ZnSO4

\*\*\*\*\*

C5H10N2O3 HL Ala-Gly CAS 687-69-4 (55)  
Alanyl-glycine; H2N.CH(CH3).CO.NH.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl KCl 20°C 0.20M U K1=2.71 B2=5.52 1982KRc (39880)1919

Zn++ gl oth/un 25°C 0.01M U K1=3.00 1954PEa (39881)1920  
\*\*\*\*\*

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl KCl 20°C 0.20M U K1=3.47 B2=6.51 1982KRc (39929)1921

Zn++ gl oth/un 25°C 0.01M U K1=4.1 1954PEa (39930)1922  
\*\*\*\*\*

C5H10N2O3 HL Gly-Ala CAS 3695-73-6 (56)  
Glycyl-alanine; H2N.CH2.CO.NH.CH(CH3).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl NaCl04 30°C 0.20M U M K1=4.10 1999PGa (39994)1923  
B(ZnAL)=5.50  
B(ZnBL)=6.19  
B(ZnCL)=6.19

A=imidazole, B=2-methylimidazole, C=2-ethylimidazole.

Zn++ gl NaCl04 25°C 0.20M M K1=3.78 1996VBa (39995)1924

Zn++ gl NaCl04 25°C 0.20M M M K1=3.789 B2= 6.65 1994VBb (39996)1925  
B(ZnH-1L)=-3.968

B(Zn(Ala)L)=8.826, B(Zn(Phe)L)=8.594, B(Zn(Tyr)L)=8.641,  
B(Zn(Trp)L)=8.823, B(Zn(His)L)=10.794, B(ZnH(His)L)=16.912.

-----  
Zn++ gl NaClO4 25°C 0.20M M K1=3.789 B2= 6.65 1994VBc (39997)1926  
\*\*\*\*\*

C5H10N2O3 L CAS 5619-16-9 (4324)  
Glycylglycine methyl ester; H2N.CH2.CO.NH.CH2.CO2CH3  
-----

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

Zn++ gl KNO3 25°C 0.05M U K1=2.77 B2=5.10 1973NAb (40031)1927  
\*\*\*\*\*

C5H10N2O3S H2L Cys-Gly CAS 19246-18-5 (2006)  
Cysteinyglycine; H2N.CH(CH2.SH)CO.NH.CH2.COOH  
-----

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

Zn++ gl KNO3 35°C 0.10M C T HM K1=8.51 2003RRa (40058)1928  
B(ZnLA)=17.18

HA is histidylglycine. Data for 35 and 45 C. DH(ZnLA)=-42.9 kJ mol<sup>-1</sup>,  
DS(ZnLA)=185 J K<sup>-1</sup> mol<sup>-1</sup>.  
-----

Zn++ gl KCl 25°C 0.20M C K1=8.15 B2=15.96 1988SKc (40059)1929  
\*\*\*\*\*

C5H10N2O3S H2L Gly-Cys CAS 57281-78-4 (2550)  
Glycyl-cysteine; H2N.CH2.CO.NH.CH(CH2.SH).COOH  
-----

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

Zn++ gl KCl 25°C 0.20M C B2=11.60 1988SKc (40066)1930  
B(ZnHL2)=20.28  
B(ZnH2L2)=27.86  
B(ZnH-1L2)=1.87  
-----

\*\*\*\*\*  
C5H10N2O4 HL CAS 1955-67-5 (6736)  
2-Aminopentanoic-5-hydroxamic acid; HOOC.CH(NH2).CH2.CH2.CO.NOH  
-----

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

Zn++ gl KCl 25°C 0.20M C K1=7.34 1993FBa (40076)1931  
B(ZnHL)=14.22  
B(Zn2HL)=19.97  
B(Zn2L)=10.90  
B(Zn2H-1L)=0.48  
-----

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

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

Zn++ gl oth/un 25°C 0.01M U K1=3.7 1954PEa (40098)1932  
\*\*\*\*\*

C5H10N2O4                      HL        Ser-Gly                      CAS 687-63-8    (2386)  
Seryl-glycine; H2N.CH(CH2.OH).CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C			K1=3.75    B2= 5.36	1986FTa (40116)	1933

\*\*\*\*\*  
C5H10N4OS                      HL                                      (2817)  
Biacetylmonoxime-thiosemicarbazone; CH3.C(:N.NH.CS.NH2).C(:N.OH).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	alc/w	30°C	50%	U T H			K1=6.87                      1992HRa (40129)	1934	

Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.  
DH(K1)=-50.5 kJ mol-1, DS(K1)=36.0 J K-1 mol-1.

\*\*\*\*\*  
C5H10N4O3                      L                                      CAS 54376-69-1    (8335)  
N,N'-Carbonylbis(2-aminoacetamide);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U TIH			K1=10.15    B2=16.35    1980SAc (40135)	1935	

Data for 0.075-0.15 M. At I=0, K1=10.50, K2=6.45. Also data for 30 C.  
DH and DS values.

\*\*\*\*\*  
C5H10OS2                      HL                                      CAS 110-50-9    (591)  
(Butoxy)dithiomethanoic acid; CH3.CH2.CH2.CH2O.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	vlt	KNO3	25°C	0.40M	C			B3=9.04	1984HSb (40152)	1936

Method: polarography.

Zn++	dis	KNO3	25°C	1.00M	U			B2=6.8                      1983SAa (40153)	1937	
------	-----	------	------	-------	---	--	--	---	------	--

\*\*\*\*\*  
C5H10OS2                      HL                                      CAS 6791-12-4    (8866)  
Isobutoxydithiomethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	vlt	KNO3	25°C	0.40M	C			B3=9.20	1984HSb (40166)	1938

Method: polarography.

\*\*\*\*\*  
C5H10O2                      HL        IsoValeric acid    CAS 503-74-2    (1311)  
3-Methyl-butanoic acid, Isovaleric acid; (CH3)2CH.CH2.COOH

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

Zn++ gl NaNO3 25°C 0.10M C I M K1=0.96 1988LTc (40181)1939  
K(Zn(phen)+L)=0.93

Data also for 50% v/v EtOH/H2O, and 50% v/v Dioxan/H2O mixtures

-----  
Zn++ vlt NaClO4 30°C 0.50M C K1=1.30 B2= 0.90 1978Gcb (40182)1940  
B3=2.30

Method: polarography. Medium pH 6.4

\*\*\*\*\*

C5H10O2 HL n-Valeric acid CAS 109-52-4 (3027)  
Pentanoic acid; CH3(CH2)3.COOH

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

-----  
Zn++ gl diox/w 25°C 50% C M K1=2.44 1985STb (40197)1941  
K(Zn(phen)+L)=2.42

-----  
Zn++ vlt NaClO4 30°C 0.50M C K1=0.30 B2= 1.23 1978Gcb (40198)1942  
B3=2.00

Method: polarography. Medium pH 6.4

\*\*\*\*\*

C5H10O2S HL CAS 4455-13-4 (4321)  
(1-Methylethylthio)ethanoic acid; (CH3)2.CH.S.CH2.COOH

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

-----  
Zn++ gl diox/w 25°C 50% U M K1=2.22 1972SGa (40228)1943  
K(ZnA+bpy)=2.22

\*\*\*\*\*

C5H10O2S HL CAS 20600-60-6 (4322)  
(Propylthio)ethanoic acid; CH3.CH2.CH2.S.CH2.COOH

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

-----  
Zn++ gl diox/w 25°C 50% U M K1=2.26 1972SGa (40234)1944  
K(ZnA+bpy)=2.19

Medium: 50% dioxan/H2O, 0.1 M NaClO4

\*\*\*\*\*

C5H10O2S HL CAS 7244-82-8 (3042)  
3-Ethylthiopropoic acid; CH3.CH2.S.CH2.CH2.COOH

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

-----  
Zn++ gl diox/w 30°C 50% U K1=3.02 B2=6.24 1956IFa (40239)1945  
\*\*\*\*\*

C5H10O3S HL (4325)  
Methoxyethyl thioglycollate; HS.CH2.CO.OCH2.CH2.OCH3

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

-----  
Zn++ vlt KNO3 25°C 0.50M U K1=3.95 B2=6.95 1971SSf (40292)1946

B3=10.04

\*\*\*\*\*

C5H11N L CAS 1003-03-8 (304)  
Cyclopentylamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaClO4	37°C	0.15M	C			K1=4.164 B2=7.832 B(Zn2H-2L2)=4.465	1974Mwb (40390)	1947

\*\*\*\*\*

C5H11N L Piperidine CAS 110-89-4 (105)  
Perhydropyridine; cyclo(-CH2.CH2.CH2.NH.CH2.CH2-) C5H11N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	cal	non-aq	25°C	100%	C	IH			2002LVa (40426)	1948

K(ZnP+L)=3.61  
K(ZnPL+L)=2.90

Medium: CCl4. ZnP: Zn(II)tetraphenylporphyrine. DH(ZnP+L)=-21.17 kJ mol<sup>-1</sup>, DS=-2 J K<sup>-1</sup> mol<sup>-1</sup>; DH(ZnPL+L)=-3.46, DS=44. Data for related ligands.

Zn++	sp	non-aq	25°C	100%	U			K(ZnP+L)=5.81	1994IUa (40427)	1949
------	----	--------	------	------	---	--	--	---------------	-----------------	------

Medium: CHCl3. ZnP is a zinc porphyrin host.

Zn++	sp	non-aq	25°C	100%	U	M		K(ZnA+L)=6.16	1993BKd (40428)	1950
------	----	--------	------	------	---	---	--	---------------	-----------------	------

Medium: toluene. A:2,3,7,8,12,13,17,18-octabromo-5,10,15,20-tetraphenyl-porphyrin. Also data for L=pyridine (4.84), imidazole (5.84), DMSO (4.12).

Zn++	sp	non-aq	25°C	100%	U	M		K(ZnA+L)=4.551	1993SSc (40429)	1951
------	----	--------	------	------	---	---	--	----------------	-----------------	------

Medium:Toluene. H2A:Octaethylporphyrin.

Zn++	sp	non-aq	?	100%	U	M		K(ZnA+L)=4.08	1990AHb (40430)	1952
------	----	--------	---	------	---	---	--	---------------	-----------------	------

Medium: CH2Cl2. A=biphenyl capped mesoporphyrin. Data for other porphyrin Zn complexes

\*\*\*\*\*

C5H11NO2 HL Valine CAS 72-18-4 (43)  
2-Amino-3-methylbutanoic acid; H2N.CH(CH3)2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	C	M		K1=5.32 B2= 9.19 B(ZnLA)=11.25	2000ZLa (40629)	1953

A=12-Pentyl-1,4,7,10-tetraazacyclotridecane-11,13-dione.

Zn++	gl	KNO3	35°C	0.10M	C	M		K1=4.53 B2= 8.43 B(ZnH-1L2)=0.95	1998ZWa (40630)	1954
------	----	------	------	-------	---	---	--	-------------------------------------	-----------------	------



Data for ternary complexes with 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime

Data for 25-45 C.  $\Delta H(K1) = -24.3 \text{ kJ mol}^{-1}$ ,  $\Delta S(K1) = 22 \text{ J K}^{-1} \text{ mol}^{-1}$ ;  $\Delta H(\text{Zn}(\text{bpy})\text{L}) = -46.0$ ,  $\Delta S(\text{Zn}(\text{bpy})\text{L}) = 57$ .

Zn++ g1 NaCl04 25°C 0.20M U T M K1=4.74 B2= 8.98 1993PPa (40633)1957  
K(ZnA+L)=4.63

Zn<sup>++</sup> g1 KCl 25°C 0.10M C TI T K1=4.46 B2=8.24 1993SKa (40634)1958  
IUPAC evaluation

Method: polarography, medium pH 8.5. HA is ethanoic acid.

Zn++      gl   KN03    37°C 0.15M U      M      K1=4.50      1990KKc (40637)1961  
B(ZnH-1L)=-2.95  
B(ZnA2L)=10.38  
B(ZnHAL)=14.40

Zn++      gl   KNO3   25°C 0.10M C      M      1989MAd (40638)1962  
K(ZnA+L)=4.27  
B(ZnAL)=11.12

Zn++ g1 KNO3 35°C 0.20M U M K1=4.70 B2=8.72 1989RVa (40639)1963  
K(ZnA+L)=4.21

Zn++      gl   NaCl04 27°C 0.20M U      M    K1=4.74   B2= 8.98   1988PPc (40640)1964  
K(ZnA+L)=4.63

Zn++ ISE KNO3 25°C 0.10M U M T K1=4.50 B2=8.16 1985DVa (40641)1965

$$K(\text{Zn}(\text{IDA})+\text{L})=3.30$$

Zn++ gl KNO3 25°C 0.10M U K1=4.58 1985MKa (40642)1966

Zn++ gl oth/un 30°C 0.20M U M K1=4.74 1984JOb (40643)1967  
 $K(\text{Zn}(\text{bpy})+\text{L})=4.69$

Medium: not stated.

Zn++ oth NaClO4 35°C 0.10M U M K1=4.40 B2=7.81 1984SYa (40644)1968  
 $B(\text{Zn}(\text{NTA})+\text{L})=3.17$

Method: paper electrophoresis

Zn++ vlt KNO3 30°C 0.30M C M K1=4.50 B2= 7.35 1983APa (40645)1969  
 $B(\text{ZnAL})=6.77$   
 $B(\text{ZnAL2})=7.71$   
 $B(\text{ZnA2L})=8.07$

Method: polarography. Medium: 0.30 M KNO3, pH 8.0. H2A is oxalic acid.

$B(\text{Zn}(\text{en})\text{L})=10.12$ ,  $B(\text{Zn}(\text{en})\text{L2})=11.00$ ,  $B(\text{Zn}(\text{en})2\text{L})=12.65$

Zn++ gl KNO3 37°C 0.15M U T K1=4.44 B2=8.24 1969CPc (40646)1970  
 $B3=10.62$   
 $K(\text{ZnL}+\text{H2O}=\text{Zn}(\text{OH})\text{L}+\text{H})=-8.62$

Zn++ oth oth/un 25°C 0.50M U T K1=4.40 B2=8.17 1967RPd (40647)1971  
 Method: optical rotation

Zn++ ISE oth/un 25°C 4.0M U T K1=4.60 B2=9.06 1958PEa (40648)1972  
 Method: Cd/Hg electrode

Zn++ ISE oth/un 25°C 4.0M U T K1=4.67 B2=8.97 1958PQa (40649)1973  
 Method: Cd/Hg electrode

Zn++ gl oth/un 25°C 0.02M U B2=8.1 1954REa (40650)1974

Zn++ gl oth/un 20°C 0.01M U B2=8.2 1952PEa (40651)1975  
 Medium: ZnSO4

Zn++ gl oth/un 25°C 0.01M U K1=5.00 B2=9.10 1949MMa (40652)1976

\*\*\*\*\*

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

Zn++ gl NaNO3 25°C 0.10M C M K1=5.30 B2= 9.64 2000KAb (40815)1977  
 $K(\text{ZnA}+\text{L})=3.52$

H2A=Dipicolinic acid.

Zn++ gl KNO3 25°C 0.20M U T HM K1=4.50 1996JLd (40816)1978  
 $K(\text{Zn}(\text{bpy})+\text{L})=4.25$

Data for 25-45 C. DH(K1)=-17.6 kJ mol<sup>-1</sup>, DS(K1)=33 J K<sup>-1</sup> mol<sup>-1</sup>;  
 DH(Zn(bpy)L)=-15.9, DS(Zn(bpy)L)=29.

---

Zn++      gl    KNO3    25°C 0.10M C      T    K1=4.42    B2=8.52    1975IPb (40817)1979

---

Zn++      gl    oth/un 25°C 0.02M U      K1=5.09    B2=9.19    1954REa (40818)1980

---

Zn++      gl    oth/un 20°C 0.00 U      B2=8.1      1952PEa (40819)1981  
 Medium: 0.0005 ZnSO4

\*\*\*\*\*

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	C	M	K1=4.82	1999AAa (41028)1982	
							K(ZnL+A)=3.74		
							B(ZnLA)=8.56		
							K(ZnHL+B)=1.89		
							K(ZnHL+C)=1.78		

HA=MOPSO, HB=MOPS, HC=DIPSO.

---

Zn++	vlt	NaClO4	25°C	1.0M	C	M	K1=4.38	B2= 8.36	1997KKb (41029)1983
							B3=11.73		
							B(ZnAL)=4.52		
							B(ZnA2L)=8.72		
							B(ZnAL2)=11.92		

Method: polarography. HA is pyridoxine (vitamin B6). Medium pH 8.50.

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Zn++	gl	KNO3	25°C	0.10M	C	R	K1=4.38	B2=8.35	1995BEa (41030)1984
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IUPAC evaluation

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Zn++	gl	NaNO3	25°C	0.10M	U		K1=4.37	B2= 8.75	1995ZWa (41031)1985
------	----	-------	------	-------	---	--	---------	----------	---------------------

Data for DL-methionine.

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Zn++	gl	NaClO4	25°C	0.20M	U	T M	K1=4.69	B2= 8.65	1993PPa (41032)1986
							K(ZnA+L)=4.54		

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

---

Zn++	gl	NaCl	37°C	0.15M	U	M			1991Hwa (41033)1987
							B(ZnLA)=9.696		
							B(ZnHLA)=16.746		
							B(ZnH2LA)=20.889		

H2A is 7-oxabicyclo-[2,2,1]-hept-5-ene-2,3-dicarboxylic acid

---

Zn++	gl	KNO3	35°C	0.20M	U	M	K1=4.37	B2=7.93	1989RVa (41034)1988
							K(ZnA+L)=3.81		

A=bis(imidazol-2-yl)methane

---

Zn++	gl	KNO3	25°C	0.10M	M	M			1989SHd (41035)1989
------	----	------	------	-------	---	---	--	--	---------------------

$$K(\text{Zn}(\text{nta})+\text{L})=2.94$$

-----  
 Zn++ gl NaClO4 27°C 0.20M U M K1=4.69 B2= 8.65 1988PPc (41036)1990  
 $K(\text{ZnA}+\text{L})=4.54$

A is 2,2'-dipyridylamine.

-----  
 Zn++ gl KNO3 25°C 0.10M U K1=4.45 1985MKa (41037)1991

-----  
 Zn++ gl oth/un 30°C 0.20M U M K1=4.69 1984JOa (41038)1992  
 $K(\text{Zn}(\text{bpy})+\text{L})=4.59$

Medium: not stated.

-----  
 Zn++ gl KCl 25°C 0.20M U K1=4.30 B2=8.15 1982FGa (41039)1993

-----  
 Zn++ gl KNO3 25°C 0.10M C T K1=4.39 B2=8.38 1975IPb (41040)1994

-----  
 Zn++ oth KNO3 20°C 0.10M U K1=4.9 B2=8.50 1964JOa (41041)1995  
 $K_3=3.2$

Method: paper electrophoresis

-----  
 Zn++ gl KNO3 25°C 0.10M U K1=4.37 B2=8.33 1964LMA (41042)1996

-----  
 Zn++ vlt oth/un 25°C ? U K1=8.3 1959MHa (41043)1997

-----  
 Zn++ gl KNO3 25°C 0.15M U K1=4.38 B2=8.47 1955LMA (41044)1998

-----  
 Zn++ gl oth/un 18°C .005M U B2=8.3 1953PEa (41045)1999

Medium: 0.005 ZnSO4

\*\*\*\*\*

C5H11NO2S HL CAS 93964-73-9 (3633)

Cysteine ethyl ester;  $\text{H}_2\text{N}.\text{CH}(\text{CH}_2.\text{SH}).\text{CO}.\text{OCH}_2.\text{CH}_3$

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	M		K1=7.42 B2=16.33	1993GVa (41143)	2000

 $B(\text{ZnHL})=12.70$

-----  
 Zn++ EMF oth/un ? dil U K1=8.61 B2=16.99 1967YTa (41144)2001

\*\*\*\*\*

C5H11NO2S H2L D-Penicillamine CAS 52-67-5 (1323)

D-2-Amino-3-mercapto-3-methylbutanoic acid;  $(\text{CH}_3)_2\text{C}(\text{SH})\text{CH}(\text{NH}_2)\text{COOH}$

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	37°C	0.15M	C	M		1996NAa (41169)	2002

 $B(\text{ZnHLA})=23.79$   
 $B(\text{ZnLA})=16.96$   
 $K(\text{ZnHA}+\text{L})=10.18$   
 $K(\text{ZnL}+\text{A})=6.63$

HA is DL-2,3-diaminopropanoic acid, HB is DL-2,4-diaminobutanoic acid.

B(ZnH2LB)=30.67.

-----  
Zn++ gl NaCl04 37°C 0.15M C M 1996NAa (41170)2003

B(Zn(orn)H2A)=31.44

B(Zn(orn)HA)=24.65

K(ZnH(orn)+L)=10.09

K(ZnL+orn)=6.59

K(Zn(orn)+L)=10.23, B(Zn(orn)L)=16.92.

-----  
Zn++ oth NaCl04 35°C ? U K1=9.70 B2=17.01 1991TSb (41171)2004

-----  
Zn++ gl KCl 25°C 0.10M M K1=9.75 B2=19.56 1987HLA (41172)2005

B(ZnHL)=15.11

B(ZnHL2)=25.44

B(ZnH2L2)=30.7

-----  
Zn++ gl KNO3 25°C 0.10M C K1=9.42 B2=19.54 1983SLc (41173)2006

K(Zn+HL+L)=14.92

K(Zn+2HL)=9.67

B(ZnL3)=22.68

-----  
Zn++ gl KCl 25°C 0.20M U M K1=9.66 B2=19.39 1979SGa (41174)2007

B(ZnHL)=14.80

B(ZnHL2)=25.23

B(ZnH2L2)=30.65

B(ZnL(Gly))=13.51

B(ZnL(His))=15.14, B(ZnL(Histamine))=14.61

\*\*\*\*\*

C5H11NO2S H2L Penicillamine CAS 52-66-4 (350)

DL-2-Amino-3-mercapto-3-methylbutanoic acid; (CH3)2C(SH)CH(NH2)COOH

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

-----  
Zn++ gl NaCl04 37°C 0.15M C M K1=10.33 B2=20.19 1993NAC (41230)2008

B(ZnHL2)=25.99

B(ZnH2L2)=31.31

Data for ternary complexes with imidazole, histamine and histidine.

B(ZnH2L(his))=27.83, B(ZnHL(his))=22.66, B(ZnL(his))=16.66, K(ZnL+his)=6.3

-----  
Zn++ oth NaCl04 35°C 0.10M C M K1=9.80 B2=17.11 1993SGb (41231)2009

K(Zn(nta)+L)=5.36

Method: electrophoresis. Medium: pH 8.5

-----  
Zn++ gl KNO3 32°C 0.0 U 1992BKf (41232)2010

K(Zn+H2L=ZnL+2H)=-8.13

K(Zn+2H2L=ZnL2+4H)=-18.23

Medium: 0.005 M KNO3

-----  
Zn++ gl KNO3 25°C 0.10M M M 1989SHd (41233)2011

K(Zn(nta)+L)=7.28

K(Zn(nta)+H+L)=13.79

-----  
Zn++ gl NaCl 37°C 0.15M U K1=10.017 B2=18.809 1984JSb (41234)2012  
-----

Zn++ gl NaCl04 25°C 3.00M C B2=20.52 1976Cwa (41235)2013

B(ZnHL2)=26.79

B(ZnH2L2)=32.72

B(Zn3L4)=47.58

B(Zn3HL4)=53.83

B(ZnH-1L2)=8.56  
-----

Zn++ gl KCl 25°C 0.12M U K1=9.42 B2=19.44 1972RJa (41236)2014

K(Zn+HL+L)=25.56

K(Zn+2HL)=30.89

For the D isomer: K1=9.38, B2=19.39, K(Zn+L+HL)=25.55, K(Zn+2HL)=30.88  
-----

Zn++ gl NaCl04 20°C 0.10M U K1=9.59 B2=19.56 1968PSg (41237)2015

B(ZnH2L)=25.55

B(ZnH2L2)=31.17  
-----

Zn++ vlt oth/un 25°C 0.20M U 1966SPa (41238)2016

B3=16.11

Medium: phosphate buffer  
-----

Zn++ gl KNO3 25°C 0.10M U K1=9.51 B2=18.51 1964Lma (41239)2017  
-----

Zn++ gl KNO3 25°C 0.15M U K1=10.0 B2=18.90 1962KRa (41240)2018

\*\*\*\*\*

C5H11NO2S HL CAS 2629-59-6 (2461)

S-Ethyl-L-cysteine; H2N.CH(CH2.S.C2H5).COOH  
-----

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

Zn++ gl NaCl04 25°C 1.00M C K1=4.17 B2=8.33 1981CPb (41290)2019

B(ZnH-1L)=-1.05

\*\*\*\*\*

C5H11NO2Se HL CAS 1464-42-2 (1900)

2-Amino-4-(methylseleno)butanoic acid; CH3.Se.CH2.CH2.CH(NH2).COOH  
-----

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

Zn++ gl NaNO3 25°C 0.10M U K1=4.88 B2= 8.75 1995Zwa (41302)2020

Data for DL-selenomethionine.

\*\*\*\*\*

C5H11NS2 HL CAS 147-84-2 (2126)

Diethyldithiocarbamic acid; (CH3.CH2)2N.CSSH  
-----

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

Zn++ EMF non-aq 25°C 100% U B2=11.9 1987USa (41329)2021

Medium: DMF, 0.1 M LiClO<sub>4</sub>

Zn++ ISE non-aq 25°C 100% U K1=7.83 B2=15.7 1984LSb (41330)2022  
Medium: DMSO, 0.1 M NaClO<sub>4</sub>; Ag-electrode. In MeOH: K1=7.7, B2=15.1

Zn++ dis oth/un 25°C 0.01M U B2=11.4 1973SSa (41331)2023

Zn++ vlt KCl 25°C 1.00M U B2=11.6 1973SSa (41332)2024

Zn++ sp non-aq ? 100% U M 1968SRg (41333)2025  
K(Zn(HA)<sub>2</sub>+2HL=ZnL<sub>2</sub>+2H<sub>2</sub>A)=0.24

Medium: CCl<sub>4</sub>. H<sub>2</sub>A=dithizone

\*\*\*\*\*

C<sub>5</sub>H<sub>11</sub>O<sub>8</sub>P H<sub>2</sub>L Ribose-5-phosph CAS 4300-28-1 (2756)

Ribose-5-phosphoric acid, Ribofuranoside 5 Phosphoric acid;

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

Zn++ gl NaNO<sub>3</sub> 25°C 0.10M C K1=2.20 1988MSa (41414)2026

\*\*\*\*\*

C<sub>5</sub>H<sub>12</sub>N<sub>3</sub>O<sub>3</sub>P H<sub>2</sub>L PYPH (223)

Piperidine-2-phosphonic acid; C<sub>5</sub>H<sub>10</sub>N<sub>2</sub>O<sub>3</sub>P

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

Zn++ gl KNO<sub>3</sub> 24°C 0.10M U K1=5.86 1989YKa (41432)2027

K(Zn+HL)=2.16

\*\*\*\*\*

C<sub>5</sub>H<sub>12</sub>N<sub>4</sub>O<sub>4</sub>P HL CAS 51276-47-2 (5704)

2-Amino-4-(methylhydroxyphosphoryl)butanoic acid;

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

Zn++ gl NaClO<sub>4</sub> 23°C 0.10M U K1=5.26 1990YTa (41440)2028

\*\*\*\*\*

C<sub>5</sub>H<sub>12</sub>N<sub>2</sub>O L TMU CAS 632-22-4 (146)

Tetramethylurea; (CH<sub>3</sub>)<sub>2</sub>N.CO.N(CH<sub>3</sub>)<sub>2</sub>

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

Zn++ cal oth/un 25°C ? U H 1980ACa (41476)2029

ZnX<sub>2</sub>(s)+2L=ZnL<sub>2</sub>X<sub>2</sub>(s) DH = - 83.1 X=Cl DH = -88.7 X=Br DH = - 128 X=I

\*\*\*\*\*

C<sub>5</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub> HL Ornithine CAS 1069-31-4 (46)

2,5-Diaminopentanoic acid; H<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>.CH<sub>2</sub>.CH(NH<sub>2</sub>)COOH

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

Zn++ vlt NaClO<sub>4</sub> 25°C 1.0M C M 1999VKc (41547)2030

B(ZnLA)=4.87

Method: polarography. Medium pH: 8.5. A is 4-picoline.

Also data for 5.8-36.8% w/w urea/H<sub>2</sub>O.

Medium pH 8.50.  $K(\text{Zn}+\text{HL}+2\text{A})=8.60$ ,  $K(\text{Zn}+2\text{HL}+\text{A})=10.0$ . HA is propanoic acid.

Method: measurement by glass and Zn/Hg electrodes.

B(ZnLA)=11.56, B(ZnHLA)=19.33, A = histamine. Also histidine

$$I = 1.0 \text{ M}, K(\text{Zn} + \text{HL}) = 2.60$$

Zn++ gl oth/un 20°C .005M U B2=7.6 1953PEa (41556)2039  
Medium: 0.005 ZnSO4

\*\*\*\*\*  
C5H12N2O2S                      HL        Met-hydroxamic        CAS 19253-87-3        (5992)



2-Amino-4-(methylthio)butanehydroxamic acid, Methionine hydrox.a.;  
CH3.S.CH2.CH2.CH(NH2).CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	37°C	0.15M	M	M		1992MMd (41604)	2041
							B(ZnHL)=11.68		
							B(ZnH-1L)=-1.40		
							B(ZnH-1L2)=1.47		
							B(ZnH2L2)=24.27		
							B(Zn2L3)=18.97, B(ZnCuL2)=21.90, B(ZnCuH-1L2)=16.72, B(ZnCuH-2L2)=10.01		
							B(CuZnH-3L3)=9.5, B(ZnNiH-1L2)=10.96, B(ZnNiH-2L2)=4.09, B(ZnNiH-3L3)=19.73		

\*\*\*\*\*

C5H12N2O2S HL (1737)  
 3-(2-Aminoethyl)thio-L-alanine; H2N.CH2.CH2.S.CH2.CH(NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C			1974NBb (41613)	2042
							K(Zn+HL)=3.71		
							K(ZnHL=ZnL+H)=-6.82		

\*\*\*\*\*  
 C5H12N4O3 HL Canavanine CAS 543-38-4 (5565)  
 Canavanine; H2N.CH(COOH).CH2.CH2.O.NH.C(:NH)-NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	U		K1=5.00 B2= 9.20	1991APa (41639)	2043

\*\*\*\*\*

C5H12O3S4 H3L CAS 19872-38-9 (4331)  
 2,3-Dimercaptopropylthioethanesulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	KNO3	20°C	0.10M	U		K1=14.20 B2=24.95	1968PRc (41650)	2044

\*\*\*\*\*

C5H12O4S3 H3L CAS 19872-36-7 (4332)  
 2,3-Dimercaptopropanoxyethanesulfonic acid; HS.CH2.CH(SH).CH2.O.CH2.CH2.HSO3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	KNO3	20°C	0.10M	U		K1=14.17 B2=24.38	1968PRc (41664)	2045

\*\*\*\*\*

C5H12O5S4 H3L CAS 35617-14-2 (4333)  
 2,3-Dimercaptopropanesulfonethanesulfonic acid; HS.CH2.CH(SH).CH2.SO2.CH2CH2.HSO3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	KNO3	?	0.10M	U		K1=14.17 B2=24.21	1968PRc (41695)	2046

\*\*\*\*\*

C5H13NO2 L CAS 105-59-9 (1070)  
N-Methyldiethanolamine; CH3.N(CH2.CH2.OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U			K1=4.3 K3=1.9 K4=1.0	1965DOb	(41741)2047

\*\*\*\*\*  
C5H13NO6P2 H4L CAS 56152-35-3 (8890)  
N-Pyrrolidinomethane-1,1-diphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C			K1=10.74 B(ZnH2L)=24.17 B(ZnHL)=19.89 B(ZnH-1L)=0.12 B(ZnH2L2)=37.55	2002MKc	(41749)2048

B(Zn3H2L2)=46.85.

\*\*\*\*\*  
C5H13NO7P2 H4L CAS 32545-75-8 (6890)  
N-Methylenedi(phosphonic acid)tetrahydrooxazine; OC4H8N.CH(P03H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	M			K1=9.46 K(Zn+HL)=7.25	1978GMf	(41762)2049

\*\*\*\*\*  
C5H13N2O4P H2L (7122)  
(S,S)-Alanyl-1-aminoethylphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	U			K1=4.22	1995HLA	(41785)2050

For the (S,R) isomer, K1=4.24, B(ZnH-1L)=-4.26.

\*\*\*\*\*  
C5H13N3 L (1866)  
cis-3,5-Diaminopiperidine; C5H9N(NH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	C			K1=7.93 B2=14.42	2000PSb	(41792)2051

\*\*\*\*\*  
C5H14NO5P H2L CAS 5994-60-5 (1302)  
N,N'-Bis(2-hydroxyethyl)aminomethylphosphonic acid; (HO.CH2.CH2)2N.CH2.P03H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.10M	U			K1=6.3	1981BGb	(41843)2052

\*\*\*\*\*

C5H14N2 L CAS 7328-91-8 (3029)  
2,2-Dimethyl-1,3-diaminopropane; H2N.CH2.C(CH3)2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	30°C	1.0M	U	TIH	K1=5.21 B2=10.41	1952HAa	(41872)2053
DH(K1)=-20.9 kJ mol <sup>-1</sup> , DS=33.5; DH(K2)=-20.9, DS(K2)=33.5									
0 C: K1=5.58, K2=5.58. In 1 M KCl, 30 C: K1=5.80, K2=4.55									

\*\*\*\*\*

C5H15NO6P2 H4L CAS 195000-13-6 (8888)  
N-(1-Methylpropyl)aminomethane-1,1-diphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=10.16	2002MKc	(41940)2054
							B(ZnH2L)=23.56		
							B(ZnHL)=19.40		
							B(ZnH-1L)=-0.22		
							B(ZnH-2L)=-11.54		
B(ZnH2L2)=36.53, B(ZnHL2)=26.00, B(Zn4H3L3)=68.59.									

\*\*\*\*\*

C5H15NO7P2 H4L AMOK CAS 63132-39-8 (1350)  
1-Hydroxy-3-N,N-dimethylaminopropane-1,1-diphosphonic acid;  
Me2N.CH2.CH2.C(OH)(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	U		K1=10.24	1979KBa	(41949)2055
							K(Zn+HL)=8.90		

\*\*\*\*\*

C5H15N3 L CAS 15995-42-3 (153)  
1,1,1-Tris(aminomethyl)ethane; (H2N.CH2)3C.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	cal	KNO3	25°C	0.50M	C	H		1980SVa	(41971)2056
DH1=-25.4 kJ mol <sup>-1</sup> , DS1=41, DH(K2)=-20.9, DS2=13 + ZnHL, Zn(OH)L and Zn(OH)2									
Zn++	gl	KNO3	20°C	0.10M	U		K1=7.47	1970KAd	(41972)2057
							K(Zn+HL)=3.82		
							K(Zn+H2L)=1.86		

\*\*\*\*\*

C5H15N3 L CAS 13531-52-7 (738)  
1,4,8-triazaoctane, N-(2-Aminoethyl)propane-1,3-diamine; H2NCH2CH2NHCH2CH2CH2NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U	H	K1=8.41	1996IFb	(41995)2058
							*K(ZnL)=-8.90		

DH(K1)=-27.9 kJ mol<sup>-1</sup>, DS(K1)=67.8 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Zn++ cal KNO3 25°C 0.50M U H 1974BFb (41996)2059  
DH(K1)=-35.2, DH(K2)=-35.3 kJ mol<sup>-1</sup>.  
-----

Zn++ gl KNO3 25°C 0.10M U K1=8.6 B2=12.40 1973AHc (41997)2060  
-----

Zn++ gl KNO3 25°C 0.50M U K1=8.77 B2=12.57 1973BFa (41998)2061  
K(ZnL+OH)=4.99  
-----

\*\*\*\*\*  
C5H16N4 L (3614)  
Tetrakis(aminomethyl)methane; C(CH<sub>2</sub>.NH<sub>2</sub>)<sub>4</sub>  
-----

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

Zn++ gl KNO3 25°C 0.10M U 1968ZBa (42011)2062  
-----

K(Zn+HL)=5.0

K(Zn+H<sub>2</sub>L)=3.2

\*\*\*\*\*  
C6H3N3O7 HL Picric acid CAS 88-89-1 (593)  
2,4,6-Trinitrophenol; HO.C6H2(NO<sub>2</sub>)<sub>3</sub>  
-----

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

Zn++ sp oth/un 21°C 0.40M U B2=2.92 1955BKa (42080)2063  
-----

Medium:0.2-0.6(some EtOH)

\*\*\*\*\*  
C6H4N2O2Cl HL CAS 39825-15-5 (3709)  
4-Chloro-2-nitrosophenol; HO.C6H3.(2-N:O)(4-Cl)  
-----

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

Zn++ gl diox/w 25°C 50% U K1=4.53 1961SHa (42176)2064  
-----

Medium: 50% dioxan, 0.1 M KNO<sub>3</sub>

\*\*\*\*\*  
C6H4N2 L CAS 100-48-1 (321)  
4-Cyanopyridine; C5H4N.CN  
-----

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

Zn++ sp non-aq 25°C 100% U M 1993SSc (42189)2065  
-----

K(ZnA+L)=3.012

K(ZnB+L)=3.234

K(ZnC+L)=3.554

Medium:Toluene. H2A:Octaethylporphyrin. H2B=t-Octaethylchlorin.

H2C=ttt-Octaethylisobacteriochlorin

\*\*\*\*\*  
C6H4N2O5 HL CAS 50-28-5 (505)  
2,4-Dinitrophenol; HO.C6H3(NO<sub>2</sub>)<sub>2</sub>  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	oth/un	21°C	0.40M	U		B2=2.26	1955BKa (42219)	2066

Medium: 0.2-0.6, some EtOH

\*\*\*\*\*

C6H4N2O6	H2L	CAS 7659-29-2	(2694)
----------	-----	---------------	--------

1,2-Dihydroxy-3,5-dinitrobenzene; (HO)2.C6H2(NO2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	M		K1=6.92 B2=12.79	1986HAd (42259)	2067

\*\*\*\*\*

C6H4N4O	HL	CAS 900-47-0	(3083)
---------	----	--------------	--------

4-Hydroxypteridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	20°C	0.01M	U		K1=3.3	1953ALa (42274)	2068

\*\*\*\*\*

C6H4O4	H2L	CAS 615-94-1	(1280)
--------	-----	--------------	--------

2,5-Dihydroxy-1,4-benzoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	30°C	25%	M	TIH	K1=7.14 B2=12.20	1991GDe (42300)	2069

Medium: 35% Dioxan/H2O, 0.1 M NaClO4. Other solvents and backgroundf concs.

Zn++	gl	KCl	30°C	25%	M	TIH	K1=6.04 B2=10.22	1991GDe (42301)	2070
------	----	-----	------	-----	---	-----	------------------	-----------------	------

Medium: 35% Dioxan/H2O, 0.1 M NaClO4. Other solvents and backgroundf concs.

\*\*\*\*\*

C6H4O5	H2L	Comenic acid	CAS 499-78-5	(2544)
--------	-----	--------------	--------------	--------

3-Hydroxypyran-4-one-6-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	KCl	25°C	0.10M	M	I	K1=5.28	1985PEe (42316)	2071

Zn++	gl	NaClO4	25°C	0.50M	U		K1=4.86 B2=8.76	1967CBb (42317)	2072
------	----	--------	------	-------	---	--	-----------------	-----------------	------

\*\*\*\*\*

C6H5NO	L	Picolinaldehyde	CAS 1121-60-4	(1186)
--------	---	-----------------	---------------	--------

2-Pyridinecarboxaldehyde; C5H4N.CHO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U	M		2000NDa (42380)	2073

B(Zn(val)L)=10.29  
 B(Zn(val)L2)=12.21  
 B(Zn(val)2L2)=16.71  
 B(Zn(phe)L)=10.17  
 B(Zn(phe)L2)=12.05, B(Zn(phe)2L2)=16.49, B(Zn(trp)L)=10.12,

B(Zn(trp)L2)=12.38, B(Zn(trp)2L2)=16.53.

-----  
Zn++ gl KNO3 25°C 0.10M U M K1=1.67 B2= 3.27 1999NDa (42381)2074  
Data for ternary complexes with histidine.

-----  
Zn++ nmr non-aq 30°C 100% U K1=0.14 B2=-0.65 1981PWa (42382)2075  
Conductivity also used  
Medium: CH3CN

\*\*\*\*\*  
C6H5NO L CAS 872-85-5 (1319)  
4-Pyridinecarboxaldehyde; C5H4N.CHO

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ nmr non-aq 30°C 100% U K1=0.04 B2=-0.84 1981PWa (42388)2076  
Conductivity also used  
Medium: CH3CN

\*\*\*\*\*  
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  
-----  
Zn++ gl diox/w 25°C 50% C K1=6.10 B2=11.47 1988CFb (42457)2077  
B3=15.77  
Medium: 50% v/v dioxan/H2O, 0.1 M KNO3

-----  
Zn++ gl diox/w 25°C 50% C M 1988CTa (42458)2078  
B(ZnAL)=18.09  
B(ZnAL2)=23.4  
Medium: 0.2 M KNO3. H2A=3-Hydroxynaphthalene-1-carboxylic acid

-----  
Zn++ gl KNO3 25°C 0.15M U K1=5.177 B2=9.539 1988JJa (42459)2079  
B3=12.90

-----  
Zn++ gl KNO3 25°C 0.10M U T K1=4.21 1988NSc (42460)2080  
At 40 C, K1=4.02.

-----  
Zn++ gl alc/w 25°C var U T 1974DKa (42461)2081  
K1=72.32/D+5.245  
D=Dielectric constant of the 1-PrOH/H2O mixture. Also at 0 and 40 C

-----  
Zn++ gl diox/w 25°C 50% U K2=6.08 1966WRb (42462)2082  
Medium: 50% dioxan, 0.1 M NaClO4

-----  
Zn++ gl NaNO3 20°C 0.10M U K1=5.30 B2=9.62 1960ANb (42463)2083  
K3=3.30

-----  
Zn++ gl oth/un 25°C 0.0 U K1=5.75 B2=10.01 1957LUa (42464)2084  
-----

Zn++ gl KNO3 25°C 0.10M U K1=5.12 B2=9.42 1957SYa (42465)2085  
\*\*\*\*\*

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  
-----

Zn++ gl NaCl 25°C 0.10M U K1=2.36 2001DSb (42655)2086  
-----

Zn++ gl KNO3 25°C 0.10M U K1=7.20 B2=14.06 1988ZMa (42656)2087  
K3=5.90

\*\*\*\*\*

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  
-----

Zn++ gl NaCl04 25°C 0.10M U T K1=3.25 B2=6.40 1981RRb (42828)2088  
Temp range 25-50. K1 at 50 C = 3.00; K2 at 50 C = 2.85

\*\*\*\*\*

C6H5NO4 H2L 3-Nitrocatechol CAS 6665-98-1 (2685)  
1,2-Dihydroxy-3-nitrobenzene; O2N.C6H3(OH)2

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

Zn++ gl KCl 25°C 0.10M M K1=8.64 B2=15.80 1985HAb (42850)2089  
\*\*\*\*\*

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  
-----

Zn++ gl KNO3 25°C 0.10M C M K1=8.10 B2=13.99 1989DAa (42897)2090  
K(ZnA+L)=6.75  
B(ZnAL)=14.29

H2A: 8-hydroxyquinoline-5-sulfonic acid.

-----  
Zn++ gl KNO3 35°C 0.20M U M K1=6.52 B2=11.79 1989RVa (42898)2091  
K(ZnA+L)=6.09

A=bis(imidazol-2-yl)methane

-----  
Zn++ gl NaCl04 30°C 0.05M U TIH K1=10.07 B2=18.64 1986NDa (42899)2092  
I=0.1, 40 C: K1=7.74, B2=14.73; 50 C: K1=7.63, B2=14.40  
I=0.1, 30 C:K1= 8.47, B2=15.89; I=0.2, 30 C:K1= 8.27, B2=15.46

-----  
Zn++ gl KCl 25°C 0.10M M K1=8.25 B2=14.85 1984HAb (42900)2093  
-----

Zn++ gl KNO3 30°C 0.10M U K1=8.20 B2=15.00 1964MTb (42901)2094  
\*\*\*\*\*

C6H5NO4 HL CAS 78901-24-3 (885)

4-Hydroxypyridine-2-carboxylic acid N-oxide; C5H3N(O)(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaClO4	30°C	0.10M	U	T		K1=3.68 B2=6.38	1982RRa (42967)	2095
*****										
C6H5N2O2Cl		L						CAS 635-22-3	(763)	
3-Nitro-4-chloroaniline; H2N.C6H3(Cl)(NO2)										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	sp	non-aq	25°C	100%	U	M			1965SSe (42976)	2096
									K(ZnCl2+L)=1.37	
									K(ZnBr2+L)=1.52	
									K(ZnI2+L)=1.39	

Medium: acetone

\*\*\*\*\*

C6H5N3		L						Azabenzimidazol	CAS 273-21-2	(2033)
4-Azabenzimidazole, 1H-Imidazo[4,5-b]pyridine;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U			K1=1.11 B2=2.78	1981LMb (42986)	2097
*****										
C6H5O2Cl		H2L						4-Cl-Catechol	CAS 2138-22-9	(1656)
1,2-Dihydroxy-4-chlorobenzene; Cl.C6H3(OH)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	30°C	0.10M	U			K1=8.63 B2=15.45	1964MTb (43080)	2098
*****										
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
Zn++	sp	KCl	25°C	0.10M	M	I		K1=4.59	1985PEe (43103)	2099
*****										
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
Zn++	gl	NaClO4	25°C	0.50M	U			K1=4.88	1967CBb (43124)	2100
*****										
Zn++	gl	diox/w	25°C	75%	U			K1=9.74 B2=17.75	1960KFc (43125)	2101
*****										
C6H5O4I		HL						Iodokojic acid	CAS 40838-33-3	(3681)
3-Iodo-5-hydroxy-2-hydroxymethyl-4-pyrone;										



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.50M	U		K1=4.92	1967CBb (43142)	2102
*****									
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
Zn++	sp	KCl	25°C	0.10M	M I		K1=4.67	1985PEe (43146)	2103
*****									
C6H6NBr		L		3-Bromoaniline			CAS 591-19-5	(758)	
3-Bromoaniline; H2N.C6H4.Br									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	diox/w	25°C	100%	U			1976BSa (43174)	2104
							K(ZnCl2+L)=1.49		
*****									
C6H6NBr		L		4-Bromoaniline			CAS 106-40-1	(757)	
4-Bromoaniline; H2N.C6H4.Br									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	diox/w	25°C	100%	U T H			1976BSa (43182)	2105
							K(ZnCl2+L)=1.80		
At 10-50 C. DH = -26.3 kJ mol <sup>-1</sup> . DS = -53.9 J K <sup>-1</sup> mol <sup>-1</sup> .									
*****									
C6H6NBr		L					(8782)		
5-Bromo-2-methylpyridine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.50M	C		K1=0.00	2002KSb (43189)	2106
*****									
C6H6NCl		L					CAS 10445-91-7	(8781)	
4-(Chloromethyl)pyridine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.50M	C		K1=1.01	2002KSb (43205)	2107
*****									
C6H6NO6P		H2L					CAS 330-13-2	(5865)	
4-Nitrophenylphosphoric acid; NO2.C6H4.O.PO.(OH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.15M	U		K1=1.758	1990KLb (43238)	2108
*****									
Zn++	gl	NaNO3	25°C	0.10M	C		K1=1.73	1988MSa (43239)	2109

\*\*\*\*\*

C6H6N2O L Isonicotinamide CAS 1453-82-3 (1949)  
Isonicotinamide, Pyridine-4-carboxylic acid amide; C5H4N.CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=1.00 B2=1.40	1974WAb (43256)	2110

\*\*\*\*\*

C6H6N2O HL CAS 873-69-8 (1258)  
Pyridine-2-aldoxime; C5H4N.CH:NOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.10M	C			2003SSa (43283)	2111

B(0,1,1)=1.902  
B(-1,1,1)=-4.81  
B(-1,1,2)=-2.50  
B(-2,1,2)=-9.440

B(p,q,r): pH+qM+rHL=HpMq(HL)r. B(-2,2,2)=-6.76, B(-3,2,2)=-13.296,  
B(-4,2,2)=-22.66, B(-3,1,3)=-17.09.

Zn++	gl	NaCl04	25°C	0.30M	U		K1=5.8 B2=11.10	1966BEa (43284)	2112
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Zn++	gl	KNO3	24°C	0.10M	U		K1=5.5 B2=10.80	1962BEa (43285)	2113
------	----	------	------	-------	---	--	-----------------	-----------------	------

\*\*\*\*\*

C6H6N2O L Acetamidopyrid. CAS 1452-77-3 (2047)  
Pyridine-2-carboxylic acid amide; C5H4N.CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=1.54 B2=2.67	1976WAa (43313)	2114

\*\*\*\*\*

C6H6N2O L Nicotinamide CAS 98-92-0 (1473)  
Pyridine-3-carboxylic acid amide, Vitamin PP, C5H4N.CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=0.78 B2=1.11	1981LRa (43332)	2115

Zn++	oth	none	0°C	?	U		K1=1.10 B2=1.85	1971KAc (43333)	2116
------	-----	------	-----	---	---	--	-----------------	-----------------	------

Method: freezing point depression

\*\*\*\*\*

C6H6N2O2 HL Aminonicotinic CAS 5345-47-1 (903)  
2-Aminopyridine-3-carboxylic acid; H2N.C5H4N.CO.OH

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

Zn++	gl	KNO3	35°C	0.15M	U T H		K1=2.78	1980SKb (43348)	2117
------	----	------	------	-------	-------	--	---------	-----------------	------

Temperature range is 25-45C. At 35C, DH1=-6.40 kJ mol<sup>-1</sup>;  
DS1=32.51 J mol<sup>-1</sup> K<sup>-1</sup>.

-----  
Zn++ gl diox/w 35°C 50% U K1=3.12 1980SKb (43349)2118  
\*\*\*\*\*

C6H6N2O2 HL (8281)

3-Hydroxy-2-amidocarboxypyridine, Hydroxypicolinamide;

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

Zn++ gl KNO3 25°C 0.10M C K1=5.62 B2=10.79 1990ARa (43368)2119  
K(ZnL2+L)=4.2  
\*\*\*\*\*

C6H6N2O2 L m-Nitroaniline CAS 99-09-2 (464)

3-Nitroaminobenzene; H2N.C6H4.NO2

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

Zn++ sp non-aq 25°C 100% U M 1965SSe (43382)2120  
K(ZnCl2+L)=1.69  
K(ZnBr2+L)=1.98  
K(ZnI2+L)=1.88

Medium: acetone

\*\*\*\*\*

C6H6N2O2 L p-Nitroaniline CAS 100-01-6 (465)

4-Nitroaminobenzene; H2N.C6H4.NO2

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

Zn++ sp non-aq 25°C 100% U M 1965SSe (43399)2121  
K(ZnCl2+L)=0.74  
K(ZnBr2+L)=0.95  
K(ZnI2+L)=0.78

Medium: acetone

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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  
-----

Zn++ dis NaClO4 20°C 0.10M U M 1970VAa (43416)2122  
K(ZnL2+py)=1.23  
K(ZnL2+2py)=1.90  
\*\*\*\*\*

C6H6N2O3 HL CAS 99-57-0 (469)

2-Amino-4-nitrophenol; H2N.C6H3(OH)(NO2)

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

Zn++ gl diox/w 30°C 50% U K1=3.64 B2=6.13 1966VMa (43443)2123

Medium: 50% dioxan, 0.1 M NaClO4

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C6H6N2O4 L Methyl orotate CAS 6153-44-2 (2612)  
2,4-Dihydroxypyrimidine-6-carboxylic acid methyl ether

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	19°C	0.15M	U		K1=3.71	1979DZc (43457)	2124

C6H6N2O4 HL Methylorotic CAS 706-36-2 (2611)  
3N-Methyl-2,4-dihydroxypyrimidine-6-carboxylic acid, methylorotic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	20°C	0.15M	U		K1=6.20 K(Zn+HL)=2.36	1979DZc (43465)	2125

C6H6N4 L Biimidazole CAS 492-98-8 (1007)  
2,2'-Biimidazole; C3H3N2-C3H3N2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.10M	C		K1=3.48 B2= 6.54	1998TSa (43481)	2126

C6H6N4 L 9-Methylpurine CAS 20427-22-9 (2480)  
9-Methylpurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	1.00M	U		K1=0.9	1983ALa (43490)	2127

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
Zn++	gl	KNO3	30°C	0.10M	U		K1=8.32	1994RSa (43680)	2128

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.20M	M	M	K1=9.702 B2=18.51 B(Zn(ala)L)=14.482 B(Zn(phe)L)=14.234 B(Zn(try)L)=14.389 B(Zn(trp)L)=14.681 B(Zn(gly-gly)L)=13.084, B(Zn(gly-ala)L)=13.121.	1994VBc (43681)	2129

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	M	K1=9.15 B2=16.40 K(ZnA+L)=8.10 B(ZnAL)=15.64	1989DAa (43682)	2130

H2A: 8-hydroxyquinoline-5-sulfonic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	35°C	0.20M	U	M	K1=8.11 B2=14.57 K(ZnA+L)=7.90	1989RVa (43683)	2131

Zn++	gl	KNO3	35°C	0.10M	U	M	K1=5.05	1989SRe (43684)	2132
K(ZnL+Cytosine)=5.09									
Zn++	gl	NaClO4	30°C	0.10M	M	TIH	K1=8.48	B2=15.51	1986DNa (43685)
Data for 0.05-0.20 M NaClO4. Extrap. to I=0.0, K1=8.96, B2=16.10.									
Data for 30-50 C. DH(K1)=-25.5 kJ mol-1.									
Zn++	gl	KNO3	35°C	0.10M	C			1985RRh (43686)	2134
K(Zn+HL)=5.08									
Zn++	gl	KCl	25°C	0.20M	C	M		1979KGa (43687)	2135
B(ZnHLA)=28.69									
B(ZnLA)=18.26									

Zn++	gl	NaClO4	30°C	0.20M	U	M	1974MJa (43688)	2136
K(Zn(His)+L)=7.24								
Zn++	gl	NaClO4	25°C	0.10M	U		K1=9.90	B2=17.57
1971GSb (43689)								
Zn++	gl	KNO3	25°C	1.0M	U		1968TMa (43690)	2138
K(Zn+H2L=ZnL+2H)=-12.744								
K(ZnL+H2L=ZnL2+2H)=-14.315								
Zn++	gl	NaClO4	30°C	0.10M	U		K1=9.08	B2=16.32
1966APb (43691)								
Zn++	gl	KCl	25°C	0.10M	U		K1=9.50	B2=17.20
1966JNa (43692)								
Zn++	gl	KNO3	30°C	0.10M	U		K1=8.46	B2=15.24
1963MNC (43693)								

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U	M	K1=4.86 K(Zn(bpy)+L)=4.86	1967SIb (43905)	2142
Medium: 50% dioxan, 0.1 M NaCl04									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
Zn++	gl	diox/w	?	75%	U		K1=12.74	B2=23.69	1973UMa	(43910)	2144

Medium: 75% v/v dioxan, 0.01 M

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C6H6O3                      H3L      Pyrogallol                      CAS 87-66-1    (696)  
1,2,3-Trihydroxybenzene; C6H3(OH)3

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

Zn++            gl   NaClO4 30°C 0.10M M TIH                      1986DNa (43943)2145

K(Zn+HL)=8.41

K(Zn+2HL)=14.87

Data for 0.05-0.20 M NaClO4. Extrapol. to I=0.0, K(Zn+HL)=8.94,  
K(Zn+2HL)=15.89. Data for 30-50 C. DH(Zn+HL)=-8.49 kJ mol<sup>-1</sup>.

-----  
Zn++            gl   NaClO4 30°C 0.20M U            M                      1974MJa (43944)2146

K(Zn(His)+L)=6.84

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

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

Zn++            sp   KCl        25°C 0.10M M    I                      K1=5.72                      1985PEe (44064)2147

Zn++            gl   NaClO4 25°C 2.00M U            H                      K1=5.56      B2=10.31    1978GHa (44065)2148

K3=2.25

DH(K1)=-10.91 kJ mol<sup>-1</sup>, DH(K2)=-13.43, DH(K3)=-30.18

-----  
Zn++            gl   NaNO3    25°C 2.00M C T H                      K1=5.36      B2=9.94    1975GDa (44066)2149

K3=2.22

At 20 C, K1=5.40, K2=4.62, K3=2.33; 30 C: 5.34, 4.57, 2.19; 40 C: 5.29, 4.53, 2.18;  
DH(K1)=-9.2 kJ mol<sup>-1</sup>, DS=71.9 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-7.9, DS=60.6; DH(K3)=-12.1

-----  
Zn++            gl   NaClO4 25°C 0.50M U                      K1=5.53      B2=10.20    1967CBb (44067)2150

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Zn++            gl   diox/w 30°C 50% U                      K1=8.24      B2=14.84    1957Cwa (44068)2151

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C6H6O3                      HL      Allomaltol                      CAS 644-46-2    (2688)  
5-Hydroxy-2-methyl-4H-pyran-4-one;

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

Zn++            sp   KCl        25°C 0.10M M    I                      K1=5.38                      1985PEe (44124)2152

-----  
Zn++            gl   NaClO4 25°C 0.50M U                      K1=5.28      B2=9.57    1967CBb (44125)2153

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C6H6O4                      HL      Kojic acid                      CAS 501-30-4    (1800)  
5-Hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;

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

Zn++ sp KCl 25°C 0.10M M I K1=5.14 1985PEe (44170)2154

Zn++ gl NaCl04 25°C 2.00M U H K1=5.01 B2=9.20 1978GHa (44171)2155  
K3=2.58

DH(K1)=-8.69 kJ mol<sup>-1</sup>, DH(K2)=-10.81, DH(K3)=-28.92

Zn++ gl NaCl04 25°C 2.00M C T H K1=5.03 B2=9.34 1975GHa (44172)2156  
B3=12.4

DH(K1)=-7.9 kJ mol<sup>-1</sup>; DS(K1)=170.0 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-6.3, DS(K2)=59.8.

At 20 C, K1=5.04, B2=9.3, B3=12.0; at 40 C, K1=4.95, B2=9.11, B3=11.75

Zn++ gl NaCl04 25°C 0.50M U K1=4.98 B2=8.95 1967CBb (44173)2157

Zn++ gl diox/w 30°C 75v% U K1=10.38 B2=18.96 1960KFc (44174)2158

Zn++ EMF KCl 21°C 0.10M U K1=4.9 B2=9.1 19590Kb (44175)2159  
Method: H electrode

Zn++ gl diox/w 30°C 50% U K1=7.4 B2=13.2 1954BFa (44176)2160

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C6H6O5S H2L (8129)

2,3-Dihydroxybenzenesulfonic acid;

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

Zn++ gl KNO3 25°C 0.10M C M K1=9.00 B2=15.95 1989DAa (44270)2161  
K(ZnA+L)=7.72  
B(ZnAL)=15.26

H2A: 8-hydroxyquinoline-5-sulfonic acid.

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C6H6O5S H3L CAS 7134-09-0 (3687)

3,4-Dihydroxybenzenesulfonic acid; (HO)2.C6H3.SO3H

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

Zn++ gl KNO3 30°C 0.10M U K1=9.40 B2=16.60 1963Mnc (44276)2162

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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

Zn++ gl KNO3 25°C 0.10M C M K1=8.62 B2=15.02 1989DAa (44376)2163  
K(ZnA+L)=6.95  
B(ZnAL)=14.45

H2A: 8-hydroxyquinoline-5-sulfonic acid.

Zn++ gl NaCl04 30°C 0.05M U TIH K1=10.07 B2=18.64 1986NDa (44377)2164

I=0.1, 40 C: K1= 9.83, B2=18.00; 50 C: K1= 9.61, B2=17.70

I=0.1, 30 C:K1= 9.94, B2=18.33; I=0.2, 30 C:K1= 9.66, B2=17.93

Zn++	oth	KNO3	25°C	0.10M	U		K1=10.30	1984BSa (44378)	2165
By ultrafiltration									
Zn++	gl	KNO3	25°C	0.10M	C	M	K1=10.14 B2=18.22 B(ZnHL)=15.84 K(ZnH-1L2)=6.56 B(ZnL(bpy))=16.41 K(ZnH-1L(bpy))=5.59	19830Za (44379)	2166
Zn++	gl	NaClO4	25°C	0.50M	C	M	K1=9.14 B2=16.90	1977LMa (44380)	2167
Zn++	gl	KCl	25°C	0.10M	U		K1=10.41 K(Zn+HL)=3.30	1964PCa (44381)	2168
Zn++	gl	KNO3	30°C	0.10M	U		K1=10.19 B2=18.52	1963MNC (44382)	2169
Zn++	gl	NaClO4	25°C	1.0M	U		K1=9.00 B2=16.91	1960NAf (44383)	2170
Zn++	gl	oth/un	25°C	0.0	U		K1=11.68	1959NAa (44384)	2171
Zn++	gl	KNO3	25°C	0.10M	U		K1=11.07 K(ZnOHL+H)=8.0	1958CGa (44385)	2172
Zn++	gl	oth/un	25°C	.029M	U	I	K1=10.58 K(ZnLOH+H)=3.73	1958NAa (44386)	2173
Zn++	gl	oth/un	25°C	0.05M	U		K2=17.9	1958NAa (44387)	2174
*****									
C6H6O9                      H4L      Ditartronic ac      (8108)									
Di(2-Propane-1,3-dioic acid)ether;									
*****									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	C		K1=5.62 K(ZnL+H)=2.94	1984MMg (44531)	2175
*****									
C6H7N                      L      Picoline                      CAS 109-06-8      (320)									
2-Methylpyridine; C5H4N.CH3									
*****									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.50M	C		K1=0.22	2002KSb (44576)	2176
Zn++	sp	non-aq	25°C	100%	U	TIH	K(ZnA+L)=2.75	1982CFa (44577)	2177
Medium: BuCl. A=tetraphenylporphyrin. Also in PhCl									
Zn++	nmr	non-aq	25°C	100%	U	HM	K2=4.47	1980WBa (44578)	2178
Medium: toluene. DH(K2)=-47 kJ mol-1.									



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 Zn++ gl NaClO4 25°C 0.10M U M K1=<1 1964KSb (44579)2179  
 Ternary complexes with dimethyldithiocarbamic acid, oxine, and substituted  
 oxines

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C6H7N L beta-Picoline CAS 108-99-6 (324)  
 3-Methylpyridine; C5H4N.CH3

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaNO3	25°C	0.50M	C		K1=1.24	2002KSb (44656)	2180
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Zn++	cal	non-aq	25°C	100%	U	H	K1=4.6 B3=10.6 B4=12.1	1994K0a (44657)	2181
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Medium: CH3CN. DH(K1)=-31.4, DH(B2)=-56, DH(B3)=-74, DH(B4)=-90 kJ mol<sup>-1</sup>.

Zn++	cal	non-aq	25°C	100%	U	H	K1=1.16 B2=1.30	1993K0a (44658)	2182
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Medium: dimethylformamide, 0.1 M Et4NClO4. DH(K1)=-14.4, DH(B2)=-30.3 kJ m<sup>-1</sup>

Zn++	sp	non-aq	25°C	100%	U	M		1984Mwa (44659)	2183
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K(ZnA+L)=4.35

In toluene, A=21H,23H-Porphine-5,10,15,20-Tetrakis(3-nitrophenyl)  
 Data also for many other Porphine analogues of A

Zn++	nmr	non-aq	25°C	100%	U	HM		1980Wba (44660)	2184
------	-----	--------	------	------	---	----	--	-----------------	------

K(ZnA+L)=4.08

Medium: toluene. DH(K2)=-44.0 kJ mol<sup>-1</sup>.

A=5-(2'-(2"-phenylethyl)carbamylamino)-10,15,20-tetraphenylporphyrin.

Zn++	nmr	non-aq	25°C	100%	U	HM		1980Wba (44661)	2185
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K(ZnA+L)=3.95

Medium: toluene. A=5-(2'-Methylcarbonylamino)-10,15,20-tetraphenylporphyrin.  
 DH=-39 kJ mol<sup>-1</sup>.

Zn++	gl	KNO3	25°C	0.50M	U		K1=1.00 B3=2.62 B4=3.73	B2=2.15	1978LRb (44662)	2186
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Zn++	ISE	NaClO4	30°C	0.10M	U		K1=1.23 B3=2.18	B2=1.91	1966DKa (44663)	2187
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Zn++	gl	NaClO4	25°C	0.10M	U		K1=<1	1964KSb (44664)	2188
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C6H7N L gamma-Picoline CAS 108-89-4 (325)  
 4-Methylpyridine; C5H4N.CH3

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	cal	non-aq	25°C	100%	U	H	K1=3.9 B2=7.3	1994K0a (44770)	2189
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B3=10.3  
B4=12.2

Medium: CH3CN. DH(K1)=-36, DH(B2)=-66, DH(B3)=-72, DH(B4)=-89 kJ mol<sup>-1</sup>.

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Zn++ cal non-aq 25°C 100% U H K1=1.33 B2=1.57 1993K0a (44771)2190  
Medium: dimethylformamide, 0.1 M Et4NClO4. DH(K1)=-14.4, DH(B2)=-30.3 kJ m<sup>-1</sup>

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Zn++ sp non-aq 25°C 100% U M 1993SSc (44772)2191  
K(ZnA+L)=3.669  
K(ZnB+L)=4.039  
K(ZnC+L)=4.332

Medium:Toluene. H2A:Octaethylporphyrin. H2B:t-Octaethylchlorin.  
H2C:ttt-Octaethylisobacteriochlorin.

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Zn++ vlt KCl 25°C 0.10M C K1=2.44 B2= 2.70 1987SPb (44773)2192  
B3=4.60

Method: polarography.

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Zn++ cal non-aq 30°C 100% U H 1976AGc (44774)2193  
K(ZnA2+L)=2.13  
K(ZnB2+L)=2.46

In benzene. A=dibutyldithiocarbamate; DH=-35.8 kJ mol<sup>-1</sup>; DS=-77 J K<sup>-1</sup> mol<sup>-1</sup>.  
B=dibenzylldithiocarbamate; DH=-35.8; DS=-73.

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Zn++ EMF KNO3 25°C 1.00M U K1=1.46 B2=2.45 1969LWc (44775)2194  
B3=2.72

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Zn++ gl diox/w 25°C 50% U M K1=1.42 1967SIb (44776)2195  
K(Zn(bpy)+L)=1.2

Medium: 50% dioxan, 0.1 M NaClO4. Ternary complexes with dimethyldithiocarbamic acid, oxine and substituted oxines

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Zn++ ISE NaClO4 30°C 0.10M U K1=1.30 B2=2.11 1966DKa (44777)2196  
B3=2.85

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Zn++ gl NaClO4 25°C 0.10M U K1=1.40 1964KSb (44778)2197  
\*\*\*\*\*  
C6H7N L Aniline CAS 62-53-3 (583)  
Aminobenzene, aniline; C6H5.NH2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	cal	non-aq	25°C	100%	C	IH			2002LVa (44855)	2198
								K(ZnP+L)=2.88 K(ZnPL+L)=2.16		
Medium: CCl4. ZnP: Zn(II)tetraphenylporphyrine. DH(ZnP+L)=-27.25 kJ mol <sup>-1</sup> , DS=-36 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(ZnPL+L)=-25.05, DS=-43. Data for related ligands.										
Zn++	sp	diox/w	25°C	100%	U	T H			1976BSa (44856)	2199
								K(ZnCl2+L)=2.38		

At 10-50 C. DH = -27.6 kJ mol<sup>-1</sup>; DS = -45.9 J K<sup>-1</sup> mol<sup>-1</sup>.

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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
Zn++	gl	NaCl04	25°C	0.20M	M	M		K1=4.945    B2= 8.86 B(Zn(ala)L)=9.952 B(Zn(phe)L)=9.504 B(Zn(try)L)=9.771 B(Zn(trp)L)=9.994	1994VBc (44916)	2200

B(Zn(gly-gly)L)=8.436, B(Zn(gly-ala)L)=8.446.

Zn++	gl	diox/w	30°C	50%	U	M			1990DSc (44917)	2201
								B(ZnL(NTA))=5.50 B(ZnL(IMDA))=5.72		

Zn++	gl	diox/w	25°C	50%	U			K1=5.99    B2=10.95	1952CFa (44918)	2202
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C6H7NO                      L                      CAS 586-98-1    (3094)  
2-Hydroxymethylpyridine (2-pyridylmethanol); C5H4N.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U			K1=1.9	1965MTa (44960)	2203

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C6H7NO                      L      Pyridylcarbinol    CAS 100-55-0    (2036)  
3-(Hydroxymethyl)azine; C5H4N.CH2OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U			K1=1.07    B2=1.72	1981LRa (44980)	2204

\*\*\*\*\*

C6H7NO                      L                      CAS 7295-76-3    (3095)  
3-Methoxypyridine; C5H4N.0CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	ISE	NaCl04	30°C	0.10M	U			K1=0.90    B2=1.40 B3=1.54	1966DKa (44990)	2205

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C6H7NO                      L                      CAS 586-95-8    (1476)  
4-(Hydroxymethyl)pyridine; C5H4N.CH2OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U			K1=1.18    B2=1.93	1987KLb (45003)	2206

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C6H7NO                      L                      CAS 620-08-6    (3096)

4-Methoxypyridine; C5H4N.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ISE	NaClO4	30°C	0.10M	U		K1=1.53 B2=2.31 B3=3.08	1966DKa (45014)	2207

\*\*\*\*\*

C6H7NO2 HL CAS 19365-01-6 (2311)

3-Hydroxy-1-methylpyridin-4(1H)-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	37°C	0.15M	C	M		1980SHb (45038)	2208

B(ZnL(gly))=11.06; B(ZnL(his))=12.59; B(ZnL(Hhis))=17.99.

Zn++	gl	KNO3	37°C	0.15M	C		K1=6.68 B2=12.31 K3=2.1	1979SPd (45039)	2209
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C6H7NO2 HL CAS 19167-98-7 (5591)

Pyrrole-1-ethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	C	M	K1=1.92 K(Zn(phen)+L)=1.85	1985BSd (45054)	2210

Medium: 50% v/v dioxan/H2O, 0.1 M NaClO4

\*\*\*\*\*

C6H7NO4S H2L CAS 3343-41-7 (3711)

1-Hydroxy-1-(2'-pyridyl)methanesulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=5.08 B2=9.29	1964BGa (45075)	2211

\*\*\*\*\*

C6H7NO4S H2L CAS 4812-14-0 (3712)

1-Hydroxy-1-(3'-pyridyl)methanesulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=7.58 B2=14.29	1964BGa (45080)	2212

\*\*\*\*\*

C6H7NS HL CAS 137-07-5 (3098)

2-Aminothiophenol (o-aminothiophenol); H2N.C6H4.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=7.33 B2=14.10	1952FCa (45087)	2213

\*\*\*\*\*

C6H7N3O L CAS 1452-63-7 (3097)

Pyridine-2-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	20°C	0.01M	U		K1=8.4 B2=15.6	1956ARd (45098)	2214
*****									
C6H7N3O		L					Isonicotinic hy CAS 54-85-3 (1267)		
Pyridine-4-carboxylic acid hydrazide; C5H4N.CO.NH.NH2									
Zn++	gl	NaCl	37°C	0.15M	C	M	K1=5.6 B(ZnHL)=12.34 B(Zn(his)L)=11.35 B(ZnH(his)L)=18.83	1983CMA (45120)	2215
Zn++	gl	oth/un	20°C	0.01M	U		K1=5.4	1956ARd (45121)	2216
*****									
C6H7N3O2I2		HL					(7181)		
2,5-Diiodo-histidine;									
Zn++	gl	NaNO3	25°C	0.50M	C		K1=3.97 B(ZnH-1L)=-2.53 B(ZnH-1L2)=2.00 B(ZnH-2L2)=-4.72 B(ZnH-3L2)=-16.02	1994WCa (45137)	2217
*****									
C6H7O4P		H2L					CAS 701-64-4 (5866)		
Phenyl phosphoric acid; C6H5O.PO(OH)2									
Zn++	gl	NaCl	25°C	0.15M	U		K1=2.146	1990KLb (45223)	2218
Zn++	gl	NaNO3	25°C	0.10M	C		K1=2.07	1988MSa (45224)	2219
*****									
C6H8NO4P		H2L					(3713)		
2-Pyridylmethanephosphoric acid (1'-picolyl phosphate)									
Zn++	gl	KNO3	25°C	0.10M	U		K1=2.83	1968MTd (45244)	2220
*****									
C6H8N2		L					2-Picolylamine CAS 29722-36-9 (502)		
2-(Aminomethyl)pyridine; C5H4N.CH2NH2									
Zn++	cal	NaCl	25°C	0.15M	C	H	K1=5.295 B2=9.640	1987ENa (45326)	2221

DH(K1)=-25.8 kJ mol<sup>-1</sup>, DS=15 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-51.9, DS=11; DH(B3)=-84, DS=-43; DH(ZnH-2L)=85, DS=24; DH(ZnH-1L2)=24, DS=-37

Zn++	g1	KN03	25°C	0.50M	U	K1=5.37	B2=9.84	1971GEa (45328)2223
						K3=2.80		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	g1	KN03	25°C	0.50M	C			K1=1.55 B3=5.50 B4=6.50	B2= 3.60	2000KGa (45372)2228

Medium: 50% dioxan, 0.1 M NaCl<sub>04</sub>

\*\*\*\*\*

C6H8N2O4                      H2L                      (3100)  
Cyanomethyliminodiethanoic acid; NC.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U			K1=5.80    B2=9.51	1955SAa (45411)	2231

\*\*\*\*\*

C6H8N2S                      HL                      CAS 22325-27-5 (8521)  
4,6-Dimethyl-2-mercaptopyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	35°C	0.10M	C	M		K1=4.35 B(ZnAL)=7.84 B(ZnBL)=7.71 B(Zn(bpy)L)=8.84 B(Zn(phen)L)=10.63	1996RRa (45425)	2232

B(Zn(en)L)=8.55. H2A is oxalic acid, H2B is malonic acid.

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C6H8N3O2I                      HL                      (7180)  
5-Monoiodo-histidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.50M	C			K1=5.22    B2=9.55 B(ZnH-1L2)=1.05 B(ZnH-2L2)=-9.14	1994WCa (45430)	2233

\*\*\*\*\*

C6H8N4B-                      L                      (7237)  
Bis(pyrazol-1-yl)borate; (C3H3N2)2BH2-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	dis	non-aq	25°C	100%	U			K(Zn+2HL=ZnL2(org)+2H)=1.15	1996KSA (45436)	2234

By solvent extraction into CHCl3

\*\*\*\*\*

C6H8N4O2S                      L                      CAS 42026-60-8 (8288)  
6-Amino-3-methyl-2-(methylthio)-5-nitroso-4(3H)-pyrimidinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.1M	U	IH		K1=5.54    B2=11.04	1984MMh (45440)	2235

Data for I=0.01-0.20 M and 25-40 C. At I=0.0 M, K1=6.41, K2=5.95.  
DH(K1)=-15.7 kJ mol<sup>-1</sup>, DS(K1)=59.7 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-10.3, DS(K2)=72.2

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C6H8O2                      HL                      CAS 765-70-8 (8322)  
3-Methylcyclopentane-1,2-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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 Zn++ gl NaClO4 20°C 1.00M M M 1985MOa (45608)2243  
 B(ZnHLTartrate)=7.19  
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Zn++ EMF NaClO4 20°C 1.00M U K1=4.34 B2=7.50 1981MOc (45609)2244  
 Ascorbic acid treated as HL. Antimony electrode used  
 -----

Zn++ gl mixed 25°C 80% U 1980KKd (45610)2245  
 K(Zn+HL)=2.2  
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Medium: 80% DMF

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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
Zn++	gl	KNO3	20°C	0.10M	U		K1=3.19 K(Zn+HL)=2.42	1977CAd (45680)	2246

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Zn++ gl KNO3 25°C 0.05M M K1=3.50 1975DPb (45681)2247  
 \*\*\*\*\*  
 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
Zn++	gl	KCl	37°C	0.15M	C		K1=4.55 B2=6.87 B(ZnHL)=8.41 B(ZnHL2)=12.03 B(ZnH-1L)=-1.92	1991CCa (45899)	2248

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Zn++ gl KNO3 25°C 0.10M U T H K1=5.02 B2=6.76 1986CRd (45900)2249  
 B(ZnHL)=8.71  
 B(Zn2H-2L2)=-2.85  
 At 10 C: K1=4.99, B2=6.85, B(ZnHL)=8.73, B(Zn2H-1L2)=-3.18; at 45 C: K1=5.23,  
 B2=7.60, B(ZnHL)=8.83, B(Zn2H-1L2)=-1.7. DH(K1)=8 kJ mol<sup>-1</sup>; DH(B2)=27  
 -----

Zn++ gl NaClO4 30°C 0.10M U K1=4.79 1981MSa (45901)2250  
 -----

Zn++ gl NaClO4 37°C 0.15M C M K1=4.72 B2=7.36 1978BMa (45902)2251  
 B(ZnHL)=8.44  
 B(Zn2H-2L2)=-2.21  
 B(ZnLA)=12.36  
 B(ZnH2LA)=24.0  
 -----

H2A=cysteine

Zn++ gl KNO3 25°C 0.10M U M K1=4.83 1978DOa (45903)2252  
 B(ZnHL)=8.43  
 -----

B(ZnL(bpy))=9.61  
 -----

Zn++	gl	KNO3	25°C	0.10M	C	K1=4.83 B(ZnHL)=8.43 B(Zn2H-2L2)=-2.94	1977DOb (45904)2253
Zn++	gl	NaCl04	37°C	0.15M	C	K1=5.58 B(ZnH-1L)=-0.19	1977RWc (45905)2254
Zn++	gl	KNO3	25°C	0.10M	C	K1=5.10 B(ZnHL)=8.98	1975FCc (45906)2255
Zn++	gl	NaCl04	25°C	0.10M	U M	K1=4.87	1974RMa (45907)2256
Zn++	nmr	oth/un	32°C	0.50M	U	K(Zn+HL)=2.42	1973HAb (45908)2257
35Cl probe							
Zn++	oth	KNO3	25°C	0.70M	U	K(Zn+H3L=ZnH2L+H)=-1.38 K(ZnH2L=ZnL+2H)=-8.48	1970BCa (45909)2258
Method: zone electrophoresis							
Zn++	gl	NaCl04	20°C	0.10M	U	K1=4.98 K(Zn+HL)=2.98 K(Zn+H2L)=1.25	1964COb (45910)2259
Zn++	gl	NaCl04	33°C	0.25M	U	K(Zn+H3L=ZnHL+2H)=-4.2 K(ZnL+H)=4.3 K(ZnH-1L+H)=7.7	1961PPa (45911)2260
Zn++	ix	oth/un	25°C	0.16M	U	K1=4.71	1960LWa (45912)2261
Zn++	ISE	oth/un	23°C	?	U	B(Zn(OH)L)=10.92	1959KVa (45913)2262
Zn++	gl	oth/un	25°C	0.15M	U	K1=4.85 K(Zn+HL)=2.96	1959LLa (45914)2263
Zn++	oth	KCl	19°C	0.10M	U	K1=4.6 K(Zn+HL)=3.0 K(Zn+H-1L)=7.5	1959OKa (45915)2264
Zn++	gl	KNO3	25°C	2.0M	U	K1=4.25 K(Zn+H-1L)=7.44	1958MSb (45916)2265
Zn++	ix	oth/un	25°C	0.16M	U	K1=4.71	1958SLb (45917)2266
Zn++	ix	oth/un	?	?	U	K1=3.55	1957KPb (45918)2267
Zn++	sol	oth/un	?	?	U		1956VTa (45919)2268

$$Zn(Zn(OH)_2 + L = ZnOHL + OH) = 9.4$$

Zn++      oth oth/un 25°C 0.05M U      1952SUC (45920)2269  
K(Zn+H3L=ZnHL+2H)=-3.66

Zn++ vlt oth/un 25°C 0.30M U K(ZnL+OH)=5.5 1951MEa (45921)2270

Medium:  $\text{Na}_3\text{C}_6\text{H}_5\text{O}_7$

Zn++ vlt oth/un 25°C 0.20M U K(ZnL+OH)=5.5 1950MEb (45922)2271

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C6H8O7P2 H3L CAS 101378-64-7 (7666)  
Phenyldiphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Zn++ g1 NaNO3 25°C 0.10M M K1=4.06 1999SSa (46340)2272

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C6H9NO6 H3L CAS 41035-84-1 (4367)  
N-Carboxymethyl-L-aspartic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ g1 KNO3 25°C 0.10M U H K1=8.60 B2=11.65 2002KNb (46370)2273  
B(ZnHL)=12.77

for I=1.0 M: K1=7.49; B2=10.03; B(ZnHL)=12.40

Also data for  $I=0.5$  M

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C6H9NO6                      H3L                      NTA                      CAS 139-13-9                      (191)  
Nitrilotriethanoic acid; N(CH<sub>2</sub>.COOH)<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++      g1    NaNO3    25°C   0.10M M      K1=10.05      1996KSc (46558)2274

Zn<sup>++</sup> cal KNO<sub>3</sub> 25°C 1.00M U H 1995V0a (46559)2275  
DH(K1)=-6.4 kJ mol<sup>-1</sup>, DS=170 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-20.8, DS=198

Zn++            0th NaCl04 30°C 0.10M C            K1=10.66            1991TSC (46560)2276  
Method: electrophoresis. Medium: pH 5.8.

Zn++      gl   KNO3    25°C 0.10M C    M    K1=10.66    1990Dab (46561)2277  
K(ZnL+A)=3.58  
B(ZnLA)=12.00

H2A: salicylaldoxime

Zn++      gl   KNO3    25°C 0.10M C    M    K1=10.66    1990DAc (46562)2278  
K(ZnL+A)=3.47  
B(ZnAL)=14.13

HL: benzohydroxamic acid

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Zn++	ISE	KCl	25°C	1.0M	U	K1=9.30	1990TKa (46563)	2279
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The same measured by polarography: K1=9.38

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Zn++	vlt	KCl	25°C	1.0M	U	K(ZnL+L)=3.18	1990TKa (46564)	2280
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Zn++	oth	NaCl04	35°C	0.10M	C	K1=10.59	1986SYa (46565)	2281
------	-----	--------	------	-------	---	----------	-----------------	------

Method: paper electrophoresis. Medium pH 8.5.

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Zn++	oth	NaCl04	35°C	0.10M	C	M	K1=10.59	1985SGc (46566)	2282
------	-----	--------	------	-------	---	---	----------	-----------------	------

K(ZnL+his)=3.94  
Method: paper electrophoresis. Medium pH 8.5.

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Zn++	oth	NaCl04	35°C	0.10M	U	K1=10.59	1984SYa (46567)	2283
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Method: paper electrophoresis

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Zn++	gl	NaCl04	25°C	1.0M	U	*K(ZnL(H2O))=-9.18	1982BCb (46568)	2284
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Zn++	gl	NaNO3	25°C	0.10M	C	M	K(ZnL+py)=1.22 K(ZnL+A)=2.73 K(ZnL+NH3)=2.3 K(ZnL+CH3COO)<0.3	1981BKb (46569)	2285
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A=1,3-diazole. K(ZnL+HB)=0.6, H3B=H3PO4

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Zn++	gl	KNO3	35°C	2.0M	C	K1=6.55	B2=11.59	1981GMg (46570)	2286
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Zn++	gl	KNO3	25°C	0.10M	U	T	M	1981SVa (46571)	2287
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K(ZnL+Gly)=3.78  
At 20 C: K(ZnL+Gly)=3.84; 30 C: 3.72; 40 C: 3.59

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Zn++	gl	NaCl04	25°C	0.10M	U	M	K1=10.31	1974RMa (46572)	2288
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Zn++	gl	NaCl04	25°C	0.10M	U	M	K(Zn+HL)=3.45 K(Zn+HPO4)=2.40 K(ZnHL+HPO4)=8.10 K(Zn+HL+HPO4)=11.55	1974RMB (46573)	2289
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Zn++	gl	NaCl04	25°C	0.10M	U	M	K(Zn+HL)=3.45 K(ZnHL+Fulvate)=4.35 K(Zn+HL+Fulvate)=7.80	1974RMB (46574)	2290
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Zn++	nmr	oth/un	25°C	0.40M	U	M	K(ZnL+en)=5.00 K(ZnL+Gly)=3.62	1973RBB (46575)	2291
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$K(\text{ZnL}+\text{A})=3.61$   
 $K(\text{ZnL}+\text{B})=1.34$   
 H2A=iminodiethanoic acid, H2B=malonic acid.  $K(\text{ZnL}+\text{OH})=4.01$

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Zn++      gl   NaCl04   35°C   0.20M   U      M      1972PBe (46576)2292  
 $K(\text{ZnL}+\text{A})=5.17$   
 $K(\text{ZnL}+\text{B})=5.21$   
 $K(\text{ZnL}+\text{C})=5.13$   
 H2A=thioglycollic acid, H2B=thiolactic acid, H3C=thiomalic acid

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Zn++      gl   KNO3      25°C   0.10M   U   T   M      1971ICa (46577)2293  
 $K(\text{ZnL}+\text{Pro})=3.98$   
 $K(\text{ZnL}+\text{Gly})=3.59$   
 15 C,  $K(\text{ZnL}+\text{Pro})=4.14$ . 70 C,  $K=3.38$

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Zn++      gl   KNO3      25°C   0.10M   U   T   M      1971ICb (46578)2294  
 $K(\text{ZnL}+\text{A})=3.19$   
 HA=piperidine-2-carboxylic acid. 15 C,  $K(\text{ZnL}+\text{A})=3.32$ . 70 C,  $K=2.82$

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Zn++      gl   KNO3      25°C   0.10M   U   T   M      1971ICc (46579)2295  
 $K(\text{Zn}(\text{OH})\text{L}+\text{H})=10.06$   
 $K(\text{ZnL}+\text{A})=3.28$   
 HA=1-aminopentanecarboxylic acid.  
 $K(\text{ZnL}(\text{OH})+\text{H})(15 \text{ C})=10.47$ ,  $(70 \text{ C})=9.02$ ;  $K(\text{ZnL}+\text{A})(15 \text{ C})=3.33$ ,  $(70 \text{ C})=2.80$

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Zn++      gl   KNO3      25°C   0.10M   U   T   M      1971IVb (46580)2296  
 $K(\text{ZnL}+\text{Sar})=3.22$   
 $K(\text{ZnL}+\text{A})=3.28$   
 HA=dimethylglycine. 15 C,  $K(\text{ZnL}+\text{Sar})=3.34$ ,  $K(\text{ZnL}+\text{A})=3.41$ .  
 70 C,  $K(\text{ZnL}+\text{Sar})=2.75$ ,  $K(\text{ZnL}+\text{A})=2.76$

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Zn++      gl   KNO3      25°C   0.10M   U      M      1971TSh (46581)2297  
 $K(\text{ZnL}+\text{Ala})=3.36$   
 $K(\text{ZnL}+\text{Gly})=3.76$

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Zn++      gl   oth/un   25°C   1.50M   U      M      K1=10.45      1970FDa (46582)2298  
 $B(\text{ZnL}(\text{NH}_3))=12.78$   
 $B(\text{ZnL}(\text{py}))=11.21$   
 $B(\text{ZnL}(\text{NH}_3)(\text{py}))=13.21$   
 $B(\text{ZnL}(\text{NH}_3)\text{A})=13.16$   
 A=thiourea.  $B(\text{ZnL}(\text{NH}_3)(\text{SCN}))=13.05$ .  $B(\text{ZnL}(\text{SCN})_2)=12.14$ .  
 $B(\text{ZnL}(\text{NH}_3)(\text{S2O3}))=13.85$ .  $B(\text{ZnL}(\text{S2O3})_2)=13.69$

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Zn++      gl   KNO3      25°C   0.10M   U      M      1970STd (46583)2299  
 $K(\text{ZnL}+\text{A})=4.23$   
 $K(\text{ZnL}+\text{B})=7.07$   
 H3A=sulphosalicylic acid. H4B=tiron

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Zn++      gl   NaCl04   25°C   0.10M   U      M      1969AIa (46584)2300  
 $K(\text{ZnL}+\text{Trp})=3.02$

Zn++	gl	NaClO4	25°C	0.10M	U	M	1969BIa (46585)2301		
							K(ZnL+histamine)=3.61		
							K(ZnL(histamine)+H)=8.41		
Zn++	nmr	oth/un	25°C	1.0M	U		K1=10.0	B2=13.50	1969RKa (46586)2302
Zn++	gl	KNO3	25°C	0.05M	U	M	1968HAa (46587)2303		
							K(ZnL+OH)=3.55		
							K(ZnL+Gly)=3.64		
							K(ZnL+A)=1.58		
A=ethylvalinate									
Zn++	gl	KNO3	25°C	0.08M	U	M	1968HAa (46588)2304		
							K(ZnL+OH)=3.55		
							K(ZnL+A)=1.58		
							K(ZnL+Gly)=3.64		
A=ethylvalinate									
Zn++	gl	NaClO4	25°C	0.10M	U	M	1968ICa (46589)2305		
							K(ZnL+Arg)=3.28		
							K(ZnL+Ser)=3.18		
Zn++	gl	NaClO4	25°C	0.10M	U	M	1968ICa (46590)2306		
							K(ZnL+A)=2.28		
							K(ZnLA=ZnLA(OH)+H)=-10.20		
							K(ZnL=ZnL(OH)+H)=-10.16		
A=glycylglycine									
Zn++	gl	NaClO4	25°C	0.10M	U	M	1968ICb (46591)2307		
							K(ZnL+Asp)=3.24		
							K(ZnL+Glu)=2.96		
Zn++	gl	NaCl	25°C	1.0M	U		K1=9.18	1966Cwa (46592)2308	
Zn++	gl	KCl	20°C	0.10M	U		K1=10.44	1966IMb (46593)2309	
Zn++	cal	KNO3	20°C	0.10M	U	H	1964Hda (46594)2310		
DH(K1)=-3.5 kJ mol-1, DS=192.3 J K-1 mol-1									
Zn++	vlt	KNO3	20°C	0.10M	U	T	K1=10.66	1956SGa (46595)2311	
Zn++	vlt	KCl	20°C	0.10M	U	T	K1=10.67	1955SAa (46596)2312	
Zn++	gl	KCl	20°C	0.10M	U		K1=10.45	1951SFa (46597)2313	
Zn++	vlt	KCl	20°C	0.20M	U		K1=10.35	1950KKa (46598)2314	
Zn++	gl	KCl	20°C	0.10M	U		K1=>10	K2=3.0	1948SBa (46599)2315
							K(ZnLOH+H)=10		

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	C	M	K1=6.40 K(ZnL+A)=4.08 B(ZnLA)=10.48 K(ZnL+B)=4.15 B(ZnLB)=10.55	1999AAa (47399)	2316
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K(ZnHL+C)=2.13, K(ZnL+D)=4.23, B(ZnLD)=10.23.

HA=MOPSO, HB=MOPS HC=DIPSO, HD=TAPSO.

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Zn++	vlt	NaClO4	25°C	1.0M	C	M	K1=6.53    B2=12.40 B3=14.32 B(ZnAL)=6.69 B(ZnA2L)=12.20 B(ZnAL2)=14.51	1997KKb (47400)	2317
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Method: polarography. HA is pyridoxine (vitamin B6). Medium pH 8.50.

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Zn++	gl	NaClO4	25°C	0.20M	M		K1=6.514    B2=12.01 B(ZnHL)=11.623	1994VBb (47401)	2318
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Zn++	gl	NaNO3	25°C	0.50M	C		K1=6.48    B2=11.92 B(ZnH-1L2)=1.97 B(ZnH-2L2)=-8.84	1994WCa (47402)	2319
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Zn++	gl	KNO3	25°C	0.10M	M		K1=6.62    B2=12.03	1993GVa (47403)	2320
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Zn++	nmr	oth/un	21°C	var	U	M	K1=6.90    B2=12.20 *K(ZnL2)=-11.15 *K(ZnH-1L2)=-11.80 K(ZnL2+en)=1.85 K(ZnL2+pn)=1.78	1992DHa (47404)	2321
------	-----	--------	------	-----	---	---	--	-----------------	------

Medium: D2O. pD=pH+0.40. K(ZnL2+Gly)=1.30, K(ZnH-1L2+en)=1.48, K(ZnH-1L2+pn)=1.30, K(ZnH-1L2+Gly)=1.30, K(ZnL2+Hen)=0.70, K(ZnL2+Hpn)=0.78.

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Zn++	gl	KNO3	25°C	0.10M	U		K1=6.61    B2=11.47	1992LPc (47405)	2322
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Zn++	gl	NaClO4	25°C	0.20M	U		K1=6.51    B2=12.00	1992VBa (47406)	2323
------	----	--------	------	-------	---	--	---------------------	-----------------	------

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Zn++	gl	NaCl	37°C	0.15M	U	M		1991Hwa (47407)	2324
							B(ZnLA)=10.215 B(ZnH-1LA)=1.796 B(ZnH2LA)=21.609		

H2A is 7-oxabicyclo-[2,2,1]-hept-5-ene-2,3-dicarboxylic acid

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Zn++	gl	KNO3	35°C	0.10M	U	M	K1=6.35 B(Zn(Cys)L)=18.50	1991RSb (47408)	2325
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Zn++	gl	NaNO3	37°C	0.15M	U		K1=6.051		1982ESa (47421)2338
							B(ZnHL)=11.821		
							B(ZnHL2)=17.991		
Zn++	gl	NaNO3	37°C	0.15M	U	M			1982ESa (47422)2339
							B(ZnH2L(pyridoxamine))=28.494		
							B(ZnH3L(pyridoxamine))=35.812		
							B(ZnH4L(pyridoxamin))=42.00		
							B(ZnH3L2(pyridoxamine))=41.99		
							B(ZnH4L2(pyridoxamine))=48.404		
Zn++	gl	NaCl	37°C	0.15M	U		K1=6.30	B2=11.45	1982HFa (47423)2340
							B(ZnHL)=10.38		
							B(ZnHL2)=16.67		
Zn++	gl	NaClO4	37°C	0.15M	C	M	K1=6.336	B2=11.60	1981ABe (47424)2341
							B(ZnHL)=10.718		
							B(ZnHL2)=16.919		
							B(ZnAL)=15.090		
							B(ZnHAL)=21.233		
H2A is cysteine.									
Zn++	gl	NaCl	37°C	0.15M	C		K1=6.287	B2=11.43	1981CMc (47425)2342
Zn++	gl	KCl	25°C	0.10M	U		K1=6.69	B2=12.06	1980DMa (47426)2343
Zn++	gl	KNO3	25°C	0.10M	C	M	K1=6.53	B2=11.92	1979ADa (47427)2344
Zn++	gl	KNO3	25°C	0.10M	C	M T			1978DOc (47428)2345
							B(ZnLA)=11.57		
							B(ZnHLA)=17.67		
A=Imidazole-5-ethylamine									
Zn++	gl	KNO3	30°C	0.10M	M		K1=6.67	B2=11.78	1978MSi (47429)2346
Zn++	gl	KCl	25°C	0.20M	U	M	K1=6.31	B2=11.84	1978SKa (47430)2347
							B(ZnHL)=11.37		
							B(ZnHL2)=17.55		
							B(ZnL(Gly))=10.89		
							B(ZnL(en))=11.65		
Zn++	gl	KNO3	25°C	0.10M	C		K1=6.53	B2=11.92	1977DOb (47431)2348
Zn++	gl	KNO3	25°C	0.10M	C	T	K1=6.48	B2=12.08	1976PSb (47432)2349
							B(ZnHL)=11.42		
							B(ZnHL2)=17.89		
							B(ZnH2L2)=23.56		
Zn++	gl	KNO3	25°C	0.10M	C		K1=6.49	B2=12.07	1976PSb (47433)2350

B(ZnHL)=11.41  
 B(ZnHL2)=17.87  
 B(ZnH2L2)=23.53

Ligand: D-His

Zn++	gl	KCl	25°C	0.10M	C	T	K1=6.567	B2=12.070	1976RIa (47434)2351
							K(Zn(DL-His))=6.574 B(Zn(DL-His)2)=12.190		
Zn++	gl	KNO3	37°C	0.15M	U		K1=6.22	B2=11.49	1975APb (47435)2352
							K(Zn+HL)=2.08		
Zn++	gl	none	21°C	0.0	M		K1=6.36	B2=12.13	1974YAa (47436)2353
Zn++	cal	KNO3	25°C	0.10M	C	H			1971BPi (47437)2354
DH(B1)=-47.72 kJ mol <sup>-1</sup> , For D-His: DH=-47.81, for rac-His: DH=-49.21									
Zn++	gl	KCl	25°C	0.10M	U		K1=6.56	B2=12.06	1970MMf (47438)2355
DL-histidine: K1=6.53, K2=5.63									
Zn++	gl	NaCl04	25°C	3.00M	U	T	K1=7.07	B2=12.74	1970WIa (47439)2356
Zn++	gl	KNO3	25°C	0.10M	U	M	K1=6.49	B2=11.90	1969MBa (47440)2357
							B(ZnL(CN))=11.76 B(ZnL(CN)2)=16.71 B(ZnL(CN)3)=20.48		
Zn++	gl	KNO3	25°C	0.20M	U	T	K1=6.91	B2=12.44	1969Rmb (47441)2358
K1(15 C)=7.01, K1(40 C)=6.78, K2(15 C)=5.64, K2(40 C)=5.37									
Zn++	gl	KNO3	37°C	0.15M	U		K1=6.34	B2=11.69	1967PSd (47442)2359
Zn++	cal	KNO3	21°C	0.10M	U	H			1967SSl (47443)2360
DH(B2)=-48.9 kJ mol <sup>-1</sup> , DS=61 J K <sup>-1</sup> mol <sup>-1</sup>									
Zn++	EMF	oth/un	25°C	?	U		K1=6.94	B2=12.53	1966PAa (47444)2361
Zn++	gl	KCl	40°C	0.25M	U	T H	K1=6.52	B2=11.59	1965AZa (47445)2362
K1=7.00(0 C),6.78(15 C),6.40(25 C); K2=5.96(0 C),5.55(15 C),5.02(25 C) At 15 C: DH(K1)=-28.8 kJ mol <sup>-1</sup> ,TDS=8.4 kJ mol <sup>-1</sup> , DH(K2)=-47.7									
Zn++	gl	KCl	15°C	0.25M	U	HM			1965AZa (47446)2363
DH(ZnA+L=A+ZnL)=9.6 kJ mol <sup>-1</sup> , TDS=20 kJ mol <sup>-1</sup> . A=histidine methyl ester									
Zn++	gl	KNO3	25°C	0.20M	U		K1=6.57		1963CCb (47447)2364
Zn++	gl	KCl	25°C	.058M	U	T	K1=6.84	B2=12.20	1961SMa (47448)2365
0 C, K1=7.35, K2=6.20; 45 C, K1=6.58, K2=5.35									
Zn++	gl	oth/un	25°C	0.01M	U		K1=6.63	B2=12.26	1959LRa (47449)2366

Zn++	oth	oth/un	?	?	U	K1=11.2		1959MHa (47450)2367
Zn++	gl	KNO3	25°C	0.15M	U	K1=6.67	B2=11.78	1955LMa (47451)2368
Zn++	gl	oth/un	20°C	0.00	U	B2=12.0		1953PEa (47452)2369
Medium: 0.0025 ZnSO4								
Zn++	gl	oth/un	20°C	0.01M	U	B2=12.0		1952ALa (47453)2370
Zn++	gl	oth/un	25°C	0.01M	U	B2=12.88		1950MMa (47454)2371
*****								
C6H9N3O2S                      H2L      Thiolhistidine      CAS 13552-61-9 (5659)								
1-Amino-2-(2-Mercaptoimidazole)-propionic acid;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=9.16    B2=17.20	1982TSb (47636)2372
*****								
C6H9N3O3                      L      Metronidazole      CAS 443-48-1 (1432)								
2-Methyl-5-nitro-H-imidazole-1-ethanol; C3HN2(NO2)(CH3).CH2.CH2.OH								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=0.53	1983LWa (47646)2373
*****								
C6H9O6P                      H3L                      CAS 4408-72-4 (7015)								
Phosphinotriethanoic acid; P(CH2.COOH)3								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=2.50	1979POa (47655)2374
Also data for 50% v/v dioxan/H2O								
*****								
C6H10N2                      L                      CAS 35203-44-2 (2054)								
1-Propylimidazole; C3H3N2.CH2.CH2.CH3								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=2.62    B2=4.68	1979Lba (47677)2375
							B3=7.25	
							B4=9.19	
							B5=9.99	
*****								
C6H10N2                      L                      CAS 931-36-2 (1419)								
2-Ethyl-4-methyl-1,3-diazole; C3H2N2(CH3)(C2H5)								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=1.30    B2=2.00	1982LKb (47681)2376

B3=6.77

B4=8.20

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C6H10N2O2S2                      H2L      cyclo-(Cys-Cys)    CAS 76392-90-0    (7985)  
cyclo-(Cysteiny1-cysteiny1);

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

Zn++            gl    NaClO4    25°C   0.10M M    2001GVa (47706)2377

B3=23.42

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C6H10N2O3                      HL                                      CAS 32514-11-7    (4318)  
dl-Tetranordethiobiotin;

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

Zn++            gl    diox/w    25°C   50%   U      M    K1=2.19                      1969SMc (47709)2378

K(ZnA+bpy)=2.01

\*\*\*\*\*

C6H10N2O4                      H2L                                      (3104)  
Piperazine-2,6-dicarboxylic acid;

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

Zn++            gl    KCl        22°C   0.10M U                      K1=5.7      B2=9.8      1964PCa (47731)2379

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C6H10N2O4                      H2L                                      CAS 89601-09-2    (3102)  
trans-Piperazine-2,3-dicarboxylic acid;

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

Zn++            gl    KCl        22°C   0.10M U                      K1=6.7      B2=10.4      1964PCa (47742)2380

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C6H10N2O5                      H2L      Gly-Asp                      CAS 4685-12-5    (282)  
Glycyl-aspartic acid; H2N.CH2.CO.NH.CH(CH2.COOH).COOH

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

Zn++            gl    KNO3      25°C   0.10M C                      K1=3.96      B2=6.64      1995KLa (47776)2381

B(ZnH-2L)=-13.48

\*\*\*\*\*

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  
-----

Zn++            gl    KNO3      25°C   0.10M C      M    K1=6.85                      2003AHa (47810)2382

K(ZnL+A)=3.75

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

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Zn++	gl	NaNO3	25°C	0.10M	C		K1=7.50		2000KHb (47811)2383
Zn++	gl	KNO3	25°C	0.10M	M	M	K1=6.86		1996AEa (47812)2384
Data for ternary complexes with dipicolinic acid									
Zn++	gl	NaNO3	25°C	0.10M	M		K1=9.73		1996KSc (47813)2385
Zn++	gl	KNO3	25°C	0.10M	C		K1=6.85		1989MAd (47814)2386
Zn++	gl	KNO3	25°C	0.10M	C		K1=7.10	B2= 9.22	1983LRc (47815)2387
							*K(ZnL2)=-9.49		
							*K(ZnH-1L2)=-10.56		
Zn++	gl	KNO3	25°C	0.10M	U		K1=7.10	B2=9.22	1981LRb (47816)2388
							K(ZnL2=ZnH-1L2+H)=-9.49		
							K(ZnH-1L2=ZnH-2L2+H)=-10.56		
Zn++	gl	KNO3	25°C	0.10M	C		K1=7.10		1979NAb (47817)2389
Zn++	gl	KCl	20°C	0.10M	U		K1=7.30	B2=9.54	1955SAa (47818)2390
*****									
C6H10N2O6P2		H4L		(6893)					
N-(2-Pyridyl)aminomethylenedi(phosphonic acid); C5H4N.NH.CH(PO3H2)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	U			K1=11.17	1990GKa (47867)2391
								K(Zn+HL)=9.10	
								K(Zn+H2L)=5.25	
*****									
C6H10N4		L		Metrazole		CAS 54-95-5 (2046)			
1,5-Pentamethylenetetrazole, 6,7,8,9-Tetrahydro-5H-tetrazoloazepine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Zn++	EMF	KNO3	25°C	0.50M	U			K1=1.0	1976LWa (47875)2392
*****									
C6H10N4OS		L		(2622)					
4,5-Dimethyl-2,4,6,8-tetraazabicyclo[3,3,0]-octane-3-one-7-thione;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	U			K1=5.56	1986KKa (47887)2393
*****									
C6H10N8O		L		(8205)					
Bis(5-tetrazolylethylene)oxide;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Zn++	gl	NaNO3	20°C	0.1M	U			K1=5.7	1979ESa (47913)2394

\*\*\*\*\*  
 C6H1002 HL CAS 815-57-6 (2261)  
 3-Methyl-pent-2,4-dione; CH3.CO.CH(CH3).CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=10.16	1962MMb (47944)	2395

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C6H1002S2 HL (1224)  
 1,2-Dithiolane-3-propanoic acid, Bisnorlipoic acid; C3H5S2.CH2CH2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	C		K1=2.58	1978SPd (47973)	2396

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C6H1003 HL CAS 16841-19-3 (3649)  
 1-Hydroxycyclopentanecarboxylic acid; HO.C5H8.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=1.89 B2=3.19	1967PRb (47982)	2397

\*\*\*\*\*

C6H1003 HL CAS 141-97-9 (3068)  
 Ethyl acetoacetate; CH3.CO.CH2.CO2.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=9.24	1973AAa (48008)	2398

\*\*\*\*\*

C6H1004 H2L Adipic acid CAS 124-04-9 (401)  
 1,6-Hexanedioic acid; HOOC.(CH2)4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	oth	NaClO4	40°C	0.10M	U		K1=2.8	1981SSe (48047)	2399

Method: Paper electrophoresis.

Zn++	dis	NaClO4	25°C	1.00M	U		K1=1.23 B2=1.78	1974MSc (48048)	2400
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Zn++	dis	oth/un	25°C	0.0	U		K1=2.67	1966RMb (48049)	2401
------	-----	--------	------	-----	---	--	---------	-----------------	------

Zn++	gl	oth/un	25°C	0.10M	U		K1=1.8	1960YYa (48050)	2402
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C6H1004 H2L (3070)  
 Isopropylmalonic acid; HOOC.CH(CH(CH3)2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	H	K1=2.85 B2=5.54 B(Zn(bpy)L)=8.02	1989ABa (48110)	2403

DH(K1)=17.9 kJ mol<sup>-1</sup>, DS(K1)=114.6 J K<sup>-1</sup> mol<sup>-1</sup>

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C6H10O4                      H2L                      CAS 616-62-6 (3069)

n-Propylmalonic acid; HOOC.CH(C3H7).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	H	K1=2.75    B2=4.81 K(Zn+HL)=1.15 B(Zn(bpy)L)=7.52	1989ABa (48116)	2404

DH(K1)=16.2 kJ mol<sup>-1</sup>, DS(K1)=107 J K<sup>-1</sup> mol<sup>-1</sup>

Zn++                      con oth/un    25°C    .001M    U                      K1=3.12                      1929GIa (48117)2405

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C6H10O4S                      H2L                      CAS 42715-54-8 (986)

2,2'-Thiodipropanoic acid; HOOC.CH(CH3).S.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=2.13	1975LPa (48122)	2406

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C6H10O4S                      H2L                      CAS 111-17-1 (139)

3,3'-Thiodipropanoic acid; HOOC.CH2.CH2.S.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	35°C	0.10M	C	M	K1=2.76 B(ZnAL)=4.51	1999DSb (48161)	2407

A is thiamine hydrochloride.

Zn++                      gl    NaClO4    25°C    0.10M    U    TIH                      K1=3.01                      1982DBb (48162)2408

Data for 0.2, 0.3 M. At I=0, K1=2.91. Data for 35 and 45 C.

DH(K1)=-6.15 kJ mol<sup>-1</sup>, DS(K1)=35.9 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

Zn++                      gl    KNO3    25°C    0.05M    M                      K1=3.97                      1975DPb (48163)2409

Zn++                      gl    KNO3    25°C    0.10M    C                      K1=1.72                      1975LPa (48164)2410

K(Zn+HL)=1.28

\*\*\*\*\*

Zn++                      vlt    KNO3    30°C    1.20M    U    I                      K1=1.49                      1972RGb (48165)2411

1.2 KNO3, 20% (CH3)2SO: K1=2.64. 20% DMF: K1=2.47

\*\*\*\*\*

Zn++                      gl    NaClO4    25°C    0.10M    U                      K1=1.6                      1968SKd (48166)2412

\*\*\*\*\*

C6H10O4S2                      H2L                      CAS 7244-02-2 (438)

1,2-Bis(carboxymethylthio)ethane; HOOC.CH2.S.CH2.CH2.S.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U		K1=2.55	1971FPa (48223)	2413

Zn++	oth	oth/un	25°C	0.10M	U	K1=2.7	1964PCa (48224)	2414
Zn++	gl	oth/un	20°C	0.10M	U	K1=2.61 K(Zn+HL)=1.74	1961S0b (48225)	2415
*****								
C6H1004S2		H2L				CAS 27887-85-0	(7721)	
meso-Dimercaptobutanedioc acid dimethyl ester;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KCl	25°C	0.10M	C	B2=14.84	2002CDc (48273)	2416
*****								
C6H1004Se		H2L				CAS 80030-00-8	(987)	
2,2'-Selenodipropanic acid; HOOC.CH(CH3).Se.CH(CH3).COOH								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	K1=1.80	1975LPa (48279)	2417
*****								
C6H1004Se		H2L				CAS 2168-88-9	(982)	
3,3'-Selenodipropanic acid; HOOC.CH2.CH2.Se.CH2.CH2.COOH								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	K1=1.77 K(Zn+HL)=1.05	1975LPa (48290)	2418
*****								
C6H1004Te		H2L				CAS 2168-91-4	(983)	
3,3'-Tellurodipropanoic acid; HOOC.CH2.CH2.Te.CH2.CH2.COOH								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	K1=1.4	1975LPa (48301)	2419
*****								
C6H1005		H2L				CAS 5961-83-1	(981)	
3,3'-Oxodipropionic acid; HOOC.CH2.CH2.O.CH2.CH2.COOH								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	K1=2.13	1975LPa (48311)	2420
*****								
C6H1006		H2L				CAS 23243-68-7	(242)	
1,2-Bis(carboxymethoxy)ethane; HOOC.CH2.O.CH2.CH2.O.CH2.COOH								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	U	K1=2.65	1975MTc (48325)	2421
*****								
C6H1007		HL				Galacturonic	CAS 685-73-4	(290)



D-Galacturonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	37°C	0.15M	C		K1=1.74 B2=2.62 B(ZnHL)=3.93 B(ZnH-1L)=-3.38	1976MTa (48380)	2422

\*\*\*\*\*  
C6H10O7 HL Glucuronic acid CAS 6556-12-3 (599)

D-Glucuronic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0	M	I	K1=1.80 B2=3.3	1996GMb (48409)	2423
At I=0.16 M: K1=1.43, B2=2.8									

\*\*\*\*\*  
C6H10O8 H2L Saccharic acid CAS 87-73-0 (1191)  
D-2,3,4,5-Tetrahydroxy-1,6-hexanedioic acid, Glucaric acid; H00C.(CHOH)4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.10M	U		K1=3.47 K(Zn+H2L=ZnL+2H)=-3.90 *K(ZnL)=-7.38	1997PPa (48459)	2424

Zn++	gl	NaCl04	25°C	0.10M	U	M	K1=3.46 K(Zn(edta)+L)=3.21	1997PPc (48460)	2425
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\*\*\*\*\*  
C6H11NO2 HL CAS 52-52-8 (3105)  
1-Aminocyclopentanecarboxylic acid; H2N.C5H8.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U		K1=4.76 B2=9.16	1963IPa (48501)	2426

\*\*\*\*\*  
C6H11NO2 HL CAS 16258-05-2 (1128)  
2-Amino-hex-5-enoic acid; CH2:CH.CH2.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=4.49 B2=8.602	1975IPb (48509)	2427

\*\*\*\*\*  
C6H11NO2 HL Pipicolinic acid CAS 3105-95-1 (1125)  
2-Piperidine carboxylic acid; C5H10N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	30°C	0.10M	U	H	K1=5.86 B2=11.44	1985RRe (48533)	2428
DH(K1)=-71 kJ mol-1, DS=122 J K-1 mol-1, DH(K2)=-34, DS=4.7									

Zn++ gl alc/w 25°C var U T 1974DKa (48534)2429

K1=67.96/D+3.5766

K2=42.94/D+4.123

D=Dielectric constant for the 1-PrOH/H2O mixture. Also at 0 and 40 C

\*\*\*\*\*

C6H11N04 H2L (1232)

2,2'-Iminodipropanoic acid; HN(CH(CH3)COOH)2

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

Zn++ gl KNO3 25°C 0.10M C K1=6.6 B2=11.10 1987AKa (48571)2430

Zn++ gl KNO3 25°C 0.10M U K1=6.6 B2=11.10 1987BKa (48572)2431

\*\*\*\*\*

C6H11N04 H2L (3106)

Iminodipropanoic acid; HN(CH2.CH2.COOH)2

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

Zn++ gl KCl 30°C 0.10M U K1=4.95 1952CMA (48588)2432

\*\*\*\*\*

C6H11N04S H3L CAS 58033-48-5 (3124)

N-2-Mercaptoethyliminodiethanoic acid; HS.CH2.CH2.N(CH2.COOH)2

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

Zn++ gl KCl 20°C 0.10M U K1=15.92 1955SAa (48605)2433

\*\*\*\*\*

C6H11N04S H2L CAS 104640-54-2 (2460)

S-Carboxyethyl-L-cysteine; H2N.CH(CH.S.CH2.CH2.COOH).COOH

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

Zn++ gl NaCl04 25°C 2.00M U K1=4.61 B2=8.67 1980MAC (48620)2434

\*\*\*\*\*

C6H11N05 H2L HIMDA CAS 93-62-9 (192)

N-(2-Hydroxyethyl)iminodiethanoic acid; HO.CH2.CH2.N(CH2.COOH)2

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

Zn++ cal KNO3 25°C 1.00M U TI 1987VRa (48661)2435

DH(K1)=-14.2 kJ mol<sup>-1</sup>, DS=103 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-19.7, DS=155

-----  
Zn++ vlt NaCl04 25°C 0.30M U K1=8.02 1974K0b (48662)2436  
-----

Zn++ gl oth/un 25°C 1.50M U M K1=8.33 1970FDa (48663)2437

B(ZnL(NH3))=11.08

B(ZnL(py))=9.54

B(ZnL(NH3)2)=12.62

B(ZnL(py)2)=9.92

B(ZnLA2)=10.20. B(ZnLA(NH3))=11.72. B(ZnL(py)(NH3))=11.76.

B(ZnL(NH3)(SCN))=11.68. B(ZnL(NH3)(S2O3))=12.26 + other data. A=thiourea

-----  
Zn++ oth KNO3 20°C 0.10M U K1=9.4 B2=12.90 1965JMa (48664)2438  
Method: electrophoresis  
-----

Zn++ gl KCl 20°C 0.10M U K1=8.33 B2=12.02 1955SAa (48665)2439  
K(ZnLOH+H)=9.44  
K(Zn(L(OH)2)+H)=10.85  
-----

Zn++ gl KCl 30°C 0.10M U K1=8.57 B2=12.67 1952CCa (48666)2440

\*\*\*\*\*

C6H11NO5 H2L (7174)

N-Carboxymethylthreonine; H00CCH2NHCH(CH(OH)CH3)COOH  
-----

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

Zn++ gl KNO3 25°C 0.10M C K1=7.06 B2=12.14 2001MTb (48822)2441  
B(ZnHL)=10.52  
B(ZnHL2)=18.06  
B(ZnH-1L)=-1.46  
-----

\*\*\*\*\*

C6H11NO5 H2L (1233)

N-Hydroxyimino-2,2'-dipropanoic acid; HO.N(CH(CH3)COOH)2  
-----

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

Zn++ gl KNO3 25°C 0.10M C K1=5.05 B2=9.10 1987AKa (48833)2442  
-----

Zn++ gl KNO3 25°C 0.10M U K1=5.05 B2=9.10 1987BKa (48834)2443

\*\*\*\*\*

C6H11NO7S H3L CAS 39716-94-4 (3125)

N-2-Sulfoethyliminodiethanoic acid (taurine-NN-diacetic acid)  
-----

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

Zn++ EMF KCl 20°C 0.10M U K1=7.05 1949SAa (48843)2444

Method: H electrode

\*\*\*\*\*

C6H11NS2 L CAS 98-99-7 (3108)

Piperidine-1-carbodithioic acid;  
-----

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

Zn++ dis oth/un 25°C 0.01M U B2=11.5 1973SSa (48854)2445  
-----

Zn++ vlt KCl 25°C 1.00M U B2=11.7 1973SSa (48855)2446

\*\*\*\*\*

C6H11N3 L CAS 34392-54-6 (4350)

4-(2-Methylaminoethyl)imidazole;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KCl    25°C 0.10M U      K1=4.83      1973BDb (48863)2447
*****
C6H11N3          L                      CAS 16227-10-4 (8351)
4-Butyl-4H-1,2,4-triazole;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaCl04 25°C 0.10M U TIH    K1=2.81    B2= 5.24  1981RPb (48868)2448
Medium: KCl04. Also data for 35 C and for 0.05 M KCl04.
Also DH and DS values.
*****
C6H11N304      HL    Gly-Gly-Gly      CAS 556-33-2 (415)
Glycyl-glycyl-glycine; H2N.CH2.CO.NH.CH2.CO.NH.CH2.COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3   25°C 0.10M U      K1=3.28    B2=6.45  1992LPc (48955)2449
-----
Zn++      gl  NaCl04 37°C 0.15M U      K1=3.378   B2=5.395  1975CMA (48956)2450
                                B(ZnHL)=9.087
                                B(ZnH-1L)=-4.677
-----

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-----
Zn++      nmr oth/un 25°C 0.80M U      K1=3.10      1972RLb (48957)2451
                                K(Zn+HL)=0.89
Medium: 0.8, 0.2 Zn(NO3)2
-----

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-----
Zn++      gl  KNO3   25°C 0.15M U      K1=3.18      1958LCb (48958)2452
-----
Zn++      EMF none 25°C 0.0 U      K1=3.33    B2=6.32  1955EMa (48959)2453
-----
Zn++      gl  oth/un 25°C 0.01M U      K1=2.6      1954PEa (48960)2454
Medium: ZnSO4
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*****
C6H11N9          L                      (7008)
Di(2-(5-tetrazolyl)ethyl)amine; ((CHN4)CH2.CH2)2NH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaNO3   20°C 0.10M U      K1=7.46      1981ESa (49000)2455
-----
Zn++      gl  NaNO3   20°C 0.1M U      K1=7.46      1979ESa (49001)2456
*****
C6H12N07P      H4L                      CAS 55339-27-0 (3127)
N-2-Phosphoethyliminodiethanoic acid; H2O3P.CH2.CH2.N(CH2.COOH)2
-----

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

```

Zn++ EMF KCl 20°C 0.10M U K1=11.24 1949SAa (49031)2457

Method: H electrode

\*\*\*\*\*

C6H12N2 L TED / DABCO CAS 280-57-9 (3076)

1,4-Diazobicyclo[2,2,2]octane (triethylenediamine)

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

Zn++ sp non-aq ? 100% U HM 1990AHb (49039)2458

K(ZnA+L)=4.69

Medium: CH2Cl2. A=biphenyl capped mesoporphyrin. DH=-60 kJ mol<sup>-1</sup>. Data for other porphyrin Zn complexes

-----  
Zn++ sp non-aq ? 100% U HM 1990HMa (49040)2459

K(Zn2A+L=Zn(A)LZn)=7.87

Medium: CH2Cl2. A=cyclic porphyrin dimer. DH=-77 kJ mol<sup>-1</sup>, DS=-121 J K<sup>-1</sup> m<sup>-1</sup>

\*\*\*\*\*

C6H12N2O3 HL Ala-Ala CAS 1948-31-8 (53)

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

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

Zn++ gl KNO3 25°C 0.10M C T K1=3.75 2000RNB (49101)2460

Data for 35 and 45 C.

\*\*\*\*\*

C6H12N2O3 HL DL-Ala-DL-Ala CAS 2867-20-1 (67)

DL-Alanyl-DL-alanine; H2N.CH(CH3).CO.NH.CH(CH3).COOH

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

Zn++ gl KCl 20°C 0.20M U K1=2.97 B2=5.74 1982KRc (49125)2461

\*\*\*\*\*

C6H12N2O3S H2L Ala-Cys (670)

Alanyl-cysteine; NH2.CH(CH3).CO.NH.CH(CH2.SH).COOH

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

Zn++ gl KCl 25°C 0.20M U B2=11.23 1990CRa (49155)2462

B(ZnHL2)=19.86

B(ZnH-1L2)=1.05

B(ZnH2L2)=27.39

\*\*\*\*\*

C6H12N2O3S2 H3L (8783)

Cysteinyl-cysteine;

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

Zn++ gl NaClO4 25°C 0.10M C K1=11.6 2002VGa (49164)2463

B(ZnHL)=16.8

For the N-acetyl derivative, K1=11.0, B2=21.8.

\*\*\*\*\*

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
Zn++	gl	KNO3	25°C	0.10M	U		K1=10.99	1979GMa (49202)	2464
Zn++	vlt	NaClO4	25°C	0.30M	U		K1=10.79	1974KOb (49203)	2465
Zn++	gl	NaNO3	25°C	0.10M	U		K1=11.71 B(ZnHL)=15.48 B(ZnH-1L)=11.98 B(Zn2L)=14.91	1974SJa (49204)	2466
Zn++	gl	KNO3	25°C	0.10M	U	M	K(ZnL+Gly)=3.79	1972IVb (49205)	2467
Zn++	gl	KNO3	25°C	0.10M	U	M	K1=11.22 K(ZnL+en)=4.44	1970DNa (49206)	2468
Zn++	gl	KCl	30°C	0.10M	U		K1=11.1	1952CMc (49207)	2469

\*\*\*\*\*

C6H12N2O4                      H2L        N,N-EDDA                      CAS 5835-29-0    (2333)  
1,2-Diaminoethane-N,N-diethanoic acid; H2N.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U		K1=11.93 K(ZnLOH+H)=10.13	1955SAa (49293)	2470

\*\*\*\*\*

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
Zn++	gl	KCl	25°C	0.20M	C		B(ZnHL)=14.67 B(Zn2L2)=18.04	1993KNa (49327)	2471
Zn++	gl	NaNO3	25°C	0.10M	C		K1=7.76 B(ZnHL)=14.51	1989EHa (49328)	2472

\*\*\*\*\*

C6H12N2O4S2                      H2L        Cystine                      CAS 923-32-0    (1404)  
DL-Dithio-bis(2-amino-3-propanoic acid); (HOOC.CH(NH2).CH2.S)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	37°C	0.15M	C T	R	K1=6.67 B(ZnHL)=12.85	1995BEa (49358)	2473

Zn++	gl	NaCl	37°C	0.15M	U	T K1=6.65	1985CFb (49359)2474
						B(ZnHL)=12.89	

Zn++      g1   NaClO4 37°C 0.15M U      B(Zn2L)=10.07      1980Ama (49361)2476

Nitrilotriacetohydroxamic acid;  $N(CH_2.CO.NH.OH)_3$

Zn++	g1	KCl	25°C 0.10M M	K1=9.73 B(ZnH3L)=30.76 B(ZnH2L)=24.50 B(ZnHL)=18.33 B(ZnH-1L)=-1.24	1980LSb (49399)2477
------	----	-----	--------------	---	---------------------

4-Methylpentanoic acid;  $(\text{CH}_3)_2\text{CH}.\text{CH}_2.\text{CH}_2.\text{COOH}$

Zn++      gl    NaNO3    25°C   0.10M C T I M    K1=0.99                  1988LTc (49414)2478  
K(Zn(phen)+L)=0.96

\*\*\*\*\*

1-Thio-beta-D-glucopyranose;

Zn++      g1    KNO3    25°C 0.15M M      K1=4.06    B2=9.34    1987GFa (49522)2479  
B3=13.12

D-Gluconic acid, 2,3,4,5,6-Pentahydroxyhexanoic acid;  $\text{HO}\cdot\text{CH}_2(\text{CHOH})_4\cdot\text{COOH}$

Zn++      vlt NaClO<sub>4</sub> 30°C    1.0M C           K1=1.70    B2= 1.60    1978PBb (49675)2480  
B3=1.85  
B4=2.04  
B5=3.01

Method: polarography. Medium pH 6.5.

Zn++ gl NaClO4 37°C 0.15M U 1977RWc (49676)2481  
B(ZnH-1L)=-9.69

Zn++ gl oth/un ? ? U 1976PPd (49677)2482  
K(Zn+H2L=ZnHL+H)=-1.62  
K(ZnL+H)=8.14

Zn++ EMF KCl 20°C 0.20M U K1=1.70 1938CKa (49678)2483  
Method: H electrode

\*\*\*\*\*  
C6H13N L CAS 108-91-8 (314)  
Cyclohexylamine; C6H11.NH2

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

Zn++ gl NaClO4 37°C 0.15M C K1=4.60 1974MWb (49799)2484  
\*\*\*\*\*  
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

Zn++ gl NaNO3 25°C 0.10M C M K1=5.29 B2= 8.97 2000ZLa (49875)2485  
B(ZnLA)=11.39  
A=12-Pentyl-1,4,7,10-tetraazacyclotridecane-11,13-dione.

Zn++ gl KNO3 35°C 0.10M C M K1=4.60 B2= 8.28 1998ZWa (49876)2486  
B(ZnH-1L2)=0.94  
B(ZnH-2L2)=-8.26

Data for ternary complexes with 3,3,9,9-tetramethyl-4,8-diazaundecane-  
2,10-dione dioxime

Zn++ gl KNO3 25°C 0.20M U T HM K1=5.20 1996JLd (49877)2487  
K(Zn(bpy)+L)=5.12

Data for 25-45 C. DH(K1)=-19.3 kJ mol<sup>-1</sup>, DS(K1)=35 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(Zn(bpy)L)=-7.1, DS(Zn(bpy)L)=75.

Zn++ gl NaClO4 25°C 0.20M U T M K1=4.88 B2= 9.21 1993PPa (49878)2488  
K(ZnA+L)=4.81  
A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Zn++ gl NaClO4 27°C 0.20M U M K1=4.88 B2= 9.21 1988PPc (49879)2489  
K(ZnA+L)=4.81

A is 2,2'-dipyridylamine.

Zn++ gl KNO3 25°C 0.10M U K1=4.72 1985MKa (49880)2490

Zn++ gl KCl 25°C 0.50M U M T K1=4.49 B2=8.49 1966LHc (49881)2491  
K(ZnL+A)=2.27  
B(ZnAL)=6.76



B(ZnAL2)=9.58  
B(ZnA2L2)=12.34

B3=10.9. HA=pyruvic acid

-----  
Zn++ vlt oth/un 25°C 1.0M U B2=11.2 1965VZa (49882)2492  
-----

Zn++ gl oth/un 20°C 0.01M U B2=8.2 1952PEa (49883)2493  
Medium: ZnSO4

\*\*\*\*\*  
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  
-----  
Zn++ gl NaNO3 25°C 0.10M C M K1=5.29 B2= 9.13 2000ZLa (50012)2494  
B(ZnLA)=11.32

A=12-Pentyl-1,4,7,10-tetraazacyclotridecane-11,13-dione.

-----  
Zn++ gl alc/w 37°C 40% C M K1=5.24 B2= 9.60 1998AAa (50013)2495  
B(ZnLA)=9.88  
K(ZnL+A)=4.64  
K(ZnA+L)=4.66  
B(ZnLC)=9.63

HC:2[o-hydroxyphenylazo]-2-cyanomethyl benzimidazole. 40% EtOH/H2O, I=0.15  
H2A:5-[o-hydroxyphenylazo] barbituric acid. K(ZnL+C)=4.39, K(ZnC+L)=4.20.

-----  
Zn++ gl alc/w 37°C 40% C K1=5.24 B2= 9.60 1997AAb (50014)2496  
Medium: 40% v/v EtOH/H2O, 0.15 M NaClO4.

-----  
Zn++ gl KNO3 25°C 0.20M U T HM K1=5.09 1996JLd (50015)2497  
K(Zn(bpy)+L)=4.52

Data for 25-45 C. DH(K1)=-14.2 kJ mol<sup>-1</sup>, DS(K1)=54 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(Zn(bpy)L)=-29.7, DS(Zn(bpy)L)=13.

-----  
Zn++ gl NaClO4 25°C 0.20M U T M K1=4.74 B2= 9.10 1993PPa (50016)2498  
K(ZnA+L)=4.69

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

-----  
Zn++ vlt KNO3 25°C 0.10M C M K1=4.50 B2= 8.72 1991KNb (50017)2499  
B3=11.03  
B(ZnAL)=6.33  
B(ZnA2L)=8.79  
B(ZnAL2)=10.38

Method: polarography, medium pH 8.5. HA is ethanoic acid.

-----  
Zn++ gl KNO3 25°C 0.10M U I K1=4.73 B2=9.30 1990RAb (50018)2500  
Data also for 10% w/w EtOH/H2O (B1=4.94; B2=9.58) and 25% (5.43; 10.15)

-----  
Zn++ gl KNO3 35°C 0.20M U M K1=4.69 B2=8.68 1989RVa (50019)2501  
K(ZnL+A)=4.26

A=bis(imidazol-2-yl)methane

-----  
Zn++ gl NaClO4 27°C 0.20M U M K1=4.74 B2= 9.10 1988PPc (50020)2502  
K(ZnA+L)=4.69

A is 2,2'-dipyridylamine.

-----  
Zn++ gl KNO3 25°C 0.10M U K1=4.88 1985MKa (50021)2503

-----  
Zn++ gl oth/un 30°C 0.20M U M K1=4.74 1984JOa (50022)2504  
K(Zn(bpy)+L)=4.48

Medium: not stated.

-----  
Zn++ nmr KNO3 34°C 0.10M U M 1983SFa (50023)2505  
K(Zn(ATP)+L)=3.23

-----  
Zn++ gl NaClO4 25°C 0.10M C M T 1980FSa (50024)2506  
B(Zn(bpy)L)=9.71  
K(Zn(bpy)+L)=4.41  
B(ZnL(phen))=11.22  
K(Zn(phen)+L)=4.67

K(Zn(bpy)+L)=4.0, K(Zn(Phen)+L)=4.4 by NMR in 0.1-0.7M NaNO3, 34 C.

-----  
Zn++ oth KNO3 20°C 0.10M U K1=5.8 B2=10.00 1964JOa (50025)2507  
K3=3.3

Method: paper electrophoresis

-----  
Zn++ gl oth/un 25°C 0.01M U T K1=3.99 B2=7.37 1959DLb (50026)2508

-----  
Zn++ gl oth/un 20°C 0.01M U B2=9.1 1952PEa (50027)2509

Medium: ZnSO4

-----  
Zn++ gl oth/un 25°C 0.01M U T K1=4.92 B2=8.93 1949MMa (50028)2510

\*\*\*\*\*

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

-----  
Zn++ gl NaClO4 20°C 0.10M U T H K1=5.76 B2=10.38 1981SDb (50150)2511  
Data for 20-40 C. DH(B2)=-79.3 kJ mol<sup>-1</sup>, DS(B2)=-71.9 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Zn++ gl KNO3 30°C 0.10M U M 1980MSb (50151)2512  
K(Zn(His)+L)=4.12

-----  
Zn++ gl KNO3 25°C 0.10M C K1=4.59 B2=8.93 1975IPb (50152)2513

-----  
Zn++ gl oth/un 18°C .005M U B2=8.7 1953PEa (50153)2514  
Medium: 0.005 ZnSO4

-----  
Zn++ gl oth/un 20°C 0.00 U B2=8.5 1952PEa (50154)2515

Zn++	gl	oth/un	20°C	0.01M	U	B2=10.4	1950ALa (50155)2516
*****							
C6H13NO2		HL				CAS 4312-93-0	(4386)
Hexanohydroxamic acid; CH3.CH2.CH2.CH2.CH2.CO.NH.OH							

\*\*\*\*\*  
C6H13NO2                      HL                      CAS 1606-01-5 (2907)  
N,N'-Diethylglycine; (C2H5)2N.CH2.COOH

\*\*\*\*\*  
C6H13NO2S                      HL      Ethionine                      CAS 67-21-0    (1909)  
2-Amino-4-(ethylthio)butanoic acid; CH3.CH2.S.CH2.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KN03	25°C	0.50M	U			K1=1.48	1985Wta	(50276)2520
*****										
C6H13NO4			HL	Bicine				CAS 150-25-4	(2124)	
N,N-Bis(2-hydroxyethyl)glycine; (HO.CH2.CH2)2N.CH2.COOH										

-----  
Zn++      oth KNO3    20°C 0.10M U      K1=6.5      B2=10.70    1965JMa (50320)2523  
Method: paper electrophoresis

Zn++	g1	KCl	30°C	0.10M	U	K1=5.38	B2=8.64	1957FCa (50321)2524
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Zn++ gl KCl 30°C 0.10M U K1=5.36 B2=8.62 1953CCa (50322)2525  
\*\*\*\*\*

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  
-----

Zn++ gl KNO3 25°C 0.10M U TIH K1=5.11 2004EAa (50489)2526  
Data for 5-45 C. DH(K1)=-33.30 kJ mol<sup>-1</sup>, DS=-13.9 J K<sup>-1</sup> mol<sup>-1</sup>. Values for  
0.02-0.15 M KNO3 and 60-75% v/v acetone, 75% EtOH and 75% dioxane/H2O

-----  
Zn++ gl KNO3 25°C 0.10M C M K1=5.59 2003AHa (50490)2527  
K(ZnL+A)=3.59

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

-----  
Zn++ gl KNO3 30°C 0.10M U M K1=5.29 1987TGb (50491)2528  
K(Zn(phen)+L)=4.81

-----  
Zn++ gl KNO3 30°C 0.10M U M K1=5.29 1985TGa (50492)2529  
K(Zn(bpy)+L)=4.58

-----  
Zn++ vlt NaClO4 30°C 0.20M C K1=6.8 B2= 7.80 1984KKd (50493)2530  
Method: polarography. Medium pH 8.0

\*\*\*\*\*  
C6H13NO6 HL CAS 84518-56-9 (4387)  
2-Amino-2-deoxy-D-gluconic acid;

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

Zn++ gl NaClO4 25°C 0.10M U K1=4.56 B2= 8.36 2000KAa (50524)2531  
B3=10.20

-----  
Zn++ gl KNO3 30°C 0.10M U K1=4.9 1966MSa (50525)2532  
\*\*\*\*\*

C6H13NS HL CAS 1072-99-7 (284)  
1-Methyl-4-mercaptopiperidine; C5H9N(CH3)(SH)

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

Zn++ gl alc/w 25°C 3.0M U 1982BGa (50543)2533  
K(3Zn+6HL=Zn3(HL)6)=39.71  
K(5Zn+12HL=Zn5(HL)12)=79.87  
K(2Zn+6HL=Zn2(HL)6)=35.26

\*\*\*\*\*  
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  
-----

Zn++ gl KNO3 25°C 0.10M U K1=4.13 1970CMc (50564)2534

-----  
Zn++ gl oth/un 20°C .005M U B2=8.7 1953PEa (50565)2535  
Medium: 0.005 ZnSO4

\*\*\*\*\*  
C6H13O9P H2L CAS 26177-86-6 (7139)  
Fructose-6-phosphoric acid; C6H11O5.H2PO4  
-----

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

Zn++ gl NaClO4 25°C 0.10M C K1=3.49 1996GCa (50602)2536  
\*\*\*\*\*

C6H13O9P H2L CAS 59-56-3 (3049)  
alpha-D-Glucose-1-phosphoric acid; Glucopyranose-1-phosphoric acid;  
-----

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

Zn++ gl NaCl 25°C 0.15M U K1=2.118 1990KLb (50614)2537  
B(ZnH-1L)=-5.818  
-----

Zn++ ix NaClO4 25°C 0.10M U K1=2.37 1966DTa (50615)2538  
By glass electrode K1=2.34  
\*\*\*\*\*

C6H14NO2P HL (6465)  
Piperidinemethylphosphinic acid; C5H10N.CH2.PO2H2  
-----

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

Zn++ gl NaClO4 25°C 0.10M C K1=4.46 1992Lba (50631)2539  
\*\*\*\*\*

C6H14NO2S (6142)  
2-Amino-4-(S,S-dimethylsulphonium)butanoic acid; (CH3)2S(+)CH2CH2CH(NH2)CHLH;  
-----

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

Zn++ gl KCl 25°C 0.20M U K1=4.05 B2=7.75 1982FGa (50640)2540  
\*\*\*\*\*

C6H14N2 L CAS 20439-47-8 (3077)  
cis-1,2-Diaminocyclohexane; C6H10(NH2)2  
-----

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

Zn++ gl oth/un 20°C ->0 U T H K1=5.89 B2=11.37 1958BFa (50668)2541  
DH(K1)=-21.8 kJ mol<sup>-1</sup>, DS=38 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-17.6, DS=42. 10 C K1=6.00,  
K2=5.55; 30 C: 5.74, 5.38; 40 C: 5.62, 5.25  
-----

Zn++ gl KCl 20°C 0.10M U K1=6.08 B2=11.57 1956SBa (50669)2542  
K(ZnLOH++H)=10.6  
K(ZnL(OH)2+H)=11.4  
\*\*\*\*\*

C6H14N2 L CAS 21436-03-3 (2456)

trans-1,2-Diaminocyclohexane; C<sub>6</sub>H<sub>10</sub>(NH<sub>2</sub>)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U		K1=7.74 B2=14.27	1970ABc	(50687)2543

DL, D and L isomers

Zn++	gl	oth/un	20°C	->0	U T H		K1=6.24 B2=11.65	1958BFa	(50688)2544
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DH(K1)=-20.9 kJ mol<sup>-1</sup>, DS=50 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-21.8, DS=29. 10 C: K1=6.37, K2=5.66; 30 C: 6.14, 5.31; 40 C: 6.01, 5.25

Zn++	gl	KCl	20°C	0.10M	U		K1=6.37 B2=11.98	1956SBa	(50689)2545
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K(ZnL2+OH)=3.1  
K(ZnL2OH+OH)=2.6

\*\*\*\*\*

C<sub>6</sub>H<sub>14</sub>N<sub>2</sub>O L (2357)  
1-Oxa-4,7-diazacyclononane; Cyclo(-((CH<sub>2</sub>)<sub>2</sub>.NH)<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>.O.-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	U		K1=6.40 B2=12.1	1990CCa	(50706)2546

Zn++	gl	NaNO <sub>3</sub>	25°C	0.10M	U		K1=6.36 B2=11.43	1986TSa	(50707)2547
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Zn++	gl	NaNO <sub>3</sub>	25°C	0.01M	U		K1=6.32 B2=11.39	1982HTa	(50708)2548
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C<sub>6</sub>H<sub>14</sub>N<sub>2</sub>O L CAS 10466-61-2 (3116)  
L-Leucine amide; H<sub>2</sub>N.CH(CH<sub>2</sub>.CH(CH<sub>3</sub>)<sub>2</sub>).CO.NH<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.01M	U		K1=1.80 B2=4.26	1959DLb	(50723)2549

\*\*\*\*\*

C<sub>6</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub> HL Lysine CAS 56-87-1 (41)  
2,6-Diaminohexanoic acid; H<sub>2</sub>N.(CH<sub>2</sub>)<sub>4</sub>.CH(NH<sub>2</sub>).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	NaClO <sub>4</sub>	25°C	1.0M	C	M		1999VKc	(50798)2550

B(ZnLA)=4.71  
B(ZnLA<sub>2</sub>)=7.26  
B(ZnL<sub>2</sub>A)=9.80

Method: polarography. Medium pH: 8.5. A is 4-picoline.

Zn++	gl	NaClO <sub>4</sub>	25°C	1.0M	U	M		1995KDa	(50799)2551
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K(Zn+HL)=3.85  
K(Zn+2HL)=6.73  
K(Zn+3HL)=9.30  
K(Zn+HL+A)=6.07

Method: polarography. Medium pH 8.50. K(Zn+HL+2A)=8.37, K(Zn+2HL+A)=9.77.

HA is propanoic acid.

Zn++	gl	NaClO4	25°C	0.10M	C			B2=9.02 B(ZnHL)=14.80 B(ZnH2L2)=29.29 B(ZnHL2)=20.22	1987LMa (50800)2552
Zn++	gl	NaCl	37°C	0.15M	U			B(ZnHL)=14.307 B(ZnH2L2)=28.34 B(ZnH-1L)=-2.06	1985CFb (50801)2553
Zn++	gl	NaClO4	37°C	0.15M	C			B(ZnHL)=14.386 B(ZnHL2)=19.844 B(ZnH2L2)=28.507	1982BKc (50802)2554
Zn++	gl	NaClO4	37°C	0.15M	C	M		B(ZnHL)=14.386 B(ZnHL2)=19.844 B(ZnH2L2)=28.507 B(ZnL(His))=11.075; B(ZnHL(His))=20.328	1981ABa (50803)2555
Zn++	gl	KCl	25°C	0.20M	C			K1=6.32 B(ZnHL)=14.72 B(ZnH2L2)=28.85 B(ZnHL2)=19.67	1981FGb (50804)2556
Zn++	gl	oth/un	20°C	.005M	U			B2=7.3 Medium: 0.005 ZnSO4	1953PEa (50805)2557
Zn++	gl	oth/un	20°C	0.01M	U			B2=7.6 ***** C6H14N2O3                      HL      5-Hydroxylysine    CAS 13204-98-3    (1585) 2,6-Diamino-5-hydroxyhexanoic acid; H2N.CH2.CH(OH).CH2.CH2.CH(NH2).COOH	1952ALa (50806)2558
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U			K1=4.00    B2=7.75 ***** C6H14N2S                      L                      (5635) 1-Thia-4,7-diazacyclononane;	1965NCa (50869)2559
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	C			K1=7.54    B2=13.60	1992WLb (50883)2560
Zn++	gl	NaNO3	25°C	0.10M	U			K1=7.31    B2=13.15 ***** C6H14N4O                      L                      CAS 44981-30-8    (8526)	1987HDa (50884)2561

Aminoiminomethylcarbamimidic acid, 2-methylpropyl ester;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	20°C	0.10M	U	I	K1=9.00 B2=12.50	1997IMb (50895)	2562

Data for 0.05-0.20 M (20 C) and 25-40 C (I=0.01 M). At I=0, K1=9.70, K2=3.95.

\*\*\*\*\*

C6H14N4O2 L CAS 1071-93-8 (2563)  
1,6-Hexanedioic acid dihydrazide; H2N.NH.CO.CH2.CH2.CH2.CH2.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	none	25°C	0.0	C	I	K1=2.449 B2= 3.31 B(ZnHL)=5.305 B(ZnHL2)=8.005	1996RRb (50901)	2563

Data for 10-60% v/v DMF/H2O and dioxane/H2O. In 50% DMF/H2O, K1=1.905, B(ZnHL)=4.982, B(ZnHL2)=8.081. In 50% dioxane/H2O, K1=2.153, B2=3.567.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.20M	U		K1=2.05 B2=3.82	1974FSa (50902)	2564

\*\*\*\*\*

C6H14N4O2 L (1529)  
1,8-Diamino-3,6-diaza-2,7-octanedione; (H2N.CH2.CO.NH.CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=3.95	1969BMc (50924)	2565

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	1.0M	U		K1=4.31	1953CGa (50925)	2566

\*\*\*\*\*

C6H14N4O2 HL Arginine CAS 74-79-3 (40)  
2-Amino-5-guanidopentanoic acid; H2N.CH((CH2)3.NH.C(:NH)(NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	NaClO4	25°C	1.0M	C	M	K1=4.23 B2= 8.30 B3=11.23 B(ZnAL)=4.40 B(ZnA2L)=8.60 B(ZnAL2)=11.45	1997KKb (50980)	2567

Method: polarography. HA is pyridoxine (vitamin B6). Medium pH 8.50.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	U		K1=4.00 B2= 7.95	1991APa (50981)	2568

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	37°C	0.15M	C	M	K1=4.074 B2=7.883 B(ZnL(His))=10.005; B(ZnL(Cys))=13.652; B(ZnHL(Cys))=20.00	1981ABb (50982)	2569

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=4.11 B2=8.07	1970CMc (50983)	2570

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	?	U	T	K1=4.19 B2=8.12	1960PEd (50984)	2571



17 C: K1=4.20, 3.99; 30 C: 4.17, 3.89; 35 C: 4.16, 3.84; 40 C: 4.14, 3.81

-----  
Zn++ gl oth/un 19°C 0.00 U B2=8.0 1953PEa (50985)2572  
Medium: 0.005 ZnSO4  
-----

Zn++ gl oth/un 20°C 0.01M U B2=7.8 1952ALa (50986)2573  
\*\*\*\*\*  
C6H14N4O4S2 H2L (6642)  
Cystine dihydroxamic acid; HONH.CO.CH(NH2).CH2.SS.CH2.CH(NH2).CO.HNOH  
-----

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

Zn++ gl KCl 25°C 0.20M C B(ZnHL)=15.76 1992FKa (51032)2574  
-----

\*\*\*\*\*  
C6H14O2Si HL (134)  
3-(Trimethylsilyl)propanoic acid; (CH3)3Si.CH2.CH2.COOH  
-----

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

Zn++ nmr NaNO3 35°C 0.10M U M K(Zn(phen)+L)=0.90 1979MIa (51041)2575  
K(Zn(bpy)+L)=0.6  
-----

Zn++ gl NaNO3 35°C 0.10M U M K1=1.03 1979MIa (51042)2576  
B(Zn(phen)L)=7.3  
B(Zn(bpy)L)=6.21  
-----

\*\*\*\*\*  
C6H14O8P2 H4L CAS 36011-96-8 (4391)  
trans-1,2-Cyclohexanediol diphosphate; C6H10(OPO3H2)2  
-----

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

Zn++ gl R4N.X 20°C 0.10M U K1=6.33 1969HRa (51114)2577  
K(Zn+HL)=3.10  
-----

Medium: (C3H7)4NI

\*\*\*\*\*  
C6H14O12P2 H4L CAS 488-69-7 (3705)  
Fructose-1,6-diphosphoric acid;  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl NaClO4 25°C 0.10M C K1=3.95 1996GCa (51120)2578  
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C6H14O12P2 H4L CAS 84364-89-6 (7140)  
Fructose-2,6-diphosphoric acid; C6H10O4.(H2PO4)2  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl NaClO4 25°C 0.10M C K1=4.48 1996GCa (51126)2579  
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C6H14S L Isopropyl sulfi CAS 625-80-9 (5674)  
2,2'-Thiodipropene, diisopropyl sulfide; (CH<sub>3</sub>)<sub>2</sub>CH-S-CH(CH<sub>3</sub>)<sub>2</sub>

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ ISE non-aq 25°C 100% U K1=-0.15 1986MMb (51134)2580  
Medium: acetone, Bu<sub>4</sub>NClO<sub>4</sub>

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C6H15N L CAS 37007-11-7 (4353)  
Diisopropylamine; ((CH<sub>3</sub>)<sub>2</sub>CH)<sub>2</sub>NH

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

Zn++ ISE R4N.X 25°C 2.00M U K1=2.41 B2=4.80 1969MPd (51145)2581  
K3=2.59  
K4=2.31

Medium: NH<sub>4</sub>NO<sub>3</sub>

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C6H15NO<sub>3</sub> Triethanolamine CAS 102-71-6 (447)  
Tris-(2-hydroxyethyl)amine; L

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl NaNO<sub>3</sub> 25°C 0.10M U K1=2.05 B2=3.28 1984HNa (51260)2582

Zn++ gl KNO<sub>3</sub> 25°C 2.00M U K1=2.56 1970URa (51261)2583

Zn++ gl KNO<sub>3</sub> 25°C 0.50M U K1=2.00 1947BRa (51262)2584

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C6H15NO<sub>6</sub>P<sub>2</sub> H<sub>4</sub>L (6891)  
Piperidine-N-Methylenedi(phosphonic acid); C<sub>5</sub>H<sub>10</sub>N.CH(PO<sub>3</sub>H<sub>2</sub>)<sub>2</sub>

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl KCl 25°C 0.10M U K1=9.47 1978GMF (51319)2585  
K(Zn+HL)=6.80

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C6H15NO<sub>7</sub>P<sub>2</sub> H<sub>4</sub>L CAS 126104-92-5 (8889)  
N-2-Methylenetetrahydrofuryloaminomethane-1,1-diphosphonic acid;

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

Zn++ gl KCl 25°C 0.20M C K1=11.08 B2=15.64 2002MKc (51340)2586  
B(ZnH<sub>2</sub>L)=22.71  
B(ZnHL)=19.00  
B(ZnH-1L)=0.60  
B(ZnH-2L)=-10.95

B(ZnH<sub>2</sub>L<sub>2</sub>)=35.61, B(Zn<sub>3</sub>H<sub>2</sub>L<sub>2</sub>)=45.03.

\*\*\*\*\*

C6H15NS HL CAS 1942-52-5 (2595)  
2-(Diethylamino)ethanethiol; (CH3.CH2)2N.CH2.CH2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	20°C	0.10M	U	TI	K1=9.61 B2=17.93	1986NDb (51350)	2587

\*\*\*\*\*

C6H15N3 L CAS 26150-46-9 (149)  
1,3,5-cis,cis-Triaminocyclohexane; C6H9.(NH2)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.10M	U	H	K1=6.95 *K(ZnL)=-7.95	1996IFb (51366)	2588

DH(K1)=-3.4 kJ mol-1, DS(K1)=121.7 J K-1 mol-1.

Zn++	cal	KCl	25°C	0.10M	C	H		1976FMa (51367)	2589
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DH(K1)=-0.21 kJ mol-1, DS(K1)=130 J K-1 mol-1; DH(ZnL+OH)=-17.4, DS(ZnL+OH)=54.

Zn++	gl	KCl	25°C	0.10M	U		K1=6.90 K(ZnL+OH)=5.85	1971Cwa (51368)	2590
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Zn++	gl	KCl	20°C	0.10M	U		K(Zn+HL)=3.7	1962BSb (51369)	2591
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C6H15N3 L CAS 4730-54-5 (26)  
1,4,7-Triazacyclononane; cyclo(-NH.CH2.CH2.NH.CH2.CH2.NH.CH2.CH2-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.20M	M	H	K1=11.3	1978KKb (51392)	2592

By polarography, K1=11.4. DH1=-29.2 kJ mol-1, DS=121 J K-1 mol-1

Zn++	oth	KNO3	25°C	0.10M	U	H		1977FZa (51393)	2593
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DH(K1)=-49.7 kJ mol-1; DS=55.2 J K-1 mol-1

Zn++	gl	KNO3	25°C	0.10M	M		K1=11.62	1976YZa (51394)	2594
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Zn++	gl	KNO3	25°C	0.10M	U		K1=11.6	1975DDa (51395)	2595
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Zn++	gl	KNO3	25°C	0.10M	U		K1=11.7 B2=21.70	1973AHc (51396)	2596
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C6H15N3O2 HL CAS 52760-35-7 (6670)  
Lysine hydroxamic acid; H2N.(CH2)4.CH(NH2)CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		B2=12.5 B(ZnHL)=15.49	2002ECa (51421)	2597

B(ZnH<sub>2</sub>L<sub>2</sub>)=30.83

B(ZnHL<sub>2</sub>)=22.24

B(ZnH-1L<sub>2</sub>)=2.4

\*\*\*\*\*

C6H<sub>15</sub>N<sub>3</sub>O<sub>2</sub> HL DTMA CAS 55682-20-7 (2334)

N,N-Bis(2-aminoethyl)glycine; (H<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>)<sub>2</sub>N.CH<sub>2</sub>.COOH

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

Zn++ gl KNO<sub>3</sub> 25°C 0.10M C K<sub>1</sub>=13.13 1975MMe (51434)2598  
K(ZnL+H)=4.20  
K(ZnLOH+H)=9.89

\*\*\*\*\*

C6H<sub>15</sub>N<sub>3</sub>O<sub>3</sub> L (6613)

1,3,5-Triamino-1,3,5-trideoxy-cis-inositol,5-Amino-5-deoxy-streptamine;

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

Zn++ gl KNO<sub>3</sub> 25°C 0.10M C K<sub>1</sub>=8.40 B<sub>2</sub>=13.56 1992HGa (51444)2599

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C6H<sub>15</sub>O<sub>2</sub>PS<sub>2</sub> HL (2059)

O,O'-Dipropyl dithiophosphoric acid; (C<sub>3</sub>H<sub>7</sub>O)<sub>2</sub>P(S)SH

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

Zn++ vlt mixed RT 50% C 1986HSd (51483)2600  
B<sub>3</sub>=2.57

Medium: 50% v/v DMF/H<sub>2</sub>O. Method: polarography.

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C6H<sub>15</sub>O<sub>2</sub>PS<sub>2</sub> HL CAS 25134-38-7 (4401)

Phosphorodithioic acid O,O-diisopropyl ester; (CH<sub>3</sub>.CH(CH<sub>3</sub>)O)<sub>2</sub>PS.SH

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

Zn++ cal oth/un ? ? U M 1971DGb (51496)2601  
K(2ZnL<sub>2</sub>=Zn<sub>2</sub>L<sub>4</sub>)=0.68  
K(ZnL<sub>2</sub>+py)=3.54  
K(ZnL<sub>2</sub>(py)+py)=0.83

Medium: benzene

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C6H<sub>15</sub>O<sub>15</sub>P<sub>3</sub> H<sub>6</sub>L Ins(1,2,6)P<sub>3</sub> CAS 28841-62-5 (6479)

D-myo-Inositol 1,2,6-trisphosphoric acid;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl oth/un 25°C 0.10M C K<sub>1</sub>=7.58 2001FSb (51528)2602  
B(ZnHL)=14.72  
B(ZnH-1L)=-1.41  
B(Zn<sub>2</sub>HLA)=35.75  
K(Zn<sub>2</sub>H<sub>3</sub>LA)=50.15

Medium: tetramethylammonium p-toluenesulfonate, 0.10 M. A is spermine.

Also constants for reactions HnL+HmA.

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C6H15PS2 HL CAS 22689-71-0 (4395)

P,P-Dipropylphosphinodithioic acid; (CH3.CH2.CH2)2.PS.SH

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

Zn++ vlt alc/w ? 90% U B2=6.5 1972TCa (51552)2603

Medium: 90% EtOH, 0.15 M NaClO4

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C6H16N04P HL CAS 387383-55-3 (8776)

N,N,N-Trimethyl-2-(phosphonomethoxy)ethylamine;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl NaNO3 25°C 0.10M M K1=2.03 2002FGb (51568)2604

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C6H16N2 L CAS 20485-44-3 (3667)

2,3-Dimethyl-2,3-diaminobutane; (CH3)2.C(NH2).C(NH2)(CH3)2

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl oth/un 20°C 1.0M U TI B2=13.20 1968POa (51591)2605

At 0 C: B2=14.08(I=0.1), 14.80(0.5), 15.20(1); 10 C: B2=13.30(I=0.1), 14.02(0.5), 14.30(1); 20 C: B2=12.24(0.1), 12.95(0.5) and 30 C. DH(B2)=6.1(?) kJ mol<sup>-1</sup>

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C6H16N202 L CAS 3197-06-6 (7963)

2-Amino-N,N-bis(2-hydroxyethyl)ethylamine;

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

Zn++ gl NaCl 25°C 0.16M U K1=5.42 2001SRa (51674)2606

K(Zn+HL)<2

\*K(ZnL)=-7.61

\*K(ZnH-1L)=-8.88

\*K(ZnH-2L)=-10.8

\*\*\*\*\*

C6H16N202 L CAS 93798-65-3 (3119)

3,6-Diaza-1,8-dihydroxyoctane; HO.CH2.CH2.NH.CH2.CH2.NH.CH2.CH2.OH

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl oth/un 25°C 0.50M U K1=4.79 B2=9.1 1960Hda (51684)2607

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C6H16N204P2 H2L (6466)

Piperazine-1,4-diylbis(methylene)bis(phosphinic acid); H2O2P.CH2.C4H8N2.CH2.PO2H2

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl NaClO4 25°C 0.10M C K1=1.49 1992LBa (51706)2608  
B(ZnHL)=8.31

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C6H16N2S L (6464)  
5-Thia-2,8-diazanonane;

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

Zn++ gl KNO3 25°C 0.10M C K1=4.6 1992Wlb (51738)2609

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C6H16N2S2 L (3120)  
3,6-Dithiaoctane-1,8-diamine; H2N.CH2.CH2.S.CH2.CH2.S.CH2.CH2.NH2

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

Zn++ gl NaClO4 25°C 0.10M U K1=4.96 B2=9.06 1977ASg (51753)2610

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C6H16O3SSi HL CAS 2039-96-5 (133)  
3-(Trimethylsilyl)propane sulfonic acid; (CH3)3Si.CH2.CH2.CH2.HSO3

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

Zn++ nmr NaNO3 35°C 0.10M U I M 1979MIa (51779)2611

K(Zn(bpy)+L)=0.45

K(Zn(phen)+L)=0.77

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C6H16O6P2 H4L CAS 4721-22-6 (3708)  
Hexane-1,6-diphosphonic acid; H2O3P(CH2)6PO3H2

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl KCl 25°C 0.10M U 1967KLa (51787)2612

K(Zn+HL)=7.34

B(Zn2L)=14.73

K(2Zn+HL)=10.31

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C6H17NO6P2 H4L CAS 71066-28-9 (8887)  
N-(3-Methylbutyl)aminomethane-1,1-diphosphonic acid;

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

Zn++ gl KCl 25°C 0.20M C K1=10.44 2002MKc (51800)2613

B(ZnH2L)=23.75

B(ZnHL)=19.39

B(ZnH-1L)=0.29

B(ZnH-2L)=-11.55

B(ZnH2L2)=36.79, B(ZnHL2)=26.07, B(Zn4H3L3)=69.84.

\*\*\*\*\*

C6H17NO6P2 H4L CAS 71066-29-0 (8886)  
N-Pentylaminomethane-1,1-diphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=10.55 B(ZnH2L)=23.79 B(ZnHL)=19.13 B(ZnH-1L)=0.64 B(ZnH-2L)=-9.85 B(ZnH2L2)=36.53, B(ZnHL2)=26.31, B(Zn4H3L3)=69.23.	2002MKc (51804)	2614
C6H17N2O3P H2L (7486) N,N,N'-Trimethyldiaminoethane-N'-methylphosphonic acid; (CH3)2N.CH2CH2.N(CH3)CH2PO3H2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=8.41 K(ZnL+H)=4.7 K(ZnL+OH)=4.7	2001DSa (51817)	2615
Zn++	gl	KNO3	25°C	0.10M	C		K1=8.41 K(ZnL+H)=4.7 K(Zn+OH)=4.7	2001DSa (51818)	2616
C6H17N3 L CAS 54473-27-7 (171) 1,1,1-Tris(aminomethyl)propane; (H2N.CH2)3C.CH2.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	cal	KNO3	25°C	0.50M	C	H		1980SVa (51835)	2617
DH1=-22.7 kJ mol <sup>-1</sup> , DS1=55.6, DH(K2)=-20.9, DS2=13, also ZnHL, Zn(OH)L, Zn(OH)2L									
Zn++	gl	KNO3	25°C	0.50M	C		K1=6.899 B2=11.25	1977MSc (51836)	2618
C6H17N3 L CAS 35513-87-2 (292) 1,4,9-Triazanonane, 3-Azaheptane-1,7-diamine; H2NCH2CH2NHCH2CH2CH2CH2NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	C		K1=6.34 B2=10.46 K(ZnL+OH)=5.48 K(ZnL+2(OH))=8.29 K(Zn+HL)=4.36 K(Zn+2HL)=8.31	1975BPd (51847)	2619
C6H17N3 L CAS 56-18-8 (968) 1,5,9-Triazanonane, 4-azaheptane-1,7-diamine; H2N.CH2.CH2.CH2.NH.CH2.CH2.CH2.NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++ gl NaClO4 25°C 0.10M U H K1=7.94 1996IFb (51882)2620  
 \*K(ZnL)=-8.58  
 DH(K1)=-22.0 kJ mol<sup>-1</sup>, DS(K1)=77.8 J K<sup>-1</sup> mol<sup>-1</sup>.

Zn++ gl NaClO4 20°C 0.10M U B(ZnHL2)=22.83 1991WBa (51883)2621

Zn++ gl KNO3 40°C 1.00M C T H K1=8.14 1974DFa (51884)2622  
 K(ZnL+OH)=5.38  
 DH(K1)=-5.8, DH(ZnLOH)=-4.7 kJ mol<sup>-1</sup> (40 C). At 25 C: K1=8.36 (8.38 by  
 polarography), K(ZnL+OH)=5.57

Zn++ gl KNO3 25°C 0.10M U K1=6.6 B2=10.30 1973AHc (51885)2623

Zn++ cal KCl 25°C 0.10M U H 1966PNa (51886)2624  
 DH(K1)=-22.6 kJ mol<sup>-1</sup>, DS=75 J K<sup>-1</sup> mol<sup>-1</sup>; DH(ZnL+OH)=-15.9, DS=47

Zn++ gl KCl 25°C 0.10M U K1=7.92 1966VAa (51887)2625  
 K(ZnL+OH)=5.2

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 C6H17N3O L CAS 58145-14-5 (7964)  
 2-Hydroxy-N,N-bis(2-aminoethyl)ethylamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaCl	25°C	0.16M	U		K1=9.55 K(Zn+H2L)<2 K(Zn+HL)<5 *K(ZnL)=-8.19 *K(ZnH-1L)=-11.0	2001SRa (51922)	2626
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Zn++	gl	KNO3	25°C	0.10M	U		K1=8.34 B(ZnH-1L)=0.38 B(ZnH-2L)=-9.19	1998XKb (51923)	2627
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 C6H18N2O4P2 H2L (7261)  
 1,2-Diaminoethane-N,N'-bis-(dimethylenemethylphosphinic acid); (CH2NHCH2PO(OH)CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	R4N.X	25°C	0.10M	M		K1=7.64	1996BCa (51927)	2628
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Medium: 0.1 M Me4NNO3.

\*\*\*\*\*  
 C6H18N2O6P2 H4L (1363)  
 N,N'-Dimethyldiaminoethane-N,N'-dimethylphosphonic acid;  
 CH3N(CH2PO3H2).CH2.CH2.N(CH2.PO3H2)CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	C		K1=13.07	2001DSa (51941)	2629
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Zn++ gl diox/w 25°C 50% C K1=12.05 B2=18.95 1979MPe (52054)2638  
 Medium: 50% v/v dioxan/H2O, 0.1 M KNO3. By calorimetry: DH(K1)=-29.7  
 kJ mol-1, DS=131 J K-1 mol-1. DH(K2)=-30.4.

Zn++ gl alc/w 25°C 65% U I K1=12.26 1972RBa (52055)2639  
 Medium: 40-99% MeOH, 0.1 M NaClO4. K1(40%)=12.94; K1(99%)=14.61

Zn++ cal KNO3 25°C 0.10M U H 1965WHa (52056)2640  
 DH(K1)=-34.7 kJ mol-1, DS=112.9 J K-1 mol-1

Zn++ cal KCl 25°C 0.10M U H 1961SPb (52057)2641  
 DG(K1)=-68.06 kJ mol-1, DH=-37.2, DS=105 J K-1 mol-1

Zn++ gl KCl 25°C 0.10M U K1=11.9 1957RSb (52058)2642

Zn++ gl KNO3 35°C 1.0M U H 1952JHa (52059)2643  
 Medium: 1 M (KNO3+KCl). DH(K1)=-16.7 kJ mol-1

Zn++ gl oth/un 30°C 1.0M U T K1=11.94 1952JHa (52060)2644  
 40 C: K1=11.81

Zn++ gl KCl 20°C 0.10M U K1=12.1 1950SCa (52061)2645  
 K(Zn+HL)=7.3

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaClO4	25°C	0.10M	U			1996IFb (52166)2646	
							*K(ZnL)=-9.87		

Zn++	gl	NaClO4	25°C	1.0M	U T H		K1=15.20	1995CXa (52167)2647	
							*K(ZnL(H2O))=-10.68		

Data for 35 and 45 C. By calorimetry, DH(\*K1)=46.0 kJ mol-1, DS(\*K1)=-51  
 J K-1 mol-1.

Zn++	gl	NaClO4	25°C	1.00M	C		K1=15.00	1994AGa (52168)2648	
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Zn++	gl	oth/un	25°C	0.10M	C		K1=14.5	1982MMb (52169)2649	
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Zn++	gl	R4N.X	25°C	0.10M	C		K1=14.40	1975JTa (52170)2650	
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Zn++	nmr	oth/un	25°C	0.50M	U	M	K1=14.53	1973RBb (52171)2651	
							K(ZnL+en)=1.15		
							K(ZnL+Gly)=1.00		
							K(ZnL+OH)=2.90		

Zn++	oth	KNO3	20°C	0.10M	U		K1=13.76	1971AWa (52172)2652	
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Zn++ cal KCl 25°C 0.10M U H 1960PCa (52173)2653  
DG(K1)=-82.56 kJ mol<sup>-1</sup>, DH=-57.5, DS=84 J K<sup>-1</sup> mol<sup>-1</sup>

Zn++ gl KCl 20°C 0.10M U K1=14.65 1950PSa (52174)2654  
\*\*\*\*\*

C6H19N2O9P3 H6L (8063)  
N-Methylethylenediamine-N,N',N'-trimethylenetris(phosphonic acid);

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

Zn++ gl KNO3 25°C 0.10M C K1=18.01 2001DSa (52233)2655  
K(ZnL+H)=5.95  
K(ZnH2L+H)=3.90  
K(ZnHL+H)=4.94  
K(ZnH3L+H)=2.9

K(ZnL+OH)=1.9

Zn++ gl KNO3 25°C 0.10M C K1=18.01 2001DSa (52234)2656  
K(ZnL+H)=5.95  
K(ZnHL+H)=4.94  
K(ZnH2L+H)=3.90  
K(ZnH3L+H)=2.9

K(ZnL+OH)=1.9

\*\*\*\*\*  
C6H20N2O8P4 H4L CAS 938-16-3 (4402)  
Ethylenediaminetetra(methylenephosphonous acid);

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

Zn++ gl KNO3 25°C 0.10M U K1=7.60 1971MMh (52245)2657  
\*\*\*\*\*

C6H20N2O12P4 H8L EDTPA CAS 1429-50-1 (434)  
Ethane-1,2-bis(iminobis(methylenephosphonic acid)); ((H2O3PCH2)2NCH2.)2

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

Zn++ gl KNO3 25°C 0.10M C K1=19.1 2001DSa (52285)2658  
K(ZnL+H)=8.22  
K(ZnH2L+H)=4.94  
K(ZnHL+H)=5.92  
K(ZnH3L+H)=4.1

K(ZnL+OH)=1.7

Zn++ gl KNO3 25°C 0.10M C K1=19.1 2001DSa (52286)2659  
K(ZnL+H)=8.22  
K(ZnHL+H)=5.92  
K(ZnH2L+H)=4.94  
K(ZnH3L+H)=4.1

K(ZnL+OH)=1.7

Zn++      gl   NaCl   37°C 0.15M C      K1=13.16      1995JWa (52287)2660  
 K(ZnL+H)=9.09  
 K(ZnH2L+H)=5.17  
 K(ZnHL+H)=6.76  
 K(ZnH3L+H)=4.30

Zn++      gl   KNO3   25°C 0.10M C      K1=18.76      1976MMa (52288)2661  
 K(ZnL+H)=8.31  
 K(ZnHL+H)=6.06  
 K(ZnH2L+H)=4.99  
 K(ZnH3L+H)=3.10

Zn++      gl   oth/un   25°C 0.10M U      1971MMb (52289)2662  
 K(ZnL+H)=8.34  
 K(ZnHL+H)=6.05  
 K(ZnH2L+H)=4.93  
 K(ZnH3L+H)=4.46

Zn++      gl   KCl   25°C 0.10M U      K1=17.05      1967KDa (52290)2663  
 K(Zn+HL)=13.52  
 K(Zn+H2L)=9.90  
 K(Zn+H3L)=6.99  
 K(Zn+H4L)=4.73

K(Zn+H5L)=2.18

\*\*\*\*\*

C7H4N2O6      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

Zn++      sp   NaCl04   25°C 0.10M U      K1=0.75      1966PMa (52395)2664

\*\*\*\*\*

C7H4N2O7      H2L      CAS 609-99-4 (400)  
 3,5-Dinitrosalicylic acid; (O2N)2.C6H2(OH).COOH

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

Zn++      gl   NaCl04   30°C 0.10M U      K1=3.32      1975JKa (52448)2665

Zn++      EMF   NaCl04   30°C 0.10M U      K1=3.32      1972JKa (52449)2666

Zn++      gl   KNO3   35°C 0.10M U      K1=3.70      1970DDa (52450)2667

\*\*\*\*\*

C7H4O3Br2      H2L      CAS 3147-55-5 (1116)  
 3,5-Dibromosalicylic acid; C6H2(OH)(Br)2.COOH

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

Zn++      gl   NaCl04   30°C 0.10M U      T K1=6.04      1975JKa (52539)2668

\*\*\*\*\*

C7H4O3Cl2                      H2L                      CAS 320-72-9    (1117)  
3,5-Dichlorosalicylic acid; C6H2(OH)(Cl)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaClO4	30°C	0.10M	U	T	K1=5.47		1975JKa	(52552)2669
*****										

C7H4O7	H3L	Meconic acid	CAS 497-59-6	(3723)
3-Hydroxy-4-pyrone-2,6-dicarboxylic acid;				

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.50M	U			K1=7.25	1967CBb (52562)	2670
*****										

C7H5NOS                      HL                      CAS 7405-23-4    (3177)  
4-Hydroxybenzothiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U			K1=6.90 B2=12.82	1960FFa (52587)	2671
*****										

C7H5NO4                      H2L              Quinolinic acid      CAS 89-00-9      (567)  
2,3-Pyridinedicarboxylic acid; C5H3N.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaCl04	30°C	0.10M	U	M		K1=4.82 B2=8.57 K(ZnL+Aspartate)=7.92 K(ZnL+Glutamate)=6.58 K(ZnL+Thiomalate)=4.56 K(ZnL+Thiodiglycolate)=4.16	1979SJb	(52614)2672

Zn++      g1    KNO3      25°C 0.10M U      K1=4.8      B2=8.5      1958YYa (52615)2673  
 \*\*\*\*\*

C7H5NO4 H2L CAS 499-80-9 (566)  
2,4-Pyridinedicarboxylic acid; C5H3N.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaCl04	30°C	0.10M	U	M		K1=7.02 B2=13.02 K(ZnL+Aspartate)=7.94 K(ZnL+Thiomalate)=4.90 K(ZnL+Glutamate)=7.11 K(ZnL+Thiodiglycolate)=4.01	1979Sjb	(52643)2674

Zn++      g1    KNO3    25°C 0.10M U      K1=5.0    B2=8.8    1958YYa (52644)2675  
\*\*\*\*\*

C7H5NO4 H2L CAS 100-26-5 (2528)  
2,5-Pyridinedicarboxylic acid, Isocinchomeric acid; C5H3N.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	20°C	0.10M	U T H		K1=4.33 B2=7.68	1983PSd	(52662)2676
30 C: K1=4.22, K2=3.26; 40 C: K1=4.13, K2=3.19									

\*\*\*\*\*

C7H5N04 H2L Dipicolinic aci CAS 449-83-2 (418)  
2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	35°C	0.10M	C M		K1=4.78 B(ZnAL)=8.61	1999DSb	(52722)2677

A is thiamine hydrochloride.

Zn++	gl	KNO3	25°C	0.10M	M M		K1=5.63	1996AEa	(52723)2678
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Data for ternary complexes with aspartic acid, serine, asparagine and N-(2-acetamido)iminodiacetic acid

Zn++	gl	NaCl04	25°C	0.20M	M M			1996VBa	(52724)2679
------	----	--------	------	-------	-----	--	--	---------	-------------

K(Zn(ala)+L)=4.60  
K(Zn(phe)+L)=4.32  
K(Zn(try)+L)=4.34  
K(Zn(trp)+L)=4.39

K(Zn(gly-gly)+L)=2.99, K(Zn(gly-ala)+L)=3.06, K(Zn(en)+L)=5.00.

Zn++	gl	KCl	25°C	1.00M	C M		K1=6.43 B2=12.46	1984SMc	(52725)2680
------	----	-----	------	-------	-----	--	------------------	---------	-------------

Ternary complexes with 2-amino-3-phosphonopropionic acid (APP) and pyridoxal -5'-phosphate- APP Schiff base.

Zn++	gl	NaNO3	20°C	0.10M	U		K1=6.35 B2=11.88	1960ANb	(52726)2681
------	----	-------	------	-------	---	--	------------------	---------	-------------

Zn++	gl	KCl	30°C	0.10M	U		K1=7.0 B2=13.0	1957TBb	(52727)2682
------	----	-----	------	-------	---	--	----------------	---------	-------------

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C7H5N04 HL CAS 62-23-7 (489)  
4-Nitrobenzoic acid; O2N.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U M		K1=1.83 K(Zn(bpy)+L)=1.86	1968GPd	(52902)2683

Medium: 50% dioxan, 0.1 M NaCl04

\*\*\*\*\*

C7H5N04 HL CAS 97-51-8 (1887)  
5-Nitrosalicylaldehyde; O2N.C6H3(OH).CHO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U T		K1=3.27 B2=5.96	1973CGc	(52932)2684

Medium: 50% dioxan, 0.3 M NaCl04. Temperature range 15-50 C  
K1(15 C)=3.34, K1(50 C)=3.03, K2(15 C)=2.80, K2(50 C)=2.55

-----  
Zn++ sp NaCl04 25°C 0.10M U K1=2.01 1966PMa (52933)2685  
\*\*\*\*\*

C7H5N04S2 H2L (3178)

4-Hydroxybenzothiazole-7-sulfonic acid;

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

Zn++ gl diox/w 25°C 50% U K1=6.1 B2=10.4 1962FFa (52947)2686

\*\*\*\*\*

C7H5N05 H2L Nitrosalicylic CAS 85-38-1 (1416)

2-Hydroxy-3-nitrobenzoic acid; HO.C6H3(NO2).COOH

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

Zn++ gl NaCl04 30°C 0.10M U T K1=5.73 1975JKa (52966)2687

Zn++ EMF NaCl04 30°C 0.10M U K1=5.73 1972JKa (52967)2688

\*\*\*\*\*

C7H5N05 H2L Nitrosalicylic CAS 96-97-9 (148)

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

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

Zn++ gl NaCl04 35°C 0.10M U K1=5.12 B2=8.37 1980ABb (53026)2689

Zn++ gl NaCl04 30°C 0.10M U K1=5.38 1975JKa (53027)2690

Zn++ oth oth/un 30°C 0.10M U K1=6.65 B2=12.90 1972KAd (53028)2691

\*\*\*\*\*

C7H5N05 H3L CAS 499-51-4 (3150)

4-Hydroxypyridine-2,6-dicarboxylic acid; HO.C5H2N(COOH)2

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

Zn++ gl oth/un 20°C 0.10M U K1=9.3 B2=17.8 1963And (53067)2692

K(ZnL+H)=5.52

K(ZnL2+H)=5.81

K(ZnHL2+H)=5.11

\*\*\*\*\*

C7H5NS2 HL CAS 149-30-3 (3752)

2-Mercaptobenzo-1,3-thiazole;

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

Zn++ dis NaCl04 20°C 0.10M U K1=3.25 B2=5.74 1968NLc (53084)2693

\*\*\*\*\*

C7H5O2Br HL CAS 4584-68-3 (2691)

3-Bromotropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	50%	U		K1=6.9 B2=12.7	1954BFd (53111)	2694
*****									
C7H5O2Br		HL					CAS 1761-61-1	(1886)	
5-Bromosalicylaldehyde; Br.C6H3(OH).CHO									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U T		K1=3.81 B2=6.94	1973CGc (53129)	2695
Medium: 50% dioxan, 0.3 M NaClO4. Temperature range 15-50 C									
K1(15 C)=3.88, K1(50 C)=3.67, K2(15 C)=3.12, K2(50 C)=2.93									
*****									
C7H5O2Cl		HL					(3747)		
2-Hydroxy-6-chlorobenzaldehyde (6-chlorosalicylaldehyde)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=5.33	1978RJa (53154)	2696
*****									
C7H5O2Cl		HL					CAS 535-80-8	(1368)	
3-Chlorobenzoic acid; Cl.C6H4.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U M		K1=1.99	1968GPd (53171)	2697
K(Zn(bpy)+L)=2.10									
Medium: 75% dioxan, 0.1 M NaClO4									
*****									
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
Zn++	gl	diox/w	30°C	75%	U		K1=4.51	1978RJa (53185)	2698
*****									
Zn++	sp	NaClO4	25°C	0.10M	U		K1=2.39	1966PMa (53186)	2699
*****									
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
Zn++	gl	diox/w	25°C	50%	U T		K1=3.65 B2=6.68	1973CGc (53220)	2700
Medium: 50% dioxan, 0.3 M NaClO4. Temperature range 15-50 C									
K1(15 C)=3.77, K1(50 C)=3.38, K2(15 C)=3.08, K2(50 C)=2.97									
*****									
C7H5O2I		HL					CAS 60032-63-5	(6282)	
5-Iodo-salicylaldehyde; I(OH)C6H3.CHO									



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=5.65	1978RJa (53268)	2701
*****									
C7H5O3As		HL					CAS 50722-40-2	(8008)	
2-Arsenosobenzoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	35°C	20%	U		K1=3.14	1973SPf (53276)	2702
Medium: 20% EtOH/H2O, 0.1 M KNO3.									
*****									
C7H5O3Br		H2L					CAS 3883-95-2	(1111)	
3-Bromosalicylic acid; Br.C6H3(OH).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	30°C	0.10M	U	T	K1=6.42	1975JKa (53287)	2703
*****									
C7H5O3Cl		H2L					CAS 321-14-2	(1113)	
5-Chlorosalicylic acid; Cl.C6H3(OH).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	30°C	0.10M	U		K1=7.32	1975JKa (53333)	2704
*****									
C7H6NO2Cl		HL					CAS 7120-43-6	(3782)	
5-Chloro-2-hydroxybenzaldehyde oxime (5-chlorosalicylaldoxime)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	20°C	75%	U		K1=5.8 B2=11.60	1965BEb (53385)	2705
Medium: 75% dioxan, 0.1 M NaClO4									
*****									
C7H6NO3Br		H2L					CAS 87353-69-3	(207)	
4-Bromosalicylhydroxamic acid; Br.C6H3(OH).CO.NH.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	diox/w	30°C	50%	U		K1=3.82	1977DJa (53393)	2706
Medium: 50% dioxan, 0.1 M NaClO4									
*****									
C7H6NO3Br		H2L					CAS 5798-94-7	(206)	
5-Bromosalicylhydroxamic acid; Br.C6H3(OH).CO.NH.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	diox/w	30°C	50%	U		K1=3.87	1977DJa (53404)	2707
Medium: 50% dioxan, 0.1 M NaClO4									
*****									

C7H6NO3Cl                      H2L                      (205)  
3-Chlorosalicylhydroxamic acid; Cl.C6H3(OH).CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++      EMF diox/w 30°C    50%    U      K1=3.62      1977DJa (53413)2708

Medium: 50% dioxan, 0.1 M NaCl<sub>04</sub>

C7H6N2	L	Benzimidazole	CAS 51-17-2 (52)
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Benzimidazole; C7H6N2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ g1 NaNO3 25°C 0.10M C M K1=2.45 2000MSa (53456)2709

$$B(\text{ZnAL}) = 8.78$$
$$B(ZnH-1AL)=1.85$$
$$B(Zn_2A_2L) = 18.63$$
$$B(Zn2H-1A2L)=12.02$$

H2A is aspartic acid.

Zn++ g1 KNO3 35°C 0.10M C M K1=2.40 1997PSb (53457)2710

$$K(ZnL+A)=7.18$$

H2A is thiamine orthophosphoric acid.

Zn++ vlt alc/w 25°C 20% U K1=1.78 B2=2.86 1979KBc (53458)2711

$$K_3 = 0.6$$

C7H6N2O                      HL                      (1926)

8-Hydroxyimidazo[1,2-a]-pyridine;

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

Zn++ gl diox/w 25°C 50% C K1=6.55 B2=12.04 1993YDa (53479)2712

In 50% v/v dioxan/water. Electrolyte: 0.1M KNO<sub>3</sub>.

C7H6N2OS                      HL                      CAS 26278-79-5    (3179)

2-Amino-4-hydroxybenzothiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ gl diox/w 25°C 50% U K1=8.0 B2=15.4 1962FFa (53485)2713

C7H6N2O4                      HL                      CAS 1595-15-9    (3754)

2-Hydroxy-5-nitrobenzaldehyde oxime (5-nitrosalicylaldoxime)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ gl diox/w 20°C 75% U K1=5.3 B2=10.90 1965BEb (53490)2714

Medium: 75% dioxan, 0.1 M NaCl04

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	20°C	0.10M	U		K1=8.15    B2=16.05	1965ABa (53498)	2715

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C7H6N2O5                      H2L                      CAS 831-51-6 (208)  
 5-Nitrosalicylhydroxamic acid; O2N.C6H3(OH).CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++		EMF diox/w	30°C	50%	U		K1=2.94	1977DJa (53520)	2716

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C7H6O5                      HL    Thiobenzoic                      CAS 98-91-9 (6294)  
 Thiobenzoic acid; C6H5.COSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	60%	U		K1=5.4    B2=9.9	1972OTc (53553)	2717

Medium: 60% v/v dioxan, 1 M (K,Na)NO3

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	30°C	0.10M	U	M	K1=2.93	1991RSc (53602)	2718

B(Zn(val)L)=9.25  
 B(Zn(val)2L2)=15.10  
 B(Zn(phe)L)=9.15  
 B(Zn(phe)2L2)=15.05

Evidence for formation of Schiff base structure in ternary complexes.  
 B(Zn(trp)L)=9.15, B(Zn(trp)2L2)=15.10.

\*\*\*\*\*

Zn++	gl	diox/w	30°C	75%	U		K1=6.71	1978RJa (53603)	2719
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Zn++	gl	KCl	25°C	0.50M	U	M		1971LLa (53604)	2720
------	----	-----	------	-------	---	---	--	-----------------	------

B(ZnLA)=7.78  
 B(ZnL2A2)=14.9  
 B(ZnL(Ala))=9.56  
 B(ZnL(b-Ala))=8.40

B(ZnL(Gly))=9.65; B(ZnL2(Ala)2)=16.23; B(ZnL2(Gly)2)=16.73;  
 B(ZnL2(b-Ala)2)=16.20. A=ethylamine

\*\*\*\*\*

Zn++	gl	KCl	25°C	0.50M	U	M	K1=2.87    B2=5.00	1968LBa (53605)	2721
------	----	-----	------	-------	---	---	--------------------	-----------------	------

B(ZnL(Gly))=9.65  
 B(ZnL(Gly)2)=13.42  
 B(ZnL2(Gly)2)=16.73

-----  
 Zn++ gl diox/w 30°C 75% U K1=6.26 1964JVa (53606)2722  
 Medium: 75% dioxan, 0.1 M NaClO4  
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Zn++ gl diox/w 25°C 50% U K1=4.50 B2=8.10 1947MMa (53607)2723  
 \*\*\*\*\*

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
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Zn++	sp	NaClO4	25°C	0.10M	U		K1=5.84	1968OWa (53654)	2724
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Zn++	gl	diox/w	30°C	50%	U		K1=7.5 K3=3.5	B2=14.0 1953BFa (53655)	2725
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\*\*\*\*\*  
 C7H6O2 HL Benzoic Acid CAS 65-85-0 (462)  
 Benzenecarboxylic acid; C6H5.COOH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	C	I M	K1=1.06 K(Zn(phen)+L)=0.95	1985BSd (53798)	2726
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In 50% dioxan: K1=2.27, K(Zn(phen)+L)=2.26. In 50% EtOH: K1=1.80, K=1.88  
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Zn++	gl	NaClO4	25°C	0.00	U	I	K1=1.70	1979TPa (53799)	2727
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Zn++	gl	KNO3	30°C	0.40M	U		K1=0.74	1970BTa (53800)	2728
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Zn++	gl	diox/w	25°C	50%	U	M	K1=2.35 K(Zn(bpy)+L)=2.40	1968GPd (53801)	2729
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Medium: 50% dioxan, 0.1 M NaClO4  
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Zn++	gl	oth/un	25°C	0.10M	U		K1=0.9	1960YYa (53802)	2730
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C7H6O2S H2L Thiosalicylic CAS 147-93-3 (236)  
 2-Mercaptobenzoic acid; HS.C6H4.COOH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	alc/w	25°C	50%	M T H		K1=8.19 B(Zn(en)L)=12.65	1992MSf (53892)	2731
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Medium: 50% v/v MeOH/H2O, 0.10 M NaClO4. Data for 40 and 55 C.  
 DH(K1)=29.2 kJ mol<sup>-1</sup>, DS(K1)=245 J K<sup>-1</sup> mol<sup>-1</sup>.  
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Zn++	gl	diox/w	25°C	0.10M	U		K1=9.09 B2=17.10	1977WVa (53893)	2732
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Zn++	gl	diox/w	30°C	0.10M	U		K1=9.18 B2=19.52	1974AAa (53894)	2733
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Zn++	gl	alc/w	50°C	45%	U T H		K1=8.84 B2=15.22	1968RSh (53895)	2734
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Medium: 45% EtOH, 0.15 M. K1=8.45(30 C),8.60(40 C); K2=5.99(30 C),6.20(40 C)  
DH(K1)=27 kJ mol<sup>-1</sup>(25 C), DS=250 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=38, DS=242

-----  
Zn++ gl alc/w 30°C 50% U K1=9.1 B2=20.30 1967KNa (53896)2735

Medium: 50% EtOH, 0.001 M NaClO4

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C7H6O2S2 H2L CAS 89677-36-1 (5448)

3-(2-Thiophene)-2-mercaptopropenoic acid; C4H3S.CH:C(SH).COOH

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

Zn++ gl diox/w 25°C 0.10M U K1=11.0 B2=19.82 1977WVa (53927)2736

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C7H6O3 H2L CAS 95-01-2 (4407)

2,4-Dihydroxybenzaldehyde; (OH)2.C6H3.CHO

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

Zn++ gl diox/w 30°C 75% U K1=9.56 1978RJa (53937)2737

-----  
Zn++ gl diox/w 30°C 50% U 1969VMa (53938)2738

K(Zn+HL)=3.60

K(ZnHL+HL)=2.80

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C7H6O3 H2L Salicylic acid CAS 69-72-7 (14)

2-Hydroxybenzoic acid, Salicylic acid; HO.C6H4.COOH

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

Zn++ cal alc/w 25°C 100% U H 1990PJa (54097)2739

Medium: MeOH. DG(K1)=-28.0 kJ mol<sup>-1</sup>, DH=27; DG(B2)=-44.5; DH=42

-----  
Zn++ gl alc/w 25°C 100% M 1988LTa (54098)2740

K(Zn+HL)=4.9

K(Zn+2HL)=7.8

Medium: MeOH

-----  
Zn++ gl NaNO3 35°C 0.10M U M T K1=7.10 1985KSc (54099)2741

K(ZnL+CMP)=1.61

H2CMP=cytidine-5'-monophosphoric acid

-----  
Zn++ gl KNO3 30°C 0.50M U M T K1=7.83 1981EKa (54100)2742

B(ZnHL2(pyridoxamine))=30.71

B(ZnH3L2(pyridoxamine))=46.71

B(ZnH4L2(pyridoxamine))=54.22

-----  
Zn++ gl NaClO4 30°C 0.10M U K1=8.86 1975JKa (54101)2743

-----  
Zn++ gl diox/w 30°C 75% U K1=9.20 1964JVa (54102)2744

Medium: 75% dioxan, 0.1 M NaClO4

-----  
Zn++ gl KCl 20°C 0.10M U K1=6.85 1958PEe (54103)2745  
\*\*\*\*\*  
C7H6O3S H2L CAS 55927-33-8 (5445)  
3-Furyl-2-mercaptopropenoic acid; C4H3O.CH:C(SH).COOH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl diox/w 25°C 0.10M U K1=11.15 B2=20.55 1977WVa (54444)2746  
\*\*\*\*\*  
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  
-----  
Zn++ gl alc/w 25°C 50% M M K1=7.63 1983ADb (54509)2747  
K(Zn(phen)+L)=7.36  
Medium: 50% v/v EtOH/H2O, 0.10 M NaNO3.  
-----

Zn++ gl NaClO4 30°C 0.10M U K1=10.34 1975JKa (54510)2748  
B(ZnHL)=10.34  
\*\*\*\*\*  
C7H6O4 H3L CAS 409-79-9 (1115)  
2,5-Dihydroxybenzoic acid; C6H3(OH)2.COOH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaClO4 30°C 0.10M U T K1=9.34 1975JKa (54577)2749  
\*\*\*\*\*  
C7H6O4 H3L Protocatechuic CAS 99-50-3 (875)  
3,4-Dihydroxybenzoic acid; C6H3(OH)2.COOH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaClO4 25°C 0.20M M M K1=8.913 B2=15.62 1994VBc (54646)2750  
B(Zn(ala)L)=13.504  
B(Zn(phe)L)=13.349  
B(Zn(try)L)=13.466  
B(Zn(trp)L)=13.712  
B(Zn(gly-gly)L)=12.060, B(Zn(gly-ala)L)=12.125.  
-----

Zn++ gl NaNO3 30°C 0.10M U K1=8.13 B2=12.68 1968JHa (54647)2751  
-----

Zn++ gl NaClO4 30°C 0.10M U K1=9.84 B2=17.39 1966APb (54648)2752  
-----

Zn++ gl KNO3 30°C 0.10M U K1=8.91 B2=15.62 1963MNC (54649)2753  
\*\*\*\*\*  
C7H6O5 H4L Gallic acid CAS 149-91-7 (446)  
3,4,5-Trihydroxybenzoic acid; C6H2(OH)3.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	EMF	KNO3	25°C	0.10M	U			1985SCd (54743)	2754
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B(Zn2L)=11.4

Method: divalent cation liquid ion exchange electrode

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C7H6O5S	H2L	CAS 29848-93-9	(3151)
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Salicylaldehyde-5-sulfonic acid; (5-Sulfosalicylaldehyde)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KCl	25°C	0.09M	U	I	K1=2.88 B2=4.55	1972MSa (54793)	2755
------	----	-----	------	-------	---	---	-----------------	-----------------	------

Range of ionic strength 0-0.71. K1(I=0)=3.61, K1(I=0.71)=2.26, B2(I=0)=5.43,

B2(I=0.71)=4.15

Zn++	gl	oth/un	25°C	0.10M	U		K1=3.00 B2=5.4	1948CMa (54794)	2756
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C7H6O6S	H3L	CAS 5965-83-3	(399)
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5-Sulfosalicylic acid, 2-Hydroxy-5-sulfobenzoic; HO3S.C6H3(OH).COOH

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

Zn++	ISE	NaClO4	25°C	1.0M	U		K1=6.69 B2=10.87	1968MNB (54915)	2757
------	-----	--------	------	------	---	--	------------------	-----------------	------

Zn++	gl	KCl	20°C	0.10M	U		K1=6.05 B2=10.7	1958PEe (54916)	2758
------	----	-----	------	-------	---	--	-----------------	-----------------	------

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C7H6O6S2	H3L	(5447)
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3-(5-Sulfo-2-furyl)-2-mercaptopropenoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	diox/w	25°C	0.10M	U		K1=10.61 B2=19.53	1977WVa (55088)	2759
------	----	--------	------	-------	---	--	-------------------	-----------------	------

in water medium, K1=8.26, B2=15.22

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C7H7N	L	CAS 100-69-6	(299)
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2-Vinylpyridine; C5H4N.CH:CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	U		K1=0.9	1974ILa (55113)	2760
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C7H7N	L	CAS 100-43-6	(294)
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4-Vinylpyridine; C5H4N.CH:CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	U		K1=1.6	1974ILa (55121)	2761
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C7H7NO	L	CAS 1112-62-9	(497)
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2-Acetylpyridine; C5H4N.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	kin	oth/un	25°C	0.10M	C		K1=1.55	1974C0a (55130)	2762
*****									
C7H7NO		L					CAS 350-03-8	(1479)	
3-Acetylpyridine; C5H4N.CO.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=0.65 B2=1.40	1986BLa (55136)	2763
*****									
C7H7NO		L					CAS 1122-54-9	(494)	
4-Acetylpyridine; C5H4N.CO.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=0.90 B2=1.32	1983LRa (55144)	2764
*****									
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
Zn++	gl	KNO3	30°C	0.10M	U	M	K1=1.99 K(ZnA+L)=2.91 B(ZnAL)=11.45	1989BBg (55193)	2765

H2A is 8-hydroxyquinoline-5-sulfonic acid.

Zn++	gl	oth/un	25°C	0.0	U			1960LUa (55194)	2766
							Kso=-9.75		

Zn++	sp	oth/un	25°C	0.0	U		K1=2.57	1960LUB (55195)	2767
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Zn++	gl	diox/w	35°C	50%	U		K1=2.6	1958YSa (55196)	2768
*****									
C7H7NO2		H2L				Salicylaldehyde	CAS 94-67-7	(1486)	
2-Hydroxybenzaldehyde oxime; HO.C6H4.CH:N.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	M	K1=5.40 B2= 9.66	1990DAb (55295)	2769
Also ternary complexes with bpy, ida, mida, ada and nta.									

Zn++	gl	KNO3	25°C	0.10M	C		K1=5.40 B2= 9.66	1990DAb (55296)	2770
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Zn++	gl	diox/w	20°C	75%	U			1965BEb (55297)	2771
							K(Zn+HL)=6.3 K(ZnHL+HL)=7.2(?)		



Medium: 75% dioxan, 0.1 M NaClO4

-----  
Zn++ gl alc/w 20°C 50% U 1959H0a (55298)2772

K(Zn+HL) < 5.2

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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

-----  
Zn++ gl diox/w 30°C 75% U K1=6.17 1964JVa (55324)2773

Medium: 75% dioxan, 0.1 M NaClO4

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C7H7NO2 HL 2-Pyridylacetic CAS 16179-97-8 (2211)

2-Pyridylethanoic acid; C5H4N.CH2.COOH

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

-----  
Zn++ gl NaClO4 25°C 0.50M U K1=2.16 B2=5.35 1971FLa (55343)2774

-----  
Zn++ gl diox/w 35°C 50% U T K1=4.33 B2=7.73 1966WRb (55344)2775

Medium: 50% dioxan, 0.1 M KNO3. K1=7.15(15 C), 6.41(35 C); K2=6.22(15 C),  
5.36(25 C)

\*\*\*\*\*

C7H7NO2 HL CAS 39825-16-6 (3756)

4-Methyl-2-nitrosophenol; CH3.C6H3(N:O).OH

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

-----  
Zn++ gl diox/w 25°C 50% U K1=5.13 1961SHa (55403)2776

Medium: 50% dioxan, 0.1 M KNO3

\*\*\*\*\*

C7H7NO2 HL CAS 3222-47-7 (3154)

6-Methylpyridine-2-carboxylic acid; CH3.C5H3N.COOH

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

-----  
Zn++ gl NaNO3 20°C 0.10M U K1=4.52 B2=8.27 1960ANb (55419)2777

\*\*\*\*\*

C7H7NO2 HL CAS 495-18-1 (184)

Benzohydroxamic acid; C6H5.CO.NH.OH

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

-----  
Zn++ gl KCl 25°C 0.20M C K1=4.86 B2= 8.77 2000FEc (55475)2778

-----  
Zn++ gl NaNO3 25°C 0.10M M M K1=4.90 B2= 9.18 1996KSc (55476)2779

K(Zn(nta)+L)=3.40

K(Zn(ida)+L)=4.12

K(Zn(ada)+L)=3.97

H2ada: N-(2-acetamido)iminodiethanoic acid.

-----  
Zn++ gl diox/w 30°C 50% U K1=10.04 B2=18.11 1994JBb (55477)2780  
Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.  
-----

Zn++ gl KNO3 25°C 0.10M C M K1=4.85 B2= 8.50 1990DAc (55478)2781  
Also ternary complexes with bpy, ida, mida, ada and nta.  
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Zn++ gl KNO3 25°C 0.10M C K1=4.85 B2= 8.50 1990DAc (55479)2782  
-----

Zn++ gl KNO3 25°C 0.10M C M 1989DAc (55480)2783

B(ZnA+L)=4.86

B(ZnB+L)=5.29

B(ZnC+L)=4.80

A: 2,2'-dipyridylamine; B: 5-nitro-1,10-phenanthroline;

C: 5-methyl-1,10-phenanthroline.

-----  
Zn++ gl NaClO4 35°C 0.10M U K1=4.95 B2=9.11 1980ABb (55481)2784  
-----

Zn++ gl diox/w 35°C 50% U K1=7.57 B2=13.19 1972ATa (55482)2785  
Medium: 50% dioxan, I=0 corr.  
-----

Zn++ gl diox/w 25°C 70% U K1=5.35 B2=9.90 1969JSa (55483)2786

\*\*\*\*\*

C7H7NO3 H2L CAS 89-57-6 (2675)

2-Hydroxy-5-aminobenzoic acid, 5-Aminosalicylic acid; H2N.C6H3(OH).COOH  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KCl	37°C	0.15M	C			1993WWa (55545)2787	
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B(ZnH-1L)=-0.95

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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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Zn++	gl	NaNO3	25°C	0.10M	C		K1=5.92	2000KHa (55576)2788	
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Zn++	gl	NaNO3	25°C	0.10M	M	M	K1=6.02 B2=10.08	1996KSc (55577)2789	
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K(Zn(nda)+L)=3.89

K(Zn(nda)+H+L)=12.01

K(Zn(ida)+L)=5.00

K(Zn(ida)+H+L)=12.25

K(Zn(ada)+L)=4.62, K(Zn(ada)+H+L)=12.22.

H2ada: N-(2-acetamido)iminodiethanoic acid.

-----  
Zn++ EMF diox/w 30°C 50% U K1=4.83 1977DJa (55578)2790

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C7H7NO3 H2L (1112)

4-Aminosalicylic acid; H2N.C6H3(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	KN03	20°C	1.0M	U		K1=0.65 ? B2=1.67 K3=1.34(?) K4=1.6(?)	1966NVa (55634)	2791

\*\*\*\*\*

C7H7NO3 HL CAS 1197-10-0 (3759)

6-(Hydroxymethyl)pyridine-2-carboxylic acid; H0.CH2.C5H3N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	?	U		K1=4.34 B2=8.45	1962G0a (55647)	2792

\*\*\*\*\*

C7H7NO4 HL CAS 17209-50-6 (886)

4-Methoxypyridine-2-carboxylic acid N-oxide; C5H3N(O)(OCH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	30°C	0.10M	U T		K1=4.18 B2=6.76	1982RRa (55660)	2793

\*\*\*\*\*

C7H7NO5S H2L CAS 3577-63-7 (3181)

5-Sulfoanthranilic acid; (5-sulfo-2-aminobenzoic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	35°C	0.01M	U		K1=2.90 B2=5.30	1956HSb (55672)	2794

\*\*\*\*\*

C7H7NS L Thiobenzamide CAS 2227-79-4 (1660)

Thiobenzamide; C6H5.CS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	non-aq	25°C	100%	U			1977SWa (55701)	2795

K(ZnCl2+L)=2.97

Medium: Et2O

\*\*\*\*\*

C7H7N2O2F3S HL CAS 73255-69-3 (559)

2-(Trifluoromethanesulfonamidomethyl)pyridine; C5H4NCH2S(:O)2NHCF3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	45%	U		K1=5.90 B2=11.25	1982MYb (55711)	2796

Medium: 45% v/v dioxan/H2O, 0.01 M KN03

\*\*\*\*\*

C7H7N2O2SF3 L CAS 51061-76-8 (9290)

2-(Trifluoromethylsulfonylaminomethyl)pyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	80%	C		K1=5.25 B2=10.37	2003CKa (55718)	2797

Medium: 80% MeOH/H2O, 0.1 M Me4NNO3.

\*\*\*\*\*

C7H7N3 L (6358)

7-Methyl-4-azabenzimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaCl04	25°C	0.10M	C		K1=1.51	1992RKa (55729)	2798
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C7H7N302 H2L CAS 4463-97-2 (1654)

2,6-Pyridinedialdoxime; C5H3N.(CH:NOH)2

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

Zn++	gl	NaCl04	25°C	0.10M	U		K1=5.9 B2=11.40	1963BFb (55738)	2799
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C7H702NS H2L CAS 60587-83-9 (5449)

3-(2-Pyrrole)-2-mercaptopropenoic acid; C4H4N.CH:C(SH).COOH

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

Zn++	gl	diox/w	25°C	0.10M	U		K1=10.93 B2=19.87	1977WVa (55770)	2800
------	----	--------	------	-------	---	--	-------------------	-----------------	------

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C7H8NCl L CAS 95-74-9 (756)

3-Chloro-4-methylaniline; Cl.C6H3(CH3).NH2

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

Zn++	sp	diox/w	25°C	100%	U T H			1976BSa (55788)	2801
------	----	--------	------	------	-------	--	--	-----------------	------

K(ZnCl2+L)=1.89

At 10-50 C. DH = -24.2 kJ mol<sup>-1</sup>; DS = -44.3 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C7H8N20 HL CAS 5451-39-8 (3157)

2-Acetylpyridine oxime; C5H4N.C(:N.OH).CH3

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

Zn++	gl	NaCl	25°C	0.10M	C			2003SSa (55796)	2802
------	----	------	------	-------	---	--	--	-----------------	------

B(0,1,1)=2.723

B(0,1,2)=4.30

B(-1,1,2)=-0.860

B(-2,1,2)=-9.75

B(p,q,r): pH+qM+rHL=HpMq(HL)r. B(-2,2,2)=-5.88, B(-3,2,2)=-12.711,

B(-4,2,2)=-20.697.

\*\*\*\*\*

C7H8N20 L CAS 3724-16-1 (1948)

3-Acetamidopyridine; C5H4N.CH2.CO.NH2

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3   25°C 0.50M U          K1=1.15   B2=1.70   1974WAb (55803)2803
*****
C7H8N2O           L                      (2035)
3-N-Acetylaminoazine; C5H4N.NH.CO.CH3
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3   25°C 0.50M U          K1=1.00   B2=1.68   1981LRa (55808)2804
                      B3=2.02
*****
C7H8N2O           HL                      CAS 1195-40-0 (5749)
6-Methylpyridine-2-carboxaldehyde oxime;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  NaCl    25°C 0.10M C                      2003SSa (55814)2805
                      B(-2,2,2)=-8.24
                      B(-3,2,2)=-14.554
                      B(-4,2,2)=-22.84

```

B(p,q,r): pH+qM+rHL=HpMq(HL)r.

```

*****
C7H8N2O           HL                      CAS 88-68-6 (4438)
Benzamide oxime; C6H5.C(:N.OH)NH2
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  mixed  22°C 70% U          K1=7.77   B2=15.53  1978MGd (55819)2806
Medium: 0.1 M KNO3 in 70% (v/v) dioxane in H2O
*****
C7H8N2O           L    Benzhydrazide   CAS 613-94-5 (2565)
Benzoic acid hydrazide; C6H5.CO.NH.NH2
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  NaNO3   25°C 0.20M U          K1=1.67   B2=2.90   1974FSa (55832)2807
*****
C7H8N2O           HL    Salicylaldehyde   CAS 3291-00-7 (3760)
Salicylaldehyde-hydrazone; 2-(OH).C6H4.CH:N.NH2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  mixed  28°C 20% U I          K1=2.681  B2=5.26   1987RRa (55846)2808
In 20% DMF. In 40% DMF, K1=3.055, K2=2.812; in 60% DMF, K1=3.675, K2=3.196
*****
C7H8N2O           HL    Salicylic hydra   CAS 936-02-7 (2646)
2-Hydroxybenzoic acid hydrazide; HO.C6H4.CO.NH.NH2
-----

```

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

Zn++	gl	KNO3	30°C	0.10M	U	M	K1=3.45	1993RDa (55867)	2809
------	----	------	------	-------	---	---	---------	-----------------	------

Also data for ternary complexes with alanine, phenylalanine, bipyridyl, catechol, oxalate and 1,2-diaminoethane.

\*\*\*\*\*

C7H8N2O2		L					CAS 99-52-5	(470)	
----------	--	---	--	--	--	--	-------------	-------	--

2-Methyl-4-nitro-aminobenzene; CH3.C6H3(NO2).NH2

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

Zn++	sp	non-aq	25°C	100%	U			1965SSe (55879)	2810
------	----	--------	------	------	---	--	--	-----------------	------

K(ZnBr2+L)=1.18

Medium: acetone

\*\*\*\*\*

C7H8N2O2		L					CAS 89-62-3	(466)	
----------	--	---	--	--	--	--	-------------	-------	--

2-Nitro-4-methylaminobenzene; CH3.C6H3(NO2).NH2

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

Zn++	sp	non-aq	25°C	100%	U			1965SSe (55886)	2811
------	----	--------	------	------	---	--	--	-----------------	------

K(ZnBr2+L)=0.40

Medium: acetone

\*\*\*\*\*

C7H8N2O2		L					CAS 15513-52-7	(5516)	
----------	--	---	--	--	--	--	----------------	--------	--

3-Nitro-2,6-dimethylpyridine;

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

Zn++	gl	NaNO3	25°C	0.50M	U		K1=0.3	1983BEb (55895)	2812
------	----	-------	------	-------	---	--	--------	-----------------	------

\*\*\*\*\*

C7H8N2O2		L					CAS 119-32-4	(467)	
----------	--	---	--	--	--	--	--------------	-------	--

3-Nitro-4-methylaminobenzene; CH3.C6H3(NO2).NH2

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

Zn++	sp	non-aq	25°C	100%	U	M		1965SSe (55902)	2813
------	----	--------	------	------	---	---	--	-----------------	------

K(ZnBr2+L)=2.40

K(ZnCl2+L)=1.90

K(ZnI2+L)=2.02

Medium: acetone

\*\*\*\*\*

C7H8N2O2		L					CAS 99-52-5	(1937)	
----------	--	---	--	--	--	--	-------------	--------	--

3-Nitro-6-methylaminobenzene; CH3.C6H3(NO2).NH2

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

Zn++	sp	non-aq	25°C	100%	U			1965SSe (55908)	2814
------	----	--------	------	------	---	--	--	-----------------	------

K(ZnCl2+L)=1.88

K(ZnBr2+L)=2.12

$$K(\text{ZnI}_2+\text{L})=1.95$$

Medium: acetone

\*\*\*\*\*

C7H8N2O2 L CAS 611-05-2 (764)

4-Nitro-3-methylaniline; CH3.C6H3(NO2).NH2

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

Zn++	sp	non-aq	25°C	100%	U			1965SSe (55916)	2815
------	----	--------	------	------	---	--	--	-----------------	------

$$K(\text{ZnBr}_2+\text{L})=1.27$$

Medium: acetone

\*\*\*\*\*

C7H8N2O2 L CAS 3569-99-1 (1950)

N-(Hydroxymethyl)isonicotinamide; C5H4N.CO.NH.CH2.OH

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

Zn++	gl	KNO3	25°C	0.50M	U		K1=0.78 B2=1.18	1974WAb (55924)	2816
------	----	------	------	-------	---	--	-----------------	-----------------	------

\*\*\*\*\*

C7H8N2O3S H2L (3783)

2-Ethylthio-1H-1,3-diazin-4-one-5-carboxylic acid;

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

Zn++	gl	KCl	25°C	0.10M	U			1961TDb (55931)	2817
------	----	-----	------	-------	---	--	--	-----------------	------

$$K(\text{Zn+HL})=2.33$$

\*\*\*\*\*

C7H8N4 L CAS 85180-62-7 (2481)

2,9-Dimethylpurine;

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

Zn++	gl	NaClO4	25°C	1.00M	U		K1=0.71	1983ALa (55956)	2818
------	----	--------	------	-------	---	--	---------	-----------------	------

\*\*\*\*\*

C7H8N4 L (2641)

4,4'-(5,5')-Bisimidazolylmethane; C3H3N2.CH2.C3H3N2

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

Zn++	gl	KNO3	30°C	0.16M	U		K1=5.62 B2=10.48	1965DFa (55962)	2819
------	----	------	------	-------	---	--	------------------	-----------------	------

\*\*\*\*\*

C7H8N4 L CAS 14675-46-8 (2484)

6,9-Dimethylpurine;

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

Zn++	gl	NaClO4	25°C	1.00M	U		K1=<0.2	1983ALa (55969)	2820
------	----	--------	------	-------	---	--	---------	-----------------	------

\*\*\*\*\*

C7H8N4 L CAS 85180-61-6 (2482)

8,9-Dimethylpurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	1.00M	U		K1=0.6	1983ALa (55977)	2821
*****									
C7H8N4		L					(1928)		
Bis(imidazol-2-yl)methane; C3H3N2.CH2.C3H3N2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=5.53 B2=10.22	1994VSa (55987)	2822
Zn++	gl	KNO3	35°C	0.20M	U	M		1990RMa (55988)	2823
							K(CoL2+Gly)=3.83		
							K(CoL2+Ala)=3.76		
							K(CoL2+Val)=3.66		
							K(CoL2+norVal)=3.68		
							K(CoL2+Leu)=3.63, K(CoL2+norLeu)=3.49, K(CoL2+Phe)=3.82		
							K(CoL2+Trp)=4.11, K(CoL2+Ser)=3.57, K(CoL2+Thr)=3.59		

Zn++	gl	KNO3	35°C	0.20M	U	M	K1=5.13 B2=9.80	1989RVa (55989)	2824
*****									
C7H8N4S		L					CAS 3608-75-1	(1799)	
2-Pyridinecarboxaldehyde thiosemicarbazone; C5H4N.CH:N.NH.CS.NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	KCl	25°C	0.10M	M		K1=9.18	1977AKb (56019)	2825
*****									
C7H8O2		HL					Salicyl alcohol CAS 90-01-7	(3727)	
2-Hydroxybenzyl alcohol; HO.C6H5.CH2.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=7.63	1964JVa (56090)	2826
Medium: 75% dioxan, 0.1 M NaClO4									
*****									
C7H8O3S		L					CAS 55832-65-0	(3763)	
3-Hydroxythiophene-2-carboxylic acid ethyl ester									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	diox/w	25°C	10%	U		K1=4.12	1965CSa (56113)	2827
Medium: 10% dioxan, 0.1 M NaClO4									
*****									
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
-------	-----	--------	------	------	-----	-------	-------------	-----------	--------



Zn++ sp KCl 25°C 0.10M M I K1=5.68 1985PEe (56122)2828  
\*\*\*\*\*

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  
-----

Zn++ sp KCl 25°C 0.10M M I K1=5.24 1985PEe (56141)2829  
\*\*\*\*\*

C7H8O8P2 H4L (6892)  
1,2-((Phenylenedioxy)methylene)diphosphonic acid); C6H4O2C(P(=O)(OH)2)2

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

Zn++ gl R4N.X 25°C 0.50M U K1=9.06 1985GMb (56162)2830  
K(Zn+HL)=4.86

Medium: 0.5 M Me4NCl

\*\*\*\*\*

C7H9N L 2,4-Lutidine CAS 108-37-4 (319)  
2,4-Dimethylpyridine; C5H3N.(CH3)2

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

Zn++ sp non-aq 25°C 100% U M 1993SSc (56190)2831  
K(ZnA+L)=2.205

Medium:Toluene. H2A:Octaethylporphyrin.

-----  
Zn++ oth KNO3 ? 0.50M U K1=3.53 1971LWb (56191)2832  
\*\*\*\*\*

C7H9N L 3,4-Lutidine CAS 583-58-4 (2056)  
3,4-Dimethylpyridine; C5H3N.(CH3)2

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

Zn++ gl KNO3 25°C 0.50M U K1=1.43 B2=2.53 1979LRa (56250)2833  
B3=3.29

\*\*\*\*\*

C7H9N L 3,5-Lutidine (323)  
3,5-Dimethylpyridine; C5H3N.(CH3)2

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

Zn++ gl NaNO3 25°C 0.50M C K1=1.37 2002KSb (56272)2834

Zn++ gl KNO3 25°C 1.00M U K1=1.25 B2=2.04 1978LRb (56273)2835  
B3=2.35

\*\*\*\*\*

C7H9N L 3-Ethylpyridine CAS 536-78-7 (2038)  
3-Ethylazine, 3-Ethylpyridine; C5H4N.C2H5

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=1.00 B2=2.15	1981LRa (56293)	2836

\*\*\*\*\*

C7H9N L 3-Methylaniline CAS 108-44-1 (755)  
 3-Methylaniline (3-Toluidine); CH3.C6H4.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	diox/w	25°C	100%	U T H			1976BSa (56302)	2837

K(ZnCl2+L)=2.48

At 10-50 C. DH = -28.0 kJ mol<sup>-1</sup>; DS = -45.9 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C7H9N L 4-Ethylpyridine CAS 536-75-4 (2055)  
 4-Ethylazine, 4-Ethylpyridine; C5H4N.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	KNO3	25°C	1.00M	U		K1=1.32 B2=2.08	1971LWa (56317)	2838

Zn++	ISE	KNO3	25°C	1.00M	U		K1=1.30 B2=1.91	1971LWa (56318)	2839
------	-----	------	------	-------	---	--	-----------------	-----------------	------

\*\*\*\*\*

C7H9N L 4-Methylaniline CAS 106-49-0 (754)  
 4-Methylaniline (4-Toluidine); CH3.C6H4.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	diox/w	25°C	100%	U T H			1976BSa (56335)	2840

K(ZnCl2+L)=2.78

At 10-50 C. DH = -28.8 kJ mol<sup>-1</sup>; DS = -43.8 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C7H9NO L o-Anisidine CAS 90-04-0 (2474)  
 2-Methoxyaniline; CH3O.C6H4.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	85%	C			1983HBa (56385)	2841

K1 < 1.3

\*\*\*\*\*

C7H9NO2 HL CAS 30652-11-0 (2458)  
 3-Hydroxy-1,2-dimethylpyridin-4(1H)-one; (OH)(CH3)(O:)C5H2N.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=7.19 B2=13.53	2004SGc (56422)	2842

\*\*\*\*\*

C7H9NO4S H2L (3784)  
 Hydroxy(6-methyl-2-pyridyl)methanesulfonic acid;

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

-----  
Zn++ gl NaClO4 25°C 0.10M U K1=4.79 B2=8.38 1964BGa (56462)2843

\*\*\*\*\*

C7H9NS L CAS 3145-77-5 (3768)

2-(Methylthiomethyl)pyridine; C5H4N.CH2.S.CH3

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

-----  
Zn++ gl diox/w 25°C 50% U M K1=1.1 1967SIb (56482)2844

K(Zn(bpy)+L)=1.1

Medium: 50% dioxan, 0.1 M NaClO4

-----  
Zn++ gl NaClO4 25°C 0.10M U K1=<1 1964KSb (56483)2845

\*\*\*\*\*

C7H9N3O2S2 L (6945)

1-Ethoxycarbonyl-3-thiazole-2-ylthiourea; C3H2NS.NHCSNHCOOC2H5

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

-----  
Zn++ gl alc/w 25°C 60% U K1=5.02 1994KEa (56499)2846

Medium: 60 % EtOH/H2O, 0.1 M NaNO3

\*\*\*\*\*

C7H9N5 L (6975)

Bis(imidazol-2-yl)methylamine;

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

-----  
Zn++ gl KCl 25°C 0.20M C K1=5.38 B2=9.92 1994VSa (56513)2847

B(ZnHL)=9.66

B(ZnHL2)=14.25

B(ZnH2L2)=18.85

B(Zn2H-1L2)=6.27

Also data for the amide formed with the peptide MeCO-Pro-Leu-Gly.

\*\*\*\*\*

C7H9N5O4 HL CAS 215525-73-8 (7724)

N-(4-Amino-1,6-dihydro-1-methyl-5-nitroso-6-oxo-pyrimidin-2-yl)glycine;

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

-----  
Zn++ gl KCl 35°C 0.10M C B2=7.61 2000ALa (56521)2848

B(ZnHL)=5.28

K(Zn=Zn(OH)2+4H)=-15.56

K(Zn=Zn(OH)4+4H)=-30.20

\*\*\*\*\*

C7H10NO6ClP2 H4L (6895)

N-(4-Chlorophenyl)aminomethylenedi(phosphonic acid); ClC6H4.NH.CH(PO3H2)2

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

-----  
Zn++ gl KNO3 25°C 0.10M U K1=10.9 1990GKa (56552)2849

$$K(\text{Zn+HL}) = 6.9$$

\*\*\*\*\*

C7H10N2 L CAS 13173-22-3 (8012)  
1-Allyl-2-methylimidazole ;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	C		K1=1.90 B2= 4.25 B3=7.00 B4=8.90	2001KGa (56560)	2850

\*\*\*\*\*

C7H10N2 L CAS 42088-91-5 (3134)  
2-(Methylaminomethyl)pyridine (2-Picolylmethylamine)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=4.96 B2=8.58	1971GEa (56602)	2851
Zn++	cal	diox/w	25°C	50%	U H			1966WRb (56603)	2852

Medium: 50% dioxan, 0.1 M KNO3. DH(B2)=-46.0 kJ mol<sup>-1</sup>

Zn++	gl	oth/un	20°C	->0	U T H		K1=4.95	1959GFa (56604)	2853
------	----	--------	------	-----	-------	--	---------	-----------------	------

DH(K1)=-22.0 kJ mol<sup>-1</sup>, DS=21 J K<sup>-1</sup> mol<sup>-1</sup>. K1=5.12(10 C), 4.73(30 C), 4.76(40C)

\*\*\*\*\*

C7H10N2 L CAS 20173-04-0 (2039)  
3-(N,N-Dimethylamino)pyridine; C5H4N.N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=1.18 B2=1.95	1981LRa (56620)	2854

\*\*\*\*\*

C7H10N2 L CAS 1122-58-3 (492)  
4-(N,N-Dimethylamino)pyridine; C5H4N.N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	non-aq	25°C	100%	U M			1993SSc (56627)	2855

K(ZnA+L)=4.656  
K(ZnB+L)=4.955  
K(ZnC+L)=5.85

Medium:Toluene. H2A:Octaethylporphyrin. H2B:t-Octaethylchlorin.  
H2C:ttt-Octaethylisobacteriochlorin.

\*\*\*\*\*

C7H10N2 L CAS 6627-60-7 (3729)  
6-Methyl-2-(aminomethyl)pyridine; CH3.C5H3N.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	NaNO3	20°C	0.10M	U		K1=4	1971ANa (56649)	2856

Zn++ vlt diox/w 25°C 50% U H B2=7.80 1966WRb (56650)2857  
Medium: 50% dioxan, 0.1 M KNO3. By calorimetry: DH(B2)=-22.2 kJ mol<sup>-1</sup>,  
DS=74.4 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C7H10N2O L (7890)  
1-Propyl-2-imidazolecarboxaldehyde;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.5M	C		K1=1.65 B2= 2.11 B3=4.19	1999BKa (56660)	2858

\*\*\*\*\*

C7H10N2O5 HL CAS 51-52-5 (4468)  
6-Propyl-2-thiouracil (6-propyl-4-hydroxy-2-mercaptopyrimidine);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	26°C	0.01M	U		K1=2.16 B2=5.78	1970Gwa (56674)	2859

\*\*\*\*\*

C7H10N2O2S HL (560)  
2-(Methanesulfonamidomethyl)pyridine; C5H4N.CH2S(:O)2NHCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	45%	U		K1=12.16	1982MYb (56681)	2860

Medium: 45% v/v dioxan/H2O, 0.01 M KNO3

\*\*\*\*\*

C7H10N2O3S HL CAS 71691-06-0 (1247)  
2-(N-Pyrrolideneimino)ethane sulfonic acid; C4H4N.CH:N.CH2.CH2.SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U T		K1=8.45	1979GSa (56690)	2861

\*\*\*\*\*

C7H10N2O8P2 H5L CAS 195000-06-7 (8891)  
N-(3-Carboxy-2-pyridyl)aminomethane-1,1-diphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=10.10 B2=14.50 B(ZnH2L)=21.71 B(ZnHL)=17.01 B(ZnH-1L)=1.04 B(ZnH4L2)=43.20	2002MKc (56700)	2862

B(ZnH2L2)=31.08.

\*\*\*\*\*

C7H10O4 H2L CAS 5802-62-3 (71)  
Cyclopentane-1,1-dicarboxylic acid; C5H8.(COOH)2

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

-----  
Zn++ gl NaClO4 25°C 0.10M U K1=2.38 1972RVh (56727)2863  
\*\*\*\*\*

C7H10O4 H2L CAS 5164-76-1 (959)  
Pent-1-ene-5-dioic acid; CH2:CH.CH2.CH2.CH(COOH)2  
-----

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

Zn++ gl KNO3 25°C 0.10M C K1=2.62 1975IPa (56742)2864  
\*\*\*\*\*

C7H10O6 H3L CAS 57056-39-0 (5947)  
2-(Carboxymethyl)glutaric acid; HOOC.CH2.CH(CH2.COOH)2  
-----

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

Zn++ gl KNO3 25°C 0.50M U K1=2.01 1983Wka (56753)2865  
B(ZnHL)=6.50  
B(ZnH2L)=10.14  
\*\*\*\*\*

C7H11NO3 HL Acetylproline (7193)  
1-Acetyl-2-pyrrolidinecarboxylic acid;  
-----

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

Zn++ gl NaClO4 25°C 0.10M M M 1994Kta (56771)2866  
K(ZnA+L)=2.2

A:1,4,7,10-Tetraazacyclododecane  
\*\*\*\*\*

C7H11NO4 H2L CAS 16598-06-4 (965)  
N-(Prop-2-enyl)iminodiethanoic acid; CH2:CH.CH2.N(CH2.COOH)2  
-----

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

Zn++ gl KNO3 25°C 0.10M C K1=7.62 B2=14.01 1975IPa (56782)2867  
\*\*\*\*\*

C7H11NO4 H2L CAS 5626-40-4 (2803)  
N-Carboxymethylpyrrolidine-2-carboxylic acid; HOOC.C4H7N-CH2COOH  
-----

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

Zn++ gl KNO3 25°C 1.00M U K1=8 B2=14 1974MIb (56792)2868  
\*\*\*\*\*

C7H11NO4 H2L CAS 499-82-1 (3163)  
Piperidine-2,6-dicarboxylic acid; C5H9N(COOH)2  
-----

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

Zn++ gl KCl 30°C 0.10M U K1=6.1 B2=11.1 1957TBb (56799)2869  
\*\*\*\*\*

C7H11NO5 H2L (3164)

1-Amino-2-propanone-N,N-diethanoic acid; CH<sub>3</sub>.CO.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
Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	U			K1=6.89 B2=10.72	1965AUa (56822)	2870
Previously published as K1=7.01, K2=3.64 (Bull.Chem.Soc.Jpn.,1963,36,1593)										

Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	U			K1=7.0 B2=10.6	1963ANa (56823)	2871
*****										
C7H11NO6		H3L		CAS		40199-58-4		(3165)		
N-(2'-Carboxyethyl)iminodiethanoic acid; HOOCH <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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Zn++	vlt	KNO <sub>3</sub>	25°C	0.10M	U			K1=9.98	1967UKa (56865)	2872
------	-----	------------------	------	-------	---	--	--	---------	-----------------	------

Zn++	gl	KCl	30°C	0.10M	U			K1=10.1	1953CMa (56866)	2873
------	----	-----	------	-------	---	--	--	---------	-----------------	------

Zn++	EMF	KCl	20°C	0.10M	U			K1=10.07	1949ASa (56867)	2874
------	-----	-----	------	-------	---	--	--	----------	-----------------	------

Method: H electrode

\*\*\*\*\*

C7H11NO6		H3L		MNTA		(1026)				
Nitrilo(2-propanoic)-diethanoic acid; HOOCH(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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Zn++	gl	NaClO <sub>4</sub>	25°C	1.00M	C			K1=9.78 B(ZnHL)=11.60	1978CBb (56895)	2875
------	----	--------------------	------	-------	---	--	--	-----------------------	-----------------	------

Zn++	gl	KNO <sub>3</sub>	20°C	0.10M	U			K1=11.06	1974RMf (56896)	2876
------	----	------------------	------	-------	---	--	--	----------	-----------------	------

Zn++	gl	KCl	20°C	0.10M	U			K1=10.89	1966IMa (56897)	2877
------	----	-----	------	-------	---	--	--	----------	-----------------	------

\*\*\*\*\*

C7H11NO6P2		H4L		DHPH		(226)				
2,6-bis(Dioxyphosphorylmethyl)pyridine; C <sub>5</sub> H <sub>3</sub> N.(CH <sub>2</sub> .PO <sub>3</sub> H <sub>2</sub> ) <sub>2</sub>										

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

Zn++	gl	KCl	25°C	0.10M	U			K1=9.66 K(Zn+HL)=5.50 K(Zn+H <sub>2</sub> L)=3.03	1988KPa (56926)	2878
------	----	-----	------	-------	---	--	--	---	-----------------	------

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C7H11NO6P2		H4L		CAS		4712-06-5		(4470)		
Amino(phenyl)methylenediphosphonic acid;										

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

Zn++	gl	KCl	25°C	0.10M	U			K1=11.64 K(Zn+HL)=8.49 B(Zn <sub>2</sub> L)=16.31	1969DMd (56934)	2879
------	----	-----	------	-------	---	--	--	---	-----------------	------

\*\*\*\*\*

C7H11N3 L CAS 63763-86-0 (6062)  
2,6-Di(aminomethyl)pyridine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaNO3 20°C 1M C K1=8.51 B2=15.52 1992CPb (56955)2880  
\*\*\*\*\*

C7H11N3O L Acetylhistamine CAS 673-49-4 (7412)  
4-(2'-Acetylaminoethyl)imidazole; C3H3N2.CH2CH2.NH.COCH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KCl 25°C 0.20M C K1=2.55 1989BKa (56960)2881  
K(Zn+HL=ZnL+H)=-4.57  
\*\*\*\*\*

C7H11N3O2 L CAS 7389-87-9 (3162)  
Histidine methyl ester

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 25°C 0.10M C T M K1=5.04 2000RRa (56992)2882  
B(ZnLA)=17.09

H2A is cysteine methyl ester. Data for 35 and 45 C.  
DH(ZnLA)=-177 kJ mol<sup>-1</sup>, DS(ZnLA)=-266 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Zn++ gl KNO3 25°C 0.10M M K1=4.45 B2=8.66 1993GVa (56993)2883  
-----  
Zn++ EMF oth/un 25°C ? U K1=5.6 1966PAa (56994)2884  
-----  
Zn++ gl KCl 0°C 0.25M U T H K1=5.29 B2=10.00 1965AZa (56995)2885  
K3=1.90

K1=4.82(15 C),4.40(25 C),4.36(40 C); K2=3.93(15 C),3.78(25 C),3.69(40 C);  
At 15 C:DH(K1)=-38.5 kJ mol<sup>-1</sup>, TDS=-11.7 kJ mol<sup>-1</sup>, DH(K2)=-38.5, TDS2=-16.7

-----  
Zn++ gl KNO3 25°C 0.16M U M K1=4.46 B2=8.66 1965CMA (56996)2886  
K3=0.0

Ternary complexes with histidine

\*\*\*\*\*

C7H11N3O2 HL L-N-MeHistidine CAS 31632-58-3 (1192)  
L-N-Methylhistidine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KCl 25°C 0.10M C K1=6.368 B2=11.340 1976RIa (57014)2887  
K(Zn(DL-N-Me-His))=6.363  
B(Zn(DL-N-Me-His)2)=11.537  
\*\*\*\*\*

C7H12N2 L CAS 4316-42-1 (8409)  
1-Butyl-1H-imidazole;



```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3   25°C 0.50M M          K1=2.57  B2= 4.97  1977LBc (57037)2888
                                         B3=7.20
                                         B4=9.34
                                         B5=10.81

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*****
C7H12N2          L                      (7888)
1-Propyl-2-methylimidazole;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3   25°C 0.5M C          K1=1.35  B2= 4.40  1999BKa (57041)2889
                                         B3=7.45
                                         B4=9.41
                                         B5=10.45

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```

*****
C7H12N2O          L                      (7889)
1-Propyl-2-Hydroxymethylimidazole;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3   25°C 0.5M C          K1=2.07  B2= 4.92  1999BKa (57049)2890
                                         B3=6.11
                                         B4=7.47

```

```

*****
C7H12N2O2          HL                      (6181)
2-(N-2-Pyrrolidimino)propanoic acid;
-----

```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaClO4 25°C 0.10M U TIH      B2=9.64      1988GRb (57071)2891
35 C:B2=9.70, 45 C:9.79. DH(B2)=13.6 kJ mol-1, DS=229.9 J K-1 mol-1

```

```

*****
C7H12N2O2S          L      Cyclo-Met-Gly      CAS 97605-73-7 (8135)
Cyclo-(L-methionyl-L-glycine), 3-[2-(Methylthio)ethyl]-2,5-piperazine dione;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      sp  NaClO4 20°C 1.0M C          K1=-0.6      1982BBc (57084)2892
pH 3.0

```

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*****
C7H12N2O3          HL      Gly-Pro          CAS 704-15-4 (257)
Glycyl-proline; H2N.CH2.CO.NC4H7.CO2H
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KCl    20°C 0.20M U          K1=4.03  B2=7.63  1982KRc (57112)2893

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*****

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C7H12N2O3                      HL      Pro-Gly                      CAS 2578-97-6    (262)  
Prolyl-glycine; C4H8N.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.20M	U			K1=3.58    B2=7.00	1982KRc (57144)	2894

\*\*\*\*\*

C7H12N2O5                      H2L      Gly-Glu                      CAS 7412-78-4    (280)  
Glycyl-glutamic acid; H2N.CH2.CO.NH.CH(CH2.CH2.COOH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C			K1=3.98 B(ZnHL)=9.96 K(ZnL+H)=5.98 K(Zn+HL)=1.587	2002FBa (57166)	2895

\*\*\*\*\*

Zn++	gl	KNO3	20°C	0.10M	U			K1=7.30    B2=9.54	1980BBc (57167)	2896
------	----	------	------	-------	---	--	--	--------------------	-----------------	------

\*\*\*\*\*

C7H12N2O6P2                      H4L                      CAS 70010-76-3    (8892)  
N-(3-Methyl-2-pyridyl)aminomethane-1,1-diphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C			K1=10.32    B2=14.30 B(ZnH2L)=21.80 B(ZnHL)=17.35 B(ZnH-1L)=1.32 B(ZnH4L2)=43.34	2002MKc (57186)	2897

B(ZnH2L2)=32.31.

\*\*\*\*\*  
C7H12N3O5P                      H2L      PMEC                      CAS 117087-39-5    (8366)  
1-[2-(Phosphonomethoxy)ethyl]cytosine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	M			K1=2.67 K(Zn+HL)=0.95 K(ZnL+H)=5.23	1999BHb (57195)	2898

\*\*\*\*\*

C7H12N4O                      L                      (6725)  
Glycyl-histamine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	C			K1=3.58    B2=6.80 B(ZnHL)=9.91	1994GHb (57211)	2899

\*\*\*\*\*

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
-----
Zn++      gl  diox/w 24°C  50%  U      K1=6.0      1979ACa (57284)2900
*****
C7H12O4      H2L      Pimelic acid      CAS 111-16-0 (985)
1,7-Heptanedioic acid; HOO.C.(CH2)5.COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3  25°C 0.10M C      K1=1.3      1975LPa (57302)2901
*****
C7H12O4      H2L      CAS 534-59-8 (480)
Butylpropanedioic acid (Butylmalonic acid); HOO.C.CH(C4H9).COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3  25°C 0.10M C  H      K1=2.97  B2=5.00  1989ABa (57326)2902
                                K(Zn+HL)=2.01
                                B(Zn(bpy)L)=7.77
DH(K1)=15.5 kJ mol-1, DS(K1)=108.8 J K-1 mol-1
-----

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-----
Zn++      gl  KNO3  25°C 0.10M C  H      K1=2.80  B2=4.96  1989ABa (57327)2903
                                K(Zn+HL)=1.65
                                B(Zn(bpy)L)=7.83
DH(K1)=15.0 kJ mol-1, DS(K1)=103.8 J K-1 mol-1
-----

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-----
Zn++      gl  KNO3  25°C 0.10M C      K1=2.73      1975IPa (57328)2904
*****
C7H12O4      H2L      CAS 510-20-3 (482)
Diethylpropanedioic acid (Diethylmalonic acid); HOO.C.(C2H5)2.COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaClO4 25°C 0.10M U      K1=2.44      19700Va (57351)2905
-----
Zn++      con oth/un 25°C .001M U      K1=3.24      1931IRb (57352)2906
*****
C7H13NO2      HL      (3170)
1-Aminocyclohexanecarboxylic acid; H2N.C6H10.COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KCl  20°C 0.10M U      K1=4.78  B2=9.18  1963IPa (57428)2907
*****
C7H13NO2      HL      CAS 103067-99-4 (1127)
2-Amino-hept-6-enoic acid; CH2:CH.CH2.CH2.CH2.CH(NH2).COOH
-----

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

```

Zn++ gl KNO3 25°C 0.10M U K1=4.45 B2=8.632 1975IPb (57434)2908  
\*\*\*\*\*

C7H13NO2 HL CAS 99571-58-1 (6223)  
6-Methylpiperidine-2-carboxylic acid; CH3.C5H9N.COOH

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

Zn++ gl oth/un 30°C 0.10M U H K1=5.79 B2=11.33 1985RRe (57449)2909  
DH(K1)=-61 kJ mol<sup>-1</sup>, DS= 90 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C7H13NO2S HL (6377)  
2-Propylthiazolidine-4-carboxylic acid;

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

Zn++ gl KNO3 30°C 0.10M U TIH K1=2.90 B2= 5.06 1983RKb (57463)2910  
At I=0.0, K1=3.06, K2=2.28. Data for 25-50 C. DH(K1)=-13.4 kJ mol<sup>-1</sup>,  
DS(K1)=11.8 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-12.9, DS(K2)=0.13.

\*\*\*\*\*

C7H13NO3 HL (7175)  
3,3'-Dimethylglutaramide; H00CCH2C(CH3)2CH2CONH2

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

Zn++ gl KNO3 25°C 0.10M U B2=5.52 1995MWb (57469)2911  
\*\*\*\*\*

C7H13NO3S H2L CAS 59-53-0 (1269)  
N-Acetyl-penicillamine; CH3.CO.NH.CH(COOH)C(CH3)2SH

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

Zn++ gl KNO3 25°C 0.10M M M 1989SHd (57483)2912  
K(Zn(nta)+L)=4.30

-----  
Zn++ gl KCl 25°C 0.20M C K1=6.85 B2=14.03 1988SKc (57484)2913  
\*\*\*\*\*

C7H13NO4 H2L CAS 16578-07-5 (341)  
N-Propyliminodiethanoic acid; CH3.CH2.CH2.N(CH2.COOH)2

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

Zn++ gl KNO3 25°C 0.10M C K1=8.00 B2=14.55 1975IPa (57521)2914  
\*\*\*\*\*

C7H13NO4S HL (6310)  
Acetylacetone-2-aminoethane sulfonic acid schiff base;  
CH3.CO.CH2.C(CH3):N.CH2.CH2.HSO3

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

Zn++ gl diox/w 25°C 50% U T H K1=7.80 19760Ma (57533)2915

\*\*\*\*\*

C7H13NO4S                      H2L                      (3184)  
N-(2-Methylthioethyl)iminodiethanoic acid; CH3.S.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U			K1=8.28    B2=12.78 K(Zn(OH)L+H)=9.68	1955SAa (57540)	2916

\*\*\*\*\*

C7H13NO5                      H2L                      CAS 62117-07-1 (3171)  
N-(2-Methoxyethyl)iminodiethanoic acid; CH3.O.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U			K1=8.43    B2=12.85 K(ZnLOH+H)=9.65 K(ZnL2OH+H)=10.75	1955SAa (57567)	2917

\*\*\*\*\*

C7H13NO5                      H2L                      CAS 59881-62-1 (339)  
N-(3-Hydroxypropyl)iminodiethanoic acid; HO.(CH2)3.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KCl	30°C	0.10M	U			K1=7.7    B2=13.0	1954CMa (57584)	2918

\*\*\*\*\*

C7H13NO5                      H2L                      CAS 41433-03-8 (4451)  
N-(Carboxymethyl)-N-(2'-hydroxyethyl)alanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	EMF	KNO3	20°C	0.10M	U			K1=8.36    B2=12.15	1968MRb (57592)	2919

\*\*\*\*\*

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
Zn++	gl	KNO3	20°C	0.10M	U			K1=8.11    B2=11.53	1980MRc (57602)	2920

\*\*\*\*\*

C7H13NS2                      HL                      (4455)  
Hexamethylenedithiocarbamic acid; (CH2)6N.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	dis	oth/un	25°C	0.01M	U			B2=12.9	1973SSa (57629)	2921

\*\*\*\*\*

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	vlt	KCl	25°C	1.0M	U			B2=13.1	1973SSa (57630)	2922

\*\*\*\*\*

C7H13N3                      L                      CAS 673-46-1 (4424)  
4-(2-Dimethylaminoethyl)imidazole;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KCl      25°C 0.10M U          K1=3.40          1973BDb (57637)2923
*****
C7H13N3O4          HL      Ala-Asn          CAS 1999-41-3 (5934)
Alanyl-asparagine; NH2.CH(CH3.CO.NH.CH(CH2.CO.NH2).COOH
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  NaCl      20°C 0.15M U          K1=3.18          1989DKa (57646)2924
D/L-Ala-D/L-Asn stereoisomer
*****
C7H14N2O2          HL          CAS 111652-03-0 (8138)
Azetidine-1-(2-aminobutanoic acid);
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3      25°C 0.10M C          K1=7.3           1989ARa (57699)2925
*****
C7H14N2O3          HL      Gly-Val          CAS 7963-21-9 (973)
Glycyl-valine; H2N.CH2.CO.NH.CH(CH(CH3)2).COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  NaClO4    25°C 0.10M U      M    K1=4.10          2001PSb (57748)2926
                                     B(ZnH-1L)=-3.00
                                     B(ZnAL)=5.50
                                     B(ZnAH-1L)=-2.10
                                     B(Zn2AL2)=18.76
A is imidazole. B(Zn2H-1AL2)=11.66, B(ZnNiAL2)=20.15, B(ZnNiH-1AL2)=13.55.
-----

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-----
Zn++       gl  NaClO4    30°C 0.20M U      M    K1=4.20          1999PGa (57749)2927
                                     B(ZnAL)=5.40
                                     B(ZnBL)=5.62
                                     B(ZnCL)=5.62
A=imidazole, B=2-methylimidazole, C=2-ethylimidazole.
*****
C7H14N2O4S2        H2L          CAS 28052-93-7 (526)
S,S'-Methylenebis(L-cysteine); H2N(HOOC)CH.CH2.S.CH2.S.CH2.CH(COOH)NH2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KCl      25°C 0.10M U          K1=7.28  B2=11.13  1981BLa (57825)2928
*****
C7H14N4O4P          H2L          CAS 550359-20-1 (9059)
[[2-(4-Amino-2-imino-1(2H)-pyrimidinyl)ethoxy]methyl]phosphonic acid;
-----

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

```

Zn++ gl NaNO3 25°C 0.10M M K1=2.11 2003FHa (57837)2929  
\*\*\*\*\*

C7H14O2 HL CAS 4536-23-6 (5863)  
5-Methyhexanoic acid; (CH3)2CH.(CH2)3.COOH

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

Zn++ gl NaNO3 25°C 0.10M C I M K1=0.99 1988LTc (57853)2930  
K(Zn(phen)+L)=0.98

Data also for 50% v/v EtOH/H2O, and 50% v/v Dioxan/H2O mixtures

\*\*\*\*\*

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

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

Zn++ EMF KNO3 20°C 0.10M U K1=5.16 B2=8.76 1968MRb (57928)2931

\*\*\*\*\*

C7H15NO4S HL MOPS CAS 1132-61-2 (2792)  
3-(N-Morpholino)propanesulfonic acid; C4H8ON-CH2.CH2.CH2.SO3H

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

Zn++ gl KNO3 25°C 0.10M C K1=3.47 2001A0a (57958)2932

Zn++ gl KNO3 25°C 0.10M C M K1=3.63 1999AAa (57959)2933  
K(Zn(Ser)+2L)=6.42  
K(Zn(Asp)+2L)=7.30  
K(Zn(His)+2L)=6.82

\*\*\*\*\*

C7H15NO5 L CAS 3329-30-4 (564)  
2-Methylamino-2-deoxyglucose;

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

Zn++ gl NaNO3 30°C 0.10M U K1=3.2 1979MNa (57971)2934

\*\*\*\*\*

C7H15NO5S HL MOPSO CAS 68399-77-9 (1967)  
3-(N-Morpholino)-2-hydroxypropane sulfonic acid;

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

Zn++ gl KNO3 25°C 0.10M C M 1999AAa (57990)2935  
K(Zn(Gly)+2L)=7.28  
K(Zn(Ser)+2L)=7.63  
K(Zn(Met)+2L)=6.97  
K(Zn(Asp)+2L)=7.65

K(Zn(Glu)+2L)=7.03, K(Zn(His)+2L)=8.50.

\*\*\*\*\*

C7H15NO7 HL (6519)

2-Amino-2-deoxy-D-glycero-D-gulo-heptonic acid;  $\text{HOOC} \cdot \text{CH}(\text{NH}_2) \cdot (\text{CHOH})_4 \cdot \text{CH}_2\text{OH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.10M	U			K1=4.62 B2=12.72 B(ZnH2L2)=22.46 B(ZnH-1L)=-4.52	1992DGa	(58001)2936

\*\*\*\*\*  
C7H15NO7 HL (7135)  
2-Amino-2-deoxy-D-glycero-L-glucoheptonic acid;  $\text{HOOCCH}(\text{NH}_2)(\text{CHOH})_4\text{CH}_2\text{OH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C			K1=4.62 B2=8.33 B(ZnH-1L)=-4.46	1995DFc	(58007)2937

\*\*\*\*\*  
C7H16N2 L CAS 86849-08-3 (3136)  
trans-Cycloheptane-1,2-diamine;  $\text{C}_7\text{H}_{12}(\text{NH}_2)_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	oth/un	10°C	->0	U			K1=6.11 B2=11.64	1958BFa	(58043)2938

\*\*\*\*\*  
C7H16N2O L (6586)  
1-Oxa-4,8-diazacyclodecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U			K1=5.1 B2=10.1	1990CCa	(58053)2939

Zn++	gl	NaNO3	25°C	0.10M	U			K1=4.94	1990HWa	(58054)2940
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\*\*\*\*\*  
C7H16N2S L (6463)  
1-Thia-4,8-diazacyclodecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C			K1=6.85	1992WLb	(58064)2941

\*\*\*\*\*  
C7H16S L CAS 26158-99-6 (5696)  
Pentyl-ethylsulfide;  $\text{C}_2\text{H}_5 \cdot \text{S} \cdot \text{C}_5\text{H}_{11}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	ISE	non-aq	25°C	100%	U			K1=-0.18	1986MMb	(58093)2942

Medium: acetone, Bu4NC104  
\*\*\*\*\*  
C7H17N L n-Heptylamine CAS 111-68-2 (3138)  
n-Heptylamine;  $\text{CH}_3(\text{CH}_2)_6\text{NH}_2$



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	non-aq	15°C	100%	U	M		1993MEa (58098)	2943
							K(ZnA+L)=3.63 K(ZnB+L)=3.18		
In chloroform. A=5,15-Bis(2-hydroxy-1-naphthyl)-2,3,7,8,12,13,17,18-octa-ethylporphine, B=5,15-Bis(2-methoxy-1-naphthyl) deriv. of A									
*****									
C7H17NO2		L					(6450)		
N,N-Di(2-hydroxypropyl)methylamine; CH3.N(CH2.CH(OH).CH3)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	?	C		K1=2.87	1991DMa (58104)	2944
*****									
C7H17NO5S		HL		AMPSO			CAS 68399-79-1 (1968)		
3-[1,1-Dimethyl-2-hydroxyethylamino]-2-hydroxypropanesulfonic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=4.42	2001AOa (58116)	2945
*****									
C7H17NO6S		HL		DIPSO			(1097)		
3-[N,N-Bis(2-hydroxyethyl)amino]-2-hydroxypropane sulfonic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=3.83	2000ADa (58130)	2946
.									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=3.55	1999AAa (58131)	2947
*****									
C7H17NO7P2		HL					CAS 220491-02-1 (7714)		
N-2-Methyltetrahydrofuryliminodi(methylenephosphonic acid);									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=10.85 B2=15.25 B(ZnHL)=16.17 B(ZnH2L)=20.51 B(ZnH-1L)=0.08 B(ZnH2L2)=31.10	1999MKa (58148)	2948
*K(ZnL)=-10.77; K(ZnOH+L)=9.47; K(ZnOH+ZnL=Zn(OH)L+Zn)=-1.38. B(ZnHL2)=25.34; B(ZnH-1L2)=3.84.									
*****									
C7H17NO7S		HL		TAPSO			CAS 68399-81-5 (167)		
3-[N-(Tris(hydroxymethyl)methyl)amino]-2-hydroxypropane sulfonic acid									

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

Zn++ gl KNO3 25°C 0.10M C M K1=3.80 2001AAa (58167)2949  
Also data for ternary complexes with 5'-GMP, 5'-IMP and 5'-CMP.

Zn++ gl KNO3 25°C 0.10M C K1=3.61 2000ADa (58168)2950  
.

Zn++ gl KNO3 25°C 0.10M C K1=3.78 1999AAa (58169)2951  
\*\*\*\*\*  
C7H17N2O3P HL (7919)  
(Glycylamino)methyl(t-butylphosphinic acid);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl KNO3 25°C 0.10M C K1=3.55 B2= 6.34 2001LKa (58187)2952  
B(ZnHL)=9.89  
B(ZnH-2L)=-13.39

\*\*\*\*\*  
C7H17N2O4P H2L Leu-Gly(P) CAS 60668-11-3 (7119)  
Leucylaminomethylphosphonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl KNO3 25°C 0.10M C K1=3.627 1995HLA (58194)2953  
B(ZnH-1L)=-4.12

\*\*\*\*\*  
C7H17N2O4PS H2L CAS 82611-22-1 (7392)  
Methionyl-1-aminoethylphosphonic acid; H2L

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl KNO3 25°C 0.10M C K1=4.16 1997LBA (58199)2954  
Data are for (S,S)-isomer. For (S,R)-isomer K1=3.85, B2=6.50

\*\*\*\*\*  
C7H17N3 L (101)  
1,4,7-Triazacyclodecane; cyclo(.NHCH2CH2NHCH2CH2NHCH2CH2CH2.)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl NaClO4 25°C 0.20M M H K1=10.3 1978KKb (58219)2955  
DH1=-30.6 kJ mol<sup>-1</sup>

Zn++ gl KNO3 25°C 0.10M M K1=11.28 1978ZOa (58220)2956

Zn++ gl KNO3 25°C 0.10M U K1=11.2 1975DDa (58221)2957  
\*\*\*\*\*  
C7H19NO6P2 H4L (7464)  
N-(3-Methylbutyl)imino-bis(methylenephosphonic acid);

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

\* $K(\text{ZnL}) = -9.57$ ;  $K(\text{ZnOH} + \text{L}) = 9.19$ ;  $K(\text{ZnOH} + \text{ZnL} = \text{Zn}(\text{OH})\text{L} + \text{Zn}) = -0.18$ .

\*\*\*\*\*

C7H19N3                      L                      Spermidine                      CAS 124-20-9    (13)  
1,5,10-Triazadecane, 4-Azaoctane-1,8-diamine; H2N.(CH2)3.NH.(CH2)4.NH2

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

Zn++      gl   NaClO4 20°C 0.10M U      1991W Ba (58305)2959  
B(ZnHL)=14.89  
B(ZnHL2)=22.29

\*\*\*\*\*

C7H20N2O4P2 H2L (7263)  
1,3-Diaminopropane-N,N'-bis(methylenemethylphosphinic acid);  
CH<sub>2</sub>(CH<sub>2</sub>NHCH<sub>2</sub>PO(OH)CH<sub>3</sub>)<sub>2</sub>

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

Zn++ gl R4N.X 25°C 0.10M M K1=7.35 1996BCa (58327)2960  
Medium: 0.1 M Me4NNO3.

\*\*\*\*\*

C7H20N4 L CAS 4741-99-5 (12)  
1,4,8,11-Tetraazaundecane; H2N.CH2.CH2.NH.CH2.CH2.CH2.NH.CH2.CH2.NH2

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

Zn<sup>++</sup> gl oth/un 21°C var U M 1987DHa (58349)2961  
Ternary complexes with glycine, alanine, en, pn, acetate.

Zn++ gl oth/un 25°C ? U K1=12.38 1976NGa (58350)2962

Zn++	g1	NaCl04	25°C	?	U	K1=12.38	1976NGe (58351)2963
------	----	--------	------	---	---	----------	---------------------

Zn++      gl    KCl      25°C 0.50M U      K1=12.8      1970W Ba (58352)2964

\*\*\*\*\*

C7H20N4 L (3012)  
N,N-Bis(2-aminoethyl)-1,3-diaminopropane; N(CH2CH2NH)2CH2CH2CH2NH2

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

Zn<sup>++</sup>      gl    KCl      25°C 0.10M C      K1=13.35      2003KDa (58365)2965  
B(ZnH-1L)=1.61

\*\*\*\*\*

C8H5NO2	HL	Isatin	CAS 91-56-5	(7844)
2,3-Indolinedione;				

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	alc/w	30°C	5%	U	M		K(ZnA+L)=7.31 B(ZnAL)=15.17	1995RRb (58405)	2966
Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. H2A is thioglycolic acid.										
Zn++	gl	alc/w	30°C	5%	M	M		K1=5.85 B2=10.61	1994RRa (58406)	2967
Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. K(ZnA+L)=5.58 (A=Gly), 5.56 (Ala), 5.53 (Val), 5.59 (en), 5.64 (bpy), 5.37 (oxalate), 5.44 (catecholate).										
*****										
C8H5NO3		L						CAS 524-38-9	(8323)	
N-Hydroxyphthalimide;										
Zn++	gl	alc/w	30°C	5%	U	M		K(ZnA+L)=3.95 B(ZnAL)=11.81	1995RRb (58421)	2968
Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. H2A is thioglycolic acid.										
*****										
C8H5NO6		H2L						CAS 603-11-2	(1171)	
3-Nitro-phthalic acid; O2N.C6H3(COOH)2										
Zn++	gl	oth/un	35°C	dil	U			K1=3.33	1970NPb (58431)	2969
*****										
C8H5N5O6		H3L						Murexide (453)		
Purpuric acid (Murexide is ammonium salt);										
Zn++	sp	none	25°C	dil	C			K1=5.02	2004AZa (58463)	2970
H-point standard addition method. Competition with sulfate.										
Zn++	sp	non-aq	25°C	100%	U	TIH		K1=5.00 B2=8.87	1995GSa (58464)	2971
Medium: 10% w/w MeCN/DMSO. DH(K1)=-24.7 kJ mol <sup>-1</sup> , DS=-14 J K <sup>-1</sup> mol <sup>-1</sup> DH(K2)=-80.2, DS=-195										
Zn++	sp	none	?	0.0	U			K(Zn+H2L)=9.32	1957TVb (58465)	2972
Zn++	sp	oth/un	?	0.10M	U			K(Zn+H2L)=3.1	1949SGa (58466)	2973
*****										
C8H5O2F3S		HL						CAS 326-91-0	(165)	
4,4,4-Trifluoro-1-(2-thienyl)butane-1,3-dione; F3C.CO.CH2.CO.C4H3S										
Zn++	sp	none	?	0.0	U			K(Zn+H2L)=9.32	1957TVb (58465)	2972
Zn++	sp	oth/un	?	0.10M	U			K(Zn+H2L)=3.1	1949SGa (58466)	2973
*****										
C8H5O2F3S		HL						CAS 326-91-0	(165)	
4,4,4-Trifluoro-1-(2-thienyl)butane-1,3-dione; F3C.CO.CH2.CO.C4H3S										

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-----
Zn++      gl  diox/w 25°C 75% U      K1=7.78  B2=15.03  1995UFa (58584)2974
-----
Zn++      gl  NaCl04 25°C 0.50M C      K1=3.45      1993HTa (58585)2975
-----
Zn++      gl  diox/w 30°C 75% U      K1=6.15      1977AHb (58586)2976
-----
Zn++      cal non-aq 25°C 100% U      M      1972KKd (58587)2977
                                   K(ZnL2+bpy)=1.95
                                   K(ZnL2+A)=1.71
                                   K(ZnL2+phen)=2.50

```

Medium: CHCl3. A=4,4'-dipyridyl.

```

-----
Zn++      dis non-aq 25°C 100% U      M      1972KKd (58588)2978
                                   K(ZnL2+bpy)=4.65

```

Medium: benzene

```

-----
Zn++      dis oth/un 25°C  ?  U      M      1967Cwa (58589)2979
                                   K(ZnL2+A)=8.07
                                   K(Zn+2HL+A=ZnL2A+2H)=-0.27

```

A=tri-n-octylphosphine oxide

```

-----
Zn++      gl  diox/w 30°C 75% U      K1=7.75  B2=14.05  1965RGa (58590)2980
*****
C8H5O3F3S      H2L      CAS 65712-32-3 (5446)
3-(2-Trifluoromethylfuryl)-2-mercaptopropenoic acid;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  diox/w 25°C 0.10M U      K1=10.33  B2=18.89  1977WVa (58718)2981
*****
C8H6N2O      HL      CAS 17056-99-4 (3220)
5-Hydroxyquinoxaline;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  diox/w 20°C 50% U      K1=7.07  B2=12.78  1954IRa (58744)2982
Medium: 50% dioxan, I=0.3 M NaCl04
*****
C8H6N2O      HL      (6290)
8-Hydroxycinnoline, (2-Hydroxybenzo)pyrimidine;

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  diox/w 20°C 50% U      K1=6.93  B2=12.73  1954IRa (58765)2983
Medium: 50% dioxan, 0.3 M NaCl04
*****
C8H6N2O      HL      8-Quinazolinol  CAS 7757-02-2 (3221)
8-Hydroxyquinazoline;
-----

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	20°C	50%	U		K1=7.48 B2=14.44	1954IRa (58775)	2984

Medium: 50% dioxan, 0.3 M NaClO4

\*\*\*\*\*

C8H6N2O2 HL (6681)  
 9-Hydroxy-pyrido(1,2-a)pyrimidin-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KN03	25°C	0.10M	C		K1=6.30 B2=11.89	1993YDa (58786)	2985

Data also in 50% v/v dioxan/water. Electrolyte: 0.1M KN03.  
 B1= 7.50, B2= 13.70.

\*\*\*\*\*

C8H6N2S L CAS 53911-41-4 (3815)  
 4-(2'-Pyridyl)-1,3-thiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U		K1=4.17 B2=7.77 B3=10.63	1968EHa (58800)	2986

\*\*\*\*\*

C8H6N2S L CAS 53911-40-3 (3816)  
 5-(2'-Pyridyl)-1,3-thiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	NaClO4	25°C	0.10M	U		K1=0.3	1965KSc (58807)	2987

\*\*\*\*\*

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
Zn++	gl	oth/un	25°C	0.10M	U		K1=2.18	1989SCa (58915)	2988

In 60% v/v EtOH/H2O: K1 = 2.94

Zn++	gl	oth/un	35°C	.493M	U		K1=3.02	1975PAb (58916)	2989
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Zn++	EMF	oth/un	25°C	0.0	U T H		K1=2.893	1965NAa (58917)	2990
------	-----	--------	------	-----	-------	--	----------	-----------------	------

Method: H electrode. 0-45 C. DH(K1)=13.4 kJ mol<sup>-1</sup>, DS=99.5 J K<sup>-1</sup> mol<sup>-1</sup>  
 K1=7.635-0.03956T+0.00007937T<sup>2</sup>

Zn++	gl	oth/un	25°C	0.10M	U		K1=2.2	1960YYa (58918)	2991
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C8H7N02Cl2 HL CAS 13538-26-6 (6286)  
 3,5-Dichloro-2-hydroxyacetophenone oxime; Cl2(HO)C6H2.C(CH3):NOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++ gl alc/w 27°C 75% U I K1=7.77 B2=14.15 1976LGa (59114)2992  
Data in 75% EtOH. Data also in 75% acetone and 75% dioxan

\*\*\*\*\*

C8H7N02S H2L (5450)  
3-(2-Pyridyl)-2-mercaptopropenoic acid; C5H4N.CH:C(SH).COOH

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

Zn++ gl diox/w 25°C 0.10M U K1=12.82 B2=19.61 1977WVa (59123)2993

\*\*\*\*\*

C8H7N04 HL CAS 3740-52-1 (5592)  
2-(4-Nitrophenyl)ethanoic acid; NO2.C6H4.CH2.COOH

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

Zn++ gl diox/w 25°C 50% C M K1=2.01 1985BSd (59134)2994  
K(Zn(phen)+L)=2.08

Medium: 50% v/v dioxan/H2O, 0.1 M NaClO4

\*\*\*\*\*

C8H7N04 HL CAS 1450-76-7 (1143)  
2-Hydroxy-5-nitroacetophenone; HO.C6H3(NO2).CO.CH3

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

Zn++ sp diox/w 40°C 50% U K1=2.85 1975PSa (59140)2995

\*\*\*\*\*

C8H7N04S HL CAS 3406-75-5 (4564)  
(4-Nitrophenylthio)ethanoic acid; O2N.C6H4.S.CH2.COOH

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

Zn++ gl diox/w 25°C 50% U M K1=1.78 1972SGa (59154)2996  
K(Zn(bpy)+L) = 1.91

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H7N3 L CAS 18653-75-3 (3792)  
2-(2'-Pyridyl)imidazole;

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

Zn++ gl KNO3 25°C 0.10M C K1=4.77 B2=9.08 1992RKa (59177)2997  
B3=12.36  
B4=13.73

-----  
Zn++ EMF KNO3 25°C 0.10M U K1=4.39 B2=8.96 1967EHc (59178)2998  
B3=12.07

\*\*\*\*\*

C8H7N3 L CAS 16576-78-6 (3793)  
4-(2'-Pyridyl)imidazole;

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=5.419 B2=10.232 B3=13.836	1967EHb	(59188)2999

\*\*\*\*\*

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
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Zn++	gl	diox/w	40°C	50%	U		K1=6.30	1975PPa	(59211)3000
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C8H8NO2Cl HL CAS 10242-05-4 (629)  
N-(3-Chlorophenyl)aminoethanoic acid; Cl.C6H4.NHCH2COOH

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

Zn++	gl	NaClO4	25°C	0.10M	U	M	K(Zn(bpy)+L)=3.13	1983CLc	(59266)3001
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\*\*\*\*\*

C8H8NO2Cl HL CAS 5465-90-7 (632)  
N-(4-Chlorophenyl)aminoethanoic acid; Cl.C6H4.NHCH2COOH

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

Zn++	gl	NaClO4	25°C	0.10M	U	M	K(Zn(phen)+L)=3.21	1984CMA	(59273)3002
------	----	--------	------	-------	---	---	--------------------	---------	-------------

Zn++	gl	NaClO4	25°C	0.10M	U		K1=2.94	1979CXa	(59274)3003
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\*\*\*\*\*

C8H8NO2Cl HL CAS 61756-69-2 (4569)  
N-Acetyl-N-(4-chlorophenyl)hydroxamine; Cl.C6H4.N(CO.CH3).OH

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

Zn++	gl	diox/w	25°C	70%	U		K1=5.16 B2=9.53	1968JSb	(59279)3004
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Medium: 70% dioxan, 0.1 M KCl

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C8H8N2 L CAS 615-15-6 (8241)  
2-Methylbenzimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.50M	U		K1=1.30	1990LGb	(59299)3005
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C8H8N2O2 H2L (3821)  
1-(2'-Hydroxyphenyl)-4-oxo-2,3-diazabut-1-ene;

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



Zn++ sp alc/w 19°C 40% U 1966SSe (59322)3006  
K(Zn+HL)=6.28  
K(Zn+H2L)=4.41

Medium: 40% EtOH, 0.05 M NaClO4

Zn++ sp alc/w 19°C 28% U 1963H0c (59323)3007  
K(?)=5.8

Medium: 28% EtOH, 0.025 M, acetate buffer

\*\*\*\*\*  
C8H8N2O3 H3L (3822)  
1-(2',4'-Dihydroxyphenyl)-4-oxo-2,3-diazabut-1-ene;

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

Zn++ sp alc/w 19°C 28% U 1963H0c (59347)3008  
K(?)=4.08  
K(?)=9.79

Medium: 28% EtOH, 0.025 M, acetate buffer

\*\*\*\*\*  
C8H8N2O4S H2L (5451)  
3-(Tetrahydro-6-methyl-2,4-dioxo-5-pyrimidyl)-2-mercaptopropenoic acid;

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

Zn++ gl diox/w 25°C 0.10M U K1=10.36 B2=19.29 1977WVa (59364)3009  
\*\*\*\*\*

C8H8N2O6S H2L CAS 15054-42-9 (3843)  
N-(2'-Nitrobenzenesulfonyl)aminoethanoic acid; O2N.C6H4.SO2.NH.CH2.CO0H

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

Zn++ gl NaNO3 25°C 0.10M C M 2000SIa (59370)3010  
B(ZnHL)=12.69  
B(ZnH2L2)=25.99  
B(ZnHL(bpy))=18.23  
B(ZnH2L2(bpy))=31.3

B(ZnL(bpy))=12.05.

-----  
Zn++ gl alc/w 30°C 50% U 1967GMb (59371)3011  
K(Zn+H2L=ZnHL+H)=1.94  
K(ZnHL+H2L=Zn(HL)2+H)=1.46  
K(ZnHL2+H)=5.97  
K(ZnL2+H)=7.60

Medium: 50% EtOH

\*\*\*\*\*  
C8H8N2O6S H2L CAS 1215-64-1 (3844)  
N-(3'-Nitrobenzenesulfonyl)aminoethanoic acid; O2N.C6H4.SO2.NH.CH2.CO0H

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

$$\begin{aligned} K(\text{Zn} + \text{H}_2\text{L} &= \text{ZnHL} + \text{H}) = 2.18 \\ K(\text{ZnHL} + \text{H}_2\text{L} &= \text{Zn}(\text{HL})_2 + \text{H}) = 1.46 \\ K(\text{ZnHL}_2 + \text{H}) &= 5.83 \\ K(\text{ZnL}_2 + \text{H}) &= 7.21 \end{aligned}$$

\*\*\*\*\*

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

$$\begin{aligned} K(\text{Zn} + \text{H}_2\text{L} &= \text{ZnHL} + \text{H}) = 2.23 \\ K(\text{ZnHL} + \text{H}_2\text{L} &= \text{Zn}(\text{HL})_2 + \text{H}) = 1.79 \\ K(\text{ZnHL}_2 + \text{H}) &= 5.82 \\ K(\text{ZnL}_2 + \text{H}) &= 7.06 \end{aligned}$$

\*\*\*\*\*

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

$$\begin{aligned} K(\text{Zn}(\text{bpy})+\text{L}) &= 8.20 \\ K(\text{Zn}(\text{phen})+\text{L}) &= 8.10 \\ K(\text{ZnA}+\text{L}) &= 7.74 \end{aligned}$$

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++      gl   NaCl   37°C 0.15M C      K1=4.25   B2= 7.65   1976APb (59405)3018  
B(ZnH-1L)=-0.43  
B(ZnH-2L)=-6.34

$$B(\text{ZnH-1L2})=3.32$$

The temperature and ionic strength are inferred, but not stated.

\*\*\*\*\*

C8H8OS2 HL CAS 128367-51-7 (4503)

1-Mercapto-1-methyl-3-(2-thienyl)prop-1-en-3-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=9.19 B2=18.22	1969UTa	(59423)3019

Medium: 75% dioxan, 0.01 M Me4NI

Zn++	gl	diox/w	30°C	75%	U		K1=9.46 B2=18.70	1969UTa	(59424)3020
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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
Zn++	gl	diox/w	40°C	50%	U		K1=6.30	1975PPa	(59452)3021

\*\*\*\*\*

C8H8O2 HL p-Toluic acid CAS 99-94-5 (1372)

4-Methylbenzoic acid; CH3.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U	M	K1=2.43 K(Zn(bpy)+L)=2.48	1968GPd	(59497)3022

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H8O2 HL Phenylacetic CAS 103-82-2 (1361)

Phenylethanoic acid; C6H5.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	50%	C	I M	K1=1.75 K(Zn(phen)+L)=1.96	1985BSd	(59535)3023

Medium: 50% v/v EtOH/H2O. In 50% dioxan: K1=2.26, K(Zn(phen)+L)=2.29

Zn++	gl	KNO3	25°C	0.10M	C	I M	K1=1.14 K(Zn(phen)+L)=1.05	1985SMf	(59536)3024
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Also data in 30, 50, 60, 70, and 90% (v/v) Ethanol/water and 10, 30, 50, 60, 70, 80, and 90% (v/v) dioxane/water.

\*\*\*\*\*

C8H8O2 HL CAS 1004-72-4 (3190)

alpha-Methyltropone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	50%	U		K1=8.6 B2=15.7	1954BFb	(59577)3025

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	50%	U		K1=8.4 B2=15.2 B3=18.8	1954BFb (59588)	3026

C8H8O2S HL CAS 103-04-8 (3223)  
 (Phenylthio)ethanoic acid; C6H5.S.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	diox/w	25°C	50%	C	M	K1=2.24	1979FFb (59618)	3027

Medium: 50% dioxan, 0.1 M NaClO4. Data also for other related sulfides

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U	M	K1=2.04 K(Zn(bpy)+L)=2.20	1972SGa (59619)	3028

Medium: 50% dioxan, 0.1 M NaClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U		K1=0.8	1962SYa (59620)	3029

C8H8O2S HL 3-Thenoylaceton CAS 21808-13-9 (2736)  
 3-Thenoylacetone, 1-(3'-Thienyl)butane-1,3-dione; C4H3S.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=10.0 B2=18.00	1965RGa (59644)	3030

C8H8O2S HL CAS 13205-48-6 (4506)  
 4-(Methylthio)benzoic acid; CH3.S.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ISE	KN03	25°C	0.10M	C		K1=0.32	1972FGb (59650)	3031

By competition with Ag+ using Ag ISE

C8H8O2Se HL CAS 17893-46-8 (4507)  
 (Phenylseleno)ethanoic acid; C6H5.Se.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ISE	KN03	25°C	0.10M	C		K1=0.60	1972FGb (59657)	3032

By competition with Ag+ using Ag ISE

C8H8O3 H2L o-Cresotic acid CAS 83-40-9 (2338)  
 2-Hydroxy-3-methylbenzoic acid; CH3.C6H3(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++ gl alc/w 25°C 50% M M K1=7.04 1983ADb (59695)3033  
K(Zn(phen)+L)=6.90

Medium: 50% v/v EtOH/H2O, 0.10 M NaNO3.

\*\*\*\*\*

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
Zn++	gl	NaClO4	25°C	2.0M	U		K1=1.36 B2= 2.58	1985MFa (59796)	3034
By quinhydrone electrode, K1=1.40, B2=2.45.									
Zn++	sp	NaClO4	30°C	0.10M	U		K1=2.65 B2=4.97	1975KAd (59797)	3035
Zn++	EMF	NaClO4	20°C	2.0M	U		K1=1.51 B2=2.58 B3=3.36	1968FLa (59798)	3036
Zn++	oth	NaClO4	20°C	2.0M	U		K1=1.48 B2=2.41 B3=3.588	1965LFa (59799)	3037

Method: optical rotation.

Zn++ kin oth/un 25°C 0.0 U K1=2.26 1951Bwa (59800)3038  
\*\*\*\*\*

C8H8O3 HL m-Anisic acid CAS 586-38-9 (2804)  
3-Methoxybenzoic acid; CH3O.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U		K1=0.9	1960YYa (59906)	3039

\*\*\*\*\*

C8H8O3 HL CAS 673-22-3 (3194)  
4-Methoxysalicylaldehyde; CH3O.C6H3(OH).CHO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=6.48 B2=12.38	1967KBb (59975)	3040

Medium: 75% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H8O3 H2L m-Cresotic acid CAS 50-85-1 (1244)  
4-Methylsalicylic acid; CH3.C6H3(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	50%	M	M	K1=7.30	1983ADb (59992)	3041

K(Zn(phen)+L)=7.16

Medium: 50% v/v EtOH/H2O, 0.10 M NaNO3.

\*\*\*\*\*

C8H8O3 HL Phenoxyacetic CAS 122-59-8 (1153)  
Phenoxyethanoic acid; C6H5.O.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	none	25°C	0.15M	C T H		K1=0.73	1990AMb (60030)	3042

Data for 10-45 C

Zn++	gl	oth/un	25°C	0.10M	U		K1=0.5	1962SYa (60031)	3043
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C8H8O3S HL CAS 3959-08-8 (4509)  
Carboxymethyl phenyl sulfoxide; HOOC.CH2.SO.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U M		K1=1.96 K(Zn(bpy)+L)=1.89	1972SGa (60051)	3044

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H8O4 H3L CAS 102-32-9 (1826)  
3,4-Dihydroxyphenylethanoic acid; C6H3(OH)2.CH2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	30°C	0.10M	U		K1=8.80 B2=15.17	1966APb (60066)	3045

\*\*\*\*\*

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
Zn++	gl	diox/w	35°C	50%	U		K1=3.78 B2=7.17	1971MAa (60077)	3046

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H8O4 L (601)  
4,5-Dimethoxy-1,2-benzoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	nmr	non-aq	34°C	100%	U M		K(ZnCl2+L)=2.62	1981KKc (60110)	3047

Medium: nitromethane

\*\*\*\*\*

C8H8O4S HL CAS 3959-23-7 (4510)  
Carboxymethyl phenyl sulfone; HOOC.CH2.SO2.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U M		K1=1.87 K(Zn(bpy)+L)=1.83	1972SGa (60118)	3048

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H8O5 H2L CAS 5629-08-3 (679)

7-Oxy-bicyclo[2.2.1]-hept-5-ene-2,3-dicarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	NaCl	37°C	0.15M	C			K1=4.119 B(ZnHL)=8.017 B(ZnHL2)=12.090	1988HYa (60121)	3049
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\*\*\*\*\*  
C8H9N L CAS 17618-94-9 (300)  
2-Allylpyridine; C5H4N.CH2.CH:CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	U			K1=1.6	1974ILa (60143)	3050
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C8H9NOS HL CAS 4822-44-0 (3240)  
N-(Mercaptoacetyl)aniline (thioglycolanilide); C6H5.NH.CO.CH2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	oth	diox/w	30°C	70%	U			B2=16.80	1973BSa (60155)	3051
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Medium: 0.1 M KCl

Zn++	gl	diox/w	30°C	75%	U			K1=10.38 B2=19.26	1961MAe (60156)	3052
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C8H9NO2 HL C-Phenylglycine CAS 2835-06-5 (6511)  
2-Amino-2-phenylethanoic acid, 2-aminophenylethanoic acid; C6H5.CH(NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	vlt	NaClO4	25°C	1.0M	C	M		B(ZnLA)=5.20 B(ZnLA2)=8.35 B(ZnL2A)=10.64	1999VKc (60169)	3053
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Method: polarography. Medium pH: 8.5. A is 4-picoline.

Zn++	gl	KNO3	25°C	0.10M	M			K1=4.13 B2=7.85	1990SMa (60170)	3054
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C8H9NO2 HL CAS 56-91-7 (3225)  
2-Aminomethylbenzoic acid; H2N.CH2.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	diox/w	35°C	50%	U			K1=5.0 B2=11.1	1958YSa (60178)	3055
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C8H9NO2 HL (6326)  
2-Hydroxy-5-amino-acetophenone; (H2N)(HO)C6H3.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ gl diox/w 40°C 50% U K1=6.65 1975PPa (60186)3056

Data also for 5 other 5-substituted analogues

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C8H9NO2 HL CAS 1726-86-9 (1487)

2-Hydroxy-5-methylbenzaldehyde oxime; CH3.C6H3(OH).CH:NOH

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl NaClO4 20°C 0.10M U K1=7.0 B2=14.30 1965BEb (60193)3057

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C8H9NO2 HL CAS 17194-82-0 (1382)

2-Hydroxyacetophenone oxime; HO.C6H4.C(CH3):NOH

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

Zn++ gl diox/w 30°C 50% U K1=5.79 1982UVa (60206)3058

Zn++ gl diox/w 30°C 75% U K1=9.19 1976IKa (60207)3059

Medium: 75% Dioxan/H2O, 0.1 M KNO3. Data also for 8 phenyl substituted analogues (3-Me, 5-Me, 3-Cl, 5-Cl, 5-Br, 3-Br, 5-I, 5-NO2)

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Zn++ gl diox/w 30°C 75% U K1=8.85 1958KVa (60208)3060

Medium: 75% dioxan, 0.1 M NaClO4

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C8H9NO2 L CAS 1849-49-6 (5907)

5'-Deoxypyridoxal

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl KNO3 25°C 0.10M M K1=2.40 1990SMa (60243)3061

K(ZnL+H)=6.09

-----  
Zn++ gl KCl 25°C 1.00M C K1=2.33 1989MSb (60244)3062

K(ZnL+H)=7.10

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C8H9NO2 HL CAS 119-68-6 (1275)

N-Methyl-anthranilic acid; CH3.NH.C6H4.COOH

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl diox/w 35°C 50% U K1=3.3 B2=5.8 1958YSa (60261)3063

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C8H9NO2 HL (2591)

N-Phenyl-N-acetohydroxamic acid; CH3.CO.N(OH)C6H5

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

Zn++ gl KCl 25°C 0.20M C K1=4.34 B2= 8.12 2000FEc (60278)3064

B(ZnH-1L2)=-1.9

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C8H9NO2 HL Phenyl-glycine CAS 103-01-5 (626)  
 N-Phenylaminoethanoic acid; C6H5.NHCH2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	1.0M	U	M	K1=4.48 B2= 7.73 K3=2.16 B(ZnLA)=6.50 B(ZnLA2)=9.10 B(ZnL2A)=10.48	1995KDa (60305)	3065

Medium pH 8.50. HA is propanoic acid.

Zn++	gl	NaCl04	25°C	0.10M	U	M	K(Zn(phen)+L)=3.43	1984CMA (60306)	3066
Zn++	gl	alc/w	21°C	50%	M		B2=4.43 B(ZnH-1L)=-6.02	1984LOc (60307)	3067
Zn++	gl	alc/w	21°C	50%	M		K1=3.07 B2=5.86 B(ZnHL)=9.99	1984LOd (60308)	3068
Zn++	gl	NaCl04	25°C	0.10M	U	M	K(Zn(bpy)+L)=3.33	1983CLc (60309)	3069
Zn++	gl	NaCl04	25°C	0.10M	U		K1=3.00	1979CXa (60310)	3070
Zn++	gl	oth/un	25°C	0.10M	U		K1=2.6	1959SYc (60311)	3071

\*\*\*\*\*

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
Zn++	vlt	KN03	30°C	0.50M	C		K1=4.84	1983BNa (60324)	3072
Method: polarography.									
Zn++	gl	NaCl04	30°C	0.10M	U	T H		1981RSc (60325)	3073
Data for 30-50 C. DH(K1)=-21.5 kJ mol <sup>-1</sup> , DS(K1)=38 J K <sup>-1</sup> mol <sup>-1</sup> . K(Zn(bpy)+L)=5.47, DH=-19.6, DS=40; K(Zn(phen)+L)=5.50, DH=-20.2, DS=39.									
Zn++	gl	NaCl04	30°C	0.10M	U	M	K1=5.67 B2=10.64 K(Zn(phen)+L)=5.50	1980RSb (60326)	3074
Zn++	gl	KN03	30°C	0.10M	U	M	K1=5.67 K(Zn(His)+L)=4.47	1980RSc (60327)	3075
Zn++	gl	NaCl04	30°C	0.10M	U	T H		1980RSe (60328)	3076
DH(K1)=-21.5 kJ mol <sup>-1</sup> , DS(K1)=38 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-22.8, DS(K2)=20.									

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C8H9NO2S HL CAS 104-18-7 (4575)

(4-Aminophenylthio)ethanoic acid; H<sub>2</sub>N.C<sub>6</sub>H<sub>4</sub>.S.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	KNO <sub>3</sub>	25°C	0.05M	M			K1=3.65	1975DPb (60367)	3077
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C<sub>8</sub>H<sub>9</sub>N<sub>3</sub> HL Pyridoxal CAS 65-22-5 (110)  
3-Hydroxy-5-(hydroxymethyl)-2-methyl-4-pyridinecarboxaldehyde;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	C			K1=2.32	1981TMe (60421)	3078
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Zn++	gl	KCl	25°C	0.50M	U	M		K1=2.32 B(ZnL(Gly))=8.43 B(ZnL <sub>2</sub> (Gly) <sub>2</sub> )=16.86 K(ZnL(Gly)+H)=7.34	1966LHa (60422)	3079
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\*\*\*\*\*  
C<sub>8</sub>H<sub>9</sub>N<sub>3</sub> H<sub>2</sub>L CAS 26071-07-8 (209)  
5-Methylsalicylhydroxamic acid; CH<sub>3</sub>.C<sub>6</sub>H<sub>3</sub>(OH).CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	EMF	diox/w	30°C	50%	U			K1=4.76	1977DJa (60435)	3080
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Medium: 50% dioxan, 0.1 M NaClO<sub>4</sub>

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C<sub>8</sub>H<sub>9</sub>N<sub>3</sub>S HL CAS 72678-98-9 (8333)  
2-(2-Furanyl)-4-thiazolidinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	KNO <sub>3</sub>	30°C	0.10M	U	IH		K1=5.26 B2= 9.89	1983RKb (60456)	3081
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At I=0.0, K1=5.43, K2=4.74. Data for 25-50 C. DH(K1)=-30.7 kJ mol<sup>-1</sup>,  
DS(K1)=22.3 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-27.0, DS(K2)=13.4.

\*\*\*\*\*  
C<sub>8</sub>H<sub>9</sub>N<sub>4</sub> H<sub>2</sub>L Mimosinic acid (2309)  
3-(3-Hydroxy-4-oxo-1,4-dihydropyridin-1-yl)propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	KNO <sub>3</sub>	37°C	0.15M	C			K1=6.86 B2=12.31 K(ZnL+H)=3.9 K3 <1.6	1979SPd (60466)	3082
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C<sub>8</sub>H<sub>9</sub>N<sub>4</sub> HL CAS 78257-51-9 (887)  
4-Ethoxypyridine-2-carboxylic acid N-oxide; C<sub>2</sub>H<sub>5</sub>O.C<sub>5</sub>H<sub>3</sub>N-O(COOH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	NaClO <sub>4</sub>	30°C	0.10M	U	T		K1=3.80 B2=6.42	1982RRa (60476)	3083
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C8H9NO4 H2L (4520)  
Dehydroethanoic acid oxime;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl diox/w 35°C 50% U 1971MAa (60483)3084  
K(Zn+HL)=3.57  
K(Zn+2HL)=6.60

Medium: 50% dioxan, 0.1 M NaClO4

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C8H9NO4S H2L CAS 7717-21-7 (3846)  
N-(Phenylsulfonyl)aminoethanoic acid; C6H5SO2NHCH2COOH

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

Zn++ vlt NaClO4 25°C 0.10M U M 1991GBb (60513)3085  
B(Zn(bpy)L)=8.96  
K(Zn+bpy+H-1L)=11.98  
K(Zn(bpy)+L)=3.66  
K(Zn(bpy)+H-1L)=6.68

-----  
Zn++ gl alc/w 30°C 50% U 1967GMb (60514)3086  
K(Zn+H2L=ZnHL+H)=1.87  
K(ZnHL+H2L=Zn(HL)2+H)=2.10  
K(ZnHL2+H)=6.61  
K(ZnL2+H)=7.88

Medium: 50% EtOH

\*\*\*\*\*

C8H9NO5S H2L (6513)  
2-Amino-4-sulfobenzeneethanoic acid; NH2.CH(C6H4HSO3)COOH

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

Zn++ gl KNO3 25°C 0.10M M K1=4.18 B2=7.49 1990Sma (60521)3087

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C8H9N2O2F3S HL CAS 58157-03-2 (212)  
2-(Trifluoromethanesulfonamidoethyl)pyridine; C5H4NCH2CH2S(:O)2NHCF3

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

Zn++ gl diox/w 30°C 45% M K1=7.4(2) B2=8.6(3) 1984MYa (60528)3088

\*\*\*\*\*

C8H9N2O3F HL Ftorafur CAS 17902-23-7 (6866)  
5-Fluoro-1-(tetrahydro-2-furfuryl)uracil, tegafur;

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

Zn++ gl NaClO4 25°C 0.10M M M 1993SKe (60536)3089  
K(ZnA+L)=4.6

A:1,4,7,10-Tetraazacyclododecane.

\*\*\*\*\*

C8H9N3 L CAS 7471-05-8 (3198)  
2,2'-Pyridylimidazoline;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl diox/w 25°C 50% U K1=6.0 B2=11.0 1956HFa (60541)3090

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C8H9N3OS L (4573)  
1-Benzoylthiosemicarbazide; C6H5.CO.NH.NH.CS.NH2

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

Zn++ gl alc/w 25°C 80% U TIH K1=8.24 1985BAb (60549)3091  
In 0.067 M KCl. When I=0.133, K=8.40; I=0.200, K=8.60. DH=-34.6 kJ mol<sup>-1</sup>,  
DS=37.5 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C8H9N3OS H2L CAS 5351-90-6 (2103)  
Salicylidenethiosemicarbazone; HO.C6H4.CH:N.NH.CS.NH2

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl alc/w 20°C 50% U K1=6.9 B2=12.8 1959HOa (60555)3092

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C8H9N3O7 H2L Uramildiacetic CAS 13055-06-5 (185)  
5-Amino-2,4,6-trioxo-1,3-perhydrodiazimino-N,N-diethanoic acid;

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

Zn++ cal KNO3 25°C 0.1M C H 1981CSb (60596)3093  
DH(K1)=-19.7 kJ mol<sup>-1</sup>, DS=167 K J mol<sup>-1</sup>

-----  
Zn++ gl KNO3 25°C 0.10M U T M 1981SVa (60597)3094  
K(ZnL+Gly)=3.89

At 20 C: K(ZnL+Gly)=3.93; 30 C: 3.78; 40 C: 3.69

-----  
Zn++ gl R4N.X 25°C 0.10M C K1=13.39 B2=16.69 1975JTa (60598)3095

-----  
Zn++ oth KNO3 25°C 0.10M U K1=12.21 1972FVa (60599)3096

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Zn++ gl oth/un 20°C 0.0 U K2=3.2 1948SBa (60600)3097

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C8H10NO6P H3L Codecarboxylase CAS 41468-25-1 (2555)  
Pyridoxal-5-phosphoric acid;

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

Zn++ gl KNO3 25°C 0.10M M K1=3.75 1990SMa (60697)3098  
K(ZnL+H)=6.53



Also  $B(\text{Zn}_2\text{L})=10.21$ ;  $B(\text{Zn}_2\text{L}_2)=19.01$ ;  $B(\text{Zn}_2\text{HL}_2)=23.88$ ;  $B(\text{Zn}_2\text{L}_3)=22.8$ .

C8H10N2O4                      H2L                      Isomimosine                      CAS 60384-61-4                      (2314)  
2-Amino-3-(5-hydroxy-4-oxo-1,4-dihydropyridin-2-yl)propanoic acid;

Zn++	g1	KN03	37°C	0.15M	C	K1=7.0	B2=12.74	1980SHb	(60760)3106
						B(ZnHL)=14.88			
						B(ZnHL2)=21.07			
						B(ZnH2L2)=28.78			
						B2=14.9			

$$B(\text{Zn}_2\text{HL}_2)=25.89; B(\text{Zn}_2\text{L}_2)=20.4; B(\text{Zn}_2\text{L})=10.1$$

C8H10N2S L CAS 538-28-3 (2599)  
2-Benzyl-2-thiopseudourea; C6H5.CH2.S.C(:NH)(NH2)

Zn++ ISE mixed 25°C 82% U K1=4.68 B2=6.20 1979TBb (60765)3107  
Medium: 82% formamide

C8H10N2S                      L                      (2598)

2-Tolylthiocarbamide; CH3.C6H4.NH.CS.NH2

Zn++ ISE mixed 25°C 82% U K1=1.75 1979TBb (60770)3108  
Medium: 82% formamide

C8H10N3OCl                      HL                      CAS 5756-79-6    (4578)

3-Ethyl-3-hydroxy-1-(2-chlorophenyl)triazene;

Zn++ gl diox/w 25°C 70% U K1=5.94 B2=10.29 1968DSa (60782)3109  
Medium: 70% dioxan, 0.1 M KCl

C8H10N3OCl                      HL                      CAS 5756-78-5    (4579)

3-Ethyl-3-hydroxy-1-(4-chlorophenyl)triazene;

Zn++ gl diox/w 25°C 70% U K1=6.35 B2=10.96 1968DSa (60787)3110  
Medium: 70% dioxan. 0.1 M KCl

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C8H10N4O2                      HL      Cyclo-Gly-His                      (1685)  
Cyclo-(glycyl-histidyl)

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

Zn++            gl    KNO3    25°C 0.10M C    H      K1=1.71                      1994AIa (60806)3111  
DH(K1)=-10.0 kJ mol<sup>-1</sup>, DS(K1)=-0.8 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Zn++            gl    KNO3    25°C 0.20M U                      K1=2.25    B2=3.84    1985KIb (60807)3112

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

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

Zn++            gl    KNO3    30°C 0.10M U                      K1=4.79                      1995KFa (60862)3113

\*\*\*\*\*

C8H10O7                      H2L                      (2958)  
5,6-Dihydroxy-7-oxa-bicyclo[2.2.1]heptan-2,3-dicarboxylic acid;

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

Zn++            gl    KNO3    30°C 0.10M U                      K1=4.16                      1995KFa (60883)3114

\*\*\*\*\*

C8H10O9                      H4L                      CAS 137172-86-2    (6612)  
SS-Oxydisuccinic acid; O(CH(COOH)CH2.COOH)2

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

Zn++            gl    KCl      25°C 0.10M C                      K1=6.62                      1992MMa (60898)3115

K(ZnL+H)=3.64

K(ZnHL+H)=2.96

K(ZnH2L+H)=2.49

K(Zn+HL)=4.29

K(Zn+H2L)=2.46, K(Zn+H3L)=1.55

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C8H10O9                      H4L                      CAS 84852-72-2    (6611)  
meso-Oxydisuccinic acid; O(CH(COOH)CH2.COOH)2

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

Zn++            gl    KCl      25°C 0.10M C                      K1=7.60                      1992MMa (60910)3116

K(ZnL+H)=3.95

K(ZnHL+H)=2.24

K(ZnH2L+H)=1.6

K(Zn+HL)=5.58

K(Zn+H2L)=2.97, K(Zn+H3L)=0.63

\*\*\*\*\*

C8H10O10                      H4L                      (5894)

1-Hydroxy-3-oxapentane-1,2,4,5-tetracarboxylic acid;  
HO.CH(COOH).CH(COOH).O.CH(COOH).CH2(COOH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	C		K1=6.31 K(ZnL+H)=3.47 K(ZnHL+H)=2.85	1989MMd (60922)	3117

\*\*\*\*\*  
 C8H11N L CAS 622-39-9 (303)  
 2-(n-Propyl)pyridine; C5H4N.CH2.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=1.3	1974ILa (60955)	3118

\*\*\*\*\*  
 C8H11N L CAS 529-21-5 (2002)  
 3-Ethyl-4-methylpyridine; CH3.C5H3N.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=1.58 B2=2.71 B3=3.36	1975LPc (60971)	3119

\*\*\*\*\*  
 C8H11NO L CAS 20609-07-8 (298)  
 2-(2'-Hydroxypropyl)pyridine; C5H4N.CH2.CH(OH).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=1.45	1974ILa (60995)	3120

\*\*\*\*\*  
 C8H11NO L (5433)  
 2-(2-Pyridyl)-2-propanol; CH3.C(OH)(C5H4N).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=1.88	1981CBa (61001)	3121

\*\*\*\*\*  
 C8H11NO HL Tyramine CAS 51-67-2 (1015)  
 2-(4-Hydroxyphenyl)ethylamine; HO.C6H4.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	1.00M	C	M	K1=8.52 K(Zn(ATP)+L)=7.01	1976RSd (61011)	3122

\*\*\*\*\*  
 C8H11NO L CAS 2859-67-8 (2037)  
 3-(3-Pyridyl)-1-propanol; C5H4N.CH2.CH2.CH2OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++ gl KNO3 25°C 0.50M U K1=1.00 B2=2.08 1981LRa (61024)3123

\*\*\*\*\*

C8H11NO2 H2L Octopamine CAS 770-05-8 (2761)

1-(4-Hydroxyphenyl)-2-aminoethanol; H2N.CH2.CH(OH).C6H4.OH

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

-----  
Zn++ gl KNO3 25°C 1.00M C M 1976RSd (61038)3124

K(Zn+HL)=5.96

K(Zn(ATP)+HL)=4.53

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C8H11NO2 H2L Dopamine CAS 579-59-9 (251)

2-(3',4'-Dihydroxyphenyl)ethylamine; (HO)2.C6H3.CH2.CH2.NH2

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

-----  
Zn++ gl NaCl04 37°C 0.15M U M K1=11.43 1995NAC (61063)3125

B(ZnHL)=18.89

B(ZnLCu)=19.87

B(ZnLNI)=14.52

-----  
Zn++ gl KCl 25°C 0.20M C B2=18.05 1979KGa (61064)3126

B(ZnHL)=20.21

B(ZnH2L2)=38.93

B(ZnHL2)=28.67

-----  
Zn++ gl KNO3 25°C 1.00M C M 1976RSd (61065)3127

K(Zn(ATP)+L)=10.05

-----  
Zn++ gl NaNO3 20°C 0.50M U 1974GSa (61066)3128

B(ZnHL)=19.33

\*\*\*\*\*

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

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

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

-----  
Zn++ vlt NaCl04 25°C 1.0M C K1=1.72 B2= 2.93 1997KKb (61108)3129

Method: polarography. Medium pH 8.50.

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C8H11NO3 H2L Noradrenaline CAS 138-65-8 (253)

Norepinephrine, 3,4-Dihydroxyphenylethanolamine; (HO)2C6H3.CH(CH2.NH2).OH

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

-----  
Zn++ gl KCl 25°C 0.20M C B2=17.82 1981GKb (61148)3130

B(ZnHL)=19.12

B(ZnH2L2)=36.78

B(ZnHL2)=27.48

Zn++	gl	KN03	25°C	1.00M	C	M				1976RSd (61149)	3131
K(Zn+HL)=9.31 K(Zn(ATP)+L)=8.35											
-----											
Zn++	gl	NaN03	20°C	0.50M	U					1974GSa (61150)	3132
B(ZnHL)=17.65											
-----											
Zn++	gl	KCl	25°C	0.10M	U			K1=10.69	B2=19.79	1966JNa (61151)	3133
K1 adjusted to give hypothetical microscopic constant											
*****											
C8H11N08 H4L CAS 7408-20-0 (2608)											
Amino-di(butanedioic acid);HN(CH(COOH)CH2.COOH)2											
-----											
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values		Reference	ExptNo
-----											
Zn++	cal	KN03	25°C	0.50M	U	H				2002LCa (61194)	3134
DH(K1)=-8.46 kJ mol-1 DH(B2)=-19.09 DH(Zn+HL)=+13.91 for I=1.0 M: DH(K1)=-8.64; DH(B2)=-20.13; DH(Zn+HL)=+9.79											
-----											
Zn++	gl	oth/un	25°C	0.10M	U			K1=10.30		1994VKa (61195)	3135
K(Zn+HL)=4.16											
*****											
C8H11N08P2 H5L (6894)											
N-(4-Carboxyphenyl)aminomethylenedi(phosphonic acid); H0OC.C6H4.NH.CH(PO3H2)2											
-----											
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values		Reference	ExptNo
-----											
Zn++	gl	KN03	25°C	0.10M	U			K1=11.09		1990GKa (61224)	3136
K(Zn+HL)=9.10 K(Zn+H2L)=5.25											
*****											
C8H11N30 HL CAS 5956-70-7 (4529)											
3-Hydroxy-3-methyl-1-(4-tolyl)triazene; CH3.C6H4.N:N.N(OH).CH3											
-----											
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values		Reference	ExptNo
-----											
Zn++	gl	diox/w	25°C	70%	U			K1=7.46	B2=13.32	1970DSb (61242)	3137
Medium: 70% dioxan, 0.1 M KCl											
*****											
C8H11N302 HL CAS 5756-72-9 (4533)											
3-Hydroxy-3-methyl-1-(4'-methoxyphenyl)triazene; CH3O.C6H4.N:N.N(OH).CH3											
-----											
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values		Reference	ExptNo
-----											
Zn++	gl	diox/w	25°C	70%	U			K1=7.84	B2=13.90	1970DSb (61255)	3138
Medium: 70% dioxan, 0.1 M KCl											

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C8H11N3O3                      HL                      CAS 2497-02-1 (3230)  
Acetyl-L-histidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	M		K1=2.91    B2=5.74	1993GVa (61270)	3139
Zn++	gl	KCl	25°C	0.20M	C		K1=2.61 K(Zn+HL=ZnL+H)=-4.48	1989BKa (61271)	3140
Zn++	gl	oth/un	25°C	0.16M	U		K1=2.50    B2=4.80 K3=2.15 K4=1.8	1960MEa (61272)	3141

\*\*\*\*\*

C8H11N5O3                      HL    Acyclovir                      CAS 59277-89-3 (8696)  
2-Amino-1,9-dihydro-9-[(2-hydroxyethoxy)methyl]-6H-purin-6-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	cal	NaNO3	25°C	0.10M	C	HM		2001HCa (61290)	3142

K(Zn+HL)=0.71

DH(Zn+HL)=-18.6 kJ mol<sup>-1</sup>, DS(Zn+HL)=-50 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C8H11O2F3                      HL                      CAS 22767-90-4 (1249)  
1,1,1-Trifluoro-5,5-dimethyl-2,4-hexanedione; F3C.CO.CH2.CO.CH(CH3)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=7.27    B2=13.73	1972UDa (61298)	3143

Medium: 75% v/v dioxan, 0.01 Me4NClO4

\*\*\*\*\*

C8H12N2                      H2L                      CAS 6971-57-9 (1099)  
6-Methyl-2-(methylaminomethyl)pyridine; (CH3.NH.CH2)(CH3)C5H3N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	35°C	50%	U	T H	K1=3.92    B2=7.68	1966WRb (61365)	3144

Medium: 50% dioxan, 0.1 M KNO3. K1=4.67(15 C), 3.93(25 C); K2=4.58(15 C), 3.81(25 C). By calorimetry: DH(B2)=-16.3 kJ mol<sup>-1</sup>, DS=93.6 J K<sup>-1</sup> mol<sup>-1</sup>(25 C)

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C8H12N2O                      L                      (3231)  
2-Aminomethyl-N-2'-hydroxyethylpyridine; C5H4N.CH2.NH.CH2.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U		K1=5.2	1964LMb (61376)	3145

\*\*\*\*\*

C8H12N2O2                      HL    Pyridoxamine                      CAS 85-87-0 (1175)  
4-(Aminomethyl)-5-hydroxy-6-methyl-3-pyridinemethanol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	37°C	0.15M	U	M	B(ZnHL(Gly)2)=23.30 B(ZnH4L2(Gly))=47.910	1983ERa (61399)	3146
Zn++	gl	NaNO3	37°C	0.15M	U	M	B(ZnH2LA4)=34.307 B(ZnH2LA2)=28.125 B(ZnLA3)=16.203 B(ZnL2A)=16.150	1983ERa (61400)	3147
A=imidazole									
Zn++	gl	NaNO3	37°C	0.10M	U		K1=6.411 B2=11.874	1982ESa (61401)	3148
Zn++	gl	NaNO3	30°C	0.50M	M	M	K1=5.88 B2=10.94 B(ZnH2L2)=26.59 B(Zn(en)L)=10.37 B(ZnH(en)L)=18.92 B(ZnH-1(en)L)=0.82	1982MAd (61402)	3149
Zn++	vlt	NaCl	25°C	0.10M	U		K1=6.60 B2=11.16 B3=13.60 B4=15.56	1977ERa (61403)	3150
Zn++	gl	KNO3	25°C	0.10M	U		K1=5.68	1957GMa (61404)	3151
*****									
C8H12N2O3S		HL		CAS 551-16-6 (6858)					
6-Aminopenicillanic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	37°C	0.10M	U	M	K1=1.90 B(Zn(gly)L)=7.06 *K(Zn(gly)L)=-7.84 B(Zn(bpy)L)=7.41 *K(Zn(bpy)L)=-7.95	1994MGc (61460)	3152
B(ZnAL)=4.76. A is imidazole									
Zn++	gl	NaNO3	37°C	0.10M	U		K1=1.90 *K(ZnL(H2O)2)=-10.23	1991MGb (61461)	3153
*****									
C8H12N2O3S		HL		CAS 16968-98-2 (4582)					
d-Bisnorbiotin									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U	M	K1=2.40 K(Zn(bpy)+L) = 2.26	1969SMc (61466)	3154

Medium: 50% dioxan, 0.1 M NaClO4

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C8H12N2O7 H3L CAS 43101-36-6 (669)

Glycylglycine-N,N-diethanoic acid; (HOOC.CH2)2N.CH2.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=7.94 K(ZnL+H)=3.01	1974MMb (61475)	3155

\*\*\*\*\*

C8H12N4B- L (7238)  
(Pyrazol-1-yl) dihydro(3,5-dimethylpyrazol-1-yl) borate; C3H3N2.BH2.C3HN2(CH3)2-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	dis	non-aq	25°C	100%	U		K(Zn+2HL=ZnL2(org)+2H)=3.02	1996KSa (61542)	3156

By solvent extraction into CHCl3

\*\*\*\*\*

C8H12N4O3 HL Gly-His CAS 3486-76-8 (273)

Glycyl-histidine; H2N.CH2.CO.NH.CH(CH2.C3H3N2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=3.91 B(Zn2H-1L2)=-2.83	1992LPc (61581)	3157
Zn++	gl	KNO3	25°C	0.30M	C		K1=3.85 B2=8.85 B(ZnH-1L)=-2.14 B(ZnHL)=11.54 B(ZnH-1L2)=1.31	1985RDa (61582)	3158
Zn++	gl	KNO3	25°C	0.10M	C	M	B2=7.73 B(ZnHL)=10.70 B(Zn2L2)=11.11 B(Zn2H-1L2)=4.08 B(Zn2H-2L2)=-2.62 B(CuZnH-1L)=6.71; B(CuZnH-1L2)=11.3; B(CuZnH-2L2)=4.3	1984ACa (61583)	3159
Zn++	gl	KCl	25°C	0.20M	C	M	K1=3.98 B2=8.03 B(ZnHL)=10.87 B(ZnH-1L)=-2.75 B(ZnH-1L2)=0.37 B(ZnH-2L)=-12.66 B(ZnHL(His))=17.62; B(ZnL(His))=10.32; B(ZnH-1L(His))=1.92	1983FSc (61584)	3160
Zn++	gl	KNO3	37°C	0.15M	U		K1=3.65 B2=6.89 K(2ZnL=Zn2L2)=3.30 K(Zn2H-1L2+H)=7.39 K(Zn2H-2L2+H)=6.19	1975APb (61585)	3161

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C8H12N4O3                      HL      His-Gly                      CAS 2578-58-7    (274)  
Histidyl-glycine; H2N.CH(CH2.C3H3N2).CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	35°C	0.10M	C	T	K1=4.99	2003RRa (61619)	3162
Data for 35 and 45 C.									
Zn++	gl	KCl	25°C	0.20M	C		K1=5.07    B2=9.54	1983FSc (61620)	3163
Zn++	gl	KNO3	37°C	0.15M	U		K1=4.25    B2=8.46	1975APb (61621)	3164
							K(Zn+HL)=2.37		
Zn++	gl	none	21°C	0.0	M		K1=4.86    B2=9.54	1974YAa (61622)	3165

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C8H12N5O4P                      H2L                      CAS 106941-25-7    (6693)  
9-(2-(Phosphonylmethoxy)ethyl)adenine; H2O3P.CH2.O.CH2.CH2.adenine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	M	M	K1=1.96	2000KLb (61642)	3166
							K(PtLA+Zn)=1.96		

A=diethylenetriamine

\*\*\*\*\*

C8H12O4                      H2L                      CAS 1127-08-8    (72)  
Cyclohexane-1,1-dicarboxylic acid; C6H10.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=2.26	1972RVh (61701)	3167

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C8H12O4                      H2L                      CAS 6018-58-3    (960)  
Hex-1-ene-6-dioic acid; CH2:CH.CH2.CH2.CH2.CH(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=2.68	1975IPa (61724)	3168

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C8H12O4                      H2L                      CAS 2305-32-0    (2225)  
L-trans-Cyclohexane-1,2-dicarboxylic acid; C6H10.(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	oth/un	25°C	0.1M	U		K1=2.3	1995FFa (61729)	3169

\*\*\*\*\*

C8H13NO3                      H3L                      (4539)  
(1-Acetyl)ethylideneiminopropanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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 Zn++      EMF oth/un    ?      ?    U      K1=7.42      1972MGB (61746)3170  
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C8H13NO6                      H3L                      (3835)  
 2-Amino-2-carboxypropane-N,N-diethanoic acid; H00CC(CH3)2N(CH2COOH)2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	KNO3	20°C	0.10M	U			K1=8.89	1974RMf	(61750)3171
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Zn++	gl	KCl	20°C	0.10M	U			K1=12.45	1966IMa	(61751)3172
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C8H13NO6                      H3L                      (5681)  
 2-Aminobutanoic-N,N-diethanoic acid; CH3CH2CH(COOH)N(CH2COOH)2  
 -----

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

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Zn++	gl	KNO3	20°C	0.10M	U			K1=10.35	1974RMf	(61778)3173
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C8H13NO6                      H3L                      (3232)  
 N-(Carboxymethyl)iminodipropionic acid; H00C.CH2.N(CH2.CH2.COOH)2  
 -----

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

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Zn++	gl	KCl	30°C	0.10M	U			K1=8.0	1953CMA	(61805)3174
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C8H13NO6S                      H3L                      (5675)  
 2-Mercapto-1-aminoethane-N,N,S-triethanoic acid; H00C.CH2.S.CH2.CH2.N(CH2COOH)2  
 -----

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

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Zn++	gl	NaClO4	25°C	0.10M	U			K1=10.92 K(Zn+HL)=3.05	1975POa	(61813)3175
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C8H13N3O2                      HL      DiMe-Histidine      (1193)  
 N-Dimethylhistidine; (CH3)2N.CH(CH2.C3H3N2).COOH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	M			K1=3.53    B2=6.65	1993GVa	(61859)3176
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Zn++	gl	KCl	25°C	0.10M	C			K1=6.339    B2=9.04 K(Zn(DL-L))=6.344 B(Zn(DL-L)2)=9.68 B(Zn(OH)L)=10.60	1976RIa	(61860)3177
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C8H13N6O4P                      H2L                      (7462)  
 9-[2-(Phosphonomethoxy)ethyl]-2,6-diaminopurine;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.20M	U		K1=3.69 B2=7.32	1982KRc (61925)	3184
*****									
C8H14N2O3 HL CAS 21561-97-7 (4448)									
dl-Bisnordethiobiotin;									
Zn++	gl	diox/w	25°C	50%	U	M	K1=2.30 K(ZnA+bpy)=2.29	1969SMc (61933)	3185
Medium: 50% dioxan, 0.1 M NaClO4									
*****									
C8H14N2O4 H2L CAS 124099-98-5 (5607)									
1,4-Piperazine-N,N'-diethanoic acid; HOOC.CH2.C4H8N2.CH2.COOH									
Zn++	EMF	KCl	20°C	0.10M	U		K1=3.05	1963IPb (61940)	3186
Method: H electrode									
*****									
C8H14N2O4 H2L CAS 55033-06-2 (8139)									
Azetidine-2-carboxy-1-(2-aminobutaneioic acid)									
Zn++	gl	KNO3	25°C	0.10M	C		K1=10.25	1989ARa (61950)	3187
Fer another racemate: K1=9.05									
*****									
C8H14N2O6P2 HL (7465)									
N-(3-Pyridylmethyl)imino-bis(methylphosphonic acid);									
Zn++	gl	KCl	25°C	0.20M	C		K1=9.21 B(ZnHL)=14.92 B(ZnH2L)=19.66 B(ZnH3L)=23.95 B(ZnH-1L)=-0.47	1999MKa (61964)	3188
*K(ZnL)=-9.68; K(ZnOH+L)=8.92; K(ZnOH+ZnL=Zn(OH)L+Zn)=-0.29.									
*****									
C8H14N4O L Carcinine (260)									
B-Alanyl-histamine; NH2.CH2.CH2.CO.NH.CH2CH2.C3H3N2									
Zn++	gl	NaClO4	25°C	0.10M	C		K1=3.53 B(ZnHL)=10.75	1994GHb (61975)	3189
*****									

Sarcosyl-histamine

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Zn++ gl diox/w 25°C 50% C M K1=2.46 1985STb (62057)3197

K(Zn(phen)+L)=2.51

\*\*\*\*\*

C8H14O2S2                      HL      Lipoic acid                      CAS 1077-28-7    (409)  
1,2-Dithiolane-3-pentanoic acid (6,8-Thioctic acid); C3H5S2.(CH2)4.COOH

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

Zn++            gl    NaClO4 25°C 0.10M C                      K1=2.47                      1978SPd (62068)3198  
For L-lipoic acid: K1=2.41; D-lipoic acid: K1=2.47

-----  
Zn++            gl    diox/w 25°C 50% U      M      K1=2.57                      1969SMc (62069)3199  
K(Zn(bpy)+L)=2.60

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H14O4S3                      H2L                                      (2526)  
3,6,9-Trithiaundecanedioic acid; HOOC.CH2.S.C2H4.S.C2H4.S.CH2.COOH

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

Zn++            gl    oth/un 25°C 0.10M U                      K1=2.25                      1971FPa (62117)3200

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C8H14O5S2                      H2L                                      CAS 4408-66-6    (8332)  
Oxybis(ethylenethio)diethanoic acid;

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Metal            Mtd Medium Temp Conc Cal Flags Lg K values                      Reference ExptNo  
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Zn++            gl    KNO3    20°C 0.10M U                      K1=1.90                      1977CAc (62131)3201

\*\*\*\*\*

C8H14O7                      H2L                                      (241)  
Di(carboxymethoxy)ethyl ether; (HOOC.CH2.O.CH2.CH2)2O

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

Zn++            gl    KNO3    25°C 0.10M U                      K1=2.60                      1975MTc (62143)3202

\*\*\*\*\*

C8H15NO2                      HL                                      CAS 6949-77-5    (3235)  
1-Aminocycloheptanecarboxylic acid; C6H10(NH2).COOH

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

Zn++            gl    KCl      20°C 0.10M U                      K1=4.61    B2=9.2    1963IPa (62156)3203

\*\*\*\*\*

C8H15NO4                      H2L                                      CAS 33994-68-7    (347)  
N-Butyliminodiethanoic acid; C4H9.N(CH2.COOH)2

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

Zn++            gl    KNO3    25°C 0.10M C                      K1=8.12    B2=14.88    1975IPa (62185)3204

\*\*\*\*\*

C8H15NO5                      H2L                                      (3234)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ gl NaCl04 25°C 0.10M U K1=4.51 1970GPa (62290)3210  
\*\*\*\*\*

C8H16N2O3 HL Gly-Ile CAS 19461-38-2 (2329)  
Glycyl-isoleucine; H2N.CH2.CO.NH.CH(CH3).C2H5).COOH

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

Zn++ gl oth/un 25°C 0.01M U K1=3.8 1954PEa (62318)3211  
\*\*\*\*\*

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

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

Zn++ gl NaCl04 25°C 0.20M M M K1=3.858 B2= 6.75 1994VBb (62374)3212  
B(ZnH-1L)=-4.052

B(Zn(Ala)L)=8.901, B(Zn(Phe)L)=8.605, B(Zn(Tyr)L)=8.712,  
B(Zn(Trp)L)=8.92, B(Zn(His)L)=10.837, B(ZnH(His)L)=16.915.

-----  
Zn++ gl KCl 20°C 0.20M U K1=3.50 B2=6.55 1982KRc (62375)3213  
-----

Zn++ gl oth/un 20°C 0.01M U K1=3.6 1954PEa (62376)3214  
\*\*\*\*\*

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

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

Zn++ gl KCl 20°C 0.20M U K1=2.77 B2=5.61 1982KRc (62420)3215  
-----

Zn++ gl oth/un 25°C 0.01M U K1=2.89 B2=5.80 1959DLb (62421)3216  
-----

Zn++ gl oth/un 25°C 0.01M U K1=3.1 1954PEa (62422)3217  
\*\*\*\*\*

C8H16N2O3S2 H2L (8784)  
Cysteiny1-cysteine ethyl ester;

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

Zn++ gl NaCl04 25°C 0.10M C B2=16.5 2002VGa (62447)3218  
B(ZnHL)=17.6  
B(Zn2L2)=27.1

For the N-acetyl derivative, B2=17.0, B(Zn3HL4)=54.3, B(Zn2HL4)=46.3.

For the N-acetyl derivative of L-Cys-D-cys ethyl ester, K1=10.2, B2=18.2

\*\*\*\*\*

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  
-----

Zn++	gl	KNO3	20°C	0.10M	U		K1=9.96	1966MKb (62460)	3219
Zn++	gl	KCl	20°C	0.10M	U		K1=10.1	1958ISa (62461)	3220
*****									
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
Zn++	gl	KNO3	25°C	0.10M	U	M		1970DNa (62488)	3221
							K(ZnL+en)=4.03		
Zn++	gl	KCl	20°C	0.10M	U		K1=10.1	1958ISa (62489)	3222
Zn++	gl	KCl	30°C	0.10M	U		K1=7.6	1953CCb (62490)	3223
*****									
C8H16N2O4		H2L					(266)		
N,N'-Dimethylethylenediamine-N,N'-diethanoic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=12.61	1993WLa (62519)	3224
							K(Zn+HL)=4.62		
							K(ZnL+OH)=2.9		
*****									
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
Zn++	gl	NaNO3	25°C	0.10M	C		K1=8.05	1989EHa (62536)	3225
							B(ZnHL)=14.92		
*****									
C8H16N2O4S2		H4L					(6947)		
2,7-Dicarboxy-3,6-diaza-1,8-octanedithiol;									
HS.CH2.CH(COOH)NH.CH2CH2.NH.CH(COOH)CH2.SH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Zn++	gl	KCl	25°C	0.10M	C		K1=20.98	1996LMa (62545)	3226
							B(ZnHL)=25.74		
							B(ZnH2L)=29.92		
							B(Zn(OH)L)=9.94		
*****									
C8H16N2O4S2		H2L					(1226)		
3,6-Dithiaoctanediamine-4,5-dicarboxylic acid; (H2N.C2H4.S.CH(COOH))2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=16.76	B2=23.06	1978MJa (62556)
3227									

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*****
C8H16N2O5          H2L          CAS 20811-97-6 (5461)
1,9-Dicarboxy-2,8-diaza-5-oxanonane (HOOC.CH2.NH.CH2.CH2)2O
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3   25°C 0.10M C          K1=10.15      1982BTb (62566)3228
*****
C8H16N2O6          H2L          CAS 50730-95-5 (4548)
Ethylenediiminobis(3-hydroxy-2-propanoic acid);
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       EMF oth/un 20°C 0.10M U          K1=10.20      1972DKa (62574)3229
-----
Zn++       gl  KNO3   20°C 0.10M U          K1=10.20      1970DKa (62575)3230
By spectrophotometry: K1=10.23 in 0.1 M NaClO4
*****
C8H16N10          L          (7005)
N,N'-Di(2-(5-tetraazolyl)ethyl)-1,2-diaminoethane;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  NaNO3   20°C 0.10M U          K1=11.17      1981ESa (62611)3231
*****
C8H16O2          HL   Valproic acid   CAS 99-66-1 (6022)
2-Propylpentanoic acid, dipropylethanoic acid; (CH3.CH2.CH2)2CH.COOH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  NaCl    37°C 0.15M C          K1=1.70      1988BCb (62616)3232
B(ZnH-1L)=-3.65
*****
C8H16O2          HL          CAS 929-10-2 (5864)
6-Methylheptanoic acid; (CH3)2CH.C(CH2)4.COOH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  NaNO3   25°C 0.10M C   I M   K1=1.02      1988LTc (62620)3233
K(Zn(phen)+L)=1.07
Data also for 50% v/v EtOH/H2O, and 50% v/v Dioxan/H2O mixtures
*****
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
-----
Zn++       nmr non-aq 27°C 100% C          K1=2.76      2000SMg (62644)3234
Medium: acetonitrile. Method: competitive 7Li nmr technique.
*****

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C8H17NO3 L CAS 41775-76-2 (6751)  
10-Aza-1,4,7-trioxacyclododecane;

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

Zn++ EMF alc/w 25°C 95% U K1=3.7 1993BDd (62755)3235  
Medium: 95% v/v MeOH/H2O, 0.1 M Et4NClO4

\*\*\*\*\*  
C8H17NO4 H2L CAS 6353-68-6 (3238)  
N,N-Di-(2-Hydroxypropyl)glycine; (HO.CH2.CH2)2N.CH2.COOH

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

Zn++ gl oth/un 30°C 0.10M U K1=5.20 B2=8.62 1957FCa (62779)3236  
\*\*\*\*\*

C8H17N3O2 HL (5973)  
1,4,7-Triazacyclononane-1-ethanoic acid;

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

Zn++ gl KNO3 25°C 0.50M M K1=14.24 1993CKa (62789)3237  
K(Zn(OH)L+H)=10.59

\*\*\*\*\*  
C8H17N3O3 HL Gly-Lys CAS 31461-63-9 (5419)  
Glycyl-lysine; NH2.CH2.CO.NH.CH(CH2.CH2.CH2.CH2.NH2)COOH

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

Zn++ gl NaNO3 37°C 0.10M C T 1984RRc (62802)3238  
B(ZnHL)=13.16  
B(ZnH2L2)=26.12

By e.s.r. at 32 C, B(ZnHL)=13.39, B(ZnH2L2)=26.23

\*\*\*\*\*  
C8H17N3O4 H2L CAS 100585-61-3 (1588)  
3,6,9-Triazaundecanedioic acid; (HOOC.CH2.NH.CH2.CH2)2NH

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

Zn++ gl NaCl 25°C 0.15M C K1=13.19 1990JKa (62806)3239  
B(ZnHL)=16.72

\*\*\*\*\*  
C8H18N2O L (6585)  
4,7-Dimethyl-1-oxa-4,7-diazacyclononane;

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

Zn++ gl KNO3 25°C 0.10M U K1=6.58 1990CCa (62818)3240

\*\*\*\*\*  
C8H18N2O2 L CAS 294-92-8 (654)  
1,7-Dioxo-4,10-diazacyclododecane;



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	U		K1=6.51 B(ZnH-1L)=-2.1	1985NSb (62834)	3241
-----									
Zn++	gl	R4N.X	25°C	0.10M	C		K1=6.22	1983LCa (62835)	3242
*****									
C8H18N2O2			L				CAS 122-96-3	(5902)	
N,N-Bis(2-hydroxyethyl)piperazine;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.10M	C		K1=2.67 B(ZnHL)=9.93	1999HLb (62855)	3243
*****									
C8H18N2O6S2			H2L		PIPES		CAS 5625-37-6	(2798)	
Piperazine-1,4-bis(2-ethanesulfonic acid); C4H8N2-(CH2.CH2.SO3H)2									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=3.42	2001AOa (62885)	3244
*****									
C8H18N4O2			L				CAS 3216-87-3	(2882)	
N,N'-Bis(2-carbamoyl)ethyl-1,2-diaminoethane;									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=5.05	1983LIa (62956)	3245
*****									
C8H18N4O2			L				(6627)		
N,N'-Bis(3-aminopropyl)oxamide; (CO.NH.(CH2)3.NH2)2									
-----									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	C	M	B(ZnCuL)=24.9 B(ZnCu2L2)=48.8 B(ZnCu3L3)=72.0	1992LJb (62964)	3246
*****									
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
Zn++	gl	KNO3	25°C	1.0M	C		K1=2.38	1980SAb (63047)	3247
*****									
C8H19NO6P2			H4L				CAS 5995-40-4	(1338)	
N-Cyclohexyliminobis(methylenephosphonic) acid; C6H11.N(CH2PO3H2)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=8.67 B(ZnHL)=16.29 B(ZnH2L)=20.77 B(ZnH-1L)=-0.54 B(ZnH-2L)=-9.93	1999MKa (63079)	3248
*K(ZnL)=-9.21; K(ZnOH+L)=8.85; K(ZnOH+ZnL=Zn(OH)L+Zn)=-0.18.									
*****									
C8H19N2O4P		H2L		(1577)					
1-(N-L-Leucylamino)ethanephosphonic acid; H2NCH(CH2CH(CH3)2)CONHCH(CH3)PO3H2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	U		K1=3.761	1995HLb (63094)	3249
*****									
C8H19N3		L		CAS 36532-31-7 (2403)					
1,4,8-Triazacycloundecane; cyclo(-NH.C2H4.NH.C3H6.NH.C3H6-)									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	M		K1=10.41 B(ZnL(OH))=16.01	1978ZOa (63109)	3250
*****									
Zn++	gl	KNO3	25°C	0.10M	U		K1=10.4	1975DDa (63110)	3251
*****									
C8H19N3O		L		CAS 186499-20-7 (9068)					
(2-Hydroxyethyl)-1,4,7-triazacyclononane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	C		K1=10.45 *K(ZnL)=-8.87	2003CPa (63114)	3252
*****									
C8H19N3O		L		(4430)					
1-Oxa-4,7,10-triazacyclododecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=10.43 B(ZnH-1L)=2.75 K(ZnL+OH)=6.14	1991ACa (63126)	3253
*****									
Zn++	gl	NaNO3	25°C	0.10M	U		K1=10.53	1988HSb (63127)	3254
*****									
Zn++	gl	NaNO3	25°C	0.10M	U		K1=10.53	1986TSa (63128)	3255
*****									
C8H19O2PS2		HL		CAS 2253-44-3 (2060)					
0,0'-Dibutyl dithiophosphoric acid; (C4H9O)2P(S)SH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt alc/w	?	90%	U			B2=4.80	1971TCa (63150)	3256
Medium: 90% EtOH, 0.3 M NaCl04									
*****									
C8H19O2PS2		HL					CAS 2253-52-3	(4584)	
O,0-Di-isobutyl phosphorodithioic acid; ((CH3)2.CH.CH2O)2P(S)SH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	cal non-aq	30°C	100%	U	M			1971DGB (63163)	3257
							K(2ZnL2=Zn2L4)=0.85		
							K(ZnL2+py)=3.95		
							K(ZnL2py+py)=0.34		

Medium : benzene

*****									
C8H19O2PS2		HL					CAS 72284-36-7	(3849)	
Phosphorodithioic acid S,S'-bis(2-methylpropyl) ester;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	dis NaCl	25°C	1.0M	U			B2=4.00	1963HZa (63172)	3258
*****									
C8H19O2PS2		HL					CAS 28470-47-5	(3848)	
Phosphorodithioic acid S,S'-dibutyl ester;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	dis NaCl	25°C	1.0M	U			B2=3.81	1963HZa (63174)	3259
*****									
C8H19PS2		HL					CAS 32435-51-5	(4552)	
Di-n-butyl phosphinedithioic acid; (C4H9)2PSSH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt alc/w	?	90%	U			B2=6.7	1971TCa (63204)	3260
Medium: 90% EtOH, 0.15 M NaCl04									
*****									
C8H20N2O2		L					CAS 82502-45-2	(3239)	
N,N'-Di-(2-Hydroxypropyl)ethylenediamine; (CH3.CH(OH).CH2.NH.CH2.)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl oth/un	25°C	0.50M	U			K1=5.12 B2=9.57	1960HDa (63223)	3261
*****									
C8H20N2O5		L					(7389)		
1-(2-Aminoethylamino)-1-deoxy-D-galactitol; NH2.(CH2)2.NH.CH2.(CHOH)4.CH2OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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B(ZnH-2L)=-12.06, B(ZnH-1L2)=0.86, B(ZnH-2L2)=-10.25  
\*\*\*\*\*

C8H20N2S2                      H2L                      (6624)  
4,7-Dimethyl-1,10-dithia-4,7-diazadecane; HS.CH<sub>2</sub>CH<sub>2</sub>.N(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>).CH<sub>2</sub>CH<sub>2</sub>.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++      gl    KNO3    25°C 0.20M C      K1=19.25      1992AHa (63245)3263  
K(Zn+2H2L)=14.14  
\*K(ZnL)=-10.17

C8H20N4                      L                      Cyclen                      CAS 294-90-6    (10)  
1,4,7,10-Tetraazacyclododecane; cyclo(-(NH.CH2.CH2.)4-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ gl NaClO<sub>4</sub> 25°C 0.10M C M K<sub>1</sub>=15.3 1995KKc (63269)3264  
\*K(ZnL)=-7.86  
K(ZnL+A)=3.3

H2A is 4-nitrophenylphosphoric acid.

Zn++      gl    NaCl04 25°C 0.10M C      K1=23.5      1995ZEa (63270)3265  
\*K(ZnL(H2O))=-7.9

Zn++ gl NaClO4 25°C 0.10M M T M 1994K<sub>Ta</sub> (63271)3266  
K(ZnAL+H=ZnBL)=7.86  
T:15-35C. K=8.06(15C), 7.64(35C). A:OH. B:H2O

Zn++      gl    NaClO4 25°C 0.10M U T      1990KSa (63272)3267  
\*K(ZnL(H2O))=-8.02

At 0 C:  $*K(\text{ZnL}(\text{H}_2\text{O})) = -8.54$ .

Zn++      g1    NaNO3    25°C 0.10M U      K1=16.2      1988HSb (63273)3268

Zn<sup>++</sup> cal oth/un 25°C 1.0M U H 1978AFa (63274)3269  
Medium: 0.1 M NaOH. DH1=-60.6 kJ mol<sup>-1</sup>

Zn++ vlt oth/un 25°C 0.20M U H K1=16.2 1977Kka (63275)3270  
DH(K1)=-33.0 kJ mol<sup>-1</sup>

C8H20N4 L CAS 6531-38-0 (6515)  
1,4-Bis(2-aminoethyl)-1,4-diazacyclohexane; NH2.CH2CH2.N(CH2CH2)2N.CH2CH2.NH2

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

Zn++ gl NaNO3 25°C 0.10M U K1=5.81 1990HNa (63304)3271  
 \*\*\*\*\*

C8H20N4 L CAS 127723-03-9 (9174)  
 1-(2-Aminoethyl)-1,4,7-triazacyclononane;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	R4N.X	25°C	0.10M	C		K1=13.81	2004TBa (63308)3272	
							K(ZnHL+H)=5.44		
							K(ZnH2L+H)=4.9		
							K(ZnL+OH)=3.57		
							K(ZnL+2OH)=3.30		

Medium: 0.1 M N(CH3)4Cl

K(ZnL+H) is not reported. K(ZnL+2OH) is more probably K(ZnLOH+OH)

\*\*\*\*\*

C8H21N3 L (2496)  
 1,1,1-Tris(N-methylaminomethyl)ethane; CH3.C(CH2.NH.CH3)3

---

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

Zn++	gl	KNO3	25°C	0.50M	C		K1=5.888	1983BMa (63316)3273	
							K(ZnL+OH)=4.786		
							K(Zn(OH)L+OH)+4.24		

\*\*\*\*\*

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
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Zn++	gl	KCl	25°C	0.10M	U		K1=13.38	1965DKb (63330)3274	
							K(Zn+HL)=4.81		

\*\*\*\*\*

C8H22N4 L CAS 35513-90-7 (1545)  
 1,4,9,12-Tetraazadodecane; NH2.(CH2)2.NH.(CH2)4.NH.(CH2)2.NH2

---

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

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Zn++	gl	KNO3	25°C	1.00M	C	H	K1=12.60	1982ABc (63379)3275	
By calorimetry: DH1=-48.5 kJ mol <sup>-1</sup> , DS1=77.8									

\*\*\*\*\*

C8H22N4 L CAS 41240-14-6 (4494)  
 1,5,8,12-Tetraazadodecane; NH2.(CH2)3.NH.(CH2)2.NH.(CH2)3.NH2

---

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

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Zn++	gl	KNO3	25°C	0.50M	U		K1=11.26	1973PFa (63398)3276	
							K(Zn+HL)=7.18		
							K(ZnL+OH)=4.05		

\*\*\*\*\*

C8H22N4O L CAS 80042-24-6 (5464)

1,4,10,13-Tetraaza-7-oxatridecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=10.97 K(ZnL+H)=5.57	1982BTb (63408)	3277

\*\*\*\*\*  
 C8H22N4S L CAS 80042-28-0 (5465)  
 1,4,10,13-Tetraaza-7-thiatridecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=11.24	1982BTb (63413)	3278

\*\*\*\*\*  
 C8H23N5 L Tetren CAS 112-57-2 (715)  
 1,4,7,10,13-Pentaazatridecane (Tetraethylenepentamine);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	cal	KNO3	25°C	0.10M	C			1982TMd (63445)	3279
							DH1=-86.1 kJ/mol		

Zn++	gl	alc/w	25°C	65%	U	I	K1=15.61	1972Rba (63446)	3280
Medium: 40-99% EtOH, 0.1 M NaClO4. K1(40%)=15.72, K1(99%)=19.00									

Zn++	cal	KNO3	25°C	0.10M	U	H		1965WHa (63447)	3281
DH(K1)=-58.5 kJ mol <sup>-1</sup> , DS=100.3 J K <sup>-1</sup> mol <sup>-1</sup>									

Zn++	cal	KCl	25°C	0.10M	U	H		1964PVa (63448)	3282
DH(K1)=-57.9 kJ mol <sup>-1</sup> , DS=94.0 J K <sup>-1</sup> mol <sup>-1</sup>									

Zn++	gl	KCl	25°C	0.10M	U		K1=15.10 K(Zn+H2L)=5.7	1963PVa (63449)	3283
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\*\*\*\*\*  
 Zn++ gl KNO3 25°C 0.10M U K1=15.4 1958RHa (63450) 3284  
 \*\*\*\*\*  
 C9H4N2F4 L CAS 124005-68-1 (7590)  
 N-(2,3,5,6-Tetrafluorophenyl)imidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.50M	M		K1=1.70	1998KSa (63500)	3285

\*\*\*\*\*  
 C9H5NOBr2 HL CAS 521-74-4 (3279)  
 5,7-Dibromo-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	35°C	75%	U		K1=7.81 B2=15.13	1970GMh (63512)	3286
Medium: 75% v/v dioxan, 0.2 M NaClO4									

-----  
Zn++ dis NaClO4 18°C 0.20M U K1=7.76 B2=15.32 1965NKa (63513)3287

\*\*\*\*\*

C9H5NOCl2 HL CAS 773-76-2 (3278)

5,7-Dichloro-8-hydroxyquinoline;

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

Zn++ gl diox/w 35°C 75% U K1=7.70 B2=14.86 1970GMh (63537)3288

Medium: 75% v/v dioxan, 0.2 M NaClO4

\*\*\*\*\*

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  
-----

Zn++ gl diox/w 35°C 75% U K1=7.80 B2=15.05 1971MAb (63553)3289

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

\*\*\*\*\*

C9H5NO2Br2 HL CAS 16846-41-1 (4666)

5,7-Dibromo-8-hydroxyquinoline N-oxide;

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

Zn++ gl diox/w 35°C 75% U K1=8.03 B2=15.56 1970GMh (63579)3290

Medium: 75% v/v dioxan, 0.2 M NaClO4

\*\*\*\*\*

C9H5NO2Cl2 HL CAS 21168-33-2 (4665)

5,7-Dichloro-8-hydroxyquinoline N-oxide;

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

Zn++ gl diox/w 35°C 75% U K1=7.80 B2=15.27 1970GMh (63589)3291

Medium: 75% 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  
-----

Zn++ gl diox/w 21°C 50% U K1=3.93 B2=7.04 1970MGd (63601)3292

Medium: 50% dioxan, 0.3 M NaClO4

\*\*\*\*\*

C9H5N3O5 HL CAS 1084-32-8 (4608)

5,7-Dinitro-8-hydroxyquinoline;

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

Zn++ gl diox/w 35°C 75% U K1=5.68 B2=10.21 1970GMh (63624)3293

Medium: 75% dioxan, 0.2 M NaClO4

\*\*\*\*\*

C9H5N3O6 HL CAS 21168-36-3 (4609)  
5,7-Dinitro-8-hydroxyquinoline-N-oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	35°C	75%	U		K1=3.87 B2=6.69	1970GMh (63634)	3294

Medium: 75% v/v dioxan, 0.2 M NaClO4

\*\*\*\*\*

C9H6NOBr HL CAS 1198-14-7 (3281)  
5-Bromo-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	dis	oth/un	25°C	0.10M	U		B2=14.62	1968CFc (63642)	3295

\*\*\*\*\*

C9H6NOCl HL CAS 130-16-5 (1268)  
5-Chloro-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	60%	U		K1=9.0 B2=17.85	1973SCd (63654)	3296

Medium: 60% dioxan, 0.1 M NaClO4

Zn++	dis	oth/un	25°C	0.10M	U		B2=15.58	1968CFc (63655)	3297
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\*\*\*\*\*

C9H6NOI HL CAS 15207-63-1 (3282)  
5-Iodo-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	dis	oth/un	25°C	0.10M	U		B2=14.86	1968CFc (63681)	3298

\*\*\*\*\*

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
Zn++	gl	diox/w	25°C	75%	C		K1=11.55 B2=17.68	1989FHa (63752)	3299

Medium: 75% v/v dioxane/H2O, 0.10 M KNO3.  
Also data for 0-50% v/v dioxane/H2O, 0.10 M KNO3.

Zn++	gl	KNO3	25°C	0.10M	C		K1=9.79 B2=17.69	1985ZHa (63753)	3300
------	----	------	------	-------	---	--	------------------	-----------------	------

Zn++	gl	NaClO4	35°C	0.10M	U		K1=7.05 B2=13.48	1983ABb (63754)	3301
------	----	--------	------	-------	---	--	------------------	-----------------	------

Zn++	gl	oth/un	20°C	0.03M	U		K1=6.96	1977KCb (63755)	3302
------	----	--------	------	-------	---	--	---------	-----------------	------

K1=7.58 by solubility

Zn++	gl	KCl	25°C	0.10M	M	I M	K1=6.37 B2=12.81	1977MLb (63756)	3303
------	----	-----	------	-------	---	-----	------------------	-----------------	------



-----  
Zn++ EMF oth/un 25°C 0.10M U K1=6.70 B2=13.02 1968KBa (63757)3304  
By Ion Exchange: K1=6.78, B2=13.15  
-----

Zn++ gl KNO3 28°C 0.10M U K1=7.25 B2=13.40 1967LMb (63758)3305  
-----

Zn++ gl NaCl 25°C 0.50M U K1=6.83 B2=12.68 1967TMd (63759)3306  
By spectrophotometry: K1=6.87, K2=6.22  
-----

Zn++ gl KCl 25°C 0.10M U K1=7.1 B2=13.20 1963STa (63760)3307  
\*\*\*\*\*

C9H6N2Br2 L CAS 36107-02-5 (4611)  
8-Amino-5,7-dibromoquinoline;  
-----

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

Zn++ sp diox/w 25°C 50% U K1=1.8 1972YTa (63844)3308  
\*\*\*\*\*

C9H6N2O3 HL CAS 5437-99-0 (3865)  
5-Nitro-8-hydroxyquinoline;  
-----

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

Zn++ gl diox/w 25°C 60% U K1=7.73 B2=14.42 1973SCd (63855)3309  
Medium: 60% dioxan, 0.1 M NaClO4  
-----

Zn++ dis oth/un 25°C 0.10M U B2=12.14 1968CFc (63856)3310  
\*\*\*\*\*

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  
-----

Zn++ gl NaClO4 25°C 0.10M C K1=4.990 B2=8.835 1978SOB (63875)3311  
B3=11.523  
\*\*\*\*\*

C9H6N2O6S H2L CAS 15851-63-3 (1433)  
7-Nitro-8-hydroxyquinoline-5-sulfonic acid;  
-----

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

Zn++ gl NaClO4 35°C 0.10M U K1=5.98 B2=11.51 1983ABb (63899)3312  
-----

Zn++ gl NaClO4 25°C .005M U K1=5.90 B2=10.80 1963FFa (63900)3313  
K3 < 3.8  
-----

Zn++ gl oth/un 25°C 0.0 U K1=5.96 B2=12.20 1955NUa (63901)3314  
\*\*\*\*\*

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
-----
Zn++       sp  diox/w 20°C  10%  U                      1970KIa (63919)3315
                                     K(Zn+HL=ZnL+H)=4.5
                                     K(ZnL+HL=ZnL2+H)=4.4

```

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*****
C9H6O4          HL  Ninhydrin          CAS 485-47-2  (2536)
1,2,3-Indantrione monohydrate, Trioxohydrindene monohydrate;
-----

```

```

Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  alc/w 30°C   5%  U      M                      1995RRb (63948)3316
                                     K(ZnA+L)=7.11
                                     B(ZnAL)=14.97

```

```

Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. H2A is thioglycolic acid.
*****
C9H7N          L          CAS 119-65-3  (487)
Isoquinoline;
-----

```

```

Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       sp  non-aq 25°C 100%  U                      1994IUa (64018)3317
                                     K(ZnP+L)=5.04

```

Medium: CHCl3. ZnP is a zinc porphyrin host.

```

-----
Zn++       sp  non-aq 25°C 100%  U      H                      1990IKa (64019)3318
                                     K(ZnP+L)=4.49

```

In toluene. P=pivalamido picket fence porphyrin. DH=-43.9 kJ mol<sup>-1</sup>; DS=-61.9 J K<sup>-1</sup> mol<sup>-1</sup>. Also data for other picket substituents.

```

-----
Zn++       ISE NaCl04 30°C 0.10M U          K1=1.08  B2=1.65  1966DKa (64020)3319
                                     B3=2.01

```

```

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

```

```

Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  diox/w 30°C  50%  U          K1=9.53      1992ELa (64173)3320
Medium: 50% dioxane/H2O (I=0.1 M, electrolyte not stated).
-----

```

```

Zn++       gl  KNO3   25°C 0.10M U      M  K1=11.34  B2=22.44  1990NAa (64174)3321
                                     K(ZnL+furoic acid)=3.89

```

```

-----
Zn++       gl  KCl    25°C 0.1M U T      K1=9.20  B2=17.08  1986MLb (64175)3322
Also for 60 C K1=8.59; B2=16.22
for 80 C K1=8.20; B2=15.40
-----

```

```

Zn++       gl  diox/w 25°C          U  I      K1=9.75  B2=18.95  1986VZc (64176)3323

```

For 0.313 mol parts of dioxane in H<sub>2</sub>O; Also in 0.356 m.p. DMSO/H<sub>2</sub>O K<sub>1</sub>=9.37;  
in 0.334 m.p. DMFA/H<sub>2</sub>O K<sub>1</sub>=6.48; B<sub>2</sub>=13.19

-----  
Zn++ gl diox/w 30°C 75% U K<sub>1</sub>=10.8 B<sub>2</sub>=21.0 1984NYa (64177)3324  
-----

Zn++ gl KNO<sub>3</sub> 25°C 0.2M U I K<sub>1</sub>=8.73 1984VZa (64178)3325  
in 0.5 M KNO<sub>3</sub> K<sub>1</sub>=8.50;  
in 1.0 M KNO<sub>3</sub> K<sub>1</sub>=8.31;  
-----

Zn++ sp diox/w 25°C 50% U I K<sub>1</sub>=9.45 B<sub>2</sub>=18.15 1978QCa (64179)3326  
In water-saturated propylene carbonate K<sub>1</sub>=10.8, K<sub>2</sub>=9.7  
-----

Zn++ gl diox/w 25°C 60% U K<sub>1</sub>=9.96 B<sub>2</sub>=18.98 1973SCd (64180)3327  
Medium: 60% dioxan, 0.1 M NaClO<sub>4</sub>  
-----

Zn++ dis non-aq 25°C 100% U M 1968CFc (64181)3328  
-----

K(ZnL+py)=3.05  
K(ZnL+A)=2.10  
K(ZnL+B)=3.40  
K(ZnL+C)=1.50

Medium: chloroform. A=2-methylpyridine, B=4-methylpyridine,  
C=2,4,6-trimethylpyridine  
-----

Zn++ cal diox/w 25°C 50% U H 1968GFa (64182)3329  
Medium: 50% dioxan, 0.1 M NaClO<sub>4</sub>. DH(K<sub>1</sub>)=-24.7 kJ mol<sup>-1</sup>, DS=96 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(B<sub>2</sub>)=-40.1, DS=213  
-----

Zn++ gl diox/w 25°C 50% U K<sub>1</sub>=9.45 B<sub>2</sub>=18.15 1967SFa (64183)3330  
-----

Zn++ dis oth/un 25°C 0.10M U B<sub>2</sub>=17.1 1965CFa (64184)3331  
-----

Zn++ sol oth/un 25°C 0.10M U K<sub>1</sub>=8.52 B<sub>2</sub>=15.84 1964FFa (64185)3332  
K<sub>so</sub>=-23.34  
-----

Zn++ gl diox/w 20°C 50% U K<sub>1</sub>=9.34 B<sub>2</sub>=17.56 1954IRa (64186)3333  
Medium: 50% dioxan, 0.3 M NaClO<sub>4</sub>  
-----

Zn++ gl diox/w 25°C 50% U K<sub>1</sub>=9.96 B<sub>2</sub>=18.86 1952JFa (64187)3334  
-----

Zn++ sp oth/un 20°C 0.0 U K<sub>1</sub>=8.56 1952NPa (64188)3335  
-----

Zn++ gl diox/w 25°C 70% U K<sub>1</sub>=10.91 B<sub>2</sub>=20.81 1949MMa (64189)3336  
-----

\*\*\*\*\*

C<sub>9</sub>H<sub>7</sub>N<sub>2</sub> HL CAS 10285-97-9 (3257)  
2-Hydroxyquinoline 1-oxide;  
-----

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

Zn++ gl oth/un 20°C 0.10M U K<sub>1</sub>=5.4 1956ARb (64385)3337  
-----

\*\*\*\*\*

C9H7NO2 HL CAS 1127-45-3 (4614)  
8-Hydroxyquinoline-N-oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=7.45 B2=14.90	1970GMb (64396)	3338

Medium: 50% dioxan, 0.3 M NaClO4

\*\*\*\*\*  
C9H7NO3S2 H2L CAS 58447-10-2 (4675)  
8-Mercaptoquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	oth/un	?	?	U		K1=8.9 B2=17.30	1968ABa (64421)	3339

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	NaCl	25°C	0.10M	C		K1= 7.572 B2=14.42	1993BCe (64496)	3340
Zn++	gl	NaClO4	35°C	0.10M	U		K1=8.10 B2=15.24	1983ABb (64497)	3341
Zn++	gl	KCl	25°C	0.10M	M I M		K1=7.73 B2=14.50	1977MLb (64498)	3342
Zn++	gl	diox/w	25°C	60%	U		K1=9.0 B2=17.85	1973SCd (64499)	3343

Medium: 60% dioxan, 0.1 M NaClO4

Zn++	gl	NaCl	20°C	0.50M	U		K1=7.46 B2=14.64 K3=5.86	1969SVc (64500)	3344
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\*\*\*\*\*  
Zn++ gl NaClO4 25°C 0.10M U IH K1=7.95 B2=14.97 1968GFa (64501)3345  
By calorimetry:DH(K1)=-21.3 kJ mol<sup>-1</sup>, DS=79 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-40.1,DS=151  
In 50% dioxan: K1=9.23,B2=17.56; DH(K1)=-21.7,DS=105; DH(B2)=-43.1,DS=192

Zn++	gl	NaCl	25°C	0.50M	U		K1=7.45 B2=13.95	1967TMd (64502)	3346
Zn++	gl	KNO3	25°C	0.10M	U		K1=7.54 B2=14.32	1959RGa (64503)	3347
Zn++	sp	oth/un	25°C	0.0	U		K1=8.65 B2=16.15	1954NUa (64504)	3348
Zn++	gl	oth/un	20°C	0.01M	U		K1=8.4 B2=15.1	1953ALa (64505)	3349
Zn++	gl	oth/un	25°C	0.01M	U		K1=8.70 B2=15.9	1949MMa (64506)	3350

\*\*\*\*\*

C9H7NS L CAS 3319-59-1 (3866)  
2-(2'-Pyridyl)thiophene; C4H3S.C5H4N

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

-----  
 Zn++ gl NaClO4 25°C 0.10M U K1=1.10 1964KSb (64604)3351  
 \*\*\*\*\*

C9H7NS HL CAS 76076-35-2 (5695)  
 2-Mercaptoquinoline;

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

Zn++ EMF non-aq 25°C 100% U K1=7.5 B2=13.00 1986UBa (64610)3352  
 Medium: dimethylformamide, LiClO4

\*\*\*\*\*  
 C9H7NS HL Quinolinethiol CAS 491-33-8 (1028)  
 8-Mercaptoquinoline;

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

Zn++ dis NaClO4 25°C 0.10M C 1987YSb (64634)3353  
 Method: extraction from 0.10 M NaClO4 solution into CHCl3/HL.  
 K(Zn+2HL(org)=ZnL2(org)+2H)=3.83. For extraction into benzene, K=3.21.

-----  
 Zn++ gl non-aq 25°C 100% U K1=8.1 B2=12.4 1984UBa (64635)3354  
 Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

-----  
 Zn++ EMF non-aq 25°C 100% U K1=8.1 B2=12.40 1983UBa (64636)3355  
 Medium: DMF, 0.1 M LiClO4

-----  
 Zn++ cal diox/w 25°C 50% U H 1968GFa (64637)3356  
 Medium: 50% dioxan, 0.1 M NaClO4. DH(K1)=-30.1 kJ mol<sup>-1</sup>, DS=109 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
 Zn++ gl diox/w 25°C 50% U K1=11.0 1966KFb (64638)3357  
 Medium: 50% dioxan, 0.1 M NaClO4

-----  
 Zn++ sp diox/w 27°C 50% U K1=11.05 1963CFa (64639)3358  
 \*\*\*\*\*  
 C9H7NSe HL CAS 16396-64-8 (3867)  
 8-Hydroselenylquinoline;

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

Zn++ sp diox/w 25°C 50% U K1=10.2 1965SFa (64655)3359  
 Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*  
 C9H7N3O2 HL (1328)  
 4-Oximino-3-phenyl-2-pyrazolin-5-one;

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

Zn++ gl alc/w 20°C 50% U T K1=3.13 B2=5.54 1981SSc (64661)3360  
 At 30 C: K1=3.47, B2=5.42

\*\*\*\*\*

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
Zn++	sp	NaNO3	25°C	0.10M	U		K1=7.80 K(Zn+HL)=4.28	19860Ha (64684)	3361

Zn++	gl	alc/w	25°C	50%	U		K(Zn+2HL)=17.2	1967NPb (64685)	3362
Medium: 50% MeOH, 0.1 M NaClO4									

Zn++	sp	NaClO4	20°C	0.10M	U		K(Zn+HL)=7.19	1966HSb (64686)	3363
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Zn++	sp	diox/w	20°C	50%	U		K(Zn+HL)=11.08 K(ZnHL+HL)=10.11 K(ZnL+H)=7.12 K(ZnOHL+H)=8.74	1966SCd (64687)	3364
Medium: 50% dioxan, 0.1 M NaClO4. K(Zn(OH)2L+H)=8.98									

\*\*\*\*\*

C9H8NO4P                      H2L                      CAS 7220-39-5    (1930)  
 8-Quinolyl-phosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.15M	U		K1=4.87 B(ZnH-1L)=-5.46 B(ZnHL)=9.69	1989AKa (64754)	3365

\*\*\*\*\*

C9H8N2                      L                      CAS 578-66-5    (503)  
 8-Aminoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	diox/w	25°C	50%	U		K1=3.7	1969Y0a (64773)	3366
Medium: 50% v/v dioxan, 0.5 M NaClO4									

Zn++	gl	oth/un	25°C	0.10M	U		K1=2.3	1964PCa (64774)	3367
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Zn++	gl	KCl	20°C	0.10M	U		K1=2.42	1957WSa (64775)	3368
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C9H8N2O                      HL                      CAS 17056-96-1    (3258)  
 8-Hydroxy-4-methylcinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	20°C	50%	U		K1=7.22    B2=13.69	1954IRa (64789)	3369
Medium: 50% dioxan, 0.3 M NaClO4									

\*\*\*\*\*

C9H8N2O2S HL (8279)  
Dehydroxydemethylidesferrithiocin;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 25°C 0.10M C K1=3.8 B2= 7.00 1990ARa (64799)3370  
\*\*\*\*\*

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

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ sp alc/w 30°C 20% C T H K1=7.51 B2=12.51 1998EGa (64827)3371  
Medium: 20% v/v EtOH/H2O, 0.10 M KCl. Also data for 35 and 45 C.  
DH and DS values reported

\*\*\*\*\*  
C9H8N4O3S HL ABS CAS 847943-99-1 (9223)  
4-Acrylamidobenzenesulfonylazide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl alc/w 25°C 50% C T H K1=8.61 B2=15.42 2004JEa (64857)3372  
Medium: 50% v/v EtOH/H2O, 0.10 M KCl. DH(K1)=-28.7 kJ mol<sup>-1</sup>, DS(K1)=  
-261 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-28.7, DS(K2)=-227. Also data for 35 and 45 C  
\*\*\*\*\*

C9H8N4O4S2 H2L (2879)  
Indol-2,3-dione-3-thiosemicarbazone-5-sulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 37°C 0.15M M M K1=5.68 B2=11.31 1982STa (64860)3373  
B(ZnL(Gly))=10.2; B(ZnL(His))=11.51  
\*\*\*\*\*

C9H8O2S H2L CAS 5740-34-1 (1065)  
3-Phenyl-2-mercaptopropenoic acid; C6H5.CH:C(SH).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl diox/w 25°C 50% U K1=11.28 B2=20.85 1977WVa (64877)3374  
\*\*\*\*\*

C9H8O4 H3L Caffeic acid CAS 331-39-5 (6037)  
3-(3,4-Dihydroxyphenyl)propenoic acid; (HO)2C6H3.CH:CH.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaCl 25°C 0.10M C K1=2.99 1987LVa (64914)3375  
B(ZnH-1L)=-3.03  
B(ZnH-1L2)=-0.39  
B(ZnH-2L2)=-8.21

B(ZnH-2L3)=-5.51

\*\*\*\*\*

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

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

Zn++            sp   NaClO4    ?   0.20M U            K1=6.52            1967GDb (64928)3376  
By glass electrode: K1=6.68,K2=5.44,K3=3.24

\*\*\*\*\*

C9H8O4                      H2L                      CAS 4316-23-8 (4593)  
4-Methylphthalic acid; CH3.C6H3(COOH)2

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

Zn++            gl   oth/un 25°C 0.04M U            K1=3.05            1971NPc (64967)3377

\*\*\*\*\*

C9H8O4S                      H2L                      CAS 135-13-7 (4620)  
(2-Carboxyphenylthio)ethanoic acid; H00C.C6H4.S.CH2.COOH

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

Zn++            gl   oth/un 25°C 0.10M U            K1=1.8            1962SYa (65000)3378

\*\*\*\*\*

C9H8O5                      H2L                      CAS 635-53-0 (3246)  
2-(Carboxymethoxy)benzoic acid; H00C.CH2.O.C6H4.COOH

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

Zn++            gl   oth/un 25°C 0.10M U            K1=2.6            1962SYa (65016)3379

-----

Zn++            gl   diox/w 35°C 50% U            K1=6.8            1958YSa (65017)3380

\*\*\*\*\*

C9H9NO3                      HL   Hippuric acid    CAS 495-69-2 (1184)  
Benzoylaminoethanoic acid, N-benzoylglycine; C6H5.CO.NH.CH2.COOH

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

Zn++            ISE NaClO4 20°C 3.0M U            K1=2.54    B2=2.95    1967KAa (65052)3381  
B3=3.26

\*\*\*\*\*

C9H9NO3                      H2L                      CAS 6343-78-8 (4624)  
N-(Salicylidene)glycine; HO.C6H4.CH:N.CH2.COOH

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

Zn++            gl   KCl    25°C 0.50M U            K1=9.37    B2=15.77    1971LLa (65060)3382

\*\*\*\*\*

C9H9NO3I2                      H2L    Iodogorgoic acid    CAS 300-39-0 (2726)  
2-Amino-3-(3,5-diiodo-4-hydroxyphenyl)propanoic acid, Diiodotyrosine;



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	20°C	.002M	U		B2=8.0	1953PEa (65069)	3383

Medium: 0.002 ZnSO4

\*\*\*\*\*

C9H9NO4		HL					CAS 55805-95-3	(6322)	
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2-Hydroxy-5-nitropropiophenone; (HO)(NO2)C6H3.CO.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	diox/w	40°C	50%	U		K1=3.28	1975PSb (65075)	3384

\*\*\*\*\*

C9H9NO4		H2L					CAS 487-54-7	(3869)	
---------	--	-----	--	--	--	--	--------------	--------	--

N-(2-Hydroxybenzoyl)glycine, 2-hydroxyhippuric acid; HO.C6H4.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=3.1 B(ZnH-1L)=-5.2	1994BDa (65091)	3385

\*\*\*\*\*

Zn++	gl	alc/w	25°C	50%	U		K1=4.12 B2= 7.98 B(ZnH-1L)=-5.33 K(Zn+OH+L)=8.67	1989MSi (65092)	3386
------	----	-------	------	-----	---	--	--	-----------------	------

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.

\*\*\*\*\*

C9H9NO4		H2L					CAS 612-42-0	(3263)	
---------	--	-----	--	--	--	--	--------------	--------	--

N-(Carboxymethyl)anthranilic acid; HOOCC6H4.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=3.05	1973UWb (65103)	3387

\*\*\*\*\*

Zn++	gl	diox/w	35°C	50%	U		K1=5.6 B2=8.4	1958YSa (65104)	3388
------	----	--------	------	-----	---	--	---------------	-----------------	------

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C9H9N3O2S2		HL					CAS 72-14-0	(8357)	
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4-Amino-N-2-thiazolyl-benzenesulfonamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	50%	C		K1=3.65	1999GAa (65126)	3389

Medium: 50% EtOH/H2O, 0.10 M NaNO3.

\*\*\*\*\*

Zn++	gl	alc/w	30°C	50%	C	M		1999MBc (65127)	3390
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B(Zn(gly)L)=10.26  
B(ZnAL)=9.89  
B(Zn(met)L)=9.01  
B(ZnH-1(gly)L)=2.26

In 50% v/v EtOH/H2O, 0.10 M NaNO3. B(ZnH-2(gly)L)=-6.74; B(ZnH-1AL)=2.65, B(ZnH-2AL)=-5.49; B(ZnH-1(met)L)=1.42, B(ZnH-2(met)L)=-6.57. A: Beta-ala



\*\*\*\*\*

C9H10N2O3 HL CAS 62134-49-0 (9110)

N-(2-Pyridyl)-3-carboxypropanamide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaClO4 25°C 0.10M U K1=3.33 B2= 5.36 2002GSa (65258)3398  
\*\*\*\*\*

C9H10N2O5 H3L (4645)

4,5,6,7-Tetrahydroindazol-3-one-5,5-dicarboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl diox/w 25°C 50% U 1969ZSa (65271)3399  
K(Zn+H2L)=2.63  
K(Zn+HL)=5.76

\*\*\*\*\*

C9H10N2O5 H2L CAS 130291-86-0 (8051)

N-(2-Hydroxy-4-nitrobenzyl)glycine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaClO4 25°C 0.10M U K1=7.51 B2=12.88 1983CHb (65284)3400  
\*\*\*\*\*

C9H10N2S L CAS 14610-11-8 (8494)

2-Mercaptoethylbenzimidazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaClO4 30°C 0.10M M M 1995RMa (65291)3401  
K(Zn(bpy)+L)=8.24  
K(Zn(phen)+L)=8.14  
K(ZnA+L)=8.02

A is 1,2-diaminobenzene.

-----  
Zn++ gl NaClO4 30°C 0.10M M K1=9.16 1995RMa (65292)3402  
\*\*\*\*\*

C9H10N4O2 HL (6976)

3,3-(Bis(imidazol-2-yl))propanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KCl 25°C 0.20M C K1=5.63 B2=10.10 1994VSa (65299)3403  
Also data for the propanamide derivatives with the peptide Ile-His-Gly-OEt  
\*\*\*\*\*

C9H10N6B HL CAS 18583-60-3 (7936)

Hydrotris(pyrazolyl)borate;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl none 25°C 0.15M C T H K1=0.6 1990AMb (65455)3410

Data for 10-45 C

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C9H1003 HL CAS 118-61-6 (3858)

Salicylic acid ethyl ester; HO.C6H4.CO.OC2H5

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

Zn++ gl diox/w 30°C 75% U K1=8.48 1964JVa (65491)3411

Medium: 75% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C9H1003S HL CAS 18619-21-2 (4637)

(2-Methoxyphenylthio)ethanoic acid; CH3O.C6H4.S.CH2.COOH

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

Zn++ ISE KNO3 25°C 0.10M C K1=1.00 1972FGb (65496)3412

By competition with Ag+ using Ag ISE

\*\*\*\*\*

C9H1003S HL CAS 3996-32-5 (4638)

(3-Methoxyphenylthio)ethanoic acid; CH3O.C6H4.S.CH2.COOH

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

Zn++ ISE KNO3 25°C 0.10M C K1=0.68 1972FGb (65504)3413

By competition with Ag+ using Ag ISE

\*\*\*\*\*

C9H1003S HL CAS 3996-42-7 (4643)

Carboxymethyl benzyl sulfoxide; C6H5.CH2.SO.CH2.COOH

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

Zn++ gl diox/w 25°C 50% U M K1=1.84 1972SGa (65515)3414

K(Zn(bpy)+L)=1.80

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C9H1003Se HL (4640)

(2-Methoxyphenylseleno)ethanoic acid; CH3O.C6H4.Se.CH2.COOH

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

Zn++ ISE KNO3 25°C 0.10M C K1=0.71 1972FGb (65518)3415

By competition with Ag+ using Ag ISE

\*\*\*\*\*

C9H1004 H3L CAS 39223-40-0 (1825)

3,4-Dihydroxyphenylpropanoic acid; (HO)2.C6H3.CH2.CH2.COOH

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

Zn++ gl NaClO4 30°C 0.10M U K1=8.64 B2=14.79 1966APb (65561)3416

\*\*\*\*\*

C9H1004S HL CAS 3937-96-0 (4644)  
Carboxymethyl benzyl sulfone; C6H5.CH2.SO2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	diox/w	25°C	50%	U	M		K1=1.73 K(Zn(bpy)+L)=1.75	1972SGa (65598)	3417
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Medium: 50% dioxan, 0.1 M NaClO4

C9H1008 H4L CAS 3724-52-5 (1264)  
cis-1,2,3,4-Cyclopentanetetra-carboxylic acid; C5H6.(COOH)4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	NaClO4	30°C	0.19M	U			K1=5.86 B2=9.66	1985MSb (65634)	3418
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C9H11N L CAS 2294-75-9 (301)  
2-(But-3-enyl)pyridine; C5H4N.CH2.CH2.CH:CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	U			K1=1.4	1974ILa (65658)	3419
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C9H11NO HL CAS 10229-63-7 (3872)  
N-(Salicylidene)aminoethane; HO.C6H4.CH:N.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	KCl	25°C	0.50M	U			K1=6.73 B2=12.8	1971LLa (65667)	3420
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C9H11NOS HL CAS 34282-30-9 (3287)  
N-(Mercaptoacetyl)-4-methylanilide; CH3.C6H4.NH.CO.CH2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	diox/w	30°C	75%	U			K1=10.33 B2=19.49	1961MAe (65674)	3421
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C9H11NOS HL CAS 36076-50-3 (4680)  
N-Phenyl-N-methyl-2-mercaptoacetamide; HS.CH2.CO.N(CH3).C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	oth	diox/w	30°C	70%	U			K1=8.32 B2=16.17	1973BSc (65679)	3422
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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
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Zn++	gl	NaNO3	25°C	0.10M	C	M		K1=4.63 B2= 8.24	2000ZLa (65870)	3423
------	----	-------	------	-------	---	---	--	------------------	-----------------	------

B(ZnLA)=10.91  
A=12-Pentyl-1,4,7,10-tetraazacyclotridecane-11,13-dione.

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Zn++	gl	KNO3	35°C	0.10M	C	M	K1=4.64	1999DSb (65871)	3424
------	----	------	------	-------	---	---	---------	-----------------	------

B(ZnAL)=4.78

A is thiamine hydrochloride.

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Zn++	vlt	NaClO4	25°C	1.0M	C	M		1999VKc (65872)	3425
------	-----	--------	------	------	---	---	--	-----------------	------

B(ZnLA)=5.36  
B(ZnLA2)=8.60

Method: polarography. Medium pH: 8.5. A is 4-picoline.

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Zn++	gl	NaClO4	25°C	0.20M	U	M	K1=4.70	B2= 8.42	1997PJa (65873)	3426
------	----	--------	------	-------	---	---	---------	----------	-----------------	------

K(Zn(bpy)+L)=4.09  
K(Zn(phen)+L)=4.39  
K(ZnA+L)=4.14  
K(Zn(his)+L)=3.81

A is 2,2'-bipyridylamine. K(Zn(ida)+L)=3.66.

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Zn++	gl	KNO3	35°C	0.10M	C	M	K1=4.64	1997PSb (65874)	3427
------	----	------	------	-------	---	---	---------	-----------------	------

K(ZnL+A)=4.20

H2A is thiamine orthophosphoric acid.

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Zn++	gl	NaClO4	25°C	0.20M	M		K1=4.78	1996VBa (65875)	3428
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Zn++	gl	NaClO4	25°C	1.0M	U	M	K1=4.55	B2= 7.86	1995KDa (65876)	3429
------	----	--------	------	------	---	---	---------	----------	-----------------	------

K3=2.22  
B(ZnLA)=6.66  
B(ZnLA2)=9.32  
B(ZnL2A)=10.70

Medium pH 8.50. HA is propanoic acid.

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Zn++	gl	NaClO4	25°C	0.20M	M		K1=4.785	B2= 9.26	1994VBb (65877)	3430
------	----	--------	------	-------	---	--	----------	----------	-----------------	------

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Zn++	gl	NaClO4	25°C	0.20M	M		K1=4.785	B2= 9.26	1994VBc (65878)	3431
------	----	--------	------	-------	---	--	----------	----------	-----------------	------

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Zn++	gl	NaClO4	25°C	0.20M	U T	M	K1=4.70	B2= 8.42	1993PPa (65879)	3432
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K(ZnA+L)=4.45

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

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Zn++	gl	NaClO4	25°C	0.20M	U	M	K1=4.74	B2=9.21	1992VBa (65880)	3433
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B(ZnL(Trp))=9.98  
B(ZnL(Tyr))=9.75

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Zn++	gl	KNO3	35°C	0.10M	U		K1=4.42	1990RSe (65881)	3434
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Zn++	gl	KNO3	25°C	0.10M	C	M		1989MAd (65882)	3435
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K(ZnA+L)=4.11  
B(ZnAL)=10.96

H2A is N-(2-acetamido)imino diethanoic acid.





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Zn++      gl  diox/w 40°C 75% U      K1=7.83      1973PPa (66026)3446
*****
C9H11NO2      HL      N-Tolylglycine  CAS 21911-67-1 (627)
N-(3-Methylphenyl)aminoethanoic acid; CH3.C6H4.NH.CH2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Zn++      gl  NaClO4 25°C 0.10M U      M      1983CLc (66037)3447
K(Zn(bpy)+L)=3.40
*****
C9H11NO2      HL      CAS 21911-69-3 (634)
N-(4-Methylphenyl)aminoethanoic acid; CH3.C6H4.NH.CH2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Zn++      gl  NaClO4 25°C 0.10M U      M      1984CMa (66044)3448
K(Zn(phen)+L)=3.94
*****
C9H11NO3      HL      (6512)
2-Amino-2-(4'-methoxyphenyl)ethanoic acid; NH2.CH(C6H4OCH3)COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Zn++      gl  KNO3   25°C 0.10M M      K1=4.08  B2=7.68  1990SMa (66054)3449
*****
C9H11NO3      H2L    o-Tyrosine  CAS 7432-92-9 (735)
2-Amino-3-(2-hydroxyphenyl)propanoic acid; HO.C6H4.CH2.CH(NH2).COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Zn++      gl  KCl    25°C 0.20M U      H      K1=6.49  B2=11.78  1984KGa (66062)3450
B(ZnHL)=14.59
B(ZnH2L2)=29.99
B(ZnHL2)=21.33
DH(ZnHL)=-32.2 kJ mol-1;DH(ZnH2L2)=-64.2;DH(ZnHL2)=-21;DH(ZnL2)=12;DH(ZnL)=2
*****
C9H11NO3      H2L    m-Tyrosine  CAS 587-33-7 (736)
2-Amino-3-(3-hydroxyphenyl)propanoic acid; HO.C6H4.CH2.CH(NH2).COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Zn++      gl  KCl    25°C 0.20M U      H      K1=5.76  B2=9.75  1984KGa (66073)3451
B(ZnHL)=14.10
B(ZnH2L2)=28.11
B(ZnHL2)=19.11
DH(ZnHL)=-30.7;DH(ZnH2L2)=-64.6;DH(ZnHL2)=-35;DH(ZnL2)=3;DH(ZnL)=7 kJ mol-1
*****
C9H11NO3      H2L    Tyrosine   CAS 60-18-4 (4)
2-Amino-3-(4-hydroxyphenyl)propanoic acid; HO.C6H4.CH2.CH(NH2).COOH
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	vlt	NaClO4	25°C	1.0M	C	M		K(Zn+HL)=4.15 K(Zn+2HL)=8.28 K(Zn+3HL)=11.00 K(Zn+HL+A)=4.30 Method: polarography. K(Zn+HL+2A)=8.45, K(Zn+2HL+A)=11.30. HA is pyridoxine (vitamin B6). Medium pH 8.50.	1997KKb (66176)	3452
Zn++	gl	KNO3	35°C	0.10M	C	M		K(Zn+HL)=4.60 K(ZnHL+A)=4.30 H2A is thiamine orthophosphoric acid.	1997PSb (66177)	3453
Zn++	gl	NaClO4	25°C	0.20M	M			K1=4.63	1996VBa (66178)	3454
Zn++	gl	NaClO4	25°C	0.20M	M			K1=4.634 B2= 9.01	1994VBb (66179)	3455
Zn++	gl	NaClO4	25°C	0.20M	M			K(Zn+HL)=4.634 K(Zn+2HL)=9.010	1994VBc (66180)	3456
Zn++	gl	NaClO4	25°C	0.20M	U	M		K1=4.70 B2=9.00 B(ZnL(Trp))=10.36 B(ZnL(Phe))=9.98	1992VBa (66181)	3457
Zn++	ISE	KNO3	25°C	0.10M	U			K1=6.66 B2=9.70	1985DVa (66182)	3458
Zn++	gl	KNO3	25°C	0.10M	C	HM		K(Zn+HL)=4.21 K(Zn+2HL)=8.3 *K(Zn(HL)2)=-8.9 K(Zn+atp+HL)=9.26 By calorimetry: DH(Zn+HL)=-9.2 kJ mol <sup>-1</sup> , DS=50 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(Zn+2HL)=-20 DS=92; DH(*K)=34, DS(*K)=59; DH(Zn+atp+HL)=1.7, DS=184.	1984ACd (66183)	3459
Zn++	gl	KCl	25°C	0.20M	U	H		K1=6.08 B2=9.97 B(ZnHL)=14.22 B(ZnH2L2)=28.15 B(ZnHL2)=19.26 DH(ZnHL)=-31.4 kJ mol <sup>-1</sup> ; DH(ZnH2L2)=-67.0; DH(ZnHL2)=-36; DH(ZnL2)=4	1984KGa (66184)	3460
Zn++	gl	KCl	25°C	0.10M	C	TIH	R	K(Zn+HL)=4.2 K(Zn+2HL)=8.2 IUPAC evaluation	1984PEa (66185)	3461
Zn++	gl	KCl	25°C	0.10M	U	M			1983MDc (66186)	3462

Zn++            gl   KN03     25°C 0.10M C   H   T K1=6.2      B2=10.11    1982PSa (66187)3463  
     B(ZnHL)=14.37  
     B(ZnHL2)=19.65  
     B(ZnH2L2)=28.59

DH(K1)=6 kJ mol<sup>-1</sup>

Zn++ gl oth/un 20°C .002M U B2=7.9 1953PEa (66189)3465  
Medium: 0.002 ZnSO4

C9H11NO3                      HL            Phenylserine                      CAS 2180-37-2    (2546)  
2-Amino-3-hydroxy-3-phenylpropanoic acid; C6H5.CH(OH).CH(NH2)COOH

Zn++ gl oth/un 17°C .005M U B2=8.5 1953PEa (66256)3467  
Medium: 0.005 ZnSO4

C9H11NO3 HL CAS 78547-13-4 (1897)  
2-Aminoxy-3-phenyl-propanoic acid; C6H5.CH2.CH(O.NH2).COOH

Zn++      g1    KNO3    25°C 0.50M U      K1=1.47      1985Wta (66263)3468

C9H11NO3                      HL      Peonoloxime                      (6250)  
2-Hydroxy-4-methoxyacetophenoneoxime; CH3O.C6H3(OH).C(:NOH).CH3

Zn++ gl diox/w 28°C 50% U K1=6.68 B2=12.65 1979BRb (66269)3469

C9H11NO3 HL CAS 85676-52-4 (628)  
N-(3-Methoxyphenyl)aminoethanoic acid; CH3O.C6H4.NH.CH2.COOH

Zn++      gl   NaClO4 25°C 0.10M U      M      1983CLc (66281)3470  
K(Zn(bpy)+L)=3.23

C9H11NO3                      HL                      CAS 22094-69-5    (633)

N-(4-Methoxyphenyl)aminoethanoic acid; CH<sub>3</sub>O.C<sub>6</sub>H<sub>4</sub>.NH.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U	M		K(Zn(phen)+L)=4.30	1984CMA (66288)	3471

Zn++	gl	NaClO4	25°C	0.10M	U		K1=3.58	1979CXA (66289)	3472	
*****										
C9H11NO4			H3L	DOPA			CAS 59-92-7	(5)		
2-Amino-3-(3,4-dihydroxyphenyl)propanoic acid; H <sub>2</sub> NCH(CH <sub>2</sub> C <sub>6</sub> H <sub>3</sub> (OH) <sub>2</sub> )COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaClO4	37°C	0.15M	U	M	K1=12.37	1995NAC (66370)	3473	
							B(ZnH <sub>2</sub> L)=26.07			
							B(ZnLCu)=21.45			

Zn++	gl	KCl	25°C	0.20M	C	M		1984KDB (66371)	3474	
							K(Zn(His)+L)=5.71			
							B(ZnH <sub>2</sub> L(His))=32.71			
							K(Zn(ATP)+L)=4.91			
							B(ZnH <sub>2</sub> L(ATP))=27.23			

Zn++	gl	KNO3	25°C	0.10M	C	M	B2=11.07	1983DAa (66372)	3475	
							B(ZnHL)=13.77			
							B(Zn2L2)=16.55			
							B(CuZnH-1L)=7.98			
							B(CuZnH-2L)=1.13			

Zn++	sp	KCl	25°C	0.20M	C			1983KGA (66373)	3476	
							K(ZnL2+H)=10.44			
							K(ZnHL2+H)=9.65			
							K(ZnH2L2+H)=8.59			

Microconstants also reported.

Zn++	gl	KCl	25°C	0.20M	C	M	B2=18.50	1979GKa (66374)	3477	
							B(ZnH <sub>2</sub> L)=27.00			
							B(ZnHL)=20.23			
							B(ZnH3L2)=47.18			
							B(ZnH2L2)=38.59			

B(ZnHL2)=28.92

Zn++	gl	NaCl	25°C	0.12M	U	M		1978RMA (66375)	3478	
							K(Zn+bpy)=5.76			
							K(Zn(bpy)+L)=11.13			
							K(Zn+A)=2.47			
							K(ZnA+L)=12.46			

H2A=tartaric acid; additional data for other ternary ligands

Zn++ gl NaCl 25°C 0.12M U M K1=11.03 1978RMc (66376)3479  
K(Zn(ATP)+L)=7.30

Zn++ gl NaCl04 25°C 0.50M U 1977BPc (66377)3480  
B(ZnH2L)=26.56  
B(ZnH4L2)=52.67  
B(ZnH6L3)=78.53  
B(ZnH5L3)=70.20  
B(ZnH4L3)=61.10, B(ZnH3L3)=51.90, B(ZnH2L3)=42.00, B(ZnHL3)=31.80,  
B3=21.70.

Zn++ gl NaNO3 20°C 0.50M U 1974GSa (66378)3481  
K(Zn+H2L)=4.4

Zn++ gl KNO3 25°C 1.0M U K1=9.94 B2=18.06 1972GJa (66379)3482

Zn++ gl oth/un 20°C .005M U K1=8.7 1953PEa (66380)3483  
Medium: 0.005 ZnSO4

\*\*\*\*\*  
C9H11NO4S H2L CAS 1080-44-0 (4682)  
N-(4-Toluenesulfonyl)glycine, N-tosylglycine; CH3.C6H4.SO2.NH.CH2.COOH

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

Zn++ vlt NaCl04 25°C 0.10M U M 1991GBb (66413)3484  
B(Zn(bpy)L)=8.82  
K(Zn+bpy+H-1L)=11.86  
K(Zn(bpy)+L)=3.52  
K(Zn(bpy)+H-1L)=6.56

Zn++ gl diox/w 30°C 45% U K1=12.00 1984MYa (66414)3485  
K(Zn+2HL)=8.12  
K(Zn+HL+L)=10.25

Zn++ vlt oth/un 25°C 0.10M U B2=6.36 1968RFa (66415)3486

Zn++ ISE NaCl04 20°C 3.0M U K1=2.26 B2=2.81 1967KAa (66416)3487  
B3=2.88

\*\*\*\*\*  
C9H11NO4S2 H3L CAS 97512-83-9 (1330)  
N-Benzenesulfonyl-L-cysteine;

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

Zn++ gl alc/w 25°C 50% C M 1997MGb (66437)3488  
B(Zn+HL)=8.96  
B(Zn(en)(HL))=14.08  
B(Zn(gly)(HL))=13.94  
\*K(Zn(bpy)(HL))=-8.52

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3. \*K(Zn(en)HL)=-8.70, \*K(Zn(gly)HL)=-

8.80, \*K(ZnLbpy)=-9.60, \*K(ZnLen)=-9.80, \*K(ZnLgly)=-9.90.

-----  
Zn++ gl diox/w 30°C 50% M 1980MDc (66438)3489

K(Zn+HL)=8.33  
K(ZnHL+HL)=7.22  
\*K(ZnH2L2)=-8.20  
\*K(ZnHL2)=-10.30

Medium: 50% v/v dioxane/H2O, 0.50 M NaClO4.

-----  
Zn++ gl NaClO4 21°C 0.50M U T H 1974GMd (66439)3490

K(Zn+HL)=8.42

-  
At 32 C: K(Zn+HL)=8.15, K(ZnHL+HL)=7.34. Also DH and DS values

\*\*\*\*\*

C9H11NO5S H2L CAS 85828-29-1 (8747)

N-(Phenylsulfonyl)-L-serine;

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

-----  
Zn++ gl alc/w 25°C 50% C T H 1987MDe (66456)3491

K(Zn+HL=ZnL+H)=3.70  
K(Zn+2HL=ZnL2+2H)=8.56  
\*K(ZnL2)=-10.84  
\*K(ZnH-1L2)=-10.90

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3. Data for 35, 45 C.

Enthalpy and entropy data.

\*\*\*\*\*

C9H11N3O2 H2L CAS 36408-72-7 (7572)

2,6-Diacetylpyridine dioxime; C5H3N(C(=NOH)CH3)2

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

-----  
Zn++ kin alc/w 25°C 24% U 1998YGa (66478)3492

\*K(ZnH2L) <-6.0  
K1eff=4.61 (pH=7)  
K(2ZnL=Zn2L2)eff=3.30 (pH=7)

Medium: 24% v/v EtOH/H2O, 4% MeCN, 0.1 M NaCl.

\*\*\*\*\*

C9H11N3O2S HL (1273)

1-Ethoxycarbonyl-3-pyridin-2-ylthiourea; C5H4N.NH.CS.NH.CO.OC2H5

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

-----  
Zn++ gl alc/w 25°C 75% U K1=6.23 B2=12.23 1980Smb (66494)3493

\*\*\*\*\*

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

Zn++ gl diox/w 35°C 50% U I K1=7.28 B2=13.56 1993GJa (66501)3494  
 Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.  
 Also data for 50% dioxane/H2O, 0.0200.2 M NaClO4. At I=0, K1=7.78.

\*\*\*\*\*

C9H12N2O2 HL CAS 19254-08-1 (5893)  
 2-Amino-N-hydroxy-3-phenylpropanamide, phenylalanine hydroxamic acid;  
 C6H5.CH2.CH(NH2).CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=4.84 B2=9.5 B(ZnHL)=11.69	1991FKa (66578)	3495

\*\*\*\*\*

C9H12N2O2 HL CAS 66315-20-6 (3272)  
 N-2'-Aminoethylanthranilic acid; HOOC.C6H4.NH.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	35°C	50%	U		K1=5.4 B2=9.8	1958YSa (66586)	3496

\*\*\*\*\*

C9H12N2O2 HL CAS 80028-35-9 (2762)  
 beta-(6-Methyl-2-pyridyl)-alpha-alanine; CH3.C5H3N.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	M		K1=4.22 B2=8.21	1976RNa (66597)	3497

\*\*\*\*\*

C9H12N2O3 H3L Tyr hydroxamic CAS 51344-01-5 (864)  
 2-Amino-N-hydroxy-3-(4-hydroxyphenyl)propanamide; HO.C6H4.CH2.CH(NH2)CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		B(ZnH2L)=20.8 B(ZnHL)=14.28 B(ZnH2L2)=29.2	1991FKa (66605)	3498

\*\*\*\*\*

C9H12N2O4 HL (2310)  
 2-Amino-3-(3-methoxy-4-oxo-1,4-dihydropyridin-1-yl)propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	37°C	0.15M	C		K1=3.39 B2=6.07 K(ZnL=ZnL(OH)+H)=-8.4 K3=1.9	1979SPd (66612)	3499

\*\*\*\*\*

C9H12N2O4 H3L (6664)  
 3,4-Dihydroxyphenylalanine hydroxamic acid, DOPA hydroxamic acid;  
 H2N.CH(CH2.C6H3(OH)2)CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		B(ZnH <sub>2</sub> L)=21.19 B(ZnHL)=14.90 B(ZnH <sub>2</sub> L <sub>2</sub> )=28.9	1991FKa (66619)	3500
*****									
C9H <sub>12</sub> N <sub>2</sub> O <sub>4</sub> S		H <sub>2</sub> L					(7330)		
2-Aminothiazole-N,N-dipropionic acid; (C <sub>3</sub> H <sub>2</sub> NS)N(CH <sub>2</sub> .CH <sub>2</sub> .COOH) <sub>2</sub>									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO <sub>3</sub>	25°C	0.15M	U		K <sub>1</sub> =2.74	1997NGa (66623)	3501
*****									
C9H <sub>12</sub> N <sub>2</sub> O <sub>6</sub>		HL		Uridine			CAS 58-96-8	(828)	
Uracil-1-beta-D-ribofuranoside;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	U T HM		B(Zn(ala)L)=9.62 B(Zn(phe)L)=9.10 B(Zn(trp)L)=9.55	1995RSb (66674)	3502
Data for 35 and 45 C. DH(Zn(ala)L)=-19.0 kJ mol <sup>-1</sup> , DS(Zn(ala)L)=120 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(Zn(phe)L)=-20.0, DS(Zn(phe)L)=107; DH(Zn(trp)L)=-20.9, DS=113.									
Zn++	gl	NaNO <sub>3</sub>	25°C	0.10M	M M		K(ZnA+L)=6.9	1994SIa (66675)	3503
A:1-(9-Acridine)-1,4,7,10-tetraazacyclododecane									
Zn++	gl	NaClO <sub>4</sub>	25°C	0.10M	M M		K(ZnA+HL)=5.2	1993SKe (66676)	3504
A:1,4,7,10-Tetraazacyclododecane.									
Zn++	gl	NaNO <sub>3</sub>	37°C	0.15M	U		K <sub>1</sub> =2.39 B(ZnH-1L)=-4.79	1990CIa (66677)	3505
Zn++	gl	KNO <sub>3</sub>	35°C	0.10M	U M		K <sub>1</sub> =4.69 K(ZnA+L)=3.58 K(ZnB+L)=2.91 K(ZnC+L)=2.24	1990RSc (66678)	3506
H <sub>2</sub> A=Iminodiethanoic acid, H <sub>3</sub> B=NTA, H <sub>4</sub> C=EDTA									
Zn++	gl	KNO <sub>3</sub>	35°C	0.10M	U M		K <sub>1</sub> =2.35 K(ZnL+A <sub>1</sub> a)=2.08 K(ZnL+Phe)=2.05 K(ZnL+Trp)=2.04	1990RSc (66679)	3507
Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	C T HM		K <sub>1</sub> =3.67 B <sub>2</sub> =6.86	1987KRa (66680)	3508



-----  
 Zn++ gl KNO3 35°C 0.10M U M K1=4.75 1986RRa (66681)3509  
 Ternary complexes with glycine, oxalate and histidine  
 \*\*\*\*\*  
 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
Zn++	EMF	KNO3	25°C	0.10M	U		K1=11.78	1982KBb (66726)	3510
*****									
C9H12N4O		L					CAS 78105-09-6	(8186)	
9-(1-Ethoxyethyl)purine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	kin	oth/un	40°C	0.20M	C		K1=0.27	1980LOa (66755)	3511
Medium: 0.20 M Mg(ClO4)2.									
*****									
C9H12N4O2S		HL					cyclo-(His-Cys) CAS 20987-75-1	(7984)	
cyclo-(Histidyl-cysteiny);									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	M		K1=6.59 B2=12.17	2001GVa (66759)	3512
*****									
C9H12N6O		L					H-Gly-BIMA CAS 206067-21-2	(7574)	
Glycinamido-bis(imidazol-2-yl)methane; NH2CH2CONHCH(C3H3N2)2									
-----									
Zn++	gl	KCl	25°C	0.20M	C		B2=10.28	1998VSa (66765)	3513
							B(ZnHL)=12.40		
							B(ZnH2L2)=24.04		
							B(ZnHL2)=17.17		
							B(Zn2H-2L2)=0.40		

Additional method: esr  
 \*\*\*\*\*  
 C9H12O6 H3L CAS 16526-68-4 (5948)  
 cis, cis-1,3,5-Cyclohexanetricarboxylic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=1.76	1983WKa (66770)	3514
							B(ZnHL)=6.40		
							B(ZnH2L)=10.28		

\*\*\*\*\*  
 C9H13N L CAS 3987-81-2 (493)  
 4-t-Butylpyridine; C5H4N.(t-C4H9)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=1.38	1983LRa (66781)	3515
*****									
C9H13NO			HL				CAS 63-90-1	(2757)	
4-Hydroxyamphetamine;									
-----									
Zn++	gl	KNO3	25°C	1.00M	C	M	K1=7.28 K(Zn+ATP)=6.23	1976RSd (66790)	3516
*****									
C9H13NO2			H2L				Phenylephrine CAS 61-76-7	(2759)	
3-Hydroxy-alpha-(methylaminomethyl)benzyl alcohol; HO.C6H4.CH(CH2.NH.CH3)OH									
-----									
Zn++	gl	KNO3	22°C	0.25M	U		K(Zn+HL)=5.56	1984GKa (66807)	3517
-----									
Zn++	gl	KNO3	25°C	1.00M	C	M	K(Zn+HL)=6.63 K(Zn(ATP)+HL)=5.29	1976RSd (66808)	3518
*****									
C9H13NO2			H2L				CAS 35085-65-5	(2758)	
4-Hydroxynorephedrine; HO.C6H4.CH(OH).CH(CH3)NH2									
-----									
Zn++	gl	KNO3	25°C	1.00M	C	M	K(Zn+HL)=6.06 K(Zn(ATP)+HL)=3.15	1976RSd (66813)	3519
*****									
C9H13NO3			H2L				Normetanephrine CAS 1011-74-1	(2760)	
2-(Aminomethyl)-4-hydroxy-3-methoxybenzyl alcohol;									
-----									
Zn++	gl	KNO3	25°C	1.00M	C	M	K(Zn+HL)=6.06 K(Zn(ATP)+HL)=4.58	1976RSd (66820)	3520
*****									
C9H13NO3			H2L				(-)Adrenaline CAS 51-43-4	(252)	
4-(1-Hydroxy-2-(methylamino)ethyl)-1,2-dihydroxybenzene, Epinephrine;CH3NHCH(OH)C6H3(OH)2									
-----									
Zn++	gl	KCl	25°C	0.20M	C		B2=18.19	1981GKb (66844)	3521

Zn++      gl   KNO3   25°C 1.00M C   M      1976RSd (66845)3522  
K(Zn+HL)=9.72  
K(Zn(ATP)+HL)=8.74

Zn++      gl    NaNO3    20°C 0.50M U      1974GSa (66846)3523  
B(ZnHL)=18.26

Zn++            gl    KCl       25°C 0.10M U                    K1=10.92   B2=20.12   1966JNa (66847)3524  
K1 adjusted to give hypothetical microscopic constant

\*\*\*\*\*  
C9H13N06                      H3L                      (3881)  
2,6-Dicarboxypiperidyl-N-ethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ g1 KN03 25°C 0.10M U K1=10.25 1968KTd (66875)3525  
 \*\*\*\*\*  
 C9H13N2O3P HL (7918)  
 (Glycylamino)methyl(phenylphosphinic acid);

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

Zn++      gl    KNO3    25°C 0.10M C      K1=3.58    B2= 6.40    2001LKa (66916)3526  
B(ZnHL)=10.21  
B(ZnH-2L)=-13.27

\*\*\*\*\*  
C9H13N2O9P                    H3L        UMP-5                    CAS 58-97-9    (2948)  
Uridine-5'-monophosphoric acid;

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

Zn<sup>++</sup> cal R4N.X 25°C 0.10M C 2002HTb (66946)3527  
Medium: 0.10 M (CH<sub>3</sub>)<sub>4</sub>NBr. DH(K1)=13.1 kJ mol<sup>-1</sup>, DS(K1)=83 J K<sup>-1</sup> mol<sup>-1</sup>.

Zn++	gl	KNO3	35°C	0.10M	U	M		1992RAd (66947)3528
							K(Zn+HL)=2.23	
							K(Zn+HL+Gly)=12.92	
							K(Zn+HL+His)=11.33	
							K(Zn+HL+histamine)=10.70	

Zn++      gl   R4N.X   25°C 0.10M C      T      1991SMa (66948)3529  
K(Zn+HL)=2.38

## IUPAC evaluation

Zn++      g1   NaNO3   25°C 0.10M C      1988MSa (66949)3530

K(Zn+HL)=2.02									
Zn++	nmr	oth/un	23°C	0.30M	U	M		1985PGa	(66950)3531
Keff(ZnA+HL)=2.61									
A=Tetrakis(4-N-methylpyridyl)porphyrin. pD=7.0									
Zn++	gl	NaClO4	25°C	0.10M	C			1984SSe	(66951)3532
K(Zn+HL)=2.03									
*****									
C9H13N3O4		HL		CAS		3992-42-5 (2266)			
Deoxycytidine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Zn++	gl	NaClO4	20°C	0.10M	U			1995GLa	(66990)3533
B(ZnH-2L)=-14.74									
*****									
C9H13N3O5		L Cytidine		CAS		65-46-3 (2152)			
Cytidine, Cytosine-1-beta-D-ribofuranoside;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Zn++	gl	NaClO4	20°C	0.10M	U			1995GLa	(67026)3534
B(ZnH-2L)=-14.54									
Zn++	gl	KNO3	25°C	0.10M	U	T HM		1995RSb	(67027)3535
K(ZnL+ala)=4.97									
K(ZnL+phe)=5.11									
K(ZnL+trp)=6.18									
Data for 35 and 45 C. DH(Zn(ala)L)=-16.3 kJ mol-1, DS(Zn(ala)L)=40 J K-1									
mol-1; DH(Zn(phe)L)=20.0, DS(Zn(phe)L)=31; DH(Zn(trp)L)=-24.4, DS=36.									
Zn++	nmr	KCl	25°C	0.60M	U		K1=-0.42	1992CPa	(67028)3536
Zn++	gl	NaNO3	25°C	0.50M	C		K1=0.20	1992KJa	(67029)3537
Zn++	gl	KNO3	35°C	0.10M	U	M	K1=0.76	1990RSc	(67030)3538
B(ZnL(Ala))=5.06									
B(ZnL(Phe))=5.31									
B(ZnL(Trp))=5.62									
Zn++	gl	KNO3	35°C	0.10M	C	M	K1=2.60	1985RRc	(67031)3539
B(ZnHL(Gly))=13.77									
B(ZnL(oxalate))=9.40									
B(ZnL(His))=11.95									
B(ZnL(histamine))=11.73									
Zn++	gl	KNO3	45°C	0.10M	U		K1=2.82	1981TKa	(67032)3540
Zn++	nmr	non-aq	32°C	100%	U			1980Mca	(67033)3541

K(Zn(NO3)2+L)=1.0

Medium: DMSO-d6

Zn++ nmr non-aq 36°C 100% U K1=0.87 1968WLa (67034)3542

Medium: (CH3)2SO, method: nmr

\*\*\*\*\*

C9H14N2 L CAS 14088-79-0 (3252)

N-Benzylethylenediamine; C6H5.CH2.NH.CH2.CH2.NH2

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

Zn++ gl diox/w 30°C 50% U K1=5.34 B2=8.96 1972GPb (67118)3543

\*\*\*\*\*

C9H14N2O5 L beta-Asp-Pro CAS 66180-29-8 (8142)

Pyrrolidine-2-carboxy-1-(2-amino-4-one-butanoic acid), beta-Aspartly-proline;

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

Zn++ gl KNO3 25°C 0.10M C K1=5.6 1989ARa (67128)3544

\*\*\*\*\*

C9H14N2O12P2 H4L UDP CAS 58-98-0 (3288)

Uridine-5'-diphosphoric acid;

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

Zn++ gl NaNO3 25°C 0.10M M K1=4.07 1999SSa (67148)3545

K(Zn+H2L)=2.3

K(ZnHL+H)=4.6

-----  
Zn++ gl KNO3 25°C 0.10M U K1=4.05 1995SBa (67149)3546

\*\*\*\*\*

C9H14N3O7P H2L dCMP CAS 1032-65-1 (5783)

Deoxycytidine-5'-monophosphoric acid;

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

Zn++ gl NaNO3 25°C 0.10M C M K1=2.14 1995SFa (67176)3547

K(Zn+HL)=0.9

K(Zn+HA)=2.74, K(Zn+A)=1.86. A=H2(cis-(NH3)2Pt(dCMP)2)

-----  
Zn++ nmr oth/un 25°C 0.20M U M 1985PGa (67177)3548

Keff(ZnA+L)=2.48

Keff(ZnAL+L)=0.30

A=Tetrakis(4-N-methylpyridyl)porphyrin. pH=6.9

\*\*\*\*\*

C9H14N3O8P H2L CMP-5 CAS 63-37-6 (1243)

Cytidine-5'-monophosphoric acid, Cytidilic acid;

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

Zn++ cal R4N.X 25°C 0.10M C 2002HTb (67218)3549  
 Medium: 0.10 M (CH3)4NBr. DH(K1)=12.9 kJ mol<sup>-1</sup>, DS(K1)=83.5 J K<sup>-1</sup> mol<sup>-1</sup>.

Zn++ gl KNO3 25°C 0.10M C M K1=2.96 2001AAa (67219)3550  
 Also data for ternary complexes with MOPSO, TAPSO and ACES.

Zn++ gl R4N.X 25°C 0.10M C T K1=2.42 1991SMa (67220)3551  
 IUPAC evaluation

Zn++ gl NaNO3 25°C 0.10M C K1=2.06 1988MSa (67221)3552

Zn++ gl KNO3 35°C 0.10M U M 1986RRe (67222)3553  
 K(Zn+HL+HA)=5.80  
 K(Zn+HL+B)=6.80  
 K(ZnLE+H)=2.96  
 B(ZnLC)=13.98

B(ZnLD)=14.05. HA is glycine; H2E is oxalic acid; C is histamine;  
 HD is histidine.

Zn++ gl NaNO3 35°C 0.10M U M K1=2.25 1985KSc (67223)3554  
 K(Zn(phen)+L)=3.76  
 K(Zn(GlyGly)+L)=2.06  
 B(Zn(salicylate)+L)=1.61

Zn++ gl KCl 25°C 0.10M U K1=2.56 1984MDb (67224)3555

Zn++ gl KCl 25°C 0.10M U K1=2.54 1958WSa (67225)3556  
 \*\*\*\*\*

C9H14N4O3 HL Carnosine CAS 305-84-0 (272)  
 3-Alanyl-histidine; H2N.CH2.CH2.CO.NH.CH(CH2.C3H3N2).COOH

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

Zn++ gl NaCl04 25°C 0.10M C K1=4.05 1994GHb (67299)3557  
 B(ZnHL)=11.51

Zn++ gl KCl 25°C 0.20M C M K1=4.00 1983FSc (67300)3558  
 B(ZnHL)=11.62  
 B(ZnHL(His))=17.62  
 B(ZnHL(bpy))=16.51  
 B(ZnL(bpy))=8.60

Zn++ gl KNO3 37°C 0.15M C K1=4.11 1982DAa (67301)3559  
 B(ZnHL)=11.33

Zn++ gl KNO3 37°C 0.15M U K1=3.86 1975APb (67302)3560  
 K(Zn+HL)=2.18

Zn++ gl KNO3 25°C 0.10M U K(Zn+HL)=3.39 1964LMa (67303)3561

-----  
 Zn++ gl oth/un 25°C 0.16M U K1=2.30 B2=4.40 1960MEa (67304)3562  
 K3=2.00  
 K4=1.7

\*\*\*\*\*

C9H14N4O3 HL Ala-His CAS 3253-17-6 (5767)  
 Alanyl-histidine;

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

Zn++ gl KNO3 25°C 0.10M U K1=4.31 B2=8.1 1992LPc (67338)3563  
 B(ZnH-2L2)=-4.48

-----  
 Zn++ gl KNO3 25°C 0.30M C K1=3.5 B2=7.8 1985RDa (67339)3564  
 B(ZnH-1L)=-3.6  
 B(ZnHL)=10.3  
 B(ZnH-1L2)=0.4

-----  
 Zn++ gl NaNO3 37°C 0.10M C 1984RRc (67340)3565  
 B(ZnHL)=9.87  
 B(ZnH-1L)=-3.23

By e.s.r. at 32 C, B(ZnHL)=10.05, B(ZnH-1L)=-2.80, B(ZnHL2)=14.00

\*\*\*\*\*

C9H14N5O3P H2L CAS 121149-93-7 (2512)  
 9-(4-Phosphonobutyl)adenine;

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

Zn++ gl NaNO3 25°C 0.10M M K1=2.75 2000GKa (67352)3566  
 K(Zn+HL)=1.4  
 \*K(ZnHL)=-6.3

\*\*\*\*\*

C9H15NO3S H2L Captopril CAS 62571-86-2 (5773)  
 1-(2(S)-3-Mercapto-2-methyl-1-oxopropanyl)-L-proline;

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

Zn++ gl NaClO4 25°C 0.10M M M 1994KTa (67388)3567  
 K(ZnA+L)=7.0

A:1,4,7,10-Tetraazacyclododecane

-----  
 Zn++ gl NaCl 37°C 0.15M U K1=5.38 B2=11.66 1985HSc (67389)3568  
 B3=15.30  
 B(ZnH-1L)=-2.14  
 B(ZnH-1L2)=1.65

\*\*\*\*\*

C9H15NO5 H2L (2459)  
 2-Amino-2-(2,3-dideoxy-D-erythro-hex-2-enopyranosyl)-propanoic acid;

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

-----  
Zn++ gl KNO3 25°C 0.10M U K1=8.96 B2=11.59 1990BDa (67394)3569  
\*\*\*\*\*

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

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

Zn++ gl KNO3 20°C 0.10M U K1=10.17 1974RMf (67398)3570  
\*\*\*\*\*

C9H15NO6 H3L CAS 817-11-8 (3271)  
3,3',3''-Nitrilotripropanoic acid; (HOOC.CH2.CH2)3N  
-----

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

Zn++ cal KNO3 25°C 0.10M C H 1983GSb (67426)3571  
DH(K1)=13.18 kJ mol<sup>-1</sup>, DS(K1)=151 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Zn++ gl KCl 30°C 0.10M U K1=5.3 1953CMa (67427)3572  
\*\*\*\*\*

C9H15NO6 H3L CAS 95482-53-4 (3270)  
N-(2-Carboxyethyl)-3,3-iminodipropanoic acid;  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Zn++ gl KCl 30°C 0.10M U K1=7.9 1953CMa (67438)3573  
\*\*\*\*\*

C9H15NO6P2 H4L CAS 6056-53-7 (1337)  
N-Benzyliminobis(methylenephosphonic) acid; C6H5CH2N(CH2P03H2)2  
-----

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

Zn++ gl KCl 25°C 0.20M C K1=9.39 1999MKa (67455)3574  
B(ZnHL)=15.26  
B(ZnH2L)=19.80  
B(ZnH-1L)=-0.20  
B(ZnH-2L)=-11.39

\*K(ZnL)=-9.59; K(ZnOH+L)=9.19; K(ZnOH+ZnL=Zn(OH)L+Zn)=-0.20.  
\*\*\*\*\*

C9H15NO6S H3L DCMM CAS 72306-91-3 (8239)  
Dicarboxymethyl-N,N-methionine acid;  
-----

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

Zn++ gl NaCl 25°C 0.50M C K(Zn+HL)=5.57 1980MFC (67466)3575  
K(ZnHL+HL)=3.93

Additional methods: conductivity, spectrophotometry  
\*\*\*\*\*

C9H15N2O15P3 H5L UTP CAS 63-39-8 (407)



Uridine-5'-triphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	C		R	K(Zn+HL)=5.06 K(Zn+H2L)=2.56	1991SMa (67500)	3576

IUPAC evaluation

Zn++	gl	NaNO3	25°C	0.10M	C			K(Zn+HL)=5.01 K(ZnL+H)=4.17 K(Zn+H2L)=2.73	1987STb (67501)	3577
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Zn++	gl	KNO3	25°C	0.10M	U T H			K1=7.21	1983RRe (67502)	3578
------	----	------	------	-------	-------	--	--	---------	-----------------	------

Also data for 35 and 45 C. At 45 C: K1=7.00.  
DH(K1)=-19.2 kJ mol<sup>-1</sup>, DS(K1)=74 J K<sup>-1</sup> mol<sup>-1</sup>.

Zn++	gl	NaClO4	25°C	0.10M	C		M	K(Zn+HL)=4.75 B(Zn(HL)(bpy))=10.20	1978FMa (67503)	3579
------	----	--------	------	-------	---	--	---	---------------------------------------	-----------------	------

Zn++	gl	KNO3	35°C	0.10M	U			K(Zn+HL)=7.10	1976KR a (67504)	3580
------	----	------	------	-------	---	--	--	---------------	------------------	------

Zn++	nmr	NaClO4	25°C	0.10M	U		M	K(ZnL+H)=8.71 K(Zn(OH)L+H)=9.24 K(Zn(bpy)L+H)=9.13	1975SIb (67505)	3581
------	-----	--------	------	-------	---	--	---	--	-----------------	------

By spectrophotometry, K(ZnL+H)=8.8.

\*\*\*\*\*

C9H15N3 L CAS 60354-75-8 (6081)  
2,6-Di(2-aminoethyl)pyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaNO3	20°C	1M	C			K1=7.50 B(ZnH-1L)=-1.25	1992CPb (67539)	3582

\*\*\*\*\*

C9H15N3 L CAS 72830-26-3 (3253)  
2-(2-(2-Aminoethyl)aminoethyl)pyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U			K1=6.7	1964LMb (67546)	3583

\*\*\*\*\*

C9H15N3O L CAS 96551-18-7 (6150)  
2-Amino-3-aminomethyl-4-methoxymethyl-6-methylpyridine;

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

-----  
Zn++ gl KNO3 25°C 0.35M M K1=2.93 B2=5.7 ? 1985CSa (67554)3584  
\*\*\*\*\*

C9H15N3O4 HL Gly-Gly-Pro (6982)  
Glycyl-glycyl-proline;  
-----

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

Zn++ gl KNO3 20°C 0.5M U K1=3.35 1974KHb (67560)3585  
\*\*\*\*\*

C9H15N3O11P2 H3L CDP CAS 63-38-7 (2187)  
Cytidine-5'-diphosphoric acid;  
-----

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

Zn++ gl NaNO3 25°C 0.10M M K1=4.10 1999SSa (67577)3586  
K(Zn+HL)=2.4  
K(ZnL+H)=4.69  
-----

Zn++ gl KCl 25°C 0.10M U K1=3.93 1984MDb (67578)3587  
B(ZnHL)=8.69  
\*\*\*\*\*

C9H16N2O4 H2L CAS 124099-99-6 (6518)  
1,4-Diazacycloheptane-N,N'-diethanoic acid;  
-----

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

Zn++ gl NaNO3 25°C 0.10M U K1=7.98 1990HNa (67613)3588  
\*\*\*\*\*

C9H16N2O4 H2L CAS 96287-30-8 (8140)  
Azetidine-2-carboxy-1-(2-aminopentanoic acid);  
-----

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

Zn++ gl KNO3 25°C 0.10M C K1=7.25 1989ARa (67617)3589  
\*\*\*\*\*

C9H16N2O6 H2L CAS 24709-35-8 (3274)  
N-(2-(2-Ethoxycarbonylamino)ethyl)iminodiethanoic acid;  
-----

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

Zn++ gl KCl 20°C 0.10M U K1=6.86 B2=12.09 1955SAa (67622)3590  
\*\*\*\*\*

C9H16N3O14P3 H4L CTP CAS 65-47-4 (406)  
Cytidine-5'-triphosphoric acid;  
-----

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

Zn++ gl R4N.X 25°C 0.10M C TI R K1=5.09 1991SMa (67674)3591  
K(Zn+HL)=2.88

## IUPAC evaluation

Zn++ gl NaNO3 25°C 0.10M C K1=5.03 1987STb (67675)3592  
 K(Zn+HL)=3.05  
 K(ZnL+H)=4.57

Zn++ gl KCl 25°C 0.10M U K1=4.79 1984MDb (67676)3593  
 B(ZnHL)=9.36

Zn++ gl KNO3 25°C 0.10M U T H K1=5.22 1983RRe (67677)3594  
 K(Zn+HL)=4.56

Also data for 35 and 45 C. At 45 C: K1=5.02, K(Zn+HL)=4.40.

DH(K1)=-18.0 kJ mol<sup>-1</sup>, DS(K1)=39 J K<sup>-1</sup> mol<sup>-1</sup>; DH(Zn+HL)=-14.6, DS=38

Zn++ gl NaClO4 25°C 0.10M C M K1=4.79 1977SIc (67678)3595  
 B(ZnL(bpy))=10.44  
 K(Zn(bpy)+L)=5.14  
 K(Zn+HL)=2.98  
 K(ZnL+H)=4.70

Zn++ nmr NaClO4 25°C 0.10M U 1975SIb (67679)3596  
 K(Zn(OH)L+H)=8.79

Zn++ gl KNO3 35°C 0.1M C I K1=5.12 1975TRc (67680)3597  
 K(Zn+HL)=4.48

\*\*\*\*\*  
 C9H16N4O4 L CAS 157358-29-7 (7398)  
 N,N'-Bis(2-hydroxyiminopropionyl)propane-1,3-diamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.15M	C		K1=6.74 B(ZnH-1L)=-3.36 B(ZnH-2L)=-14.50	2004NJb (67723)	3598

\*\*\*\*\*  
 C9H16N4O5 HL (7472)  
 2-Hydroxymethylserylhistidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.20M	C		B(ZnH-1L)=-3.13 B(ZnH-2L)=-12.87 B(ZnH-1L2)=-0.16	1999MKb (67728)	3599

\*\*\*\*\*  
 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
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Zn++ gl KNO3 25°C 0.10M C H K1=2.50 B2=4.33 1989ABa (67763)3600  
 B(Zn(bpy)L)=7.65  
 DH(K1)=19.5 kJ mol<sup>-1</sup>, DS(K1)=111.7 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
 Zn++ gl NaClO4 25°C 0.10M U K1=2.45 19700Va (67764)3601  
 -----

Zn++ con oth/un 25°C .001M U K1=3.15 1931IRb (67765)3602  
 \*\*\*\*\*  
 C9H17NO5 HL Pantothenic acid CAS 63409-48-3 (2629)  
 N-(2,4-Dihydroxy-3,3-dimethylbutyryl)-3-aminopropanoic acid;

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

Zn++ gl KCl 25°C 0.24M U K1=1.65 1980FMd (67811)3603  
 \*\*\*\*\*  
 C9H17NO6 H2L CAS 58144-32-4 (6077)  
 N-(1,1-Di(hydroxymethyl)propyl)iminodiethanoic acid;  
 (HO.CH2)2C(CH2.CH3).N(CH2.COOH)2

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

Zn++ gl NaClO4 25°C 1.0M C K1=9.67 B2=13.60 1981ASb (67824)3604  
 B(ZnHL)=12.61  
 B(ZnH-1L)=1.38

\*\*\*\*\*  
 C9H17NO6S HL (6381)  
 2-(D-Deoxyglucosyl)thiazolidine-4-carboxylic acid;

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

Zn++ gl NaClO4 25°C 0.10M C K1=2.81 1990GNa (67833)3605  
 B(ZnH-1L)=-3.72  
 B(ZnH-2L)=-11.07  
 B(Zn2H-5L2)=-27.00

\*\*\*\*\*  
 C9H17NO7S HL (6462)  
 2(RS)-1,2,3,4,5-Pentahydroxypentylthiazolidine-4(R)-carboxylic acid;

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

Zn++ gl NaClO4 25°C 0.10M C K1=4.01 1992GNa (67839)3606  
 B(Zn2L)=6.93  
 B(Zn2H-1L)=-0.94  
 B(Zn2H-2L)=-9.20

-----  
 Zn++ gl NaClO4 25°C 0.10M C K1=3.75 B2=6.51 1990GNa (67840)3607  
 B(ZnH-1L2)=-0.95  
 B(ZnH-2L2)=-8.24

Data also for D-galactosyl:K1=4.01,B2=6.93,B(ZnH-1L2)=-0.94,B(ZnH-2L2)=-9.20

\*\*\*\*\*

C9H17N3O4S                      H2L      Ala-Ala-Cys                      (6477)  
Alanyl-alanyl-cysteine

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

Zn++	gl	KCl	25°C	0.20M	U		B2=12.09 B(ZnHL2)=20.40 B(ZnH2L2)=27.86 B(ZnH-1L2)=2.83	1990CRa (67863)	3608
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C9H17N3O5                      H2L      2,2-DIHA                      CAS 709640-94-8      (9155)  
N-Hydroxy-N'-[3-(hydroxymethylamino)-3-oxopropyl]-N-methyl-butanediamide;

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

Zn++	gl	KNO3	25°C	0.20M	C		K1=7.95 B(ZnHL)=13.83 B(Zn2L3)=22.01	2004FBa (67878)	3609
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\*\*\*\*\*

C9H18N2O3                      HL      Ala-Leu                      CAS 1999-42-4      (264)  
Alanyl-leucine; H2N.CH(CH3).CO.NH.CH(CH2.CH(CH3)2).COOH

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

Zn++	gl	KCl	20°C	0.20M	U		K1=2.93      B2=5.67	1982KRc (67898)	3610
------	----	-----	------	-------	---	--	----------------------	-----------------	------

Zn++	gl	KNO3	20°C	0.5M	U		K1=3.20	1974KHb (67899)	3611
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\*\*\*\*\*

C9H18N2O3                      HL      Leu-Ala                      CAS 7298-84-2      (4659)  
Leucylalanine- H2N.CH(CH2.CH(CH3)2).CO.NH.CH(CH3).COOH

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

Zn++	ISE	oth/un	20°C	0.20M	U		K1=2.45 K1=2.93 (L-leucyl-D-alanine)	1967KKa (67911)	3612
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\*\*\*\*\*

C9H19NS2                      HL                      CAS 150-11-8      (1154)  
N,N-Di(n-butyl)dithiocarbamate; (C4H9)2N.CSSH

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

Zn++	EMF	non-aq	25°C	100%	U		B2=12.8	1987USa (67987)	3613
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Medium: DMF, 0.1 M LiClO4

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C9H19N2O4+                      H2L                      (3277)  
2-Di(carboxymethyl)aminoethyltrimethylammonium cation  
+

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

Zn++ gl KCl 20°C 0.10M U K1=5.34 B2=9.85 1955SAa (67996)3614

\*\*\*\*\*

C9H20N2O2 L 13-AneN2O2 CAS 60350-15-4 (5662)

1,4-Dioxo-7,11-diazacyclotridecane;

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

Zn++ gl NaNO3 25°C 0.10M U K1=4.89 1986TSa (68034)3615  
-----

Zn++ gl NaNO3 25°C 0.10M U K1=4.89 1985THd (68035)3616  
-----

C9H20N2O4S HL HEPPS CAS 16052-06-5 (7900)

N-(2-Hydroxyethyl)piperazine-N'-3-propanesulfonic acid;

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

Zn++ vlt oth/un 0.7M C 2001SVa (68042)3617

K1eff(ZnL)=8.54

Method: cathodic stripping voltammetry with ligand exchange.

Medium: sea water, 0.05 M Tris (pH 8.07).  
-----

Zn++ vlt oth/un 0.7M C 2001SVa (68043)3618

K1eff(ZnL)=8.54

Method: cathodic stripping voltammetry with ligand exchange.

Medium: sea water, 0.05 M Tris (pH 8.07).  
-----

C9H20N2O5S HL HEPPSO CAS 68399-78-0 (2011)

N-(2-Hydroxyethyl)piperazine-N'-(2-hydroxypropanesulfonic acid);  
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-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Zn++ gl KNO3 25°C 0.10M C K1=4.13 2001AOa (68051)3619  
-----

C9H20N2O6 L CAS 267643-08-3 (919)

(2S)-2,3-Diaminopropyl-beta-D-glucopyranoside;  
-----

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

Zn++ gl NaCl 25°C 0.16M C K1=5.49 B2= 9.80 2000SMa (68058)3620

K(Zn+HL)=2.3

K(ZnL+OH)=4.2

K(ZnL2+OH)=4.20

K(ZnL2+2OH)=8.0  
-----

C9H20N2O6 L CAS 221558-98-1 (690)

1,3-Diamino-2-propyl-alpha-D-mannopyranoside;  
-----

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

Zn++ gl NaCl 25°C 0.16M C K1=4.3 B2= 8.30 2000SMa (68062)3621

K(ZnL+OH)=4.5  
K(ZnL2+OH)=5.2  
K(ZnL2+2OH)=9.3

\*\*\*\*\*

C9H20N2O6 L CAS 220972-45-2 (622)  
1,3-Diamino-2-propyl-beta-D-glucopyranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.16M	C		K1=3.95 K(ZnL+OH)=3.8	2000SMa (68066)	3622

\*\*\*\*\*

C9H21N3 L (6817)  
1,4,8-Triazacyclododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.10M	U		K1=7.01 *K(ZnL(H2O))=-7.34	1990KSa (68166)	3623

\*\*\*\*\*

C9H21N3 L CAS 294-80-4 (1531)  
1,5,9-Triazacyclododecane; cyclo(-NH.(CH2)3.NH.(CH2)3.NH.(CH2)3-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	non-aq	25°C	10%	C		K1=8.70 *K(Zn(H2O)L)=-7.53	1998SJa (68181)	3624

Medium: 10.2% (v/v) acetonitrile/H2O, 0.1 M NaCl04.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.10M	U	H	K1=8.25 *K(ZnL)=-7.44	1996IFb (68182)	3625

DH(K1)=14.6 kJ mol<sup>-1</sup>, DS(K1)=207.1 J K<sup>-1</sup> mol<sup>-1</sup>.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.10M	U	T	K1=8.41 *K(ZnL(H2O))=-7.30	1990KSa (68183)	3626

At 0 C: \*K(ZnL(H2O))=-7.89.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.20M	U	M	K(ZnL+OH)=6.4 K(ZnL+SCN)=2.4 K(ZnL+I)=1.6 K(ZnL+Br)=1.5	1990KSa (68184)	3627

K(ZnL+CH3COO)=2.6. K(ZnL+F)=0.8.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	M		K1=8.75 B(ZnL(OH))=15.04	1978ZOa (68185)	3628

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=8.8	1975DDa (68186)	3629

\*\*\*\*\*

C9H21N3O L (2479)

1-Oxa-4,7,11-triazacyclotridecane; cyclo(-O.(CH2.CH2.NH)2.CH2.CH2.CH2.NH.CH2.CH2-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U			K1=9.80 B(ZnH-1L)=2.19 B(ZnH-2L)=-8.6 K(ZnL+OH)=6.21 K(ZnL+2OH)=9.24	1991ACa (68197)	3630

Zn++	gl	NaNO3	25°C	0.10M	U			K1=9.90	1986TSa (68198)	3631
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Zn++	gl	NaNO3	25°C	0.10M	C			K1=9.94	1983THa (68199)	3632
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\*\*\*\*\*

C9H21N3O3 L CAS 221233-44-9 (7658)

cis,cis,cis-2,4,6-Trimethoxycyclohexane-1,3,5-triamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C			K1=10.80 B2=18.54	1999WKa (68210)	3633

\*\*\*\*\*

C9H22N4 L CAS 295-14-7 (9)

1,4,7,10-Tetraazacyclotridecane; cyclo(-(NH.CH2.CH2.)4.CH2-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U	H		K1=15.74	1980MPa (68242)	3634

DH(K1)=-70.0 kJ mol-1, DS(K1)=86.5 J K-1 mol-1

Zn++	vlt	oth/un	25°C	0.20M	U	H		K1=15.6	1977KKa (68243)	3635
------	-----	--------	------	-------	---	---	--	---------	-----------------	------

DH(K1)=-32.6 kJ mol-1

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C9H22N4 L N-Methylcyclen CAS 133008-74-9 (8674)

1-Methyl-1,4,7,10-tetraazacyclododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	C	M		K(ZnL+A)=2.0 K(ZnL+SCN)=2.4 K(ZnL+B)=3.3 K(ZnL+Cl)=1.7	1995KKc (68250)	3636

HA is ethanoic acid, H2B is 4-nitrophenylphosphoric acid.

\*\*\*\*\*

C9H22N4 L CAS 22217-18-1 (4657)

N,N'-Bis(2-aminoethyl)-1,4-diazacycloheptane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U			K1=10.18	1977PBb (68256)	3637



C9H24N3O6P3 H3L (7110)  
1,4,7-Triazacyclononane-1,4,7-triyltrimethylenetrakis(phosphinic acid);

C9H24N3O9P3                      H6L                      NOTPH                      CAS 83843-39-3 (224)  
1,4,7-Triazacyclononane-N,N',N''-tris(methylenephosphonic acid);

C9H24N4 L CAS 129880-56-4 (1533)  
1,4,10,13-Tetraazatridecane; H2N.(CH2)2.NH.(CH2)5.NH.(CH2)2.NH2

By calorimetry:  $\Delta H_1 = -31.0 \text{ kJ mol}^{-1}$ ,  $\Delta S_1 = 80.3$

C9H24N4 L CAS 4605-14-5 (1797)  
1,5,9,13-Tetraazatridecane; H2N.(CH2)3.NH.(CH2)3.NH.(CH2)3.NH2

C9H24N4 L CAS 4963-47-7 (546)  
Tris-(3-aminopropyl)amine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	M		K1=10.72 *K(ZnL)=-9.99	2003IIa (68382)	3645
Zn++	gl	KCl	25°C	0.10M	U		K1=10.702	1968DPa (68383)	3646
Zn++	sp	KCl	25°C	0.10M	U		K1=10.70	1968VPa (68384)	3647

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Zn++      gl  NaNO3  20°C 0.10M U      K1=9.41      1962TAb (68385)3648
*****
C9H28N3O15P5      10L      DTPPH      CAS 15827-60-8 (2921)
Diethylenetriamine-N,N,N',N'',N''-penta(methylphosphonic acid);
H2O3PCH2.N(CH2CH2.N(CH2PO3H2)2)2 H
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KCl      25°C 0.10M U      K1=16.45      1967KDa (68397)3649
                        K(Zn+HL)=13.36
                        K(Zn+H2L)=10.41
                        K(Zn+H3L)=8.44
                        K(Zn+H4L)=6.77

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K(Zn+H5L)=5.23, K(Zn+H6L)=3.91
*****
C10H6O3      HL      CAS 83-72-7 (3294)
2-Hydroxy-1,4-naphthoquinone;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      sp  alc/w  25°C 50% M      K1=2.61      2000HSc (68453)3650
                        K(Zn+H2L=ZnL+2H)=-2.65

```

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

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-----
Zn++      vlt oth/un 25°C 0.20M U      B2=8.49      1966SPa (68454)3651
phosphate buffer
-----

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-----
Zn++      gl  diox/w 30°C 75% U      K1=6.14 B2=11.55 1960KFc (68455)3652
*****
C10H6O3      HL      CAS 481-39-0 (3295)
5-Hydroxy-1,4-naphthoquinone;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      sp  alc/w  25°C 50% M      K1=4.21 B2=12.07 2000HSc (68471)3653
                        K(Zn+HL=ZnL+H)=-4.45
                        K(ZnL+HL=ZnL2+H)=-0.84

```

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

```

*****
C10H6O4      H2L      CAS 475-38-7 (6120)
5,8-Dihydroxy-1,4-naphthoquinone;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      sp  alc/w  25°C 50% M      K1=2.9      2000HSc (68487)3654
                        K(Zn+H2L=ZnL+2H)=-8.68
                        K(Zn(OH)2L+2H)=14.18

```

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

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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
Zn++	vlt	KN03	20°C	0.24M	U		K1=2.12 B3=7.15 B4=10.71	1972NSb (68500)	3655

\*\*\*\*\*  
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
Zn++	sp	KCl	25°C	0.10M	U		K1=4.63	1971MSf (68562)	3656
Zn++	gl	diox/w	30°C	75%	U I		K1=9.32 B2=17.02	1957CFa (68563)	3657
In 50% dioxan K1=6.76, K2=5.68									

Zn++	gl	diox/w	30°C	75%	U		K1=9.5 B2=17.3	1954UFa (68564)	3658
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\*\*\*\*\*  
C10H7NO2 HL CAS 14510-06-6 (4715)  
2-Formyl-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=7.25 B2=14.39	1972HUb (68605)	3659
Medium: 50% v/v dioxan, 0.1 M KCl									

\*\*\*\*\*  
C10H7NO2 HL CAS 132-53-6 (2524)  
2-Nitroso-1-naphthol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	21°C	50%	U		K1=5.60 B2=11.00	1970MGd (68629)	3660
Medium: 50% dioxan, 0.3 M NaClO4									
Zn++	sp	KCl	25°C	0.10M	U		K1=3.91	1970SMa (68630)	3661
Zn++	gl	diox/w	30°C	50%	U I		K1=5.70 B2=10.92	1957CFa (68631)	3662
In 75% dioxan K1=8.40, K2=7.02									

Zn++	gl	diox/w	30°C	75%	U		K1=8.70 B2=15.70	1954UFa (68632)	3663
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\*\*\*\*\*  
C10H7NO2 HL CAS 2598-30-3 (3317)  
5-Formyl-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=6.45 B2=12.70	1958JPa (68670)	3664

K3=4.95

Medium: 50% dioxan, 0.3 M NaCl

\*\*\*\*\*

C10H7N02 HL Quinaldic acid CAS 93-10-7 (2209)

Quinoline-2-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=9.88 B2=18.18	1988ZMa (68689)	3665

Zn++	gl	diox/w	25°C	50%	U		K1=5.1 B2=9.7	1955HCb (68690)	3666
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Zn++	sp	oth/un	25°C	0.0	U		K1=4.17	1955LUa (68691)	3667
------	----	--------	------	-----	---	--	---------	-----------------	------

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C10H7N02 HL CAS 86-59-9 (873)

Quinoline-8-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	30°C	50%	U		K1=3.85 B2=7.00	1981RRa (68743)	3668

Medium: 50% v/v EtOH, 0.1 M KNO3

Zn++	gl	diox/w	25°C	50%	U		K1=4.9 B2=9.0	1955HCb (68744)	3669
------	----	--------	------	-----	---	--	---------------	-----------------	------

Zn++	gl	oth/un	25°C	0.0	U		K1=3.05 B2=5.89	1955LUa (68745)	3670
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C10H7N02S HL CAS 10958-38-5 (3922)

3-Phenyl-1,2-thiazole-5-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=1.66	1968EGb (68778)	3671

Medium: 50% dioxan, 0.1 M NaCl04

\*\*\*\*\*

C10H7N03 H2L Kynurenic acid CAS 492-77-3 (1540)

4-Hydroxy-2-quinolinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=3.4 B2=6.50	1964BFa (68785)	3672

K(Zn(OH)L+H)=7.0

K(Zn(OH)2L+H)=8.1

\*\*\*\*\*

C10H7N04 H3L Xanthurenic aci CAS 59-00-7 (1539)

4,8-Dihydroxy-2-quinolinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=7.7 B2=13.70	1964BFa (68792)	3673

K(Zn(OH)L+H)=9.7

$$K(\text{Zn}(\text{OH})_2\text{L}+\text{H})=11.3$$

\*\*\*\*\*

C10H7NO5S                      H2L                      CAS 97573-20-5 (3332)  
1,2-Naphthoquinone-4-sulfonic acid-2-oxime

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

Zn++              gl    KCl              25°C 0.10M U                      1961MAd (68799)3674  
K(Zn+HL=ZnL+H)=3.04

\*\*\*\*\*

C10H7NO5S                      H2L                      CAS 14090-74-5 (2676)  
1-Nitroso-2-hydroxynaphthalene-7-sulfonic acid;

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

Zn++              EMF KCl              25°C 0.10M U              K1=4.13    B2=7.50    1970MSH (68805)3675

\*\*\*\*\*

C10H7NO5S                      H2L                      CAS 14090-74-5 (4765)  
1-Nitroso-2-hydroxynaphthalene-4-sulfonic acid;

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

Zn++              EMF KCl              25°C 0.10M U    I              K1=4.30    B2=7.49    1973MSf (68827)3676  
I=0, K1=5.08, B2=8.39

\*\*\*\*\*

C10H7NO5S                      H2L                      CAS 50332-97-3 (2660)  
1-Nitroso-2-hydroxynaphthalene-5-sulfonic acid;

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

Zn++              EMF KCl              25°C 0.10M U    I              K1=4.46    B2=7.99    1973MSf (68830)3677  
I=0, K1=5.26, B2=8.92

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

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

Zn++              gl    KCl              25°C 0.10M U    I              K1=4.19    B2=7.73    1969MSa (68837)3678  
I=0: K1=5.05, B2=8.56

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

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

Zn++              sp    KCl              25°C 0.10M U              K1=3.56              1970SMa (68872)3679

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Zn++              sp    oth/un 25°C 0.0 U              K1=3.86              1966MAg (68873)3680

\*\*\*\*\*

C10H7NO5S                      H2L                      CAS 23525-13-6    (1813)  
2-Nitroso-1-hydroxynaphthalene-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	sp	KCl	25°C	0.10M	U			K1=3.82	1970SMa (68907)	3681
Zn++	gl	KCl	25°C	0.10M	U	I		K1=3.58    B2=6.29	1969MSa (68908)	3682

I=0: K1=4.48, B2=7.13

\*\*\*\*\*  
C10H7NO5S                      H2L                      CAS 26276-78-8    (4763)  
2-Nitroso-1-hydroxynaphthalene-6-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	EMF	KCl	25°C	0.10M	U			K1=3.71    B2=6.58	1970MSh (68922)	3683

\*\*\*\*\*

C10H7NO5S                      H2L                      (4764)  
2-Nitroso-1-hydroxynaphthalene-7-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.01M	U	I		K1=4.25    B2=6.97	1970MSg (68927)	3684

I=0.1: K1=3.76, B2=6.45

\*\*\*\*\*  
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
Zn++	sp	KCl	25°C	0.10M	U			K1=4.05	1970SMa (68936)	3685
Zn++	EMF	KCl	25°C	0.10M	U			K1=4.04    B2=6.34	1969MSh (68937)	3686

\*\*\*\*\*

C10H7NO8S2                      H3L                      CAS 26276-77-7    (4767)  
1-Hydroxy-2-nitrosonaphthalene-4,8-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	EMF	KCl	25°C	0.10M	U			K1=3.78    B2=5.79	1970MMh (68960)	3687
Zn++	sp	KCl	25°C	0.10M	U			K1=3.80	1970SMa (68961)	3688

\*\*\*\*\*

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
Zn++	gl	NaCl04	10°C	0.10M	U	H		K1=6.90	1979GBf (68990)	3689

Zn++ oth KCl 25°C 0.10M U I K1=4.5 B2=7.1 1967MAi (68991)3690  
At I=0: K1=5.7, B2=7.6

Zn++ gl KCl 25°C 0.10M U 1961MAd (68992)3691  
K(Zn+HL=ZnL+H)=-2.42  
K(ZnL+HL=ZnL2+H)=-4.30

\*\*\*\*\*  
C10H7N08S2 H3L CAS 52664-45-6 (1627)  
2-Nitroso-1-hydroxynaphthalene-4,6-disulfonic acid;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ EMF KCl 25°C 0.10M U I K1=3.51 B2=5.83 1973MSf (69047)3692  
I=0: K1=4.65, B2=7.25

\*\*\*\*\*  
C10H7N08S2 H3L CAS 50332-99-3 (1628)  
2-Nitroso-1-hydroxynaphthalene-4,7-disulfonic acid;

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

Zn++ EMF KCl 25°C 0.10M U I K1=3.63 B2=7.25 1973MSf (69057)3693  
I=0: K1=4.70, B2=6.69

\*\*\*\*\*  
C10H7N202F3S HL CAS 23375-18-0 (1680)  
8-(Trifluoromethanesulfonamido)quinoline;

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

Zn++ gl diox/w 30°C 75% U K1=7.7 B2=14.0 1984NYa (69068)3694  
\*\*\*\*\*

C10H7N304 H2L 1-Ph-violuric (957)  
1-Phenyl-alloxan-5-oxime, (1-Phenyl-5-isonitrosobarbituric acid);

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

Zn++ gl alc/w 18°C 50% U T K1=6.68 B2=11.91 1982SGa (69082)3695  
Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4

\*\*\*\*\*  
C10H702F3 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  
-----

Zn++ dis NaCl 25°C 0.10M U K1=3.6 B2=6.2 1984KSb (69124)3696  
-----

Zn++ dis NaClO4 25°C 1.0M C M K1=3.23 B2= 5.49 1977SMe (69125)3697  
K(ZnL2(org))+A(org))=6.71

Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylphosphine  
oxide (A). K(Zn+2HL(org)=ZnL2(org)+2H)=-9.02.  
-----

Zn++ gl oth/un ? 0.0 U B2=7.30 1951UFa (69126)3698  
 \*\*\*\*\*

C10H8NO4BrS H2L CAS 37026-31-6 (3933)  
 7-Bromo-8-hydroxy-2-methylquinoline-5-sulfonic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++ gl NaCl04 25°C .005M U K1=6.61 B2=12.29 1963FFa (69189)3699  
 K3 < 3.5

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++ gl NaNO3 37°C 0.10M U K1=5.15 1997MGa (69402)3700

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Zn++ gl alc/w 25°C 50% C K1=5.90 1997MGb (69403)3701

---

Zn++ cal non-aq 25°C 100% C H K1=4.7 B2= 8.40 1996KSb (69404)3702  
 B3=10.7

Medium: N,N-dimethylacetamide, 0.10 M Bu4N[BF4].  
 DH(K1)=-30.6 kJ mol<sup>-1</sup>, DH(B2)=-59.9 kJ mol<sup>-1</sup>, DH(B3)=-79.3 kJ mol<sup>-1</sup>.

---

Zn++ cal non-aq 25°C 100% U H K1=2.03 B2=3.77 1995K0a (69405)3703  
 B3=4.9

Medium: 4-Methylpyridine, 0.1 M n-Bu4NCl04. DH(K1)=-13.5 kJ mol<sup>-1</sup>,  
 DH(B2)=-29, DH(B3)=-34

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Zn++ gl NaNO3 37°C 0.10M U K1=5.15 1994MGc (69406)3704  
 Data for ternary complexes with 6-aminopenicillanic acid

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Zn++ gl KNO3 30°C 0.10M U K1=5.26 1994RSa (69407)3705

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Zn++ sp non-aq 25°C 100% U HM 1992UNa (69408)3706  
 K(ZnA+L=ZnAL)=3.91  
 K(Zn2B+L=Zn2BL)=4.04  
 K(ZnC+L=ZnCL)=4.52  
 K(Zn2D+L=Zn2DL)=7.45

Medium: CHCl3. A,D=substituted porphyrins, B,C=substituted porphyrin dimers

---

Zn++ gl KNO3 25°C 0.10M C M K1=5.13 B2= 9.50 1991DAc (69409)3707  
 Data for ternary complexes with acetohydroxamic acid

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Zn++ gl KNO3 25°C 0.10M C M K1=5.13 1990DAc (69410)3708  
 K(ZnL+A)=4.88  
 B(ZnAL)=10.01

HL: benzohydroxamic acid

---

Zn++ cal non-aq 25°C 100% U IHM K1=3.7 B2=6.9 1990IMa (69411)3709



B3=8.9

In DMF, 0.16 M Et<sub>4</sub>NClO<sub>4</sub>. DH(K<sub>1</sub>)=-17.4, DH(B<sub>2</sub>)=-36.6, DH(B<sub>3</sub>)=-54.0 kJ mol<sup>-1</sup>  
Also data for ternary complexes with Br<sup>-</sup>, I<sup>-</sup>, and NCS<sup>-</sup>.

---

Zn++ sp NaClO<sub>4</sub> 25°C 0.01M C H K<sub>1</sub>=5.23 1988DLb (69412)3710  
DH(K<sub>1</sub>)=-27.4 kJ mol<sup>-1</sup>, DS(K<sub>1</sub>)=8 J K<sup>-1</sup> mol<sup>-1</sup>

---

Zn++ sp non-aq 25°C 100% C I K<sub>1</sub>=4.14 1987AWa (69413)3711  
Medium: DMSO, 0.06 M NaClO<sub>4</sub>. In trimethylphosphate: K<sub>1</sub>=6.27;  
In dimethylacetamide: K<sub>1</sub>=4.71

---

Zn++ cal non-aq 25°C 100% U H K<sub>1</sub>=3.95 B<sub>2</sub>=7.07 1987INa (69414)3712  
B<sub>3</sub>=8.94  
Medium: DMF, 0.4 M Et<sub>4</sub>NClO<sub>4</sub>. DH(K<sub>1</sub>)=-18.3, DH(K<sub>2</sub>)=-19.9, DH(K<sub>3</sub>)=-18.3 kJ mol<sup>-1</sup>  
DS(K<sub>1</sub>)=14, DS(K<sub>2</sub>)=-7 and DS(K<sub>3</sub>)=-26 J K<sup>-1</sup> mol<sup>-1</sup>.

---

Zn++ cal non-aq 25°C 100% C H K<sub>1</sub>=3.95 B<sub>2</sub>=7.07 1987SNb (69415)3713  
K<sub>3</sub>=1.87  
Medium: DMF, 0.4 M Et<sub>4</sub>NClO<sub>4</sub>. DH(K<sub>1</sub>)=-18.3 kJ mol<sup>-1</sup>, DH(K<sub>2</sub>)=-19.9, DH(K<sub>3</sub>)=18.3

---

Zn++ cal non-aq 25°C 100% C HM 1987SNb (69416)3714  
B(ZnClL)=9.24  
B(ZnCl<sub>2</sub>L)=14.54  
Medium: DMF, 0.4 M Et<sub>4</sub>NClO<sub>4</sub>. DH(ZnClL)=-7.9 kJ mol<sup>-1</sup>, DH(ZnCl<sub>2</sub>L)=-16.2

---

Zn++ gl diox/w 25°C 50% U M K<sub>1</sub>=6.20 B<sub>2</sub>=11.75 1984ABb (69417)3715  
B(ZnL(PFHA))=12.81  
B(ZnL(PTHA))=12.92  
PFHA=N-phenyl-2-furylhydroxamate, PTHA=N-phenyl-2-thenohydroxamate

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Zn++ gl KNO<sub>3</sub> 25°C 0.10M U M 1984KRb (69418)3716  
K(ZnL+NTA)=10.67

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Zn++ gl NaClO<sub>4</sub> 35°C 0.10M U K<sub>1</sub>=5.17 B<sub>2</sub>=9.67 1983ABb (69419)3717

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Zn++ sp NaClO<sub>4</sub> 25°C 0.20M U I K<sub>1</sub>=3.50 1983EBa (69420)3718

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Zn++ sp non-aq 25°C 100% U K<sub>1</sub>=1.77 1981AWa (69421)3719  
Medium: hexamethylphosphoric triamide

---

Zn++ gl NaClO<sub>4</sub> 35°C 0.10M U M 1980ABb (69422)3720  
K(ZnL+A)=5.19  
H<sub>2</sub>A=2-hydroxy-5-nitrobenzoic acid

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Zn++ gl KNO<sub>3</sub> 25°C 0.20M C K<sub>1</sub>=4.95 B<sub>2</sub>=9.73 1979MBa (69423)3721

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Zn++ gl KNO<sub>3</sub> 25°C 0.10M C M 1978DAb (69424)3722  
B(ZnLA)=8.51  
B(ZnL<sub>2</sub>A)=12.99  
B(ZnLA<sub>2</sub>)=12.25

HA=N,N-dimethylglycine

-----  
Zn++ gl KNO3 25°C 0.10M U M K1=5.04 B2=9.60 1978DOa (69425)3723  
B3=13.2

B(ZnAL)=9.61, B(ZnHAL)=13.44, K(ZnL+HA)=2.79, K(ZnL+A)=4.61. H3A=citric acid

-----  
Zn++ gl KNO3 30°C 0.10M M M 1977MSd (69426)3724  
K(ZnL+His)=6.13

-----  
Zn++ cal non-aq 30°C 100% U H 1976AGc (69427)3725  
K(ZnA2+L)=0.78  
K(ZnB2+L)=1.60

In benzene. A=dibutyldithiocarbamate; DH=-40 kJ mol<sup>-1</sup>; DS=-117 J K<sup>-1</sup> mol<sup>-1</sup>.  
B=dibenzylidithiocarbamate; DH=-53.3; DS=-145.

-----  
Zn++ kin non-aq 19°C 100% U K1=3.4 1976BMA (69428)3726  
Medium: DMSO, 0.2 M NaClO4

-----  
Zn++ gl KNO3 25°C 0.10M C K1=5.04 B2=9.60 1975DOb (69429)3727  
K3=3.6

-----  
Zn++ gl KNO3 25°C 0.10M C K1=5.04 B2= 9.60 1975DOc (69430)3728  
B3=13.20

-----  
Zn++ gl oth/un 25°C 0.10M U M 1975JBc (69431)3729  
K(ZnL+A)=7.03  
K(ZnL+B)=6.66

H2A=catechol, H2B=pyrogallol

-----  
Zn++ cal non-aq 30°C 100% U H 1974DGa (69432)3730  
K(ZnA2+L)=>6

In benzene. HA=thiobenzoyl-1,1,1-trifluoroacetone; DH=-60 kJ mol<sup>-1</sup>

-----  
Zn++ gl oth/un 35°C 0.20M U M 1973JPb (69433)3731  
K(ZnL+A)=7.82  
K(ZnL+B)=7.89  
K(ZnL+C)=7.76

H2A=thioglycollic acid, H2B=thiolatic acid, H2C=thiomalic acid.

-----  
Zn++ oth NaClO4 30°C 0.20M U M 1972MJa (69434)3732  
B(ZnLA)=7.81  
B(ZnLB)=8.75  
K(Zn+L+HC)=7.35

H2A=pyrocatechol, H3B=protocatechuic acid, H3C=pyrogallol.

-----  
Zn++ EMF KNO3 30°C 0.10M U M 1972STa (69435)3733  
B(ZnL(en))=4.90  
B(ZnL(pn))=5.20

-----  
Zn++ gl NaClO4 25°C 0.10M U M K1=5.30 B2=9.83 1971GSb (69436)3734

B(ZnLA)=15.19  
 B(ZnL(Gly))=9.87  
 B(ZnL(en))=10.40

H2A=catechol

-----  
 Zn++ gl KNO3 30°C 1.0M U HM K1=5.26 B2=9.81 1965DDa (69437)3735  
 K3=3.96

By calorimetry:DH(K1)=-26.1 kJ mol<sup>-1</sup>, DS=14.6 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-49.1,  
 DS=25.9; DH(B3)=-66.5, DS=44.3. Ternary complexes with many ligands

-----  
 Zn++ cal NaNO3 20°C 0.10M U H 1963ANb (69438)3736  
 DH(K1)=-29.7 kJ mol<sup>-1</sup>, DS=0 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-52.3, DS=10;  
 DH(B3)=-73.2, DS=11.3

-----  
 Zn++ gl NaNO3 20°C 0.10M U K1=5.30 B2=9.83 1963ANG (69439)3737  
 K3=3.80

-----  
 Zn++ gl NaClO4 25°C 1.0M U H K1=4.89 B2=9.47 1962ABa (69440)3738  
 K3=4.27  
 DH(K1)=22.2 kJ mol<sup>-1</sup>, DS=21; DH(K2)=22.2, DS=13; DH(K3)=22.2, DS=8

-----  
 Zn++ ISE KNO3 40°C 0.10M U T K1=4.86 B2=9.10 1962CLa (69441)3739  
 K3=3.56  
 K1=5.39(10 C),5.20(20 C),6.16(25 C); K2=4.74(10 C),4.50(20 C),4.46(25 C);  
 K3=4.01(10C),3.74(25C). DH((K1)=-29.2 kJ mol<sup>-1</sup>,DH(K2)=-28,DH(K3)=-24.2

-----  
 Zn++ ISE alc/w 40°C 42% U TIH K1=4.54 B2=8.40 1962CLa (69442)3740  
 K3=2.91  
 Medium:41.5% EtOH, 0.05 M KNO3.K1=5.08(10 C),4.95(20 C),4.68(32 C); K2=4.43  
 (10C),4.17(20C),3.98(32C);K3=3.28(10C),3.05(32C).DH(K1)=-31 kJ mol<sup>-1</sup>

-----  
 Zn++ dis KCl 25°C 0.10M U K1=5.04 B2=9.39 1962IMa (69443)3741  
 K3=3.57

-----  
 Zn++ gl KNO3 25°C 0.10M U K1=5.4 B2=9.8 1956YSb (69444)3742  
 B3=13.3

-----  
 Zn++ sp oth/un 25°C 0.01M U K1=5.0 B2=12.0 1955LFb (69445)3743  
 B3=17.14

\*\*\*\*\*  
 C10H8N2 L CAS 553-26-4 (501)  
 4,4'-Bipyridyl; (C5H4N)2

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

-----  
 Zn++ sp non-aq ? 100% U M 1990AHb (69668)3744  
 K(ZnA+L)=3.26

Medium: CH2Cl2. A=biphenyl capped mesoporphyrin. Data for other porphyrin  
 Zn complexes

\*\*\*\*\*

C10H8N2O2 HL CAS 80690-06-8 (874)  
5-Aminoquinoline-8-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	30°C	50%	U		K1=5.04 B2=9.50	1981RRa (69673)	3745

Medium: 50% v/v EtOH, 0.1 M KNO3

C10H8N2O2 HL CAS 5603-22-5 (2753)  
8-Hydroxyquinoline-2-carboxaldehyde oxime

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=8.09 B2=15.75	1967SFa (69680)	3746

C10H8N2O2S HL CAS 15112-10-4 (8299)  
N-Phenyl-2-thiobarbituric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	31°C	0.10M	U T H		K1=7.30 B2=13.00	1984SJa (69689)	3747

Also data for 18 and 42 C. DH(K1)=-106 kJ mol<sup>-1</sup>, DS(K1)=-209 J K<sup>-1</sup> mol<sup>-1</sup>  
DH(K2)=-59.1, DS(K2)=-86.0. Also data for N-tolyl- derivatives.

C10H8N2O5 HL CAS 36874-89-9 (6226)  
4-Nitromaleanilic acid; HOOC.CH:CH.CO.NH.C6H4.NO2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	22°C	80%	U T H		K1=7.85 B2=13.35	1985SAb (69706)	3748

30 C: K1= 7.70, K2=5.40; 40 C: K1= 7.50, K2=5.30  
DH(K1)=-33.9 kJ mol<sup>-1</sup>, DS=63 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-20.3, DS=38

C10H8N2O6S H2L CAS 37226-33-8 (3923)  
2-Methyl-7-nitro-8-hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	.005M	U		K1=5.31 B2=9.63	1963FFa (69712)	3749

K3 < 3.5

C10H8N4O4 H3L CAS 92265-25-3 (7738)  
5-(o-Hydroxyphenylazo)-barbituric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	37°C	40%	C		K1=5.22 B2= 9.47	1998AAa (69745)	3750

Medium: 40% v/v EtOH/H2O, 0.15 M NaCl04.

Zn++	gl	alc/w	37°C	40%	C	M	K1=5.22 B2= 9.47	1997AAb (69746)	3751
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B(Zn(gly)L)=10.00

K(Zn(gly)+L)=4.52

K(ZnL+gly)=4.78

B(Zn(ala)L)=10.06

Medium: 40% v/v EtOH/H<sub>2</sub>O, 0.15 M NaClO<sub>4</sub>. K(Zn(ala)+L)=4.70, K(ZnL+ala)=4.84; B(Zn(leu)L)=9.88, K(Zn(leu)+L)=4.64, K(ZnL+leu)=4.66.

\*\*\*\*\*

C10H8O2                      H2L                      CAS 92-44-4 (1658)

2,3-Dihydroxynaphthalene;

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

Zn++            gl    NaClO<sub>4</sub> 30°C 0.20M U            M                      1974MJa (69762)3752  
K(ZnA+L)=5.25

H4A=EDTA

\*\*\*\*\*

C10H8O5S                      H3L            DHNSA                      (877)

2,3-Dihydroxynaphthalene-6-sulfonic acid;

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

Zn++            gl    NaClO<sub>4</sub> 25°C 0.50M C                      K1=8.97    B2=16.50    1976LAe (69828)3753

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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  
-----

Zn++            gl    NaNO<sub>3</sub> 25°C 0.10M U                      K1=10.03            1990HWa (69915)3754

Zn++            gl    KNO<sub>3</sub> 27°C 0.10M U                      K1=5.85    B2=10.90    1988AIa (69916)3755

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C10H9NO                      HL            8-OH-Quinaldine    CAS 826-81-3 (998)

2-Methyl-8-hydroxyquinoline;

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

Zn++            sp    KCl    30°C 1.0M M                      K1=7.60            1996BTa (70024)3756

Zn++            gl    diox/w 35°C 50% U T                      K1=9.40            1992ELa (70025)3757

Medium: 50% dioxane/H<sub>2</sub>O (I=0.1 M, electrolyte not stated).

Data for 30-45 C.

-----  
Zn++            dis non-aq 25°C 100% U            M                      1968CFc (70026)3758

K(ZnL+py)=1.60

K(ZnL+A)=1.00

K(ZnL+B)=1.75

K(ZnL+C)=0.20

Medium: chloroform. A=2-methylpyridine, B=4-methylpyridine, C=2,4,6-tri-methylpyridine

-----  
 Zn++ cal diox/w 25°C 50% U H 1968GFa (70027)3759  
 Medium: 50% dioxan, 0.1 M NaClO4. DH(K1)=-15.9 kJ mol<sup>-1</sup>, DS=121 J K<sup>-1</sup> mol<sup>-1</sup>  
 DH(B2)=-46.4, DS=188  
 -----

Zn++ gl diox/w 25°C 50% U K1=9.06 B2=17.90 1967SFa (70028)3760  
 -----

Zn++ dis diox/w 25°C 50% U B2=15.68 1965CFa (70029)3761  
 B3=18.28  
 -----

Zn++ sp alc/w ? 100% U K1=11.6 B2=23.2 1964COa (70030)3762  
 Medium: EtOH  
 -----

Zn++ gl diox/w 20°C 50% U K1=8.66 B2=16.76 1954IRa (70031)3763  
 Medium: 50% dioxan, 0.3 M NaClO4  
 -----

Zn++ gl diox/w 40°C 50% U T H K1=9.47 1954JFa (70032)3764  
 K1=10.07(0.7 C), 9.82(25 C); K2=9.27(0.7 C). DH(B2)=-43.0 kJ mol<sup>-1</sup>, DS=213  
 \*\*\*\*\*

C10H9NO HL CAS 5541-67-3 (999)  
 5-Methyl-8-hydroxyquinoline;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	diox/w	20°C	50%	U		K1=9.46 B2=17.86	1954IRa (70061)3765	
------	----	--------	------	-----	---	--	------------------	---------------------	--

Medium: 50% dioxan, 0.3 M NaClO4  
 \*\*\*\*\*

C10H9NO HL CAS 5541-68-4 (1000)  
 7-Methyl-8-hydroxyquinoline;  
 -----

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

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Zn++	gl	diox/w	20°C	50%	U		K1=9.31 B2=17.42	1954IRa (70074)3766	
------	----	--------	------	-----	---	--	------------------	---------------------	--

Medium: 50% dioxan, 0.3 M NaClO4  
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C10H9NO HL CAS 3846-73-9 (3320)  
 8-Hydroxy-4-methylquinoline;  
 -----

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

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Zn++	dis	non-aq	25°C	100%	U	M		1968CFc (70086)3767	
------	-----	--------	------	------	---	---	--	---------------------	--

K(ZnL+py)=2.47  
 K(ZnL+A)=2.00  
 K(ZnL+B)=2.87  
 K(ZnL+C)=1.50

Medium: chloroform. A=2-methylpyridine, B=4-methylpyridine,  
 C=2,4,6-trimethylpyridine  
 -----

Zn++ gl diox/w 25°C 50% U H K1=9.76 B2=18.96 1968GFa (70087)3768  
 Medium: 50% dioxan, 0.1 M NaClO4. By calorimetry: DH(K1)=-23.4 kJ mol<sup>-1</sup>,  
 -----

Zn++            dis oth/un 25°C 0.10M U                          B2=18.1                          1965CFa (70088)3769

---

Zn++            gl diox/w 40°C 50% U T H                      K1=10.25   B2=19.44   1954JFa (70089)3770  
K1=11.25(0.7 C),10.67(25 C); K2=10.28(0.7 C),9.57(25 C);  
DH(B2)=-81.9 kJ mol-1, DS=109 J K-1 mol-1

\*\*\*\*\*

C10H9NO                               L                               CAS 938-33-0     (3322)

8-Methoxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U		K1=1.6	1964PCa	(70105)3771
*****									
C10H9NO2			HL				CAS 57334-35-7	(3905)	
2-Hydroxymethyl-8-hydroxyquinoline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	KCl	30°C	1.0M	M		K1=7.81	1996BTa (70114)	3772
Zn++	gl	diox/w	25°C	50%	U		K1=10	1967SFa (70115)	3773
*****									
C10H9NO2			HL				CAS 87-51-4	(891)	
Indole-3-ethanoic acid:									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	C	M	K1=2.48 K(Zn(phen)+L)=2.72	1985BSd	(70133)3774
Medium: 50% v/v dioxan/H2O, 0.1 M NaClO4									
*****									
C10H9NO3		HL					Maleanilic acid	CAS 37902-58-2	(6225)
Maleanilic acid; HOOC.CH:CH.CO.NH.C6H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	alc/w	22°C	80%	U T H			K1=7.45 B2=13.65	1985SAb (70155)	3775
30 C: K1= 7.30, K2=6.10; 40 C: K1= 7.15, K2=6.00										
DH(K1)=-23.2 kJ mol <sup>-1</sup> , DS=62 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-13.7, DS=70										
*****										
C10H9NO3S		H2L						CAS 49608-51-7	(8280)	
4,5-Dihydro-2-(2-hydroxyphenyl)-4-thiazolecarboxylic acid,										
Deazademethyl-desferrithiocin;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KN03	25°C	0.10M	C			K1=8.5 B2=14.60	1990Ara	(70163)3776
*****										

C10H9N03S2 HL (7206)

6-Methyl-5-sulfo-8-mercaptoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	oth/un	20°C	0.10M	U		K1=9.2 B2=17.80	1985DAb (70173)	3777

C10H9N04S 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
Zn++	gl	NaCl	25°C	0.50M	U		K1=7.32 B2=14.01	1967Tmd (70193)	3778
Zn++	gl	NaClO4	25°C	.005M	U		K1=7.50 B2=14.64	1963FFa (70194)	3779
							K3 < 3.5		

C10H9N05 H2L CAS 27855-25-0 (4720)

2-Carboxybenzoylglycine; H00C.C6H4.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	ISE	NaClO4	20°C	3.0M	U		K1=2.90 B2=3.54	1967KAa (70206)	3780
							B3=3.96		

C10H9N07S2 H3L CAS 82-47-3 (6247)

8-Amino-1-hydroxynaphthalene-3,6-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	20°C	0.0	U		K1=2.45	1961PEb (70218)	3781

C10H9N08 H2L CAS 83785-11-9 (685)

2-Nitro-1,4-di(carboxymethoxy)benzene; O2N.C6H3.(OCH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	30°C	?	U		K1=3.42	1985TZa (70228)	3782

C10H9NS HL CAS 10222-10-3 (1029)

2-Methyl-8-mercaptoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	dis	NaClO4	25°C	0.10M	C			1987YSb (70250)	3783

Method: extraction from 0.10 M NaClO4 solution into CHCl3/HL.

K(Zn+2HL(org)=ZnL2(org)+2H)=3.79.

Zn++	gl	non-aq	25°C	100%	U		K1=8.5 B2=14.9	1984UBa (70251)	3784
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Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a





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C10H9NS2 HL CAS 91330-90-0 (5693)  
7-Thiomethyl-8-mercaptoquinoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ EMF non-aq 25°C 100% U K1=8.9 B2=15.70 1986UBa (70312)3795  
Medium: dimethylformamide, LiClO4

\*\*\*\*\*

C10H9N3 L Dipyritydylamine CAS 1202-34-2 (2428)  
(2,2'-Dipyritydyl)amine; C5H4N.NH.C5H4N

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 25°C 0.10M C M K1=3.70 B2= 7.16 1991DAc (70327)3796  
Data for ternary complexes with acetohydroxamic acid

-----  
Zn++ gl NaClO4 25°C 0.10M C M 1979FSa (70328)3797  
B(ZnL(pyrocatecholate))=14.22  
K(ZnL+pyrocatecholate)=10.47  
K(Zn(pyrocatecholate)+L)=4.32

-----  
Zn++ gl KNO3 25°C 0.10M U TIH K1=3.70 B2=7.16 1976BBE (70329)3798

-----  
Zn++ EMF KNO3 20°C 0.10M U K1=3.75 B2=6.95 1971ANa (70330)3799  
\*\*\*\*\*

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  
-----  
Zn++ sp diox/w 25°C 10% U T K1=7.85 1973KSd (70354)3800  
Medium: 10% dioxan, 0.1 M KNO3. 15 C: K1=7.87, 35 C: K1=7.83

\*\*\*\*\*

C10H9N3OS HL CAS 54723-30-7 (3924)  
3-(2'-Thiazolylazo)-4-methylphenol; CH3.C6H3(OH).N:N.C3H2N2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl alc/w 25°C 50% U K1=6.1 B2=11.50 1967NPb (70372)3801  
Medium: 50% MeOH, 0.1 M NaClO4

\*\*\*\*\*

C10H9N3O2 HL CAS 1631-97-6 (4718)  
3-Methyl-4-benzeneazo-isoxazol-5-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl diox/w 25°C 75% U K1=8.25 B2=13.82 1995UFa (70383)3802  
\*\*\*\*\*

C10H9N3O2 HL CAS 56634-85-6 (1326)

4-Oximino-3-methyl-1-phenyl-2-pyrazolin-5-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	20°C	50%	U T		K1=2.75 B2=5.42	1981SSc (70388)	3803
At 30 C: K1=2.68, B2=5.33									
*****									
C10H90BrS HL CAS 87112-37-6 (8334)									
p-Bromobenzoylthioacetone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=8.08 B2=16.08	1991CAb (70421)	3804
Medium: 75% v/v dioxane/H2O, 0.10 M KCl.									
*****									
C10H902Br 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
Zn++	gl	diox/w	30°C	75%	U		K1=9.92 B2=17.53	1976GRa (70429)	3805
*****									
C10H902Cl HL CAS 64743-36-8 (308)									
1-(4-Chlorophenyl)butane-1,3-dione; Cl.C6H4.CO.CH2.CO.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		B2=18.04	1976BRd (70444)	3806
*****									
C10H904P H2L CAS 1136-89-6 (1931)									
1-Naphthyl-phosphoric acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.15M	U		K1=2.01 B(ZnH-1L)=-4.73	1989AKa (70459)	3807
*****									
C10H10N04P HL (1932)									
8-Quinolyl-methyl-phosphoric acid; (C9H7N)CH2P04H									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.15M	U		K1=1.18 B(ZnH-1L)=-5.53	1989AKa (70520)	3808
*****									
C10H10N2 L CAS 26628-04-2 (3300)									
8-Aminoquinaldine (8-Amino-2-methylquinoline)									

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

Zn++ gl oth/un 25°C 0.10M U K1=1.6 1964PCa (70525)3809  
\*\*\*\*\*

C10H10N2O HL CAS 70125-17-6 (3906)  
2-Aminomethyl-8-hydroxyquinoline;

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

Zn++ gl diox/w 25°C 50% U K1=12.31 B2=23.11 1967SFa (70532)3810  
\*\*\*\*\*

C10H10N2O HL CAS 37920-81-3 (3323)  
8-Hydroxy-2,4-dimethylquinazoline;

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

Zn++ gl diox/w 20°C 50% U K1=7.77 B2=14.78 1954IRa (70538)3811  
Medium: 50% dioxan, 0.3 M NaClO4  
\*\*\*\*\*

C10H10N2O2 HL (6192)  
Benzimidazole-2-propanoic acid; C7H5N2.CH2.CH2.COOH

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

Zn++ gl alc/w 30°C 50% U M K1=3.40 B2=6.21 1987RGa (70543)3812  
K(ZnA+L)=4.41  
K(ZnB+L)=3.02  
K(Zn(bpy)+L)=3.12

Medium: 50% EtOH, 0.1 M NaClO4. H2A=oxalic acid, H2B=malonic acid  
\*\*\*\*\*

C10H10N2O2S L CAS 4939-30-4 (1676)  
8-(Methanesulfonylamido)quinoline;

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

Zn++ gl diox/w 30°C 75% U K1=10.1 B2=19.7 1984NYa (70547)3813  
\*\*\*\*\*

C10H10N2O3S H2L CAS 76045-30-2 (7218)  
Desferri-ferrithiocin,  
2-(3-Hydroxypyridin-2-yl)-4-methyl-4,5-dihydrothiazole-4-carboxylic acid;

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

Zn++ gl KNO3 25°C 0.10M C K1=9.28 B2=16.69 1990ARa (70553)3814  
\*\*\*\*\*

C10H10N4 L CAS 38956-80-8 (8371)  
3-Phenyl-6-hydrazinopyridazine;

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

Zn++ gl NaCl 37°C 0.15M U K1=3.79 1984AMb (70587)3815  
B(ZnH-1L)=-1.56

\*\*\*\*\*

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  
-----

Zn++ gl alc/w 30°C 50% C M 1999MBc (70601)3816

B(Zn(gly)L)=9.02

B(ZnAL)=9.27

B(Zn(met)L)=9.42

B(ZnH-1(gly)L)=-0.04

In 50% v/v EtOH/H2O, 0.10 M NaNO3. B(ZnH-2(gly)L)=-0.04; B(ZnH-1AL)=1.91,

B(ZnH-2AL)=-8.37; B(ZnH-1(met)L)=1.22, B(ZnH-2(met)L)=-6.78. A: Beta-ala

-----  
Zn++ gl diox/w 30°C 50% U K1=2.76 B2= 5.60 1993MBc (70602)3817

\*K(ZnL)=-9.36

\*K(ZnL2)=-7.17

\*K(Zn(OH)L2)=-9.85

Medium: 50% v/v dioxane/H2O, 0.10 M NaNO3.

-----  
Zn++ gl alc/w 25°C 50% U M 1986SKe (70603)3818

K(ZnA+L)=1.84

Medium: 50% v/v EtOH/H2O, 0.1 M NaCl. H3A=nitrolotrientanoic acid

\*\*\*\*\*  
C10H10N4O4S2 H2L CAS 78441-02-8 (2880)

N-Methylindol-2,3-dione-3-thiosemicarbazone-5-sulfonic acid;

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

Zn++ gl KNO3 37°C 0.15M M K1=5.57 B2=11.36 1982STa (70622)3819

\*\*\*\*\*  
C10H10O5 HL CAS 13522-48-0 (4722)

3-Mercapto-1-phenylbut-2-en-1-one; C6H5.CO.CH:CH.C(SH).CH3

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

Zn++ gl diox/w 30°C 75% U I K1=6.85 B2=13.35 1969LSa (70630)3820

Medium: 75% acetone, 0.1 M NaClO4

In 0.017 NaClO4, 74.5% dioxan: K1=8.23, K2=8.27

-----  
Zn++ gl diox/w 30°C 75% U K1=9.48 B2=18.77 1969UTa (70631)3821

Medium: 75% v/v dioxan, 0.01 M Me4NI

\*\*\*\*\*  
C10H10O5 HL CAS 92897-11-5 (4723)

4-Mercapto-4-phenylbut-3-en-2-one; CH3.CO.CH:C(SH).C6H5

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

Zn++ gl diox/w 30°C 75% U K1=9.57 B2=19.02 1969UTa (70644)3822

Medium: 75% v/v dioxan, 0.01 M Me4NI

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=10.18	1977AHb (70688)	3823
Zn++	dis	NaClO4	25°C	1.0M	C	M	K1=4.15    B2= 7.70	1977SMe (70689)	3824

K(ZnL2(org)+A(org))=3.76

Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylphosphine oxide (A). K(Zn+2HL(org)=ZnL2(org)+2H)=-11.36.

Zn++	cal	non-aq	30°C	100%	U	M		1973DGb (70690)	3825
------	-----	--------	------	------	---	---	--	-----------------	------

K(ZnL2+py)=2.99

Medium: benzene

Zn++	gl	diox/w	30°C	75%	U		K1=9.62    B2=17.90	1955H0a (70691)	3826
------	----	--------	------	-----	---	--	---------------------	-----------------	------

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C10H10O3                      HL                      CAS 16636-62-7      (3298)  
2-Hydroxybenzoylacetone; HO.C6H4.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=8.51    B2=16.10	1955H0a (70796)	3827

\*\*\*\*\*

C10H10O4                      H2L                      CAS 616-75-1      (4700)  
Benzylmalonic acid; HOOC.CH(CH2.C6H5).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	oth/un	?	?	U		K1=2.41	1968KKa (70817)	3828

\*\*\*\*\*

C10H10O6                      H2L                      CAS 5411-14-3      (2394)  
1,2-Phenylenedioxodiethanoic acid; C6H4(O.CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=2.0	1968SMb (70840)	3829

\*\*\*\*\*

C10H11NO5                      L                      (2831)  
Acetothioacetanilide; CH3.CO.CH2.CS.NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	diox/w	25°C	50%	U		K1=6.40	1985NBa (70876)	3830

Data also for 4-methoxy, 4-methyl and 4-chloro analogues

\*\*\*\*\*

C10H11NO2                      HL                      (4730)  
N-Phenyl-(trans-2-butenyl)hydroxamic acid; CH3.CH:CH.CO.N(C6H5).OH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  diox/w 35°C 50% U          K1=7.79  B2=13.90  1970BTc (70921)3831
*****
C10H11N02S          HL                      CAS 42607-21-6 (8331)
2-Phenylthiazolidine-4-carboxylic acid;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3   30°C 0.10M U TIH    K1=4.84  B2= 8.86  1983Rkb (70925)3832
At I=0.0, K1=4.98, K2=4.13. Data for 25-50 C. DH(K1)=-28.2 kJ mol-1,
DS(K1)=17.4 J K-1 mol-1; DH(K2)=-23.4, DS(K2)=7.9.
*****
C10H11N03          H2L                      CAS 34208-97-4 (4731)
N-(Salicylidene)-alanine; HO.C6H4.CH:N.CH(CH3).COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KCl    25°C 0.50M U          K1=8.78  B2=14.67  1971LLa (70933)3833
*****
C10H11N03          H2L                      CAS 34295-85-7 (4732)
N-(Salicylidene)-beta-alanine; HO.C6H4.CH:N.CH2.CH2.COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KCl    25°C 0.50M U          K1=7.58  B2=14.56  1971LLa (70935)3834
*****
C10H11N03S          H2L  Benzoylcysteine CAS 60199-84-0 (2580)
N-Benzoyl-2-amino-3-mercaptopropionic acid; C6H5.CO.NHCH(COOH)CH2SH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  NaNO3  25°C 0.15M U          K(Zn+2HL)=9.90
                                     K(ZnHL2+H)=7.14
                                     K(ZnL2+H)=9.42
-----

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-----
Zn++       gl  NaNO3  25°C 0.15M U          K1=6.50  B2=12.60  1975ZNa (70952)3836
                                     K3=5.40
*****
C10H11N04          H2L                      CAS 102963-05-0 (3325)
2,2'-Carboxyanilinopropanoic acid; HOOC.C6H4.NH.CH(CH3).COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KCl    20°C 0.10M U          K1=2.85          1958ISa (70959)3837
*****
C10H11N04          H2L                      CAS 1137-73-1 (2567)
N-Phenyliminodiethanoic acid; C6H5.N(CH2.COOH)2
-----

```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	cal	KNO3	25°C	0.1M	C	H		1991ANa (70980)	3838
DH(K1)=18.0 kJ mol <sup>-1</sup>									
Zn++	cal	KNO3	25°C	0.10M	U		K1=3.27	1991Aa (70981)	3839
DH(K1)=17.99 kJ mol <sup>-1</sup> , DS(K1)=121.34 J K <sup>-1</sup> mol <sup>-1</sup>									
Zn++	gl	oth/un	25°C	0.10M	U		K1=3.4 B2=5.8	1959SYc (70982)	3840
Zn++	gl	KCl	30°C	0.10M	U		K1=3.7 B2=6.0	1957TBc (70983)	3841
Zn++	gl	KCl	20°C	0.10M	U		K1=3.22	1955SAa (70984)	3842

\*\*\*\*\*  
C10H11NO4 H2L Salicylalanine CAS 5853-90-7 (6174)  
N-Salicylyl-2-aminopropanoic acid; HO.C6H4.CO.NH.CH(CH3)COOH  
\*\*\*\*\*

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	50%	U		K1=3.96 B2= 7.71	1989MSi (71014)	3843
							B(ZnH-1L)=-5.48		
							K(Zn+OH+L)=8.52		

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.

\*\*\*\*\*  
C10H11NO5 H3L CAS 100844-86-8 (2108)  
N-(2-Hydroxyphenyl)iminodiethanoic acid; HO.C6H4.N(CH2.COOH)2  
\*\*\*\*\*

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	oth/un	?	?	U		K1=9.77	1968TRc (71032)	3844
							K(Zn+HL)=3.95		

\*\*\*\*\*  
C10H11NO5 H3L CAS 6386-78-3 (2834)  
N-(4-Hydroxyphenyl)-iminodiethanoic acid; HO.C6H4.N(CH2.COOH)2  
\*\*\*\*\*

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=8.81	1980TAa (71052)	3845
							K(Zn+HL)=6.86		

\*\*\*\*\*  
C10H11NO5S H2L (3929)  
N-(2-Thenoylmethyl)iminodiethanoic acid; C4H3S.CO.CH2.N(CH2.COOH)2  
\*\*\*\*\*

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=7.35 B2=11.61	1965AUa (71057)	3846

\*\*\*\*\*  
C10H11N3 L CAS 49612-00-2 (3301)  
2-Hydrazino-4-methylquinoline;  
\*\*\*\*\*



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	22°C	0.10M	U		K1=5.1 B2=9.2	1957FEa (71077)	3847
*****									
C10H11N3O3S		HL					CAS 723-46-6	(8374)	
4-Amino-N-(5-methyl-3-isoxazolyl)-benzenesulfonamide;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	M	M	K1=2.04 B(Zn(phen)L)=2.65	1995SKa (71083)	3848
*****									
C10H11O2Cl		HL					CAS 77103-89-0	(6319)	
5-Chloro-2-hydroxybutyrophenone; (HO)(Cl)C6H3.CO.CH2.CH2.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	40°C	75%	U		K1=7.20 B2=13.88	1974PSc (71102)	3849
Medium: 75% dioxan/H2O, 0.1 M NaClO4									
*****									
C10H11O4As		H2L					CAS 51525-18-9	(3907)	
As-Phenylarsinodiethanoic acid; C6H5.As(CH2.COOH)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	20°C	0.10M	U		K1=1.4	1964PIa (71124)	3850
*****									
C10H11O4P		H2L					CAS 58942-13-5	(7014)	
Phenylphosphino-P,P-diethanoic acid, Diphenylphosphinediethanoic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=1.69	1979POa (71135)	3851
*****									
C10H12N2		L				Tolazoline	CAS 59-97-2	(1036)	
2-Benzyl-2-imidazoline; C6H5.CH2.C3H5N2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=2.00 B2=3.86 B3=5.64 B4=7.30 B5=8.85	1983LWa (71153)	3852
*****									
C10H12N2O		HL					CAS 155055-22-4	(8339)	
3-(Phenylimino)-2-butanone oxime;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

Zn++ gl alc/w 30°C 50% U T K1=8.05 B2=14.73 1993Hmd (71162)3853  
 Medium: 50% v/v MeOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.  
 For 2-OH deriv., K1=6.46, for 3-OH, K1=6.54, for 4-OH, K1=6.98.

\*\*\*\*\*

C10H12N2O2 HL CAS 70263-59-1 (8479)  
 2-(Phenylhydrazono)butanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	30°C	40%	C TI		K1=3.01 B2= 5.53	1997RRd (71173)	3854

Medium: 40% v/v EtOH/H2O, 0.10 M KNO3. Also data for 50-70% v/v EtOH/H2O, 0.1 M KNO3, and for 20-50 C.

\*\*\*\*\*

C10H12N2O3S HL CAS 93100-65-3 (6199)  
 2-(2-Pyrrolideneamino)benzene sulfonic acid; C4H7N:N.C6H4.HSO3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U T H		K1=6.27	1987RDb (71208)	3855

35 C:K=6.61, 45 C:6.83. DH=41.73 kJ mol<sup>-1</sup>, DS=260 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C10H12N2O4 H2L CAS 16598-05-3 (967)  
 2-Pyridylmethyliminodiethanoic acid; C5H4N.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	20°C	0.10M	C H		K1=10.65	1981ANb (71231)	3856

DH(K1)=-13.4 kJ mol<sup>-1</sup> DS=158.2 J K<sup>-1</sup> mol<sup>-1</sup>  
 additional method: exchange equilibria and ion selective electrode

Zn++	gl	KNO3	25°C	0.10M	C		K1=8.78 B2=15.61	1975IPa (71232)	3857
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Zn++	gl	KNO3	20°C	0.10M	U		K1=10.87	1963IFc (71233)	3858
------	----	------	------	-------	---	--	----------	-----------------	------

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C10H12N2O4 H2L CAS 91856-13-2 (8436)  
 DL-N-(4-Aminophenyl)aspartic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.50M	C		K1=2.03	1984RFb (71288)	3859

\*\*\*\*\*

C10H12N2O4 H2L PAA CAS 41203-01-4 (8132)  
 N-(2-Pyridinylmethyl)-aspartic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	M		K1=16.89	2002YKa (71294)	3860

For N-6-methyl-2-pyridinylmethyl analogue: K1=7.96.

\*\*\*\*\*

C10H12N2O4 HL (6004)

N-Benzyloxycarbonylglycyl hydroxamic acid; C6H5.CH2.O.CO.NH.CH2.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U			K1=4.7 B2=8.6	1987CSb (71298)	3861
*****										
C10H12N2O5S		HL		(6278)						
2-Benzenesulfonamidossuccinamic acid; C6H5.SO2.NH.CH(CO.NH2).CH2.COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	50%	U			K1=6.02 B2=11.87	1978GMc (71311)	3862
*****										
C10H12N2O8		H2L		Orotidine		CAS 314-50-1 (6781)				
Uridine-6-carboxylic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	70%	M			K1=1.64	1990BSb (71318)	3863
Medium: 70% v/v DMSO/H2O, 0.1 M NaNO3										
*****										
C10H12N4O		L		CAS 16347-32-3 (2483)						
9-(Tetrahydro-2-pyran-1-yl)purine;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	1.00M	U			K1=0.5	1983ALa (71321)	3864
*****										
C10H12N4O4		L		Nebularine		CAS 550-33-4 (2172)				
Purine-9-beta-D-ribofuranoside;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	1.00M	U			K1=0.7	1981LAc (71328)	3865
*****										
C10H12N4O5		HL		Inosine		CAS 58-63-9 (2344)				
Hypoxanthine-9-beta-D-ribofuranoside;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	M	M			1994SIa (71371)	3866
							K(ZnA+L)=5.7			
A:1-(9-Acridine)-1,4,7,10-tetraazacyclododecane										
Zn++	gl	NaClO4	25°C	0.10M	M	M			1993SKe (71372)	3867
							K(ZnA+L)=4.2			
A:1,4,7,10-Tetraazacyclododecane.										

Zn++	gl	KNO3	35°C	0.10M	U	M		K1=2.31	1991RRa (71373)	3868
							B(ZnL(Ala))=7.23			

B(ZnLA)=7.07  
 B(ZnL(norVal))=7.24  
 B(ZnL(norLeu))=7.45

HA=2-aminobutanoic acid

-----  
 Zn++ gl NaNO3 37°C 0.15M U K1=2.77 1990CIa (71374)3869  
 -----

Zn++ gl KNO3 35°C 0.10M U M K1=2.31 1990RRb (71375)3870  
 B(Zn(Ala)L)=7.23  
 B(Zn(Phe)L)=7.83  
 B(Zn(Trp)L)=7.97  
 -----

Zn++ gl KNO3 25°C 0.10M C T H K1=3.04 1983RRd (71376)3871  
 Data for 25-45 C. DH(K1)=-2.76 kJ mol<sup>-1</sup>, DS(K1)=56.1 J K<sup>-1</sup> mol<sup>-1</sup>.  
 -----

Zn++ gl NaClO4 25°C 1.0M U K1=2.4 1981LVa (71377)3872  
 K(Zn+HL)=0.7  
 K(Zn+HL=ZnL+H)=-6.3  
 -----

Zn++ nmr NaNO3 27°C 0.10M U 1981SHa (71378)3873  
 K(Zn+HL)=0.31  
 -----

\*\*\*\*\*  
 C10H12N4O6 H2L Xanthosine CAS 5968-90-1 (1176)  
 3,9-Dihydro-9-ribofuranosyl-1H-purine-2,6-dione;  
 -----

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

Zn++ gl KNO3 35°C 0.10M U M K1=1.43 1991RRa (71446)3874  
 K(Zn(Ala)+L)=4.82  
 K(ZnA+L)=4.69  
 K(Zn(norVal)+L)=4.86  
 K(Zn(norLeu)+L)=5.14  
 -----

HA=2-aminobutanoic acid

-----  
 Zn++ gl KNO3 25°C 0.10M U M 1990RRa (71447)3875  
 B(ZnHL(His))=9.14  
 B(ZnHL(histamine))=9.18  
 B(ZnH2L(catechol))=10.54  
 K(Zn(Gly)+H+L)=2.86  
 -----

Zn++ gl KNO3 35°C 0.10M U M K1=1.43 1990RRb (71448)3876  
 B(Zn(Ala)L)=4.82  
 B(Zn(Phe)L)=5.31  
 B(Zn(Trp)L)=5.59  
 -----

Zn++ gl NaNO3 25°C 0.10M C 1989KTa (71449)3877  
 K(Zn+H-1L)=1.32  
 -----

Zn++ gl KNO3 35°C 0.10M C M 1985RRh (71450)3878  
 K(Zn+HL)=2.21  
 -----

K(Zn(gly)+HL)=2.8

K(Zn+HL+his)=9.05

K(Zn+HL+HA)=10.28

K(Zn+HL+B)=8.46. H2A is catechol, H2B is oxalic acid.

Zn++ gl KNO3 35°C 0.10M U M 1983RRb (71451)3879

K(Zn+HL)=2.21

K(Zn+2HL)=5.25

K(ZnGly+H2L=ZnHLGly+H)=2.8

Zn++ gl KNO3 25°C 0.10M U T H 1983RRc (71452)3880

K(Zn+2HL)=5.21

DH=-11.7kJ mol<sup>-1</sup>. At 5 C: K=6.15; 35 C: 5.25; 45 C: 5.53

Zn++ gl KNO3 45°C 0.10M U M 1979RRb (71453)3881

K(Zn+HL+TetraMeen)=5.37

K(Zn+HL+Sulphosalicylate)=2.33

Zn++ gl KNO3 45°C 0.10M U M 1979RRb (71454)3882

K(Zn(bpy)+HL)=2.89

K(Zn(phen)+HL)=2.58

Zn++ gl KNO3 25°C 0.10M U T 1978RRa (71455)3883

K(Zn+HL)=2.26

Zn++ gl oth/un 20°C 0.01M U K1=2.4 1953ALa (71456)3884

C10H12N4O6 HL CAS 40281-74-1 (3910)

Purin-6-one 9-riboside N(1)-oxide (Inosine N(1)-oxide)

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

Zn++ sp NaClO4 25°C 0.10M U K1=3.60 1965SIa (71505)3885

C10H12N6O4 HL (6488)

N6(Threoninocarbonyl)adenine; C5H3N4.NH.CO.NH.CH(COOH).CH(OH).CH3

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

Zn++ gl KCl 25°C 0.20M U K1=4.68 B2=9.78 1990VJa (71517)3886

B(ZnH-1L)=0.24

C10H12O2 HL CAS 1901-78-6 (4701)

2-Hydroxybutyrophenone; HO.C6H4.CO.CH2.CH2.CH3

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

Zn++ gl KNO3 40°C 0.10M U K1=6.0 1973SPc (71532)3887

C10H12O2 HL CAS 1946-74-3 (202)

## 3-Isopropyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	dis	NaClO4	25°C	0.10M	U		K1=6.18 K3=3.44	B2=11.56	1962DYa (71555)3888
Zn++	dis	NaClO4	25°C	0.10M	U		K1=6.18 B3=15.00	B2=11.56	1958DYa (71556)3889
Zn++	gl	alc/w	25°C	50%	U		K1=5.14	B2=8.04	1955PHa (71557)3890
Medium: 50% EtOH									
Zn++	gl	diox/w	30°C	50%	U		K1=8.7	B2=16.2	1954BFb (71558)3891
Zn++	gl	diox/w	30°C	50%	U		K1=8.7 B3=19.3	B2=15.7	1954BFb (71559)3892

\*\*\*\*\*

C10H12O2 HL CAS 499-44-5 (3303)

## 4-Isopropyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	dis	non-aq	25°C	100%	C	M			1997SNa (71627)3893
							K(Zn+2L=ZnL2(org))=13.9		

Method: solvent extraction from 0.10 M NaNO3 into CHCl3.

K is for: Zn(aq)+2L(aq)=ZnL2(org). Data for ternary complexes with TOPO.

\*\*\*\*\*

C10H12O2 HL CAS 1821-12-1 (5541)

## 4-Phenylbutanoic acid; C6H5.CH2.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KN03	25°C	0.10M	C	I M	K1=1.09		1985BSd (71637)3894
							K(Zn(phen)+L)=1.08		

In 50% dioxan: K1=2.46, K(Zn(phen)+L)=2.45. In 50% EtOH: K1=1.91, K=2.03

\*\*\*\*\*

C10H12O3 HL CAS 13794-14-4 (8123)

## 2-Phenoxybutanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	none	25°C	0.15M	C	T H	K1=0.6		1990AMb (71645)3895
Data for 10-45 C									

\*\*\*\*\*

C10H13N L CAS 100190-73-6 (302)

## 2-(Pent-4-enyl)pyridine; C5H4N.CH2.CH2.CH2.CH:CH2

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

Zn++ gl KNO3 25°C 0.10M U K1=1.5 1974ILa (71689)3896  
\*\*\*\*\*

C10H13NOS HL CAS 99075-17-9 (3339)  
2-Mercapto-N-phenylbutyramide (2-Mercaptobutyranilide)

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

Zn++ gl diox/w 30°C 75% U K1=10.56 B2=19.65 1961MAe (71701)3897  
\*\*\*\*\*

C10H13NOS HL CAS 34282-28-5 (3338)  
N-(Mercaptoacetyl)-2,6-dimethylaniline; (CH3)2.C6H3.NH.CO.CH2.SH

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

Zn++ gl diox/w 30°C 75% U K1=10.28 B2=19.58 1961MAe (71707)3898  
\*\*\*\*\*

C10H13NO2 HL (4743)  
N-Phenyl-n-butyrohydroxamic acid; CH3.CH2.CH2.CO.N(C6H5).OH

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

Zn++ gl diox/w 25°C 50% U K1=7.72 B2=14.11 1972STf (71718)3899  
\*\*\*\*\*

C10H13NO3 H2L Salicyl-alanine CAS 57471-91-7 (6944)  
2-(N-(2-Hydroxybenzyl))aminopropanoic acid; HO.C6H4.CH2.NH.CH(CH3)COOH

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

Zn++ gl KCl 25°C 0.10M U K1=8.75 B2=13.24 1975RIa (71734)3900  
B(ZnHL2)=22.34  
K(Zn+OH+L)=13.05

Data are for L-ligand. For rac-ligand, K1=8.75, B2=13.20,  
B(ZnHL2)=22.43, K(Zn+OH+L)=13.05.

\*\*\*\*\*

C10H13NO3S HL (3340)  
N-(Mercaptoacetyl)-2,5-dimethoxyaniline; HS.CH2.CO.NH.C6H3(OCH3)2

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

Zn++ gl diox/w 30°C 75% U K1=10.04 B2=18.70 1961MAe (71750)3901  
\*\*\*\*\*

C10H13NO5S H2L CAS 93474-55-6 (8748)  
N-(Phenylsulfonyl)-L-threonine;

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

Zn++ gl alc/w 25°C 50% C T H 1987MDe (71777)3902  
K(Zn+2HL=ZnL2+2H)=9.04

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3. Data for 35, 45 C.  
Enthalpy and entropy data.

\*\*\*\*\*

C10H13N2O11P H3L Orotidylic acid CAS 68244-58-6 (6665)  
Orotidine-5'-monophosphoric acid, uridine-5-carboxylic acid-5-monophosphoric acid;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl NaNO3 25°C 0.10M M K1=2.50 1991BSc (71785)3903

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C10H13N4O8P H3L IMP CAS 131-99-7 (843)

Inosine-5'-monophosphoric acid;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ cal R4N.X 25°C 0.10M C 2002HTb (71840)3904

Medium: 0.10 M (CH3)4NBr. DH(K1)=-3.7 kJ mol<sup>-1</sup>, DS(K1)=36 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Zn++ gl KNO3 25°C 0.10M C M K1=2.57 2001AAa (71841)3905

Also data for ternary complexes with MOPSO, TAPSO and ACES.

-----  
Zn++ gl KNO3 25°C 0.10M C T HM 2000RNb (71842)3906

K(Zn+HL)=2.97

K(Zn+HL+A)=6.90

K(Zn+HL+C)=7.00

Data for 35 and 45 C. HA is DL-ala-ala, HC is DL-ala-phe. DH(ZnHLA)=-21.1 kJ mol<sup>-1</sup>, DS(ZnHLA)=61 J K<sup>-1</sup> mol<sup>-1</sup>; DH(ZnHLC)=-18.1, DS(ZnHLC)=73.

-----  
Zn++ gl KNO3 35°C 0.10M U M 1998RVb (71843)3907

K(Zn+H2L=ZnHL+H)=2.83

K(Zn+H2L+HA=ZnHLA+2H)=8.01

K(Zn+H2L+HC=ZnHLC+2H)=8.53

K(Zn+H2L+HD=ZnHLD+2H)=8.72

HA is alanine, HC is phenylalanine, HD is tryptophan.

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Zn++ gl NaNO3 25°C 0.10M M 1994SMb (71844)3908

K(Zn+HL)=2.54

\*\*\*\*\*

C10H13N4O9P H3L (3930)

Inosine-5'-monophosphoric acid N(1)-oxide;

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

Zn++ sp NaClO4 25°C 0.10M U 1965SIa (71880)3909

K(Zn+HL)=3.83

\*\*\*\*\*

C10H13N5O4 HL AZT CAS 30516-87-1 (6865)

3'-Azido-3'-deoxythymidine, azidothymidine;

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

Zn++ gl NaNO3 25°C 0.10M M M 1994SIa (71899)3910



$$K(\text{ZnA}+\text{L})=7.2$$

A:1-(9-Acridine)-1,4,7,10-tetraazacyclododecane

Zn++ gl NaCl04 25°C 0.10M M M 1993SKe (71900)3911

$$K(\text{ZnA}+\text{L})=5.6$$

A:1,4,7,10-Tetraazacyclododecane.

\*\*\*\*\*

C10H13N5O4 L Adenosine CAS 58-61-7 (2154)

Adenosine, Adenine-9-beta-D-ribofuranoside;

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

Zn++ gl NaCl04 20°C 0.10M U K1=2.51 1995GLa (71927)3912  
B(ZuH-2L)=-14.00

Zn++ gl NaCl04 25°C 1.00M U K1=0.2 1981LAc (71928)3913

Zn++ nmr NaNO3 27°C 0.10M U K1=-0.3 1981SHa (71929)3914

Zn++ nmr non-aq 36°C 100% U K1=0.19 1968WLa (71930)3915  
Medium: (CH3)2SO. 21 C, K1=0.01

Zn++ sp oth/un 20°C var U K1=-0.28 1964SBb (71931)3916  
Medium: 0.5-3 M Zn(ClO4)2

Zn++ gl KCl 20°C 0.10M U K1=1.51 1957WSa (71932)3917

\*\*\*\*\*

C10H13N5O5 HL Guanosine CAS 118-00-3 (1402)

2-Aminopurin-6-one-9-riboside;

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

Zn++ gl KNO3 25°C 0.10M C T HM 1988KRa (71989)3918

$$K(\text{Zn}+\text{HL})=3.13$$

$$K(\text{ZnHL}+\text{HL})=3.36$$

Also data at 15, 35 and 45 C. DH(ZnHL)=-11; DS=25. DH(ZnH2L2)=-13.9; DS=18.

Also ternary complexes with bpy, phen and 5-sulfosalicylic acid

Zn++ gl NaCl04 25°C 1.0M U 1981LVa (71990)3919  
K(Zn+HL=ZnHL)=0.8

Zn++ nmr NaNO3 27°C 0.10M U 1981SHa (71991)3920  
K(Zn+HL)=0.80

Zn++ nmr non-aq 21°C 100% U 1973SFa (71992)3921  
K(Zn+HL)=0.33

Medium: (CH3)2SO

Zn++ nmr non-aq 36°C 100% U 1968WLa (71993)3922  
K(Zn+HL)=0.25

Medium: (CH<sub>3</sub>)<sub>2</sub>SO

-----  
Zn++ gl oth/un 20°C 0.01M U K1=4.6 1953ALa (71994)3923  
\*\*\*\*\*  
C10H13N5O5 L CAS 116-92-9 (2174)  
Adenosine-N'-oxide;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl none 25°C 0.0 U K1=7.50 1960PEb (72029)3924  
\*\*\*\*\*  
C10H14N2 L CAS 57404-42-9 (6274)  
cis-2,3-Diamino-tetralin(1,2,3,4-tetrahydronaphthalene);  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO<sub>3</sub> 25°C 0.10M C K1=4.95 B2=9.69 1974YKa (72048)3925  
\*\*\*\*\*  
C10H14N2 L CAS 57404-43-0 (6273)  
trans-2,3-Diamino-tetralin(1,2,3,4-tetrahydronaphthalene);  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KCl 25°C 0.10M C K1=5.39 B2=10.21 1974YKa (72052)3926  
\*\*\*\*\*  
C10H14N<sub>2</sub>O L CAS 7006-13-5 (4746)  
N,N-Diethylpicolinamide; C<sub>5</sub>H<sub>4</sub>N.CO.N(CH<sub>2</sub>.CH<sub>3</sub>)<sub>2</sub>  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ oth oth/un 0°C ? U K1=1.10 B2=1.85 1971KAc (72068)3927  
Method: freezing point depression  
\*\*\*\*\*  
C10H14N<sub>2</sub>O<sub>4</sub>S H<sub>2</sub>L (6995)  
2-Amino-4-methylthiazolyl-N,N-di(propanoic acid); CH<sub>3</sub>.C<sub>3</sub>H<sub>2</sub>NS.N(CH<sub>2</sub>CH<sub>2</sub>COOH)<sub>2</sub>  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaNO<sub>3</sub> 25°C 0.15M U K1=3.12 1997NGa (72078)3928  
-----  
Zn++ gl NaNO<sub>3</sub> 25°C 0.15M U K1=0.50 1995NGa (72079)3929  
\*\*\*\*\*  
C10H14N<sub>2</sub>O<sub>6</sub> L alpha-Thymidine CAS 4449-43-8 (695)  
Thymine-2-desoxyribofuranosyl-5-methyluracil;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaNO<sub>3</sub> 25°C 0.10M M M 1994SIa (72100)3930  
K(ZnA+L)=7.2  
A:1-(9-Acridine)-1,4,7,10-tetraazacyclododecane

-----  
Zn++ gl NaClO4 25°C 0.10M M M 1993SKe (72101)3931  
K(ZnA+HL)=5.6

A:1,4,7,10-Tetraazacyclododecane.

\*\*\*\*\*

C10H14N2O7 H3L CAS 95175-15-8 (5705)

2,5-Diazacyclohexanon-1-2(butane-1,4-dioic)-6-ethanoic acid;

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

Zn++ gl KNO3 25°C 0.10M U K1=2.52 1989VZb (72117)3932

\*\*\*\*\*

C10H14N4B- L (7239)

Bis(3,5-dimethylpyrazol-1-yl)borate; ((CH3)2C3H)2BH2-

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

Zn++ dis non-aq 25°C 100% U 1996KSa (72126)3933

K(Zn+2HL=ZnL2(org)+2H)=2.53

By solvent extraction into CHCl3

\*\*\*\*\*

C10H14N5O6P H2L dAMP CAS 653-63-4 (5782)

Deoxyadenosine-5'-monophosphoric acid;

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

Zn++ nmr oth/un 25°C 0.20M U M 1985PGa (72140)3934

Keff(ZnA+L)=2.95

Keff(ZnAL+L)=0

A=Tetrakis(4-N-methylpyridyl)porphyrin. pH=6.9

\*\*\*\*\*

C10H14N5O6PS H2L AMPS CAS 19341-57-2 (8152)

Adenosine-5'-monothiophosphoric acid, 5-Thioadenylic acid;

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

Zn++ gl NaNO3 25°C 0.10M M K1=2.52 1997SSg (72143)3935

\*K(ZnL)=-6.8

-----  
Zn++ gl KNO3 25°C 0.10M U K1=2.52 1995SSe (72144)3936

\*\*\*\*\*

C10H14N5O7P H2L AMP-2 CAS 81012-86-4 (2437)

Adenosine-2'-monophosphoric acid, 2-Adenylic acid;

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

Zn++ gl R4N.X 25°C 0.10M C T K1=2.69 1991SMa (72170)3937

IUPAC evaluation

-----  
Zn++ gl NaNO3 25°C 0.10M U K1=2.10 1989MSf (72171)3938

-----  
 Zn++ gl KNO3 40°C 0.10M U T H K1=2.60 1967TMf (72172)3939  
 K1=2.72(0.4 C),2.68(12 C),2.64(25 C). At 25 C: DH(K1)=-5.0 kJ mol<sup>-1</sup>, DS=33

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C10H14N5O7P H2L AMP-3 CAS 84-21-9 (2438)  
 Adenosine-3'-monophosphoric acid, 3-Adenylic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	R4N.X	25°C	0.10M	C	TI	R K1=2.61	1991SMa (72214)3940	
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IUPAC evaluation

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Zn++	gl	NaNO3	25°C	0.10M	U		K1=1.98	1989MSf (72215)3941	
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Zn++	gl	KNO3	40°C	0.10M	U	T H	K1=2.56	1967TMf (72216)3942	
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K1=2.65(0.4 C),2.62(12 C),2.60(25 C). At 25 C: DH(K1)=-4.6 kJ mol<sup>-1</sup>, DS=34 J

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Zn++	ix	NaClO4	25°C	0.10M	U		K1=2.48	1966DTa (72217)3943	
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Zn++	gl	KNO3	25°C	0.10M	U		K1=2.60	1962TMa (72218)3944	
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Zn++	gl	KCl	25°C	0.10M	U		K1=2.69	1958WSa (72219)3945	
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C10H14N5O7P H2L AMP-5 CAS 18422-05-4 (842)  
 Adenosine-5'-monophosphoric acid, 5-Adenylic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	NaNO3	25°C	0.10M	M		K1=2.38	2003BSa (72349)3946	
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K(ZnL+H)=4.63  
 K(Zn+HL)=0.8

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Zn++	cal	R4N.X	25°C	0.10M	C			2002HTb (72350)3947	
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Medium: 0.10 M (CH3)4NBr. DH(K1)=1.0 kJ mol<sup>-1</sup>, DS(K1)=49 J K<sup>-1</sup> mol<sup>-1</sup>.

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Zn++	gl	KNO3	25°C	0.10M	C		K1=2.72	2001AOa (72351)3948	
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Zn++	gl	KNO3	25°C	0.10M	C	M	K1=2.72	2000ADa (72352)3949	
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Data for ternary complexes with TAPSO and DIPSO.

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Zn++	gl	NaNO3	25°C	0.10M	C	M	K1=2.79	2000KHa (72353)3950	
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K(ZnL+A)=2.86  
 B(ZnLA)=5.65

H2A=salicylhydroxamic acid.

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Zn++	gl	NaNO3	25°C	0.10M	C	M	K1=2.79	2000KHb (72354)3951	
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K(ZnA+L)=2.94  
 B(ZnAL)=10.44

H2A=N-(2-acetamido)iminodiacetic acid.

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Zn++ gl NaNO3 25°C 0.10M M K1=2.38 1996SSd (72355)3952

Zn++ gl R4N.X 25°C 0.10M C T K1=2.76 1991SMa (72356)3953  
IUPAC evaluation

Zn++ gl NaNO3 25°C 0.10M U K1=2.38 1989MSf (72357)3954

Zn++ gl NaNO3 25°C 0.10M C K1=2.38 1988SMb (72358)3955

Zn++ ix NaClO4 18°C 0.05M U K1=3.6 1978K0c (72359)3956

Zn++ gl diox/w 25°C 10% U M K1=2.40 1967SBc (72360)3957  
K(Zn(bpy)+L)=2.40

Medium: 10% dioxan, 0.1 M NaClO4

Zn++ gl KNO3 40°C 0.10M U T H K1=2.68 1967TMf (72361)3958  
K1=2.80(0.4 C), 2.76(12 C), 2.72(25 C). At 25 C: DH(K1)=-5.0 kJ mol<sup>-1</sup>, DS=34 J

Zn++ gl NaClO4 25°C 0.10M U K1=2.23 1964SBa (72362)3959

Zn++ gl KNO3 25°C 0.10M U K1=2.72 1962TMa (72363)3960

\*\*\*\*\*  
C10H14N5O7P H2L dGMP CAS 902-04-5 (5781)  
Deoxyguanosine-5'-monophosphoric acid;

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

Zn++ gl NaNO3 25°C 0.10M U K1=2.99 1998SSc (72511)3961

Zn++ nmr oth/un 25°C 0.20M U M 1985PGa (72512)3962

Keff(ZnA+L)=2.81  
Keff(ZnAL+L)=0.60

A=Tetrakis(4-N-methylpyridyl)porphyrin. pH=6.9

\*\*\*\*\*

C10H14N5O8P H2L CAS 4061-78-3 (3931)  
Adenosine-5'-monophosphoric acid N(1)-oxide;

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

Zn++ gl NaClO4 25°C 0.10M U 1964SBa (72518)3963

K(Zn+HL)=2.20  
K(ZnL+H)=6.90

By spectrophotometry: K1=7.79

\*\*\*\*\*

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

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

Zn++ cal R4N.X 25°C 0.10M C 2002HTb (72562)3964

Medium: 0.10 M (CH<sub>3</sub>)<sub>4</sub>NBr. DH(K<sub>1</sub>)=-7.1 kJ mol<sup>-1</sup>, DS(K<sub>1</sub>)=28 J K<sup>-1</sup> mol<sup>-1</sup>.

Zn++ gl KNO<sub>3</sub> 25°C 0.10M C M K<sub>1</sub>=2.65 2001AAa (72563)3965  
Also data for ternary complexes with MOPSO, TAPSO and ACES.

Zn++ gl KNO<sub>3</sub> 25°C 0.10M C T HM 2000RNb (72564)3966  
K(Zn+HL)=3.10  
K(Zn+HL+A)=7.10  
K(Zn+HL+C)=7.18

Data for 35 and 45 C. HA is DL-ala-ala, HC is DL-ala-phe. DH(ZnHLA)=-19.9 kJ mol<sup>-1</sup>, DS(ZnHLA)=69 J K<sup>-1</sup> mol<sup>-1</sup>; DH(ZnHLC)=-18.1, DS(ZnHLC)=76.

Zn++ gl KNO<sub>3</sub> 35°C 0.10M U M 1998RVb (72565)3967  
K(Zn+H<sub>2</sub>L=ZnHL+H)=2.97  
K(Zn+H<sub>2</sub>L+HA=ZnHLA+2H)=8.16  
K(Zn+H<sub>2</sub>L+HC=ZnHLC+2H)=8.70  
K(Zn+H<sub>2</sub>L+HD=ZnHLD+2H)=8.88

HA is alanine, HC is phenylalanine, HD is tryptophan.

Zn++ gl NaNO<sub>3</sub> 25°C 0.10M M 1994SMb (72566)3968  
K(Zn+HL)=2.69

Zn++ gl KNO<sub>3</sub> 35°C 0.10M U M K<sub>1</sub>=5.29 1990RAc (72567)3969  
K(Zn+HL+histamine)=11.21  
K(Zn+H<sub>2</sub>L+Gly)=9.21  
K(Zn+HL+His)=11.35

\*\*\*\*\*  
C10H15NO L Ephedrine CAS 299-42-3 (1836)  
(1-Methylaminoethyl)benzyl alcohol; C<sub>6</sub>H<sub>5</sub>.CH(OH)CH(CH<sub>3</sub>)NHCH<sub>3</sub>

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl KNO<sub>3</sub> 25°C 1.00M C 1976RSd (72639)3970  
K(Zn+HL)=5.65

Zn++ gl KCl 25°C .058M U T K<sub>1</sub>=5.13 B<sub>2</sub>=9.39 1961SMa (72640)3971  
At 0 C: K<sub>1</sub>=5.68, B<sub>2</sub>=10.64; 45 C: K<sub>1</sub>=4.54, B<sub>2</sub>=8.70

\*\*\*\*\*  
C10H15NOS<sub>2</sub> L (5423)  
2-(2-Pyridyl)-1,3-dithiomethyl-2-propanol; CH<sub>3</sub>S.CH<sub>2</sub>.C(OH)(C<sub>5</sub>H<sub>4</sub>N).CH<sub>2</sub>.SCH<sub>3</sub>

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
Zn++ gl diox/w 25°C 50% U K<sub>1</sub>=1.23 1981CBa (72652)3972

\*\*\*\*\*  
C10H15NO<sub>6</sub> H<sub>3</sub>L (3915)  
N-(1'-Carboxycyclopentyl)iminodiethanoic acid;

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

Zn++ gl KCl 20°C 0.10M U K1=12.31 1966IMa (72666)3973  
\*\*\*\*\*

C10H15N2O7P H2L dTMP CAS 3715-64-8 (5784)  
Deoxythymidine-5'-monophosphoric acid;

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

Zn++ nmr oth/un 25°C 0.20M U M 1985PGa (72678)3974

Keff(ZnA+L)=2.46

Keff(ZnAL+L)=0.60

A=Tetrakis(4-N-methylpyridyl)porphyrin. pH=6.9

\*\*\*\*\*

C10H15N2O8P H2L TMP-5 CAS 365-07-1 (2949)

Thymidine-5'-monophosphoric acid, Thymidylic acid;

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

Zn++ gl R4N.X 25°C 0.10M C T K1=2.46 1991SMa (72688)3975

K(Zn+HL)=2.46

IUPAC evaluation

-----  
Zn++ gl NaNO3 25°C 0.10M C 1988MSa (72689)3976

K(Zn+HL)=2.10

\*\*\*\*\*

C10H15N3O8 H3L CAS 43068-75-3 (2463)

Triglycine-N,N-diethanoic acid; (HOOC.CH2)2N.CH2.CO-Gly-Gly-OH

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

Zn++ gl KNO3 25°C 0.10M C K1=7.63 1974MMb (72715)3977

K(ZnL+H)=3.21

\*\*\*\*\*

C10H15N4O14P3 H5L ITP CAS 35908-31-7 (2148)

Inosine 5'-triphosphoric acid;

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

Zn++ gl NaNO3 25°C 0.10M C 2001SBc (72739)3978

K(Zn+HL)=5.32

K(ZnHL+H)=4.25

K(Zn+H2L)=3.1

-----  
Zn++ gl NaClO4 25°C 0.10M U M 1977CSa (72740)3979

K(Zn+HL)=5.02

K(Zn(bpy)+HL)=5.04

B(Zn(bpy)(HL))=10.34

-----  
Zn++ sp NaClO4 25°C 0.10M U M 1977CSa (72741)3980

Keff(Zn(bpy)+HL)=2.46, pH 2.5

K(Zn(bpy)L+H)=3.87

-----  
Zn++ nmr NaClO4 25°C 0.10M U M 1975SIb (72742)3981

K(ZnL+H)=8.31  
K(Zn(OH)L+H)=9.4  
K(Zn(bpy)L+H)=8.87

By spectrophotometry, K(ZnL+H)=8.2.  
-----

Zn++ gl KNO3 25°C 0.10M U T 1973TRb (72743)3982

K(Zn+HL)=4.57

K(35 C)=4.77, K(45 C)=4.50  
\*\*\*\*\*

C10H15N5 L CAS 470701-53-2 (8551)

N-(Imidazole-4-ylmethyl-5-methyl)histamine;  
-----

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

Zn++ gl NaClO4 25°C 0.10M C K1=8.28 B2=11.79 2002JTa (72773)3983

B(ZnHL)=12.75  
B(ZnHL2)=19.6  
\*\*\*\*\*

C10H15N504 HL Gly-Gly-His CAS 93404-95-6 (74)

Glycyl-glycyl-histidine; H2N.CH2.CO.NH.CH2.CO.NH.CH(CH2.C3H3N2).COOH  
-----

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

Zn++ gl KNO3 37°C 0.15M U K1=3.31 1977APa (72797)3984

B(ZnHL)=10.08  
B(Zn2L2)=9.77  
B(Zn2H-1L2)=3.31  
B(Zn2H-2L2)=-4.49  
\*\*\*\*\*

C10H15N504 HL Gly-His-Gly CAS 7758-33-0 (716)

Glycyl-histidyl-glycine; NH2.CH2.CO.NH.CH(CH2.C3N2H3)CO.NH.CH2.CO.OH  
-----

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

Zn++ gl KNO3 37°C 0.15M U K1=2.90 1975APb (72815)3985

B(ZnH-1L)=-2.55  
K(ZnH-2L+H)=9.69  
\*\*\*\*\*

C10H15N504 HL His-Gly-Gly CAS 32999-80-7 (6269)

Histidyl-glycyl-glycine;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl none 21°C 0.0 M K1=4.93 B2=9.64 1974YAA (72823)3986

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C10H15N5010P2 H3L ADP CAS 20398-34-9 (2181)

Adenosine-5'-diphosphoric acid;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	M		K1=4.28 K(ZnL+H)=4.43 K(Zn+HL)=2.31	2003BSa (72891)	3987
Zn++	gl	KNO3	25°C	0.10M	C	M	K1=4.28 K(ZnL+A)=2.48 B(ZnLA)=6.76 K(ZnL+B)=2.20 B(ZnLB)=6.48 K(ZnL+C)=4.19, B(ZnLC)=8.47, K(ZnL+D)=4.72, B(ZnLD)=9.00. HA=MOPS, HB=POPSO, HC=HEPPSO and HD=AMPSO.	2001A0a (72892)	3988
Zn++	gl	KNO3	25°C	0.10M	C	M	K1=4.28 K(ZnL+A)=6.90 B(ZnLA)=11.18 K(ZnL+B)=3.72 B(ZnLB)=8.33 HA=ACES, HB=MOPSO. Also data for CHES, TAPSO and DIPSO.	2000ADa (72893)	3989
Zn++	gl	NaNO3	25°C	0.10M	C	M	K1=4.18 K(ZnL+A)=4.35 B(ZnLA)=8.53 H2A=salicylhydroxamic acid.	2000KHa (72894)	3990
Zn++	gl	NaNO3	25°C	0.10M	C	M	K1=4.18 K(ZnA+L)=4.38 B(ZnAL)=11.88 H2A=N-(2-acetamido)iminodiacetic acid.	2000KHb (72895)	3991
Zn++	gl	KNO3	25°C	0.10M	U		K1=4.27	1995SBa (72896)	3992
Zn++	gl	R4N.X	25°C	0.10M	C	TI	R K1=4.41 K(Zn+HL)=2.04 IUPAC evaluation. 37 C, 0.15 NaCl: K1=4.18	1991SMa (72897)	3993
Zn++	nmr	oth/un	23°C	0.30M	U	M	Keff(ZnA+L)=3.57 pD=7.0 A=Tetrakis(4-N-methylpyridyl)porphyrin.	1985PGa (72898)	3994
Zn++	gl	KNO3	22°C	0.25M	U		K1=5.65	1984GKa (72899)	3995
Zn++	gl	KCl	25°C	0.10M	U	M	B(ZnL(Gly))=8.32	1983MDd (72900)	3996
Zn++	gl	KCl	25°C	0.10M	U		K1=4.17 B(ZnHL)=8.95	1980DMa (72901)	3997
Zn++	gl	KNO3	40°C	0.10M	U	T H	K1=4.20	1967TMf (72902)	3998

$K(\text{Zn}+\text{HL})=1.96$   
 $K(\text{ZnOHL}+\text{H})=8.18$   
 $K(2\text{ZnOHL}=\text{Zn}_2(\text{OH})_2\text{L}_2)=13.20$   
 $K(\text{Zn}_2(\text{OH})_2\text{L}_2+2\text{H}=2\text{ZnL})=3.16$   
 $K_1=4.40(0.4\text{ C}), 4.35(12\text{ C}), 4.28(25\text{ C}); K(\text{Zn}+\text{HL})=2.15(0.4\text{ C}), 2.11(12\text{ C}), 2.04(25\text{ C})$ . At 25 C:  $\text{DH}(K_1)=-8.4\text{ kJ mol}^{-1}$ ,  $\text{DS}=54\text{ J K}^{-1}\text{ mol}^{-1}$ ;  $\text{DH}(\text{Zn}+\text{HL})=-7.9$ ,  $\text{DS}=13$

Zn++          gl   KNO<sub>3</sub>    12°C 0.10M U T H                      1967TMf (72903)3999  
K(ZnOHL+H)=8.83  
K((ZnOHL)<sub>2</sub>+2H)=3.50  
K(2ZnOHL=Zn<sub>2</sub>(OH)<sub>2</sub>L<sub>2</sub>)=14.16  
At 25 C: DH(ZnOHL+H)=-41.4 kJ mol<sup>-1</sup>, DS=25 J K<sup>-1</sup> mol<sup>-1</sup>; DH((ZnOHL)<sub>2</sub>+2H=2ZnL)  
=-54.3, DS=-71, DH(2ZnOHL=Zn<sub>2</sub>(OH)<sub>2</sub>L<sub>2</sub>)=-21.3, DS=-8

Zn++	gl	KN03	25°C 0.10M U	K1=4.28	1962TMa (72904)4000
				K(Zn+HL)=2.04	
				K(ZnL+H2O=Zn(OH)L+H)=-8.51	
				K(2ZnL+2H2O=(Zn(OH)L)2)=-13.68	

Zn <sup>++</sup>	gl	KCl	25°C 0.10M U	K <sub>1</sub> =4.13 K(Zn+HL)=2.34	1958WSa (72905)4001
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C10H16N2O2 L (7408)  
N-(2-Pyridylmethyl)iminodiethanol; C5H4N.CH2.N(CH2CH2.OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++      gl    KNO3    25°C 0.10M C      K1=5.25      1986DSa (73032)4002

C10H16N2O3S	HL	Vitamin H	CAS 58-85-5	(410)
D-Biotin (Coenzyme R);				

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ nmr NaClO4 27°C 3.00M U K1=-1.2 1982SSb (73043)4003  
Medium: D2O. In DMF: K1=0.2

Zn++ gl diox/w 25°C 50% U M K1=2.45 1969SMc (73044)4004  
K(Zn(bpv)+L)=2.49

Medium: 50% dioxan, 0.1 M NaClO<sub>4</sub>. In 0.1 M NaClO<sub>4</sub> alone: K<sub>1</sub>=0.82

C10H16N2O4S HL CAS 3376-83-8 (4793)  
D-Biotin-DL-sulfoxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn<sup>++</sup> gl diox/w 25°C 50% U M K1=2.38 1969SMc (73054)4005  
K(Zn(bpy)+L)=2.34

Medium: 50% dioxan, 0.1 M NaClO<sub>4</sub>. Values for d-isomer, for l-isomer K<sub>1</sub>=2.37, K(Cu(bpy)+L)=2.36

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 C10H16N2O5                      H2L      gamma-Glu-Pro      CAS 53411-63-5 (8143)  
 Pyrrolidine-2-carboxy-1-(2-amino-5-one-pentanoic acid, Gamma-Glutamyl-proline;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	C			K1=4.87	1989ARa (73057)	4006
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C10H16N2O5S                      HL                                      (4794)

D-Biotin sulfone;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	diox/w	25°C	50%	U	M		K1=2.46 K(Zn(bpy)+L)=2.49	1969SMc (73061)	4007
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Medium: 50% dioxan, 0.1 M NaClO4

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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  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	cal	KNO3	25°C	0.5M	U			2002LCb (73087)	4008
DH(K1)=-18.82 kJ mol <sup>-1</sup> DH(Zn+HL)=+5.78									

for 1.0 M KNO3 DH(K1)=-19.11 DH(Zn+HL)=+6.14

for 1.5 M KNO3 DH(K1)=-19.18 DH(Zn+HL)=+6.32  
 -----

Zn++	gl	NaCl	25°C	0.10M	C			K1=13.58 K(ZnL+H)=3.67 K(ZnHL+2H)=5.9 K(Zn(OH)L+H)=11.3 K(ZnHL+HL)=5.5	2002OHa (73088)	4009
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Ligand is [S,S] isomer.  
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Zn++	gl	KNO3	25°C	0.10M	U			K1=12.77 K(Zn+HL)=6.68 K(Zn+H2L)=2.48	1989VZb (73089)	4010
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Zn++	gl	KNO3	30°C	1.0M	U			K1=8.35	1972TSf (73090)	4011
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Zn++	gl	KNO3	20°C	0.10M	U			K1=13.49	1968MJa (73091)	4012
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By paper electrophoresis: K1=13.1  
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Zn++	sp	KNO3	20°C	0.10M	U			K1=12.9	1966MSg (73092)	4013
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C10H16N2O8                      H4L      EDTA                      CAS 60-00-4 (120)  
 1,2-Diaminoethane-N,N,N',N'-tetraethanoic acid, Sequestic acid;  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	vlt	KNO3	25°C	0.10M	C	K1=16.52	2001CKb (73398)4014
Method: cyclic voltammetry. Medium: pH 10.							
Zn++	cal	none	25°C	0.0	C H		19900Ba (73399)4015
Medium: pH 8.7. DH(K1)=-14.98 kJ mol-1.							
Zn++	vlt	KCl	25°C	0.30M	U	K(Zn+HL)=10.27	1988HPa (73400)4016
Zn++	ISE	KCl	25°C	1.00M	U I	K1=15.67 K(Zn+HL)=8.19 K(ZnL+H)=2.36	1985VGa (73401)4017
Zn++	cal	KNO3	25°C	1.50M	U H	K(ZnL+OH)=1.88	1985VKa (73402)4018
DH(ZnL+OH)=-20.84 kJ mol-1							
Zn++	gl	NaCl	37°C	0.15M	C	K1=14.61	1984DMb (73403)4019
Zn++	gl	KNO3	25°C	0.20M	U	K1=16.3 K(ZnL+H)=2.99	1982AKa (73404)4020
Zn++	EMF	KCl	20°C	0.10M	C	K1=16.1	1981SFa (73405)4021
Method: Pt/H2 electrode.							
Zn++	sol	KNO3	25°C	1.00M	U	K(ZnL+H)=3.0 K(ZnHL+H)=1.4	1979JPa (73406)4022
Zn++	sol	KNO3	25°C	1.00M	U	K(ZnL+H)=2.96 K(ZnHL+H)=1.30	1979JPb (73407)4023
Zn++	gl	KCl	20°C	0.10M	C	R K1=16.68 K(ZnL+H)=3.0	1978ANa (73408)4024
IUPAC evaluation. K(ZnL+H) Tentative							
Zn++	vlt	KNO3	20°C	0.10M	U	K1=16.66	1978NLb (73409)4025
Zn++	dis	none	25°C	0.0	U	K1=16.4	1977MFb (73410)4026
Measured by liquid chromatography on a chelating resin							
Zn++	gl	NaCl04	25°C	3.00M	C	K1=14.87 B(ZnHL)=17.97	1976CWa (73411)4027
Zn++	gl	KNO3	25°C	0.01M	C I	K1=13.3	1976MCa (73412)4028
Zn++	gl	oth/un	25°C	0.10M	U H	K1=16.3	1974DTa (73413)4029
DH(K1)=-23.4 kJ mol-1							

Zn++	oth	NaClO4	25°C	1.0M	U		1973HHb (73414)4030
						K(CoLCl+Zn)=0.6	
Zn++	ISE	KNO3	25°C	0.10M	U	K1=16.5	1973HRa (73415)4031
Zn++	gl	oth/un	25°C	1.50M	U	M K1=16.50	1970FDa (73416)4032
						B(ZnL(py))=16.72	
						B(ZnL(NH3))=17.38	
						B(ZnL(thiourea))=17.05	
						B(ZnL(SCN))=16.57	
						B(ZnL(S2O3))=17.30	
Zn++	gl	KNO3	25°C	0.10M	U	K1=16.24	1969BNa (73417)4033
						K(ZnL+H)=3.0	
						K(Zn+HL)=9.0	
Zn++	oth	oth/un	42°C	?	U T H	K1=14.80	1968LPa (73418)4034
						Method: ultrasonic. K1=15.52(32 C). DH(K1)=105 (?) kJ mol <sup>-1</sup> , DS=483? J K <sup>-1</sup> mol <sup>-1</sup>	
Zn++	oth	KNO3	20°C	0.10M	U	K1=17.5	1965JMb (73419)4035
						Method: electrophoresis	
Zn++	nmr	oth/un	36°C	?	U		1965KUa (73420)4036
						K(Zn(OH)+L)=2.2	
						K(ZnL+OH)=2.0	
Zn++	vlt	KNO3	25°C	0.20M	U	K1=15.94	19650Ga (73421)4037
Zn++	cal	KNO3	25°C	0.10M	U	H	1965WHa (73422)4038
						DH(K1)=-23.4 kJ mol <sup>-1</sup> , DS=238 J K <sup>-1</sup> mol <sup>-1</sup>	
Zn++	gl	KNO3	20°C	0.10M	U	K1=16.26	1964ANa (73423)4039
						K(Zn+HL)=9.0	
Zn++	cal	KNO3	20°C	0.10M	U	H	1963ANF (73424)4040
						DH(K1)=-20.3 kJ mol <sup>-1</sup> , DS=247 J K <sup>-1</sup> mol <sup>-1</sup>	
Zn++	EMF	NaNO3	22°C	0.10M	U	T K1=16.69	1957SAb (73425)4041
Zn++	gl	oth/un	20°C	0.17M	U	H	1956CSb (73426)4042
						DH(K1)=-23.5 kJ mol <sup>-1</sup> , DS=236 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(ZnL+OH)=13	
Zn++	EMF	oth/un	25°C	0.0	U	H	1956MAa (73427)4043
						Method: H electrode. DS(K1)=230 J K <sup>-1</sup> mol <sup>-1</sup>	
Zn++	EMF	NaClO4	25°C	0.10M	U	K1=16.4	1956SRb (73428)4044
Zn++	cal	oth/un	25°C	0.05M	U	H	1954CHa (73429)4045
						Medium: Zn(NO3)2. DH(K1)=-18.8 kJ mol <sup>-1</sup> , DS=230 J K <sup>-1</sup> mol <sup>-1</sup>	

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Zn++      gl  KCl    20°C 0.10M U      K1=16.26      1954SGa (73430)4046
By polarography, 0.1 M KNO3, K1=16.50
-----
Zn++      sp  KNO3   30°C 0.10M U      K1=15.3       1953HMa (73431)4047
*****
C10H16N2O8S2      H4L                      CAS 20206-12-1 (996)
2,9-Diamino-5,6-dicarboxy-4,7-dithiadecanedioic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaClO4 25°C 0.10M U      B2=22.23      1978MJa (74364)4048
*****
C10H16N2O9      H4L                      CAS 616-90-0 (2615)
Bis-(2-aminoethylether)-N,N'di(1,3-propanedioic acid); ((HOOCC)2CH.NH.CH2.CH2)2O
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      EMF KNO3   25°C 0.10M U      K1=10.53      1979KBe (74370)4049
*****
C10H16N2O11P2    H4L                      CAS 491-97-4 (7674)
Thymidine-5'-diphosphoric acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaNO3   25°C 0.10M M                      1999SSa (74383)4050
K(Zn+HL)=4.15
*****
C10H16N5O13P3    H4L    ATP                      CAS 56-65-5 (403)
Adenosine-5'-triphosphoric acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3    25°C 0.10M C      M      K1=4.85      2001A0a (74540)4051
K(ZnL+A)=2.09
B(ZnLA)=6.94
K(ZnL+B)=2.30
B(ZnLB)=7.15
K(ZnL+C)=3.30, B(ZnLC)=8.15, K(ZnL+D)=3.77, B(ZnLD)=8.62, K(ZnL+E)=2.86,
B(ZnLE)=7.71. HA=PIPES, HB=MOPS, HC=POPSO, HD=HEPPSO and HE=AMPSO.
-----
Zn++      gl  KNO3    25°C 0.10M C      M      K1=4.85      2000ADa (74541)4052
K(ZnL+A)=3.49
B(ZnLA)=8.34
K(ZnL+B)=3.73
B(ZnLB)=8.58
K(ZnL+C)=3.20, B(ZnLC)=8.05, K(ZnL+D)=3.40, B(ZnLD)=8.25.
HA=ACES, HB=MOPSO, HC=CHES, HD=TAPSO. Also data for DIPSO.
-----
Zn++      gl  NaNO3   25°C 0.10M C      M      K1=4.90      2000KHa (74542)4053

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K(ZnL+A)=6.19

B(ZnLA)=11.09

H2A=salicylhydroxamic acid.

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Zn++ gl NaNO3 25°C 0.10M C M K1=4.90 2000KHb (74543)4054

K(ZnA+L)=5.26

B(ZnAL)=12.67

H2A=N-(2-acetamido)iminodiacetic acid.

---

Zn++ gl R4N.X 25°C 0.10M C TIH R K1=5.16 1991SMa (74544)4055

K(Zn+HL)=2.69

IUPAC evaluation. DH(K1)=16.3 kJ mol<sup>-1</sup>. 37 C, I=0.15 M:K1=4.83, K(ZnL+HL)=2.61

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Zn++ gl NaNO3 25°C 0.10M C K1=5.16 1987STb (74545)4056

K(Zn+HL)=2.86

K(ZnL+H)=4.17

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Zn++ gl NaClO4 25°C 0.10M U I M K1=5.81 B2=8.27 1986CCc (74546)4057

B(ZnHL)=10.25

B(ZnH2L)=13.86

B(Zn2L)=8.26

B(Zn2HL)=11.98

Ternary complexes with 2,2'-dipyridylamine. In 0.1 M KNO3, K1=5.44, B2=7.52, B(ZnHL)=9.75, B(ZnH2L)=13.09, B(Zn2L)=7.22, B(Zn2H-1L)=1.28.

---

Zn++ ix oth/un 25°C 0.06M C 1985JEa (74547)4058

K1eff=2.94

Medium: 0.06 M N-tris(hydroxymethyl)methyl-2-aminoethane sulfonic acid buffer, pH 7.45. In 0.06 M imidazole/HCl buffer, pH 7.45, K1eff=2.82.

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Zn++ nmr R4N.X 22°C 0.10M U 1985PHb (74548)4059

K(Zn+H3L)+2.78

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Zn++ gl KCl 25°C 0.10M U M K1=4.81 1984DMc (74549)4060

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Zn++ gl KNO3 22°C 0.25M U K1=5.65 1984GKa (74550)4061

---

Zn++ gl KCl 25°C 0.20M C M 1984KDb (74551)4062

B(ZnL(DOPA))=14.35

B(ZnHL(DOPA))=23.0

B(ZnHL(Dopamine))=23.6

B(ZnHL(Adrenaline))=23.2

B(ZnHL(Noradrenaline))=23.4, H3DOPA=3,4-dihydroxyphenylalanine

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Zn++ gl KNO3 25°C 0.10M C HM K1=5.23 B2=7.12 1983ACb (74552)4063

B(ZnHL)=9.22

B(Zn2L)=7.08

B(ZnL(Ala))=9.18

B(ZnL(Trp))=9.90

DH(K1)=16.3; DH(B2)=5.0; DH(ZnHL)=3.8; DH(Zn2L)=28.8 kJ mol<sup>-1</sup>.

DH(ZnL(Ala))=16.7; DH(ZnL(Trp))=-24.7 kJ mol<sup>-1</sup>

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Zn++	gl	KCl	25°C	0.10M	U		1983MDd (74553)4064
						B(ZnL(Gly))=8.89	

---

Zn++	gl	KCl	25°C	0.10M	U	K1=4.92	1980DMa (74554)4065
						B(ZnHL)=9.66	

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Zn++	gl	KNO3	35°C	0.10M	C	M	K1=5.25	1979MTb (74555)4066
							K(Zn+HL)=2.68	

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Zn++	ix	NaCl04	18°C	0.05M	U		K1=7.3	1978K0c (74556)4067
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Zn++	gl	NaCl	25°C	0.12M	U	M	K1=4.08	1978RMc (74557)4068
							K(ZnL+DOPA)=7.30	

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H3DOPA=3,4-dihydroxyphenylalanine

Zn++	sp	NaCl04	25°C	0.10M	U	M		1977CSa (74558)4069
							K(Zn(bpy)+L)=5.31	

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Zn++	gl	NaCl04	25°C	0.10M	U	M	K1=5.21	1977CSa (74559)4070
							K(Zn(bpy)+L)=5.26	

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Zn++	gl	NaCl04	25°C	0.10M	C	M		1977SIc (74560)4071
							B(Zn(bpy)L)=10.56	
							K(Zn(bpy)+L)=5.26	

---

Zn++	gl	KNO3	25°C	1.00M	C	M	K1=3.19	1976RSd (74561)4072
							K(ZnL+HA)=4.90	
							K(ZnL+B)=4.70	

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A=norephedrine, B=amphetamine

Zn++	kin	NaCl04	50°C	0.10M	U			1976SAb (74562)4073
							B(Zn2L)=3.0	

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Zn++	gl	NaCl04	25°C	0.10M	U	M		1976SNa (74563)4074
							K(ZnL+Ala)=3.71	
							K(Zn(Ala)+L)=4.41	

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Zn++	nmr	NaCl04	25°C	0.10M	U			1975SIb (74564)4075
							K(Zn(OH)L+H)=8.87	

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Zn++	gl	NaCl04	25°C	0.10M	U	M	K1=5.21	1967SBc (74565)4076
							K(Zn(bpy)+L)=5.26	

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Zn++	gl	R4N.X	30°C	0.10M	U		K1=5.52	1966PSa (74566)4077
							K(Zn+HL)=2.91	

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Medium: Me4NBr

Zn++	gl	KNO3	40°C	0.10M	U	T H	K1=4.71	1966TMb (74567)4078
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$$K(\text{Zn}+\text{HL})=2.58$$

K1=4.75    B2=6.16    1962HBa (74568)4079  
K(Zn+HL)=2.78  
K(Zn+H2L)=2.09

K1=4.85      1962Tmb (74569)4080  
K(Zn+HL)=2.67

K1=4.80                      1961BRb (74570)4081  
K(Zn(OH)L+H)=8.5

K1=4.76      1958WSa (74571)4082  
K(Zn+HL)=2.75

C10H16N5O14P3                  H5L        GTP                      CAS 86-01-1    (404)  
Guanosine-5'-triphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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2001SBc (74861)4083  
K(Zn+HL)=5.52  
K(ZnHL+H)=4.45  
K(Zn+H2L)=3.45

1977SIc (74862)4084  
K(Zn+HL)=4.96  
K(Zn(bpy)+HL)=5.03  
B(Zn(HL)(bpy))=10.33

1975SIb (74863)4085  
K(ZnL+H)=8.39  
K(Zn(OH)L+H)=9.48  
K(Zn(bpy)L+H)=9.20

By spectrophotometry,  $K(\text{ZnL}+\text{H})=8.3$ .

1973TRb (74864)4086  
K(Zn+HL)=5.72

$$K1(35\text{ }^{\circ}\text{C})=5.76, K1(45\text{ }^{\circ}\text{C})=5.64$$

C10H16N6 L CAS 53596-58-0 (3898)  
N,N'-Bis(4'-(5')-imidazolylmethyl)-1,2-diaminoethane;

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

K1=10.39      1968GRa (74894)4087

C10H16N6OS                      L                      CAS 54237-72-8    (5996)

Cimetidine sulfoxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	37°C	0.15M	C		K1=1.867 B(ZnH-1L)=-5.439	1986FBa (74899)	4088
*****									
C10H16N6S		L	Cimetidine		CAS 51481-61-9		(5716)		
Cimetidine; CH3.C3H2N2.CH2.S.CH2.CH2.NH.C(:NCN)NH.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	37°C	0.15M	C		B2=5.092	1984ABg (74911)	4089
*****									
C10H16O4		H2L	Camphoric acid		CAS 124-83-4		(4708)		
Camphoric acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	NaClO4	28°C	0.20M	U		K1=3.06	1970RJ a (74928)	4090
By glass electrode: K1=3.0									
*****									
C10H16O8P2		H4L			(6907)				
1,2-Diphosphinoethane-P,P,P'P'-tetraethanoic acid;									
(HOOC.CH2)2P.CH2.CH2.P(CH2.COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	C		K1=3.69 B(ZnHL)=8.54 B(ZnH2L)=12.65	1992PPb (74935)	4091
Additional method: Zn(Hg) electrode									

Zn++	gl	NaClO4	25°C	0.10M	C		K1=3.69 B(ZnHL)=8.54 B(ZnH2L)=12.65	1982PPc (74936)	4092
*****									
C10H17NO4		H2L			CAS 2848-06-8		(3916)		
N-(Cyclohexyl)iminodiethanoic acid; C6H11.N(CH2.COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.50M	U		K1=7.42 B2=12.73	1967FMb (74966)	4093
*****									
Zn++	gl	KNO3	20°C	0.10M	U		K1=7.60	1964PIa (74967)	4094
*****									
C10H17NO5		H2L			CAS 6243-06-7		(3326)		
N-(2-Hydroxycyclohexyl)iminodiethanoic acid; HO.C6H10.N(CH2.COOH)2									

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

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Zn++      gl   KCl      20°C 0.10M U      K1=9.19      1955ASb (74982)4095  
\*\*\*\*\*

C10H17N05      H2L      (3917)

N-(Tetrahydropyran-2-ylmethyl)iminodiethanoic acid;

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

Zn++      gl   KNO3      20°C 0.10M U      K1=9.06      B2=13.58      1963IFa (74994)4096  
K(Zn+HL)=2.75

\*\*\*\*\*

C10H17N08S      HL      (1735)

2-(5-Carboxy-1,2,3,4-tetrahydroxypentyl)4-carboxythiazolidine,  
Galactocarboxythiazolidine;

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

Zn++      gl   NaCl04      25°C 0.10M C      K1=4.08      B2=5.83      1992GNa (75010)4097  
B(ZnHL)=7.32  
B(ZnH-1L)=-3.75  
B(ZnH-2L)=-12.51  
B(ZnH-1L2)=-1.56

B(ZnH-2L2)=-10.75

\*\*\*\*\*

C10H17N2014P3      H3L      TTP      CAS 365-08-2 (402)

Thymidine-5'-triphosphoric acid;

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

Zn++      gl   NaCl      25°C 0.10M C      R K1=5.1      1991SMa (75039)4098  
K(Zn+HL)=5.1

IUPAC evaluation

-----  
Zn++      gl   NaNO3      25°C 0.10M C      K(Zn+HL)=5.03      1987STb (75040)4099

-----  
Zn++      gl   NaCl04      25°C 0.10M C      M      1977SIc (75041)4100  
K(Zn+HL)=4.89  
K(Zn(bpy)+HL)=5.18  
B(Zn(bpy)(HL))=10.48

-----  
Zn++      nmr   NaCl04      25°C 0.10M U      M      1975SIb (75042)4101  
K(ZnL+H)=8.35  
K(Zn(OH)L+H)=9.2  
K(Zn(bpy)L+H)=9.06

By spectrophotometry, K(ZnL+H)=8.7.

\*\*\*\*\*

C10H17N306S      H3L      Glutathione      CAS 70-18-8 (333)

Glutamyl-cysteinyl-glycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	oth/un	20°C	0.01M	C		K1=4.78 B2= 8.66	2001DAa (75091)	4102

Medium: 0.01 M acetate buffer. Method: differential pulse polarography.

Zn++	gl	NaClO4	25°C	0.10M	U	TIH	K1=7.002	2001SGd (75092)	4103
------	----	--------	------	-------	---	-----	----------	-----------------	------

Data for 0.05-0.2 M NaClO4 and 15-45 C. DH(K1)=-35.7 kJ mol<sup>-1</sup>, DS(K1)=-220 J K<sup>-1</sup> mol<sup>-1</sup>. At I=0, K1=7.400. Also data for MeOH/H2O, EtOH/H2O, DMF/H2O.

Zn++	gl	KNO3	30°C	0.10M	U	T M		1995SSc (75093)	4104
------	----	------	------	-------	---	-----	--	-----------------	------

K(ZnA+L)=5.89  
K(ZnB+L)=6.89  
K(ZnC+L)=6.00  
K(ZnD+L)=7.50

Also data for 40 and 50 C. HA is anthranilic acid, H2B is ascorbic acid, HC is nicotinic acid, HD is sulfanilic acid.

Zn++	gl	NaClO4	25°C	3.00M	C		K1=8.57 B2=13.59	1976CWA (75094)	4105
------	----	--------	------	-------	---	--	------------------	-----------------	------

B(ZnHL)=14.76  
B(ZnHL2)=23.27  
B(ZnH2L2)=30.62  
B(ZnH-1L)=-0.07

B(ZnH-1L2)=3.63

Zn++	gl	NaClO4	37°C	0.15M	U	M	K1=7.98 B2=12.48	1976TWa (75095)	4106
------	----	--------	------	-------	---	---	------------------	-----------------	------

B(ZnHL)=14.11  
B(ZnHL2)=21.36  
B(Zn(HL)2)=28.08  
B(ZnH-1L)=-0.71, B(ZnH-1L2)=3.1

Zn++	gl	KNO3	25°C	0.16M	U		K1=5.1	1959MEa (75096)	4107
------	----	------	------	-------	---	--	--------	-----------------	------

Zn++	gl	KNO3	25°C	0.15M	U		K1=8.30	1955LMA (75097)	4108
------	----	------	------	-------	---	--	---------	-----------------	------

\*\*\*\*\*  
C10H17N6O12P3 H4L CAS 4209-30-7 (4795)  
Adenyl-5'-yl-imidodiphosphoric acid; adenosine-0.PO(OH).0.PO(OH).NH.PO(OH)2

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

Zn++	gl	R4N.X	20°C	0.10M	M	T H	K1=5.87	1976PSe (75165)	4109
------	----	-------	------	-------	---	-----	---------	-----------------	------

K(Zn+HL)=3.10

Medium: 0.1 M Me4NClO4. At 0 C: K1=6.22, K(Zn+HL)=3.18. DH(K1)=-26 kJ mol<sup>-1</sup>, DS=7 J K<sup>-1</sup> mol<sup>-1</sup>; DH(Zn+HL)=-6, DS=11

\*\*\*\*\*  
C10H18N2O3 HL CAS 533-48-2 (411)  
D/L-Desthiobiotin, 5-Methyl-2-oxo-4-imidazoline-caproic acid;

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

Zn++	gl	diox/w	25°C	50%	U	M		1969SMc (75178)	4110
------	----	--------	------	-----	---	---	--	-----------------	------

$$K(\text{Zn}(\text{bpy})+\text{L})=2.48$$

Medium: 50% dioxan, 0.1 M NaClO<sub>4</sub>

\*\*\*\*\*

C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub> H<sub>2</sub>L CAS 124125-60-6 (914)

1,5-Diazacyclooctane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO <sub>3</sub>	25°C	0.10M	U		K <sub>1</sub> =11.07	1990HNa (75196)	4111

Zn++	gl	NaClO <sub>4</sub>	25°C	0.10M	U		K <sub>1</sub> =11.27	1975BIb (75197)	4112
------	----	--------------------	------	-------	---	--	-----------------------	-----------------	------

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C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub> H<sub>2</sub>L CAS 96287-33-1 (8141)

Pyrrolidine-2-carboxy-1-(2-aminopentanoic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	C		K <sub>1</sub> =7.3	1989ARa (75206)	4113

\*\*\*\*\*

C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>S H<sub>2</sub>L (6638)

1-Thia-4,7-diazacyclononane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	C		K <sub>1</sub> =14.03	1993WLa (75211)	4114

\*\*\*\*\*

C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O<sub>5</sub> H<sub>2</sub>L (5608)

1-Oxa-4,7-diazacyclononane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	U		K <sub>1</sub> =12.53	1990CCa (75225)	4115

\*\*\*\*\*

C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O<sub>5</sub> H<sub>2</sub>L (6634)

N,N-Diethylacetamidoiminodiethanoic acid; (C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>N.CO.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
Zn++	gl	NaClO <sub>4</sub>	25°C	0.50M	U		K <sub>1</sub> =8.11 B <sub>2</sub> =11.20	1992GLa (75245)	4116

$$B(\text{ZnH-1L})=-1.67$$

\*\*\*\*\*

C<sub>10</sub>H<sub>18</sub>N<sub>2</sub>O<sub>7</sub> H<sub>3</sub>L 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
Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	U	H	K <sub>1</sub> =14.42	1969BNa (75299)	4117

Zn++	cal	KNO <sub>3</sub>	25°C	0.10M	U	H		1965WHa (75300)	4118
------	-----	------------------	------	-------	---	---	--	-----------------	------

DH(K<sub>1</sub>)=-35.1 kJ mol<sup>-1</sup>, DS=159 J K<sup>-1</sup> mol<sup>-1</sup>

Zn++	EMF	KNO3	25°C	0.10M	U	K1=14.5	1960HRA (75301)	4119
Zn++	gl	KCl	30°C	0.10M	U	K1=14.5	1955CMA (75302)	4120
*****								
C10H18N4O6		H2L				(4504)		
Hexanoic acid bis(3-hydroxycarbamoyl-methyl)amide; HONHCOCH2NHCO(CH2)4CONHCH2CONHOH								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=7.73 B(Zn2L3)=22.01 B(ZnHL)=13.98	1999FEa (75564)4121
*****								
C10H18N4O6S2		H2L					CAS 7729-20-6 (6021)	
Cysteinylglycine disulfide; (-S.CH2.CH(NH2)CO.NH.CH2.COOH)2								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=3.56 B(ZnHL)=9.61	1988Vsb (75574)4122
*****								
C10H18N4O8		H4L					CAS 35048-92-5 (4751)	
Ethylenedinitrilo-N,N'-diacetohydroxamic-N,N'-diethanoic acid;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K(Zn+H2L)=9.60 K(ZnL+H)=7.47 K(ZnHL+H)=6.35	1971MMe (75580)4123
*****								
C10H18O2		HL					CAS 73910-38-6 (4707)	
Isobutyryl pivaloyl methane; (CH3)2.CH.CO.CH2.CO.C(CH3)3								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=10.08 B2=19.35	1972UDa (75595)4124
Medium: 75% v/v dioxan, 0.01 M Me4NC104								
*****								
C10H18O8		H2L					CAS 32775-08-9 (240)	
1,12-Dicarboxy-2,5,8,11-tetraoxadodecane; (HOOC.CH2.O.CH2.CH2.O.CH2)2								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=2.18	1975MTc (75614)4125
*****								
C10H19NO4		H2L					(3328)	
N-(3,3-Dimethylbutyl)iminodiethanoic acid; (CH3)3C.CH2.CH2.N(CH2.COOH)2								

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U		K1=7.92 B2=14.15	1955SAa (75633)	4126
*****									
C10H19N3O4		H2L					(8095)		
1,4,7-Triazacyclononane-1,4-diethanoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	1.0M	U		K1=17.3	2000LKc (75652)	4127
*****									
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
Zn++	gl	oth/un	25°C	0.01M	U		K1=2.50 B2=5.39	1959DLb (75681)	4128
*****									
Zn++	gl	oth/un	25°C	0.01M	U		K1=1.8	1954PEa (75682)	4129
*****									
C10H19N3O5		H2L					CAS 6366-86-5	(8573)	
N-6-L-alpha-Aspartyl-L-lysine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C			2002KVa (75703)	4130
							B(ZnHL)=13.85		
							B(Zn2L2)=15.30		
							B(ZnH-1L)=-2.59		
*****									
C10H19N3O5		H2L		2,3-DIHA			CAS 709640-93-7	(9156)	
N-Hydroxy-N'-[4-(hydroxymethylamino)-4-oxobutyl]-N-methyl-butanediamide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.20M	C		K1=7.71	2004FBa (75707)	4131
							B(ZnHL)=13.95		
							B(Zn2L3)=21.7		
*****									
C10H20N2		L					CAS 42121-74-4	(6275)	
2(e),3(e)-Diamino-trans-decaline(decahydronaphthalene);									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=6.57 B2=12.30	1974YKa (75724)	4132
*****									
C10H20N2O3		HL		NIBL			(6057)		
N-(Isobutyroyl)-lysine; (CH3)2CH.CO.NH.(CH2)4.CH(NH2)COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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C10H20N2O6 H2L CAS 96817-35-5 (4755)  
1,2-Diaminoethane-N,N'-bis(4-hydroxy-2-butanoic acid);

Zn++ sp oth/un 20°C 0.10M U K1=9.85 1972DKa (75840)4140

C10H20N4O4                      HL                      (8572)  
Glycyl-lysyl-epsilon-glycine;

Zn++      gl    KCl      25°C 0.20M C      K1=4.74    B2= 7.00    2002KV a (75891)4141  
B(ZnHL)=11.42

C10H20O5 L 15-Crown-5 CAS 33100-27-5 (576)  
1,4,7,10,13-Pentaoxacyclopentadecane; cyclo(-(O.CH2.CH2)5-)

Zn++ con mixed 25°C 90% C K1=1.94 2003ISa (75927)4142  
Medium: 90% v/v DMSO/H2O.

Zn<sup>++</sup> con alc/w 25°C 40% C K1=1.82 2001ISa (75928)4143  
Medium: 40% v/v EtOH/H<sub>2</sub>O.

Zn++ nmr non-aq 27°C 100% C K1=3.82 2000SMg (75929)4144  
Medium: acetonitrile. Method: competitive 7Li nmr technique.

Zn++ vlt alc/w 25°C 100% C K1=2.29 1987CBd (75930)4145  
Medium: methanol, 0.10 M Et4NI or Bu4NClO4. Method: polarography.

C10H21NO3 L (6568)  
Trans-1-(bis(2-hydroxyethyl)amino)-2-hydroxycyclohexane;

Zn++      gl    NaNO3    25°C 0.10M C      K1=2.78      1991DCa (76171)4146

C10H21N04 L CAS 66943-05-3 (5818)  
1-Aza-4,7,10,13-tetraoxacyclopentadecane;

Zn++ EMF alc/w 25°C 95% U K1=4.1 1993BDd (76177)4147  
Medium: 95% v/v MeOH/H2O, 0.1 M Et4NClO4

C10H21N11 L (7006)  
1,7-Di(2-(5-tetraazolyl)ethyl)-1,4,7-triazaheptane;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaNO3  20°C 0.10M U      K1=17.52      1981ESa (76208)4148
*****
C10H22N2O5S2      L      CAS 40236-04-2 (2343)
1-Oxa-4,13-diaza-7,10-dithiacyclopentadecane;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaClO4 25°C 0.10M U  H      K1=5.09      1979ASb (76228)4149
Also DH values
-----
Zn++      gl  NaClO4 25°C 0.10M U      K1=4.43      B2=7.91      1977LAa (76229)4150
-----
Zn++      gl  NaClO4 25°C 0.10M U      K1=5.09      1975ASc (76230)4151
*****
C10H22N2O5S2      L      CAS 40236-30-4 (5395)
1-Oxa-4,13-dithia-7,10-diazacyclopentadecane;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaClO4 25°C 0.10M U  H      K1=4.43      1979ASb (76248)4152
B(ZnHL)=7.91
Also DH values
*****
C10H22N2O3      L      CAS 60350-17-6 (2471)
1,4,7-Trioxa-10,13-diazacyclopentadecane;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  R4N.X  25°C 0.10M C      K1=5.04      1983LCa (76257)4153
*****
C10H22N2O3      L      Cryptand 2,1      CAS 31249-95-3 (835)
4,7,13-Trioxa-1,10-diazacyclopentadecane (Trioxa(2,1)cryptand);
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  R4N.X  25°C 0.05M C      K1=4.9      1997BCc (76275)4154
Medium: 0.05 M Me4NClO4
-----
Zn++      gl  R4N.X  25°C 0.10M C      K1=5.34      1983LCa (76276)4155
-----
Zn++      gl  alc/w  25°C 100% C      K1=7.42      1979SAa (76277)4156
Medium: MeOH
-----
Zn++      gl  R4N.X  25°C 0.10M C      K1=5.19      1977ASc (76278)4157
*****
C10H22N4      L      CAS 82413-08-9 (6153)
1,4,7,10-Tetraaza-bicyclo[8.2.2]tetradecane;
-----

```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	U		K1=10.95	1988HDa (76383)	4158
Zn++	gl	NaNO3	25°C	0.10M	U		K1=10.95	1987HEa (76384)	4159
*****									
C10H22N4O			L				CAS 85828-26-8	(5498)	
1,4,8,11-Tetraazacyclotetradecane-5-one;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	M		B(ZnH-1L)=0.59	1990KKa (76402)	4160
*****									
C10H22N4O4			H2L				(1878)		
1,8-Diamino-3,6-diazaoctane-3,6-diethanoic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=19.13 K(Zn+H2L)=8.88 K(Zn+HL)=14.12	1981CDa (76425)	4161
*****									
C10H22N4O4			H2L				CAS 66650-98-4	(1587)	
3,6,9,12-Tetraazatetradecanedioic acid; (HOOC.CH2.NH.CH2.CH2.NH.CH2- )2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.15M	C		K1=15.65 B(ZnHL)=19.14	1990JKa (76428)	4162
*****									
C10H23N3O			L				(6453)		
1-Oxa-4,8,12-triazacyclotetradecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	C		K1=11.52	1996JLb (76503)	4163
Zn++	gl	KNO3	25°C	0.10M	U		K1=8.9 B(ZnHL)=16.0 B(ZnH-2L)=-6.5 K(ZnL+20H)=12.24	1991ACa (76504)	4164
*****									
C10H23N3O2			L				CAS 60350-18-7	(5875)	
1,4-Dioxa-7,10,13-triazacyclopentadecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	35°C	0.15M	C		K1=9.0	1997BBa (76517)	4165

$$K(\text{ZnL}+\text{OH})=4.8$$

Zn++	gl	NaCl	25°C	0.15M	C	I M	K <sub>1</sub> =8.95	1996BBb (76518)4166
							K(ZnL+OH)=4.92	
							K(ZnL+HCO <sub>3</sub> )=2.2	
							K(ZnL+CO <sub>3</sub> )=3.6	

In 0.1 M NaClO<sub>4</sub> (K<sub>1</sub>=9.03, K(ZnL+OH)=4.93).

Zn++      gl    KNO3    25°C 0.10M C      K1=8.95      1994CDa (76519)4167

Zn++      gl    NaNO3    25°C 0.10M C      K1=8.85      1989HBa (76520)4168

\*\*\*\*\*

C10H23N3O2                      L                      CAS 572925-33-8    (9069)

Bis(2-hydroxyethyl)-1,4,7-triazacyclononane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++      g1    NaNO3    25°C 0.10M C      K1=11.32      2003CPa (76527)4169

$$*K(\text{ZnL}) = -8.50$$

\*\*\*\*\*

C10H24N2OS2                      L                      CAS 68704-79-0    (1787)

8-Oxa-2,14-diaza-5,11-dithiapentadecane;

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

Zn++      gl    NaCl04 25°C 0.10M U    H    K1=5.61      1979ASb (76552)4170

$$B(\text{ZnHL}) = 10.81$$

Also DH values

Zn++      gl    NaCl04 25°C 0.10M U      K1=5.73    B2=10.63    1975ASb (76553)4171

\*\*\*\*\*

C10H24N2O2	L	Ethambutol	CAS 36697-71-9	(1403)
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R-2,2'-(1,2-Ethandyldiimino)-bis-1-butanol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Zn++ gl NaClO4 25°C 0.10M U T H K1=6.22 1990BPb (76570)4172

Zn++      g1   NaCl   37°C 0.15M C      M   K1=5.354      1981CMc (76571)4173

$$B(\text{ZnH-1L}) = -3.043$$
$$B(ZnH-2L) = -12.28$$
$$B(\text{Zn}(\text{his})\text{L})=9.81$$

\*\*\*\*\*

C10H<sub>24</sub>N<sub>2</sub>O<sub>4</sub> L CAS 140-07-8 (2669)

N,N,N',N'-Tetra(2-hydroxyethyl)diaminoethane; ((HO.CH<sub>2</sub>.CH<sub>2</sub>)<sub>2</sub>N.CH<sub>2</sub>-)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++      gl   oth/un   25°C   0.50M U      K1=4.97      1960Hda (76583)4174

\*\*\*\*\*

C10H24N2O8P2                      H4L                      CAS 230306-63-5 (7192)  
 4,10-Bis(phosphonomethyl)-1,7-dioxa-4,10-diazacyclododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	C		K1=12.97 B(ZnHL)=18.80 B(ZnH2L)=23.80 B(ZnH-1L)=1.84 B(Zn2L)=16.34	2000PSa (76588)	4175

Medium: 0.10 M [Et4N]NO3. B(Zn2H-1L)=8.29

\*\*\*\*\*

C10H24N4                      L                      iso-Cyclam                      CAS 52877-36-8 (142)  
 1,4,7,11-Tetraazacyclotetradecane; cyclo(-(HNCH2.CH2)3.CH2.NH.CH2.CH2.CH2-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	U		K1=15.44	1991LHa (76612)	4176
Zn++	cal	non-aq	25°C	100%	U	HM		1981GMb (76613)	4177

DH(2ZnBr2+L=ZnBrL+ZnBr3)=-133.9. Ternary complexes with C5H5N and CH3CN.  
 Medium: CH3CN

Zn++	cal	oth/un	25°C	1.0M	U	H		1978AFa (76614)	4178
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Medium: NaOH. DH(K1)=-69.0 kJ mol-1

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C10H24N4                      L                      Cyclam                      CAS 295-37-4 (8)  
 1,4,8,11-Tetraazacyclotetradecane; cyclo(-(HN.CH2.CH2.NH.(CH2)3)2-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.50M	U		K1=15.5	1997BLd (76644)	4179
Zn++	gl	NaClO4	25°C	0.10M	U		*K(ZnL(H2O))=-9.77	1990KSa (76645)	4180
Zn++	oth	KNO3	25°C	0.10M	U		K1=15.28	1984BSa (76646)	4181

By ultrafiltration

Zn++	vlt	NaClO4	25°C	0.10M	U	T H	K1=15.5	1981YPa (76647)	4182
Zn++	gl	KNO3	25°C	0.50M	U		K1=15.34	1980MPa (76648)	4183
Zn++	cal	oth/un	25°C	1.0M	U	H		1978AFa (76649)	4184

Medium: NaOH. DH(K1)=-61.9 kJ mol-1

Zn++	gl	NaClO4	25°C	0.20M	M	H	K1=15.0	1978KKb (76650)	4185
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DH1=-31.8 kJ mol-1

Zn++	vlt	oth/un	25°C	0.20M	U	H	K1=15.5	1977KKa (76651)	4186
------	-----	--------	------	-------	---	---	---------	-----------------	------

DH(K1)=-31.8 kJ mol<sup>-1</sup>

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C10H24N4 L (4712)

1,4-Bis(3-aminopropyl)-1,4-diazacyclohexane, 1,4-Bis(3-aminopropyl)-piperazine;

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

Zn++ gl NaNO3 25°C 0.10M U K1=6.32 1990HNa (76684)4187

\*\*\*\*\*

C10H24N4 L CAS 91135-29-4 (6516)

1,5-Bis(2-aminoethyl)-1,5-diazacyclooctane; NH2.CH2CH2.N(CH2CH2CH2)2N.CH2CH2.NH2

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

Zn++ gl NaNO3 25°C 0.10M U K1=12.81 1990HNa (76689)4188

\*\*\*\*\*

C10H24N4O L CAS 468743-83-1 (8673)

1,4,7,10-Tetraazacyclododecane-1-ethanol;

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

Zn++ gl NaClO4 25°C 0.10M C M K1=13.8 1995KKc (76698)4189

\*K(ZnL)=-7.60

K(ZnL+A)=1.6

K(ZnL+SCN)=2.0

K(ZnL+B)=3.0

K(ZnL+Cl)=1.3. HA is ethanoic acid, H2B is 4-nitrophenylphosphoric acid.

\*\*\*\*\*

C10H24N4O L (7051)

1-Oxa-4,7,10,13-tetraazacyclopentadecane;

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

Zn++ gl KNO3 25°C 0.10M C K1=13.21 1994CDa (76705)4190

Zn++ gl NaNO3 25°C 0.10M U K1=13.11 1990HWa (76706)4191

\*\*\*\*\*

C10H25N5 L 15-Ane-N5 CAS 295-64-7 (99)

1,4,7,10,13-Pentaazacyclopentadecane; cyclo(-(HN.CH2.CH2)5-)

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

Zn++ gl NaClO4 25°C 0.20M M H K1=19.1 1978KKb (76727)4192

B(ZnHL)=22.2

DH1=-57.3 kJ mol<sup>-1</sup>

\*\*\*\*\*

C10H25N5 L CAS 168324-43-4 (9175)

1,4-Bis(2-aminoethyl)-1,4,7-triazacyclononane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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 Zn++ gl NaClO4 25°C 0.15M C K1=13.01 2002AGa (76827)4199  
 K(ZnL+H)=7.43  
 K(ZnL+OH)=1.88  
 \*\*\*\*\*

C10H28N6 L PENTEN CAS 4097-90-9 (3315)  
 N,N,N',N'-Tetra-(2-aminoethyl)diaminoethane;

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	1.0M	C		K1=16.66 B(ZnHL)=24.95	2001GLb (76860)	4200

 -----

Zn++ cal KNO3 25°C 0.10M U H K1=16.15 1971PWa (76861)4201  
 K(Zn+HL)=14.05  
 K(ZnL+H)=8.0  
 K(ZnHL+L=ZnL+HL)=2.08  
 DH(K1)=-60.6 kJ mol<sup>-1</sup>, DS=104.5 J K<sup>-1</sup> mol<sup>-1</sup>; DH(Zn+HL)=-61.2, DS=62.7;  
 DH(ZnL+H)=-47.9, DS=-7.9; DH(ZnHL+L=ZnL+HL)=0.6, DS=37.6  
 -----

Zn++ cal KCl 25°C 0.10M U H K1=16.05 1964SPb (76862)4202  
 B(ZnHL)=14.00  
 K calculated. By calorimetry: DH(K1)=-60.6 kJ mol<sup>-1</sup>, DS=104.5 J K<sup>-1</sup> mol<sup>-1</sup>;  
 DH(ZnHL)=-61.2, DS=62.7  
 -----

Zn++ gl KCl 20°C 0.10M U K1=16.24 1953SMa (76863)4203  
 K(Zn+HL)=14.20  
 K(ZnL+H)=8.16  
 \*\*\*\*\*

C11H8N2O L Dipyridylketone CAS 19437-26-4 (1151)  
 2,2'-Carbonyldipyridine; C5H4N.CO.C5H4N

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=2.12 K(ZnH-1L+H)=5.3	1975FSb (76916)	4204

 -----

C11H8N6O HL (7009)  
 1-(5-Tetrazolyl)azo-2-naphthol;

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	NaClO4	20°C	0.10M	U		K1=8.20 B2=15.10	1978SSf (76924)	4205

 -----

C11H8N6O7S2 H4L CAS 35322-95-7 (909)  
 3-Hydroxy-4-(1H-tetrazol-5-ylazo)-2,7-naphthalenedisulfonic acid;

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	NaClO4	25°C	0.10M	U		K1=8.51	1978BEa (76935)	4206

 -----



C11H8N6O8S2                      H5L                      CAS 74385-48-1    (897)  
2-(1H-Tetrazol-5-ylazo)chromotropic acid;

Zn++ sp NaClO4 25°C 0.10M U 1983PSa (76947)4207  
K(Zn+H2L=ZnHL+H)=-2.72

C11H8OS3                      HL                      CAS 15473-70-8    (4826)  
1-Mercapto-1,3-bis(2-thienyl)prop-1-en-3-one;

Zn++ gl diox/w 30°C 75% U K1=9.76 B2=19.27 1969UTa (76957)4208

C11H8O3                      H2L                      CAS 86-48-6    (1129)  
1-Hydroxy-2-naphthoic acid;

Zn++      gl    KNO3    25°C 0.10M M      K1=8.37      1980DCb (77001)4209  
K(Zn(nta)+L)=4.59

Zn++      gl   KN03   30°C 0.10M U T H      K1=7.49      B2=14.34   1976SSb (77002)4210  
At 35 C: K1=8.15, K2=7.65; 40 C: 8.81, 8.20

C11H8O3                      H2L                      CAS 2083-08-1 (1131)  
2-Hydroxy-1-naphthoic acid;

Zn++      gl   KN03   25°C 0.10M M      K1=7.85      1980DCb (77057)4211  
K(Zn(nta)+L)=4.07

C11H8O3 HL CAS 483-35-6 (3347)  
2-Hydroxy-3-methyl-1,4-naphthoquinone;

Zn++ vlt oth/un 25°C 0.20M U B3=12.15 1966SPa (77072)4212

Zn++ gl diox/w 30°C 75% U K1=6.80 B2=12.80 1960KFc (77073)4213

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
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-----  
 Zn++ gl diox/w 25°C 50% C K1=7.8 1987CFb (77104)4214  
 In 50% dioxan/H2O; 0.2 M KNO3.  
 -----

Zn++ gl oth/un 25°C ? U 1966MAh (77105)4215  
 K(Zn+HL=ZnL+H)=4.35  
 K(Zn+2HL=ZnL2+2H)=4.60  
 -----

\*\*\*\*\*  
 C11H8O3 HL Plumbagin CAS 81402-06-4 (882)  
 6-Hydroxy-2-methyl-1,4-naphthoquinone;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	alc/w	30°C	50%	U		K1=6.21 B2=12.11	1981RRc (77144)	4216
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C11H8O3S HL CAS 32267-05-3 (3353)  
 2-Furoyl-2-thenoylmethane; C4H3O.CO.CH2.CO.C4H3S  
 -----

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

-----

Zn++	gl	diox/w	30°C	75%	U		K1=9.60 B2=18.23	1953UFe (77151)	4217
------	----	--------	------	-----	---	--	------------------	-----------------	------

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

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

-----

Zn++	gl	diox/w	35°C	50%	U		K1=2.99 B2=5.39	1971MAa (77165)	4218
------	----	--------	------	-----	---	--	-----------------	-----------------	------

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

-----

Zn++	gl	alc/w	35°C	70%	U		K1=4.24 B2=7.26	1984CEa (77194)	4219
------	----	-------	------	-----	---	--	-----------------	-----------------	------

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C11H9N L CAS 1008-89-5 (3934)  
 2-Phenylpyridine; C6H5.C5H4N  
 -----

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

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Zn++	gl	NaClO4	25°C	0.10M	U		K1=<1	1964KSb (77302)	4220
------	----	--------	------	-------	---	--	-------	-----------------	------

\*\*\*\*\*

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

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

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Zn++	gl	diox/w	25°C	60%	U		K1=8.57 B2=16.70	1973SCd (77323)	4221
------	----	--------	------	-----	---	--	------------------	-----------------	------

Medium: 60% dioxan, 0.1 M NaClO4

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C11H9NO2S HL CAS 29556-13-6 (1450)

N-Phenyl-2-thenoylhydroxamic acid; C4H3SCON(C6H5)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U	M		K1=5.71 B2=12.29 B(ZnL(bpy))=12.92 B(ZnL(phen))=14.21	1984ABb	(77342)4222

Zn++	gl	NaClO4	25°C	0.10M	U			K1=5.92 B2=10.75	1975BLa	(77343)4223
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C11H9NO3 H2L CAS 80690-05-7 (872)

3-Hydroxy-2-methyl-1,4-naphthoquinone monoxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	0.10M	U			K1=5.49 B2=10.56 K3=5.12	1981KSa	(77359)4224

\*\*\*\*\*

C11H9NO3 H2L CAS 35975-56-5 (16)

Methyl-8-hydroxyquinoline-2-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	sp	NaClO4	25°C	0.10M	U			K1=6.58	1977HCa	(77369)4225

\*\*\*\*\*

C11H9NO3 HL CAS 1137-48-0 (1449)

N-Phenyl-2-furylhydroxamic acid; C4H3O.CO.N(C6H5).OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U	M		K1=6.45 B2=12.12 B(ZnL(bpy))=12.81 B(ZnL(phen))=14.00	1984ABb	(77384)4226

Zn++	gl	NaClO4	25°C	0.10M	U			K1=5.96 B2=10.74	1975BLa	(77385)4227
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C11H9NO4 H2L CAS 4321-82-7 (4829)

3-Acetyl-4-hydroxycoumarin oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	35°C	50%	U				1971MAa	(77407)4228

K(Zn+HL)=2.72  
K(Zn+2HL)=4.83

Medium: 50% dioxan, 0.01 M NaClO4

\*\*\*\*\*

C11H9NO4 HL CAS 65490-35-9 (6230)

8-Formyl-7-hydroxy-4-methyl-2H-[1]benzopyran-2-one-oxime; (CH3)(OH)C9H3O(:O)CH:NOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	35°C	70%	U		K1=5.18 B2=8.68	1984CEa (77435)	4229
*****									
C11H9N2O2F3S		HL				CAS	33354-16-4	(1681)	
2-Methyl-8-(Trifluoromethanesulfonamido)quinoline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=8.5 B2=15.7	1984NYa (77442)	4230
*****									
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
Zn++	sp	alc/w	24°C	5%	U		B2=15.48	1973BJb (77451)	4231
Medium: 5% EtOH, 0.1 M NaClO4									

Zn++	gl	alc/w	25°C	50%	U		K1=8.8 B2=16.90	1967ANa (77452)	4232
Medium: 50% MeOH, 0.1 M NaClO4									
*****									
C11H9N3O		HL				CAS	7687-72-1	(3938)	
4-(2'-Pyridylazo)phenol; C5H4N.N:N.C6H4.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	50%	U		K1=<3 K2=<3	1967ANa (77469)	4233
Medium: 50% MeOH, 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
Zn++	sp	none	22°C	0	U			1995AHa (77509)	4234
							B2eff=15		
B2eff at pH 10.0, I=0.015 M									

Zn++	sp	KNO3	25°C	0.10M	U		B2=21.52	1986OHb (77510)	4235
							K(Zn+2HL)=9.66		
							K(Zn+L+HL)=15.89		
							K(ZnHL2+H)=6.07		
							K(ZnL2+H)=6.67		

Zn++	sp	NaNO3	25°C	0.10M	C		K1=11.2	1983OHb (77511)	4236
							K(Zn+HL)=5.05		

Zn++ sp KNO3 25°C 0.10M U K1=11.5 B2=20.5 1979PKb (77512)4237  
 K(Zn+HL)=5.2  
 K(Zn+2HL)=7.3

Zn++ sp NaClO4 25°C 0.10M U K1=11.9 B2=22.20 1968TFb (77513)4238  
 K(ZnL+H)=5.90  
 K(ZnL2+H)=7.55  
 K(ZnHL2+H)=6.45

Zn++ sp NaClO4 20°C 0.10M U 1966HSb (77514)4239  
 K(Zn+HL)=11.6

Zn++ gl diox/w 25°C 50% U 1962CYa (77515)4240  
 K(Zn+HL)=12.4  
 K(ZnHL+HL)=11.1  
 K(ZnL+H)=7.7  
 K(ZnOHL+H)=9.3

Zn++ gl diox/w 25°C 50% U I K1=11.2 B2=19.00 1962GNa (77516)4241  
 Medium: 50% dioxan, 0.1 M. In 0% dioxan: K1=10.5, K2=6.6

Zn++ sp oth/un ? ? U B2=25.3 1961HSb (77517)4242  
 K(Zn+HL)=12.6

\*\*\*\*\*  
 C11H9N3O4 H2L CAS 82628-26-0 (1379)  
 1-(2-Tolyl)violuric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 Zn++ gl alc/w 18°C 50% U T K1=6.38 B2=11.34 1982SGa (77619)4243  
 Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4

\*\*\*\*\*  
 C11H9N3O4 H2L CAS 82628-27-1 (1378)  
 1-(3-Tolyl)violuric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 Zn++ gl alc/w 18°C 50% U T K1=6.54 B2=11.56 1982SGa (77626)4244  
 Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4

\*\*\*\*\*  
 C11H9N3O4 H2L CAS 82628-25-9 (1377)  
 1-(4-Tolyl)violuric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 Zn++ gl alc/w 18°C 50% U T K1=6.75 B2=11.95 1982SGa (77633)4245  
 Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4

\*\*\*\*\*  
 C11H9N3O5S HL (6249)  
 1,2-Naphthoquinone-4-sulfonic acid 2-semicarbazone; C10H5(:O)(HSO3):N.NH.CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	28°C	0.10M	U	T H	K1=4.47 B2=8.73	1980MGd (77639)	4246
*****									
C11H10N2			L				CAS 1132-37-2	(2427)	
(2,2'-Dipyridyl)methane; C5H4N.CH2.C5H4N									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=3.20 B2= 6.39	20010Va (77652)	4247
B(ZnHL)=7.35									
Zn++	gl	NaClO4	25°C	0.10M	C	M		1979FSa (77653)	4248
B(ZnL(pyrocatecholate))=13.54									
K(ZnL+pyrocatecholate)=10.73									
K(Zn(pyrocatecholate)+L)=3.64									
Zn++	gl	KN03	20°C	0.10M	U		K1=2.81 B2=5.20	1970BAa (77654)	4249
K(Zn+HL)=2.0									
K(Zn+ZnL)=2.1									
*****									
C11H10N2O			L				(7591)		
4'-(Imidazol-1-yl)acetophenone;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.50M	M		K1=1.94	1998KSa (77663)	4250
*****									
C11H10N2O2			HL				CAS 75793-37-6	(1669)	
N-(8-Quinolyl)aminoethanoic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=3.6 B2=7.20	1969TKa (77676)	4251
*****									
C11H10N3OClS			HL				(1294)		
2-(4',5'-Dimethyl-2'-thiazolylazo)-4-chlorophenol;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	60%	U		K1=6.37 B2=12.47	1981KTa (77687)	4252
*****									
C11H10N4			L	PAPHY			CAS 2215-33-0	(1305)	
Pyridine-2-aldehyde-2'-pyridyl-hydrazone; C5H4N.CH:N.NH.C5H4N									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	EMF	KN03	20°C	0.10M	U		K1=6.21 B2=11.79	1971ANa (77699)	4253

$$\begin{aligned} K(\text{Zn}+\text{HL}) &= 5.7 \\ K(\text{Zn}+2\text{HL}) &= 12.2 \\ K(\text{ZnHL}_2+\text{H}) &= 7.96 \\ K(\text{ZnL}_2+\text{H}) &= 8.78 \end{aligned}$$
$$K(\text{Zn}+\text{HL})=4.93$$
$$K(\text{Zn}+2\text{HL})=9.94$$
$$\begin{aligned} K(\text{Zn}+\text{HL}) &= 5.7 \\ K(\text{Zn}+2\text{HL}) &= 11.2 \\ K(\text{ZnHL}_2+\text{H}) &= 7.94 \\ K(\text{ZnL}_2+\text{H}) &= 8.85 \end{aligned}$$

C11H11NO2 HL CAS 830-96-6 (892)  
Indole-3-propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	C	M	K1=2.52 K(Zn(phen)+L)=2.63	1985BSd (77778)	4261

Medium: 50% v/v dioxan/H2O, 0.1 M NaClO4

\*\*\*\*\*  
 C11H11NO4 HL CAS 32345-47-4 (6227)  
 4-Methoxymaleanilic acid; HOOC.CH:CH.CO.NH.C6H4.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	22°C	80%	U T H		K1=7.90 B2=14.25	1985SAb (77785)	4262

30 C: K1= 7.80, K2=6.35; 40 C: K1= 7.65, K2=6.20  
 DH(K1)=-23.0 kJ mol<sup>-1</sup>, DS=71 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-14.2, DS=75

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	M	K1=8.42 K(ZnL+A)=3.58 B(ZnLA)=12.00	1990DAb (77806)	4263

H2A: salicylaldoxime

Zn++	gl	KNO3	25°C	0.10M	C	M	K1=8.42 K(ZnL+A)=3.35 B(ZnAL)=11.77	1990DAc (77807)	4264
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HL: benzohydroxamic acid

Zn++	gl	KNO3	25°C	0.10M	U		K1=8.42	1967UKa (77808)	4265
------	----	------	------	-------	---	--	---------	-----------------	------

Zn++	sp	NaNO3	20°C	0.10M	U		K(?)=5.61	1961DSa (77809)	4266
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Zn++	EMF	KCl	20°C	0.10M	C		K1=7.7	1950WIa (77810)	4267
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Method: H electrode

\*\*\*\*\*  
 C11H11NS HL CAS 54128-50-6 (1033)  
 2,7-Dimethyl-8-mercaptoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	non-aq	25°C	100%	U		K1=9.1 B2=16.0	1984UBa (77853)	4268

Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

Zn++	EMF	non-aq	25°C	100%	U		K1=9.1 B2=16.00	1983UBa (77854)	4269
------	-----	--------	------	------	---	--	-----------------	-----------------	------

Medium: DMF, 0.1 M LiClO4

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C11H11NS2 HL CAS 54487-80-8 (5694)  
2-Methyl-(5-thiomethyl)-8-mercaptoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++		EMF non-aq	25°C	100%	U		K1=7.1 B2=12.90	1986UBa (77864)	4270

Medium: dimethylformamide, LiClO4

\*\*\*\*\*  
C11H11N2O2Br HL (9228)  
3-[4-Bromophenylazo]penta-2,4-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++		gl alc/w	25°C	0.1M	U		K1=6.82	2004GMc (77871)	4271

Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture

\*\*\*\*\*  
C11H11N2O2Cl HL (9229)  
3-[4-Chlorophenylazo]penta-2,4-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++		gl alc/w	25°C	0.1M	U		K1=6.92	2004GMc (77883)	4272

Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture

\*\*\*\*\*  
C11H11N2O2I HL (9227)  
3-[4-Iodophenylazo]penta-2,4-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++		gl alc/w	25°C	0.1M	U		K1=6.85	2004GMc (77894)	4273

Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture

\*\*\*\*\*  
C11H11N3O2S HL Sulfapyridine CAS 144-83-2 (8356)  
4-Amino-N-2-pyridinyl-benzenesulfonamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++		gl alc/w	30°C	50%	C	M		1999MBc (77926)	4274

B(Zn(gly)L)=11.05  
B(ZnAL)=10.64  
B(Zn(met)L)=10.22  
B(ZnH-1(gly)L)=4.08  
In 50% v/v EtOH/H2O, 0.10 M NaNO3. B(ZnH-2(gly)L)=-4.20; B(ZnH-1AL)=2.79,  
B(ZnH-2AL)=-5.36; B(ZnH-1(met)L)=2.32, B(ZnH-2(met)L)=-5.74. A: Beta-ala

Zn++		gl diox/w	30°C	50%	U		K1=4.39 B2= 7.84	1993MBc (77927)	4275
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\*K(ZnL)=-7.05  
\*K(ZnL2)=-7.85  
\*K(Zn(OH)L2)=-11.45

Medium: 50% v/v dioxane/H2O, 0.10 M NaNO3.

\*\*\*\*\*

C11H11N3O3 HL CAS 51451-03-7 (4834)  
3-Methyl-4-(2'-methoxyphenylazo)isoxazol-5-one;

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

Zn++ gl diox/w 30°C 75% U B2=9.0 1971SYa (77939)4276

\*\*\*\*\*

C11H11N3O3S L CAS 67665-24-1 (8341)  
Furoin thiosemicarbazone;

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

Zn++ gl alc/w 30°C 50% U T H K1=8.95 B2=16.88 1991HRa (77948)4277

Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.

DH(K1)=-144 kJ mol<sup>-1</sup>, DS(K1)=306 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-121, DS(K2)=248.

\*\*\*\*\*

C11H11N3O4 HL (9230)  
3-[4-Nitrophenylazo]penta-2,4-dione;

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

Zn++ gl alc/w 25°C 0.1M U K1=6.58 2004GMc (77954)4278

Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture

\*\*\*\*\*

C11H12NOCl L CAS 50519-24-9 (3367)  
4-(4-Chlorophenylimino)pentan-2-one; CH3.CO.CH2.C(:N.C6H4.Cl).CH3

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

Zn++ gl alc/w 25°C 70% U K1=5.64 1992CGd (77978)4279

Medium: 70% EtOH/H2O. For 4-fluoro K1=4.70; 4-bromo 5.74; 4-iodo 5.93

\*\*\*\*\*

C11H12N2O L Antipyrine CAS 60-80-0 (2026)  
2,3-Dimethyl-1-phenyl-3-pyrazolin-5-one, Phenazone;

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

Zn++ gl KNO3 25°C 0.50M U K1=0.43 B2=0.64 1980LWa (78000)4280  
B3=0.65

\*\*\*\*\*

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

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

Zn++ gl NaClO4 25°C 0.10M U TIH B2=9.65 1988GRb (78012)4281

35 C:B2=9.78, 45 C:9.90. DH(B2)=22.7 kJ mol<sup>-1</sup>, DS=260.9 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C11H12N2O2 HL Tryptophan CAS 73-22-3 (3)

2-Amino-3-(3-indolyl)propanoic acid;  $\text{H}_2\text{N}.\text{CH}(\text{CH}_2.\text{C}_8\text{H}_6\text{N})\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	35°C	0.10M	C	M	K1=4.96 B(ZnAL)=5.12	1999DSb (78135)	4282

A is thiamine hydrochloride.

Zn++	vlt	NaClO4	25°C	1.0M	C	M	K1=5.00 B2= 9.60 B3=12.30 B(ZnAL)=5.20 B(ZnA2L)=9.85 B(ZnAL2)=12.50	1997KKb (78136)	4283
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Method: polarography. HA is pyridoxine (vitamin B6). Medium pH 8.50.

Zn++	gl	KNO3	35°C	0.10M	C	M	K1=4.90 K(ZnL+A)=4.83	1997PSb (78137)	4284
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H2A is thiamine orthophosphoric acid.

Zn++	gl	NaClO4	25°C	0.20M	M		K1=4.83	1996VBa (78138)	4285
Zn++	gl	NaClO4	25°C	0.20M	M		K1=4.835 B2= 9.66	1994VBb (78139)	4286
Zn++	gl	NaClO4	25°C	0.20M	M		K1=4.855 B2= 9.66	1994VBc (78140)	4287
Zn++	gl	NaClO4	25°C	0.20M	U	M	K1=4.88 B2=9.63 B(ZnL(Tyr))=10.36 B(ZnL(Phe))=9.88	1992VBa (78141)	4288

Zn++	gl	KNO3	35°C	0.10M	U		K1=4.60	1990RSe (78142)	4289
------	----	------	------	-------	---	--	---------	-----------------	------

Zn++	gl	KNO3	35°C	0.10M	U	M	K1=4.99 K(Zn(thiodipropionate)+L)=4.93	1989RSb (78143)	4290
------	----	------	------	-------	---	---	---	-----------------	------

Zn++	gl	KNO3	35°C	0.20M	U	M	K1=4.59 B2=8.64 K(ZnA+L)=4.66	1989RVa (78144)	4291
------	----	------	------	-------	---	---	-------------------------------------	-----------------	------

A=bis(imidazol-2-yl)methane

Zn++	gl	KNO3	25°C	0.20M	U	M	K1=4.79 K(Zn(bpy)+L)=5.16	1988BSc (78145)	4292
------	----	------	------	-------	---	---	------------------------------	-----------------	------

Zn++	gl	KNO3	25°C	0.10M	U	M	K1=5.16 B2=9.62	1988MBa (78146)	4293
------	----	------	------	-------	---	---	--------------------	-----------------	------

Zn++	vlt	NaClO4	25°C	0.10M	C		K1=9.0 B2=14.78	1986KSc (78147)	4294
------	-----	--------	------	-------	---	--	--------------------	-----------------	------

Method: polarography. Medium pH 7.0

Zn++	gl	KNO3	25°C	0.10M	U		K1=4.70	1985MKa (78148)	4295
------	----	------	------	-------	---	--	---------	-----------------	------

Zn++	gl	KNO3	25°C	0.10M	C	H	K1=4.70 B2=8.93	1983ACb (78149)	4296
------	----	------	------	-------	---	---	--------------------	-----------------	------

DH(K1)=-12.1; DH(B2)=-24.3 kJ mol<sup>-1</sup>.



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C11H12N2O3                      H2L                      CAS 121565-72-8 (8344)  
2-[[2-(Hydroxyimino)-1-methylpropylidene]amino]benzoic acid;

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

Zn++              gl   alc/w   30°C   50%   C T H              K1=8.62              1993HCb (78270)4308  
Medium: 50% v/v EtOH/H2O, 0.10 M NaClO4. For meta-COOH, K1=10.20;  
for para-COOH, K1=8.88. Data for 40 and 50 C and DH and DS values.

\*\*\*\*\*

C11H12N2O3                      HL                      CAS 20771-72-6 (3359)  
4-(4-Nitrophenylimino)pentan-2-one; CH3.CO.CH2.C(:N.C6H4.NO2).CH3

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

Zn++              gl   diox/w   30°C   50%   U              K1=9.37   B2=17.23   1961MJa (78275)4309

\*\*\*\*\*

C11H12N2O3                      H2L                      CAS 114-03-4 (4839)  
5-Hydroxytryptophan;

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

Zn++              vlt   NaClO4   25°C   1.0M   C              M              1997KKb (78288)4310

K(Zn+HL)=4.50  
K(Zn+2HL)=8.72  
K(Zn+3HL)=12.00  
K(Zn+HL+A)=4.70

Method: polarography. K(Zn+HL+2A)=8.85, K(Zn+2HL+A)=12.32.  
HA is pyridoxine (vitamin B6). Medium pH 8.50.

-----  
Zn++              gl   NaNO3   20°C   0.37M   U              1971WSd (78289)4311

K(Zn+HL)=4.49  
K(Zn+2HL)=8.78

\*\*\*\*\*

C11H12N2O3                      HL                      CAS 642074-71-3 (9045)  
N-Benzyl-N'-hydroxypiperazine-2,6-dione;

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

Zn++              gl   KNO3   25°C   0.10M   C              B2=8.23              2003CMb (78296)4312

\*\*\*\*\*

C11H12N2O5                      H2L                      CAS 5853-99-6 (8739)  
N-[N-(2-Hydroxybenzoyl)glycyl]glycine;

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

Zn++              gl   alc/w   30°C   50%   C              1991MCb (78303)4313

K(Zn+HL=ZnH-2L+3H)=-19.21

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.

\*\*\*\*\*

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  
-----

Zn++            gl    KCl        25°C 0.10M U T            K1=7.48            2005ACa (78311)4314  
For 35 C K1=7.33; for 45 C K1=7.18

\*\*\*\*\*  
C11H12N2O7                      H3L                      CAS 76268-70-5 (3360)  
N-(2-Hydroxy-5-nitrobenzyl)iminodiethanoic acid;

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

Zn++            gl    KCl        20°C 0.10M U            K1=12.6            1952SAb (78339)4315

\*\*\*\*\*  
C11H12N4O                      L                      CAS 86869-40-1 (8372)  
3-(2-Methoxyphenyl)-6-hydrazinopyridazine;

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

Zn++            gl    NaCl      37°C 0.15M U            K1=3.603 B2= 7.25 1984AMb (78346)4316  
Also data for the 3-methoxyphenyl- derivative (B2=7.513, B3=10.00)  
and the 4-methoxyphenyl- derivative (K1=3.788)

\*\*\*\*\*  
C11H12N4O2                      HL                      (4837)  
2-(5-Methyl-4-imidazolylazo)-4-methoxyphenol;

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

Zn++            gl    diox/w 25°C 50% U            K1=10.0 B2=16.90 1968YTa (78352)4317  
Medium: 50% dioxan, 0.1 M KNO3

\*\*\*\*\*  
C11H12N6                      CAS 127742-73-8 (3107)  
4-(Imidazol-4-ylmethyl)-2-(imidazol-2-ylmethyl)imidazole;            L

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

Zn++            gl    NaCl04 25°C 0.10M C    M    K1=8.45 B2=13.42 2000JGa (78365)4318  
B(ZnHL)=11.98  
B(ZnH-1L)=0.23  
B(ZnHL2)=19.45  
B(ZnH2L2)=24.05

For H2A=cysteine: B(ZnAL)=15.66, B(ZnHAL)=23.06, B(ZnH2AL)=28.79.

\*\*\*\*\*  
C11H12O4S2                      H2L                      CAS 4265-49-0 (4840)  
4-Methyl-1,2-phenylenebisthioethanoic acid; CH3.C6H3(S.CH2.COOH)2

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

Zn++            gl    KNO3      25°C 0.10M U            K1=2.20            1971FPa (78412)4319

\*\*\*\*\*

C11H12O9 H3L CAS 69065-58-3 (2714)  
1,2,4-Trihydroxy-3,4,5-trimethoxycarbonylcyclopentadiene;

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

Zn++	gl	NaClO4	25°C	0.10M	C	T		1978MSh (78423)	4320
------	----	--------	------	-------	---	---	--	-----------------	------

DH(Zn+HL)=-7.1 kJ/mol

Data obtained from three lgK values at 15, 25 and 35 C.

Zn++	gl	NaClO4	25°C	0.10M	U			1975MSb (78424)	4321
------	----	--------	------	-------	---	--	--	-----------------	------

K(Zn+HL)=5.92

K(ZnHL+HL)=4.57

\*\*\*\*\*

C11H13NO HL CAS 880-12-6 (3361)  
4-(Phenylimino)pentan-2-one; CH3.CO.CH2.C(:N.C6H5).CH3

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

Zn++	gl	alc/w	25°C	70%	U		K1=7.41	1992CGd (78436)	4322
------	----	-------	------	-----	---	--	---------	-----------------	------

Medium: 70% EtOH/H2O

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C11H13NO4 H2L (3364)  
N-2-Tolyliminodiethanoic acid; CH3.C6H4.N(CH2COOH)2

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

Zn++	gl	KCl	30°C	0.10M	U		K1=2.7	1957TBb (78544)	4323
------	----	-----	------	-------	---	--	--------	-----------------	------

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C11H13NO4 H2L CAS 300042-63-8 (7950)  
N-4-Tolyliminodiethanoic acid;

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

Zn++	cal	NaClO4	25°C	0.10M	C	H		1997ZLa (78549)	4324
------	-----	--------	------	-------	---	---	--	-----------------	------

DH(K1)=15.1, DH(K2)=11.4 kJ mol<sup>-1</sup>. DH(B(ZnL(nta)))=11.0.

\*\*\*\*\*

C11H13NO4 H2L CAS 3987-53-9 (966)  
N-Benzyliminodiethanoic acid; C6H5.CH2.N(CH2COOH)2

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

Zn++	gl	oth/un	?	?	U		K1=7.0	1975DTa (78571)	4325
------	----	--------	---	---	---	--	--------	-----------------	------

Zn++	gl	KNO3	25°C	0.10M	C		K1=6.98 B2=12.51	1975IPa (78572)	4326
------	----	------	------	-------	---	--	------------------	-----------------	------

Zn++	gl	KCl	40°C	0.10M	U	T	K1=6.96 B2=12.25	1968EAb (78573)	4327
------	----	-----	------	-------	---	---	------------------	-----------------	------

K1=7.09(10 C), 7.00(25 C); K2=5.65(10 C), 5.45(25 C)

\*\*\*\*\*

C11H13NO5 H3L HBIDA CAS 7372-13-6 (1603)

N-(2-Hydroxybenzyl)iminodiethanoic acid; HO.C6H4.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C			K1=12.99 K(ZnL+H)=5.79 K(Zn+HL)=7.07	1975HMb (78611)	4328

\*\*\*\*\*  
C11H13NO6 H4L CAS 1911-59-2 (4852)  
2,3-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	EMF	oth/un	?	?	U			K(Zn+HL)=13.3 K(Zn+H2L)=8.2	1975DTa (78655)	4329

\*\*\*\*\*  
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
Zn++	gl	oth/un	25°C	0.0	U			K(Zn+HL)=13.6 K(Zn+H2L)=8.0	1970TTb (78670)	4330

\*\*\*\*\*  
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
Zn++	EMF	oth/un	?	?	U			K(Zn+HL)=10.9 K(Zn+H2L)=8.0	1975DTa (78686)	4331

\*\*\*\*\*  
C11H13NO6S H3L CAS 20531-36-6 (4872)  
N-Benzenesulfonyl-1-glutamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	EMF	none	30°C	0.0	U			K(Zn+H3L=ZnH2L+H)=1.77 K(ZnHL+H)=4.32	1970GDb (78696)	4332

\*\*\*\*\*  
C11H13N3O L Ampyrone CAS 83-07-8 (2027)  
4-Amino-2,3-dimethyl-1-phenyl-3-pyrazolin-5-one, 4-Aminoantipyrine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U			K1=1.32 B2=2.42	1980LWa (78704)	4333



\*\*\*\*\*  
 C11H13O4AsS                      H2L                      CAS 36198-36-4 (4870)  
 Bis(carboxymethyl)-2-(methylthiophenyl)arsine; (HOOCH<sub>2</sub>)<sub>2</sub>.As.C<sub>6</sub>H<sub>4</sub>.S.CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U		K1=3.20 K(Zn+HL)=2.52	1971FPa (78740)	4334

\*\*\*\*\*  
 C11H14N2O                      L                      CAS 51036-80-7 (444)  
 1-(1-Ethoxyethyl)benzimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	kin	NaCl	80°C	0.90M	C		K(Zn+HL=ZnL+H)=3.1	1980LKa (78768)	4335

\*\*\*\*\*  
 C11H14N2O                      L                      (4854)  
 Methylglyoxal 4-dimethylaminoanil

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	oth/un	?	?	U		K1=5.46	1969SMa (78774)	4336

\*\*\*\*\*  
 C11H14N2O3                      HL                      Gly-Phe                      CAS 3321-03-7 (829)  
 Glycyl-phenylalanine; H<sub>2</sub>N.CH<sub>2</sub>.CO.NH.CH(CH<sub>2</sub>.C<sub>6</sub>H<sub>5</sub>).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.01M	U		K1=3.8	1954PEa (78807)	4337

\*\*\*\*\*  
 C11H14N2O4                      H2L                      Gly-Tyr                      CAS 658-79-5 (533)  
 Glycyl-tyrosine; H<sub>2</sub>N.CH<sub>2</sub>.CO.NH.CH(CH<sub>2</sub>.C<sub>6</sub>H<sub>4</sub>.OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO <sub>3</sub>	25°C	0.16M	M		B2=8.14 B(ZnHL)=13.48 B(ZnH <sub>2</sub> L <sub>2</sub> )=26.31 B(ZnHL <sub>2</sub> )=17.80 B(ZnH-1L)=-1.40	1979AKa (78853)	4338

B(ZnH-2L<sub>2</sub>)=-11.8

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.01M	U		K(Zn+HL)=2.6	1954PEa (78854)	4339

\*\*\*\*\*  
 C11H14N2O4                      H2L                      (1880)  
 N-(6-Methyl-2-pyridylmethyl)iminodiethanoic acid; CH<sub>3</sub>C<sub>5</sub>H<sub>3</sub>NCH<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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 Zn++ ISE NaNO3 20°C 0.10M C H K1=9.80 1981ANb (78871)4340  
 DH(K1)=-9.2 kJ mol<sup>-1</sup>, DS=156 J K<sup>-1</sup> mol<sup>-1</sup>  
 additional method: exchange equilibria

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C11H14N2O4 H2L CAS 642074-70-2 (9044)  
 N-Benzyl-N-carboxymethyl-iminoacetohydroxamic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=6.63 B2=11.06 B(ZnHL)=12.84 B(ZnHL2)=18.6 B(ZnH2L2)=24.51	2003CMB (78900)	4341

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C11H14N4O5 HL CAS 56566-64-4 (2816)  
 Biacetylmonoxime-4-phenyl-3-thiosemicarbazone;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	30°C	50%	U T H		K1=6.95	1992HRa (78935)	4342

 Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.  
 DH(K1)=-30.7 kJ mol<sup>-1</sup>, DS(K1)=31.0 J K<sup>-1</sup> mol<sup>-1</sup>.  
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C11H14N4O4 L Tubercidin CAS 69-33-0 (6412)  
 7-Deazaadenosine, Tubercidin;

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.50M	C		K1=0.19	2002KSb (78948)	4343
Zn++	gl	NaNO3	25°C	0.50M	M		K1=0.33	1991JCa (78949)	4344

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C11H14N4O5 HL 1-Methylinosine CAS 2140-73-0 (8133)  
 1-Methylhypoxanthine-9-beta-D-ribofuranoside;

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	1.0M	U		K(Zn+HL=ZnHL)=0.3	1981LVa (78971)	4345

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C11H14O2 HL CAS 20907-24-8 (4816)  
 2-Hydroxy-3-methylbutyrophenone; (HO).C6H3(CH3).CO.CH2.CH2.CH3

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	40°C	0.10M	U		K1=7.10	1973SPc (78984)	4346

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C11H14O2 HL CAS 52780-68-4 (4817)  
 2-Hydroxy-4-methylbutyrophenone; (HO).C6H3(CH3).CO.CH2.CH2.CH3

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3   40°C 0.10M U          K1=6.68      1973SPc (78989)4347
*****
C11H14O2           HL                      CAS 24323-47-5 (4818)
2-Hydroxy-5-methylbutyrophenone; (HO).C6H3(CH3).CO.CH2.CH2.CH3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3   40°C 0.10M U          K1=6.38      1973SPc (78994)4348
*****
C11H14O2           HL                      CAS 2270-20-4 (5542)
5-Phenylpentanoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  KNO3   25°C 0.10M C I M    K1=1.13      1985BSd (79000)4349
                        K(Zn(phen)+L)=1.10
In 50% dioxan: K1=2.49, K(Zn(phen)+L)=2.50. In 50% EtOH: K1=1.91, K=2.09
*****
C11H14O2S          HL                      (4857)
2-Thenoylpivaloylmethane; C4H3S.CO.CH2.CO.C(CH3)3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  diox/w 30°C 75% U          K1=9.63   B2=18.48  1972UDa (79003)4350
Medium: 75% v/v dioxan, 0.01 M Me4NC104
*****
C11H14O3           HL                      (4819)
2-Furoyl pivaloyl methane; C4H3O.CO.CH2.CO.C(CH3)3
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  diox/w 30°C 75% U          K1=9.31   B2=17.59  1972UDa (79009)4351
Medium: 75% v/v dioxan, 0.01 M Me4NC104
*****
C11H14O5           HL                      CAS 951-82-6 (5594)
2-(3,4,5-Trimethoxyphenyl)ethanoic acid;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++       gl  diox/w 25°C 50% C M    K1=2.21      1985BSd (79014)4352
                        K(Zn(phen)+L)=2.33
Medium: 50% v/v dioxan/H2O, 0.1 M NaCl04
*****
C11H15NO3          L                      (6281)
Benzaldehyde:tris-buffer Schiff's base; C6H5.CH:N.C(CH2.OH)3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Zn++ gl alc/w 26°C 60% U K1=1.58 B2=4.31 1978TPb (79028)4353  
\*\*\*\*\*

C11H15N04 HL CAS 18212-81-2 (6280)  
Salicylaldehyde:tris-buffer Schiff's base;  
-----

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

Zn++ gl alc/w 26°C 60% U K1=3.90 1978TPb (79040)4354  
\*\*\*\*\*

C11H15N04S2 H2L CAS 51786-15-3 (8749)  
N-(Phenylsulfonyl)-L-methionine;  
-----

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

Zn++ gl alc/w 25°C 50% C T H 1987MDe (79048)4355  
K(Zn+HL=ZnL+H)=4.57  
K(Zn+2HL=ZnL2+2H)=9.61

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3. Data for 35, 45 C.  
Enthalpy and entropy data.  
\*\*\*\*\*

C11H15NS2 HL CAS 73732-54-4 (1253)  
4-Diethylaminodithiobenzoic acid; (C2H5)2N.C6H4.CSSH  
-----

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

Zn++ sp oth/un 25°C ? U M 1979CDa (79055)4356  
K(ZnL2+pyridine)=3.08  
K(ZnL2+(4-Me-pyridine))=3.52  
K(ZnL2+(4-Ph-pyridine))=3.32  
K(ZnL2+(4-CN-pyridine))=1.40  
\*\*\*\*\*

C11H15N407P H2L CAS 16719-46-3 (6026)  
Tubercidin-5'-monophosphoric acid, 7-Deazaadenosine-5-monophosphoric acid;  
-----

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

Zn++ gl NaNO3 25°C 0.10M C K1=2.11 1988SMb (79064)4357  
K(Zn+HL)=0.93  
\*\*\*\*\*

C11H16N202 L Pilocarpine CAS 54-71-7 (1431)  
(3S;4R)-3-Ethylidihydro-4-((1-methyl-1H-imidazol-5-yl)methyl)-2-furanone;  
-----

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

Zn++ gl KNO3 25°C 0.50M U K1=2.41 B2=4.84 1983LWa (79087)4358  
B3=7.36  
B4=9.65  
B5=11.39  
B6=12.00





K(Ni+ZnL=NiL+Zn)=2.28

K(Cu+ZnL=CuL+Zn)=2.50

K(Cd+ZnL=CdL+Zn)=0.29

K(Pb+ZnL=PbL+Zn)=1.56. Medium: 0.2 KNO<sub>3</sub>, 0.01% gelatin

\*\*\*\*\*

C<sub>11</sub>H<sub>18</sub>N<sub>2</sub>O<sub>8</sub> H<sub>4</sub>L CAS 4408-81-5 (923)  
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((H<sub>2</sub>OC.CH<sub>2</sub>)<sub>2</sub>N.CH<sub>2</sub>)<sub>2</sub>.CH<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	oth	KNO <sub>3</sub>	20°C	0.10M	U		K <sub>1</sub> =15.26	1971AWa (79397)	4376
Zn++	vlt	KNO <sub>3</sub>	25°C	0.20M	U		K <sub>1</sub> =14.26	19650Ga (79398)	4377
Zn++	gl	KNO <sub>3</sub>	20°C	0.10M	U	H		1964ANa (79399)	4378

K(Zn+HL)=7.3

By calorimetry: DH(K<sub>1</sub>)=-9.5 kJ mol<sup>-1</sup>, DS=258 J K<sup>-1</sup> mol<sup>-1</sup>

Zn++	gl	KNO <sub>3</sub>	20°C	0.10M	U		K <sub>1</sub> =15.26	1964LAa (79400)	4379
							K(ZnL+H)=2.5		

By polarography: K<sub>1</sub>=15.22

Zn++	ISE	KNO <sub>3</sub>	20°C	0.10M	U		K <sub>1</sub> =15.25	1964LAa (79401)	4380
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By glass electrode: K<sub>1</sub>=15.29 and 15.06(with Ca++)

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C<sub>11</sub>H<sub>18</sub>N<sub>2</sub>O<sub>9</sub> H<sub>4</sub>L HDPTA CAS 3148-72-9 (431)  
1,3-Diamino-2-hydroxypropane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	KNO <sub>3</sub>	20°C	0.10M	U		K <sub>1</sub> =13.95	1967SMf (79511)	4381
Zn++	EMF	KCl	20°C	0.10M	U		K <sub>1</sub> =11.51	1966PIa (79512)	4382
Method: H electrode									

Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	U		K <sub>1</sub> =13.70	1966TKa (79513)	4383
							K(ZnL+H)=3.58		

Zn++	oth	KNO <sub>3</sub>	20°C	0.10M	U		K <sub>1</sub> =13.5	1965JMb (79514)	4384
Method: electrophoresis									

Zn++	vlt	KCl	20°C	0.10M	U		K <sub>1</sub> =12.95	1964DSc (79515)	4385
------	-----	-----	------	-------	---	--	-----------------------	-----------------	------

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C<sub>11</sub>H<sub>18</sub>N<sub>4</sub> L CAS 78668-34-5 (6708)  
3,6,9,15-Tetraazabicyclo[9.3.1]pentadeca-1(15),11,13-triene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO <sub>3</sub>	25°C	0.10M	C		K <sub>1</sub> =14.40	1993CDa (79615)	4386
							K(Zn(OH)L+H)=8.5		

C11H18N6O3                      HL           Gly-Gly-His-NMe    CAS 59681-15-1    (2222)  
Glycyl-glycyl-L-histidyl-N-methylamide;

Zn++	gl	KN03	25°C 0.16M U	B2=6.58	1979LSa (79647)4387
				B(ZnHL)=10.20	
				B(ZnH-1L)=-5.02	
				B(ZnH-2L)=-12.70	

C11H20N2O3	HL	Pro-Leu	CAS 52899-07-7	(258)
Prolyl-leucine; C4H8N.CO.NH.CH(CH2.CH(CH3)2).COOH				

Zn++      gl    KCl      20°C 0.20M U      K1=3.61    B2=7.59    1982KRc (79703)4388

C11H20N2O4S                      H2L                      (6639)  
1-Thia-4,8-diazacyclodecane-N,N'-diethanoic acid;

Zn++      g1    KNO3    25°C 0.10M C      K1=14.41      1993WLa (79713)4389

C11H20N4O6                      H2L                      ICRF 198                      CAS 108430-47-3                      (8369)  
N,N'-(1-Methyl-1,2-ethanediyl)bis[N-(2-amino-2-oxoethyl)glycine];

Zn++	gl	NaCl	37°C	0.15M	C	K1=9.499	1982HMB (79725)4390
						B(ZnHL)=11.919	
						B(ZnHL2)=19.061	
						B(ZnH2L2)=23.109	
						B(ZnH-1L)=0.169	

C11H20O2                      HL      Dipivaloylmeth.    CAS 1118-71-4    (363)  
2,2,6,6-Tetramethyl-3,5-heptanedione; (CH3)3C.CO.CH2.CO.C(CH3)3

Zn++      gl   diox/w 30°C   75%   U      K1=12.04      1977AHb (79739)4391

Zn++ cal non-aq 30°C 100% U M 1973DGB (79740)4392  
K(ZnL2+py)=2.69

Zn++            gl    diox/w 30°C    75% U                    K1=10.47    B2=20.28    1972UDa (79741)4393  
Medium: 75% v/v dioxan, 0.01 M Me4NC104

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	H		K1=2.52    B2=4.51 B(Zn(bpy)L)=8.25	1989ABa (79762)	4394
DH(K1)=23 kJ mol <sup>-1</sup> , DS(K1)=125.5 J K <sup>-1</sup> mol <sup>-1</sup>										

Zn++	gl	NaClO4	25°C	0.10M	U			K1=2.55	19700Va (79763)	4395
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C11H21N3O5                      H2L                      CAS 499238-77-6 (8837)  
N-Hydroxy-N'-[4-(hydroxymethylamino)-4-oxobutyl]-N-methylpentanediamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.20M	C			K1=7.40 B(ZnHL)=13.93 B(Zn2L3)=21.1	2004FBa (79792)	4396

\*\*\*\*\*

C11H21N3O5                      H2L    2,4-DIHA                      CAS 709640-92-6 (9157)  
N-Hydroxy-N'-[5-(hydroxymethylamino)-5-oxopentyl]-N-methyl-butanediamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.20M	C			K1=7.97 B(ZnHL)=14.03 B(Zn2L3)=22.2	2004FBa (79801)	4397

\*\*\*\*\*

C11H21N3O6                      H3L                      CAS 65439-22-7 (1857)  
1,1,1-Tris(aminomethyl)ethane-N,N',N''-triethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U			K1=12.78 K(Zn+HL)=7.90	1977HZa (79812)	4398

\*\*\*\*\*

C11H23N3O3                      HL    Val-Lys                      CAS 97791-87-2 (5769)  
Valyl-lysine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaNO3	37°C	0.10M	C			B(ZnHL)=12.01 B(ZnH2L2)=24.94	1984RRc (79890)	4399

\*\*\*\*\*

C11H25N3O                      L                      (7190)  
1-(2-Hydroxyethyl)-1,5,9-triazacyclododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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-----
Zn++      gl  NaNO3  25°C 0.10M M T      K1=7.6      1994KNc (79923)4400
              *K(ZnL)=-7.4
              K(2ZnH-1L=Zn2H-2L2)=0.8
T: 15-35 C. K1=7.8(15 C), 7.3(35 C). *K(ZnL)=-7.7 (15 C), -7.1(35 C)
K(2ZnH-1L=Zn2H-2L2)=1.0(15 C)
*****
C11H25N3O      L      (6392)
4,7,10-Trimethyl-1-oxa-4,7,10-triazacyclododecane;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3   25°C 0.10M U      K1=10.006    1991ACa (79929)4401
              B(ZnH-1L)=2.54
              K(ZnL+OH)=6.35
*****
C11H25N3O2     L      (7052)
1,4-Dioxa-7,11,14-triazacyclohexadecane;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3   25°C 0.10M C      K1=8.10      1994CDa (79936)4402
              K(ZnLOH+H)=8.66
*****
C11H25N5O      L      CAS 91328-02-8 (1605)
1,5,8,11,14-Pentaazacyclohexadecane-2-one;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaClO4 25°C 0.10M M      K1=10.7      1990KKa (79947)4403
              B(ZnH-1L)=2.3
*****
C11H26N4      L      CAS 83616-30-2 (868)
1,4,7,10-Tetraazacyclopentadecane; cyclo(-(NH.CH2.CH2)4.CH2.CH2.CH2-)
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaNO3  25°C 0.10M C      K1=10.70     1987HNa (79972)4404
*****
C11H26N4      L      CAS 15439-16-4 (7)
1,4,8,12-Tetraazacyclopentadecane; cyclo(-(NH.CH2.CH2.(N.(CH2)3.)3-)
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      cal non-aq 25°C 100% U   HM      1981GMb (79986)4405
DH(2ZnBr2+L=ZnBrL+ZnBr3)=-151.9.Ternary complexes with C5H5N and CH3CN.
Medium: CH3CN
-----
Zn++      gl  KNO3   25°C 0.50M U      K1=15.35     1980MPa (79987)4406
-----

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Zn++ vlt oth/un 25°C 0.20M U H K1=15.0 1977KKa (79988)4407  
DH(K1)=-34.3 kJ mol<sup>-1</sup>

\*\*\*\*\*

C11H26N4 L CAS 124099-97-4 (5396)

N,N'-Bis(2-aminopropyl)-1,4-diazacycloheptane;

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

Zn++ gl NaNO3 25°C 0.10M U K1=8.17 1990HNa (80003)4408

\*\*\*\*\*

C11H26N4O L CAS 252191-58-5 (7607)

1-(3-Hydroxypropyl)-1,4,7,10-tetraazacyclododecane;

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

Zn++ gl R4N.X 25°C 0.10M C K1=13.7 1999DWa (80007)4409

K(ZnL=ZnH-1L+H)=-8.3

Medium: 0.1 M NEt4ClO4

\*\*\*\*\*

C11H26N4O L CAS 73396-34-6 (7856)

1-Oxa-4,7,11,14-tetraazacyclohexadecane;

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

Zn++ gl NaNO3 25°C 0.10M U K1=11.72 1990HWa (80014)4410

\*\*\*\*\*

C11H27N5 L CAS 29783-72-0 (98)

1,4,7,10,13-Pentaazacyclohexadecane; cyclo(-(NH.CH2.CH2)5.CH2-)

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

Zn++ gl NaClO4 25°C 0.20M M H K1=17.9 1978KKb (80027)4411

B(ZnHL)=21.6

DH1=-56.5 kJ mol<sup>-1</sup>

\*\*\*\*\*

C11H30N6 L CAS 65845-29-6 (4822)

2,2',2'',2'''-(Trimethylenedinitrilo)tetrakis(ethylamine);

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

Zn++ EMF KNO3 25°C 0.10M U H K1=14.86 1971PWa (80048)4412

K(Zn+HL)=12.25

K(ZnL+H)=7.65

K(ZnHL+L=ZnL+HL)=2.62

By calorimetry: DH(K1)=-50.3 kJ mol<sup>-1</sup>, DS=115.4 J K<sup>-1</sup> mol<sup>-1</sup>; DH(Zn+HL)=-51.4,  
DS=61.9; DH(ZnL+H)=-47.1, DS=-12.1; DH(ZnHL+L=ZnL+HL)=1.08, DS=46.4

-----  
Zn++ EMF KNO3 20°C 0.10M U K1=15.01 1971PWa (80049)4413

K(ZnL+Zn)=2.17

K(Zn+HL)=12.42

$$K(\text{ZnL}+\text{H})=7.79$$

\*\*\*\*\*

C11H30N6 L (6595)  
5-(4'-Amino-2'-azabutane)-5-methyl-3,7-diazaanonane-1,9-diamine;  
CH3.C(CH2.NH.CH2.CH2.NH2)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.50M	M		K1=17.0 K(ZnL+H)=6.8 K(ZnHL+H)=5.9	1991HLA (80056)	4414

\*\*\*\*\*

C12H602Cl4S H2L CAS 97-18-7 (4944)  
Bithionol; Cl2.C6H2(OH).S.C6H2(OH).Cl2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	75%	U		K1=8.08 B2=13.94	1970FGa (80094)	4415

Medium: 75% EtOH, 1.0 M NaClO4

\*\*\*\*\*

C12H7N2Cl L CAS 7089-68-1 (3965)  
2-Chloro-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	NaClO4	25°C	0.05M	U T H		K1=3.1	1989LDA (80127)	4416

DH(K1)=-19.4 kJ mol<sup>-1</sup>, DS(K1)=-6 J K<sup>-1</sup> mol<sup>-1</sup>

Zn++	sp	KCl	25°C	0.10M	U		K1=3.3 B2=6.60	1971IGA (80128)	4417
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\*\*\*\*\*

C12H7N2Cl L CAS 4199-89-7 (2751)  
5-Chloro-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	35°C	0.10M	C M		K1=4.67 B2= 9.27 B(ZnLA)=14.60 B(ZnHLA)=20.62	1998LYa (80138)	4418

A is 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime.

Zn++	sp	oth/un	25°C	0.10M	U		K1=5.85	1959BBa (80139)	4419
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C12H7N3O2 L CAS 4199-88-6 (449)  
5-Nitro-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	35°C	0.10M	C M		K1=4.06 B2= 8.35 B(ZnLA)=14.20 B(ZnHLA)=20.16	1998LYa (80164)	4420

A is 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime.

-----  
Zn++ gl KNO3 25°C 0.10M C M K1=5.40 1991DAc (80165)4421  
Data for ternary complexes with acetohydroxamic acid  
-----

Zn++ sp oth/un 25°C 0.10M U K1=5.40 1959BBa (80166)4422  
\*\*\*\*\*  
C12H8N2 L Phenanthroline CAS 66-71-7 (144)  
1,10-Phenanthroline;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ vlt oth/un 20°C 0.01M C K1=5.64 B2=10.95 2001DAa (80335)4423  
B3=15.95  
Medium: 0.01 M acetate buffer. Method: differential pulse polarography.  
-----

Zn++ EMF non-aq 25°C 100% C H K1=5.86 B2=11.10 2001KTA (80336)4424  
B3=15.2  
Medium: DMF, 0.40 M Et4NClO4. Method: Zn/Hg electrode. By calorimetry,  
DH(K1)=-26.5 kJ mol<sup>-1</sup>, DH(B2)=-55.7, DH(B3)=-83.2.  
-----

Zn++ gl KNO3 35°C 0.10M C M K1=5.06 B2= 9.82 1998LYa (80337)4425  
B(ZnLA)=14.96  
B(ZnHLA)=20.98  
A is 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime.  
-----

Zn++ cal non-aq 25°C 100% U H K1=3.8 B2=7.2 1995KOa (80338)4426  
B3=10.0  
Medium: 4-Methylpyridine, 0.1 M n-Bu4NClO4. DH(K1)=-25.4 kJ mol<sup>-1</sup>,  
DH(B2)=-45, DH(B3)=-54.4  
-----

Zn++ gl KNO3 25°C 0.10M C M K1=6.40 B2=12.20 1991DAc (80339)4427  
Data for ternary complexes with acetohydroxamic acid  
-----

Zn++ gl KNO3 25°C 0.10M C M K1=6.40 1990DAc (80340)4428  
K(ZnL+A)=4.99  
B(ZnAL)=11.39  
HL: benzohydroxamic acid  
-----

Zn++ gl NaNO3 35°C 0.10M U M K1=6.25 1985KSc (80341)4429  
K(ZnL+CMP)=3.76  
H2CMP=cytidine-5'-monophosphoric acid  
-----

Zn++ gl diox/w 25°C 50% U M K1=7.35 B2=13.93 1984ABb (80342)4430  
B(ZnL(PFHA))=14.00  
B(ZnL(PTHA))=14.21  
PFHA=N-phenyl-2-furylhydroxamate, PTHA=N-phenyl-2-thenohydroxamate  
-----

Zn++ gl NaClO4 35°C 0.10M U K1=6.32 B2=11.93 1983ABb (80343)4431  
-----

Zn++	sp	NaClO4	25°C	0.20M	U	I	K1=3.49	1983EBa (80344)4432
Zn++	gl	NaClO4	35°C	0.10M	U		K1=5.49 B2=10.30	1980ABb (80345)4433
Values given by the same author (reference 83AB) differ by more than 1 log unit in the same conditions: K1 = 6.32, B2 = 11.93								
Zn++	gl	KNO3	25°C	0.20M	C		K2=5.97	1979MBa (80346)4434
Zn++	gl	KNO3	35°C	0.10M	C	M	K1=5.94	1979MTb (80347)4435
Zn++	gl	NaNO3	20°C	0.10M	C	M	K1=6.55 B(ZnL(ATP))=11.87	1978MSd (80348)4436
Zn++	vlt	KNO3	25°C	0.10M	U	I	K1=6.55 B2=12.35 K3=5.20	1978QCb (80349)4437
In water saturated propylene carbonate K1=6.5, K2=6.3, K3=5.1								
Zn++	sp	NaClO4	25°C	1.0M	C		K1=6.52 K(Zn+HL=ZnL+H)=1.21	1978Y0a (80350)4438
Zn++	EMF	KNO3	30°C	0.10M	U	M	K(ZnL+Gly)=4.71 K(ZnL+Ala)=4.53 K(ZnL+nor-Leu)=4.34 K(ZnL+Gly+OH)=9.92	1977MSa (80351)4439
Zn++	gl	KNO3	30°C	0.10M	M	M	K(ZnL+His)=5.93	1977MSd (80352)4440
Zn++	ISE	alc/w	25°C	50%	U		K1=5.83 B2=11.60 B3=16.34	1972BBa (80353)4441
Medium: 50% EtOH, 0.15 M K2SO4. In aqueous soln: K1=6.22, B2=11.57, B3=16.59								
Zn++	EMF	KNO3	30°C	0.10M	U	M	B(ZnL(en))=4.87 B(ZnLA)=5.26	1972STa (80354)4442
A=1,2-diaminopropane								
Zn++	cal	oth/un	25°C	0.0	U		K1=6.17 B2=12.08 K3=5.25	1970EAa (80355)4443
Zn++	ISE	NaNO3	25°C	0.50M	U		K1=6.73	1967SPa (80356)4444
Zn++	cal	NaNO3	20°C	0.10M	U	H		1963ANb (80357)4445
DH(K1)=-31.4 kJ mol <sup>-1</sup> , DS=18.4 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=-62.7, DS=23.0; DH(B3)=-80.7, DS=59.8								
Zn++	gl	NaNO3	20°C	0.10M	U		K1=6.55 B2=12.35 K3=5.20	1963ANg (80358)4446

C12H10N2O HL CAS 10354-53-7 (3970)  
2-Benzoylpyridine oxime; C5H4N.C(:N.OH).C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	mixed	40°C	40%	U	TIH	K1=7.91 B2=14.61	1965SSa	(80657)4457
Medium: 40% acetone, 0.05 M NaClO4. K1=8.20(20 C),8.15(30 C); K2=6.75(20 C), 6.70(40 C). I=0-0.1. At I=0,DH(K1)=-26.3 kJ mol-1,DS=71; DH(K2)=-2.6,DS=122									
*****									
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
Zn++	gl	diox/w	25°C	50%	U		K1=5.8 B2=10.1	1962GNb	(80669)4458
*****									
C12H10N2O2		H2L					CAS 2050-14-8	(3378)	
2,2'-Dihydroxyazobenzene; HO.C6H4.N:N.C6H4.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	75%	U		K1=19.9	1998FHa	(80697)4459
Medium: 75% (v/v) dioxane/water; 0.1 M KNO3.									
*****									
C12H10N2O2		H2L					CAS 2050-15-9	(1108)	
2,4-Dihydroxyazobenzene; C6H5.N:N.C6H3(OH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=10.8? B2=22.7	1962GNb	(80710)4460
*****									
C12H10N2O4S		H2L					(7497)		
4-(2-Hydroxy-1-phenylazo)-benzenesulfonic acid; C6H4(OH).N=N.C6H4.SO3H									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	20°C	0.1M	C			1998IEa	(80727)4461
K(Zn+HL=ZnH-1L+2H)=-13.0									
*****									
C12H10N2S		L					CAS 13225-84-8	(1993)	
2-Thiopicolinanilide; C5H4N.(C:S).NH.C6H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	50%	U		K1=8.04 B2=16.1	1981MMd	(80747)4462
B3=24.6									
*****									
C12H10N3OBr		HL					CAS 5756-88-7	(4001)	
1-(4'-Bromophenyl)-3-hydroxy-3-phenyltriazene;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	70%	U		K1=7.64 B2=13.94	1965PSd	(80752)4463



Medium: 70% dioxan, 0.1 M KCl

\*\*\*\*\*

C12H10N3OCl HL CAS 52756-05-6 (3998)

1-(2'-Chlorophenyl)-3-hydroxy-3-phenyltriazene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	70%	U		K1=7.26 B2=13.17	1964PSg (80759)	4464

Medium: 70% dioxan, 0.1 M KCl

\*\*\*\*\*

C12H10N3OCl HL CAS 5756-86-5 (3999)

1-(4'-Chlorophenyl)-3-hydroxy-3-phenyltriazene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	70%	U		K1=7.41 B2=13.53	1964PSb (80765)	4465

Medium: 70% dioxan, 0.1 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
Zn++	gl	NaClO4	30°C	0.10M	U T		K1=5.10 B2= 8.97	1981GMi (80777)	4466

Also data for 40-50 C.

\*\*\*\*\*

C12H11NOS HL Thionalide CAS 93-42-5 (4002)

2-Mercapto-N-(2'-naphthyl)acetamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	20°C	75%	U		K1=7.8 B2=14.9	1968BKb (80815)	4467

Medium: 75% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C12H11NO9 H5L (3975)

N-(2',5'-Dicarboxy-4'-hydroxyphenyl)iminodiethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KN03	25°C	0.10M	U			1967UKa (80847)	4468

K(Zn+HL)=9.19

K(Zn+H2L)=3.20

\*\*\*\*\*

C12H11N3O HL CAS 2824-60-4 (3972)

1-Pyridyl-3-(2'-hydroxyphenyl)-1,2-diazaprop-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	50%	U		K1=11.1	1967AND (80867)	4469

Medium: 50% MeOH, 0.1 M NaClO4

\*\*\*\*\*

C12H11N3O5 HL (6787)  
2-Hydroxy-1-naphthaldehyde thiosemicarbazone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl diox/w 20°C 75% U K1=8.35 B2=14.94 1992SSc (80883)4470  
Medium: 75% v/v dioxan/H2O and other mixtures, 0.1 M NaClO4

\*\*\*\*\*

C12H11N3O2 HL CAS 50536-09-5 (6323)  
2-Hydroxy-1-naphthaldehyde-semicarbazone; HO.C10H6.CH:N.NH.CO.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl diox/w 20°C 75% U K1=7.82 B2=14.25 1992SSc (80908)4471  
Medium: 75% v/v dioxan/H2O and other mixtures, 0.1 M NaClO4

-----  
Zn++ gl diox/w 30°C 75% U K1=8.90 1975MKa (80909)4472  
\*\*\*\*\*

C12H11N3O4S H2L (4003)  
3-Hydroxy-3-phenyl-1-(4'-sulfonyl)triazene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl diox/w 25°C 70% U K1=6.52 B2=11.85 1964PSf (80937)4473  
Medium: 70% dioxan, 0.1 M KCl

\*\*\*\*\*

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  
-----  
Zn++ sp NaClO4 25°C 0.50M C K1=1.136 1984MTa (80958)4474  
\*\*\*\*\*

C12H12N06Cl H3L (4004)  
(alpha-Carboxy-4'-chlorobenzyl)iminodiethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KCl 20°C 0.10M U K1=9.51 1966IMb (80980)4475  
\*\*\*\*\*

C12H12N2 L CAS 4916-40-9 (4895)  
1,2-Bis(2-pyridyl)-ethane; C5H4N.CH2.CH2.C5H4N

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 20°C 0.10M U K1=1.4 1970BAa (80988)4476  
K(Zn+HL)=1.0

\*\*\*\*\*

C12H12N2 L (6630)

1,2-Bis(4-pyridyl)ethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	sp	non-aq	25°C	100%	U	HM			1992UNa (80993)	4477
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K(Zn2A+L=Zn2AL)=2.04

K(ZnB+L=ZnBL)=4.51

K(Zn2C+L=Zn2CL)=6.97

Medium: CHCl3. A,C=substituted porphyrins, B=substituted porphyrin dimer.

Zn++	sp	non-aq	?	100%	U	M			1990AHb (80994)	4478
------	----	--------	---	------	---	---	--	--	-----------------	------

K(ZnA+L)=3.63

Medium: CH2Cl2. A=biphenyl capped mesoporphyrin. Data for other porphyrin Zn complexes

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C12H12N2 L CAS 1134-35-6 (3375)

4,4'-Dimethyl-2,2'-bipyridyl; CH3.C5H3N.C5H3N.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	KNO3	25°C	0.10M	U			K1=6.0 B2=11.0	1956YSb (81005)	4479
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K3=4.0

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C12H12N2O HL CAS 70301-52-9 (1940)

2-(Hydroxyphenyliminomethyl)pyridine; C5H4N.CH2.NH.C6H4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	EMF	KNO3	20°C	0.10M	U			K1=7.29 B2=11.50	1978CSa (81022)	4480
------	-----	------	------	-------	---	--	--	------------------	-----------------	------

Zn++	gl	diox/w	25°C	50%	U			K1=10.8 B2=18.8	1962GNb (81023)	4481
------	----	--------	------	-----	---	--	--	-----------------	-----------------	------

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C12H12N2O2 HL CAS 4173-74-4 (4915)

1-Phenyl-3-methyl-4-acetylpyrazol-5-one;

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

Zn++	dis	NaClO4	?	0.10M	U			K1=2.20 B2=5.32	1971NSb (81038)	4482
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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
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Zn++	sp	oth/un	25°C	0.05M	C				2000MPa (81059)	4483
------	----	--------	------	-------	---	--	--	--	-----------------	------

K1eff=3.80

Medium: 0.05 M ethanoate buffer, pH=5.5. Method: spectrofluorimetry.

Zn++	gl	mixed	25°C	75%	U			K1=5.43	1998Sjb (81060)	4484
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Medium: 75% DMSO/H2O, 0.10 M NaClO4.

-----  
 Zn++ sp KCl 25°C 0.10M U K1=3.8 1978TSb (81061)4485  
 \*\*\*\*\*  
 C12H12N2O4 H2L CAS 63409-56-3 (8441)  
 3-(2-Carboxyphenylazo)pentane-2,4-dione;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ gl diox/w 25°C 25% M K1=8.45 1985EEa (81092)4486  
 \*\*\*\*\*  
 C12H12N2O4Cl2 L CAS 53-85-0 (8151)  
 5,6-Dichloro-1-(beta-D-ribofuranosyl)benzimidazole;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ gl NaNO3 25°C 0.50M M K1=0.86 1998KSd (81097)4487  
 \*\*\*\*\*  
 C12H12N4 L (3958)  
 1-(2'-Pyridyl)-3-(6''-methyl-2''-pyridyl)-1,2-diazaprop-2-ene;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ gl NaNO3 60°C 0.0 M TI K1=5.79 B2=11.04 1969GGb (81115)4488  
 Medium: 0 corr. (5C):K1=6.68,B2=12.20,(15C):K1=6.40,B2=11.93,(25C):K1=6.19,  
 B2=11.67,(30C):K1=6.13,B2=11.54,(40C):K1=6.0,B2=11.34,(50C):K1=5.89,B2=11.15  
 \*\*\*\*\*  
 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  
 -----  
 Zn++ gl alc/w 25°C 50% U T H K1=6.4 B2=12.52 1999EEa (81124)4489  
 Medium: 50%(v/v) EtOH/H2O, 0.10 M KCl. DH(K1)=9.57 kJ mol<sup>-1</sup>,  
 DS(K1)=155 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=19.2 kJ mol<sup>-1</sup>, DS(K2)=181 J K<sup>-1</sup> mol<sup>-1</sup>.  
 \*\*\*\*\*  
 C12H12N8B HL CAS 40250-95-1 (7937)  
 Tetrakis(pyrazolyl)borate;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Zn++ dis non-aq 25°C 100% C 2001KSb (81141)4490  
 K(Zn+2HL=ZnL2(org)+2H)=3.7  
 Method: solvent extraction into chloroform.  
 K: Zn+2HL(org)=ZnL2(org)+2H.  
 \*\*\*\*\*  
 C12H12O3 H2L CAS 39113-56-9 (794)  
 1-Phenylhexane-1,3,5-trione; C6H5.CO.CH2.CO.CH2.CO.CH3  
 -----

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

Zn++ gl diox/w 30°C 75% U K1=9.19 B2=17.06 1960KFc (81152)4491  
\*\*\*\*\*

C12H12O3 HL (6844)  
3-Benzoylpenta-2,4-dione; CH3.CO.CH(CO.C6H5)CO.CH3

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

Zn++ gl KCl 25°C 0.20M U K1=4.51 1992CMd (81162)4492  
\*\*\*\*\*

C12H13NO HL CAS 36749-37-8 (3978)  
8-Hydroxy-2-propylquinoline;

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

Zn++ gl oth/un 25°C 0.0 U K1=8.96 B2=19.45 1966KUc (81174)4493  
\*\*\*\*\*

C12H13NO3 HL (1054)  
4-Dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H4.CH:CH.CO.COOH

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

Zn++ sp NaClO4 25°C 0.50M C K1=1.254 1984MTa (81188)4494  
\*\*\*\*\*

C12H13NO3 H2L (5384)  
Acetylacetone-anthranilic acid Schiff base

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

Zn++ gl diox/w 30°C 50% U K1=4.98 B2=9.27 1971MGa (81215)4495  
\*\*\*\*\*

C12H13NO5 H2L CAS 90274-75-2 (3979)  
N-(2'-Acetylphenyl)iminodiethanoic acid; CH3.CO.C6H4.N(CH2.COOH)2

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

Zn++ gl KNO3 25°C 0.10M U K1=7.13 B2=11.10 1965AUa (81229)4496  
\*\*\*\*\*

C12H13NO6 H3L CAS 17335-88-5 (3981)  
1-(Carboxybenzyl)iminodiethanoic acid; C6H5.CH(COOH).N(CH2.COOH)2

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

Zn++ gl KCl 20°C 0.10M U K1=9.78 1966IMb (81240)4497  
\*\*\*\*\*

C12H13NO8 H5L (7001)  
3-Bis-(carboxymethyl)iminomethyl-2,4-dihydroxybenzoic acid;  
HOOC.C6H2(OH)2CH2.N(CH2COOH)2

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

Zn++ gl KCl 25°C 0.10M U 1977RTb (81248)4498

K(Zn+H<sub>2</sub>L)=8.8

\*\*\*\*\*

C12H13NS HL CAS 54421-21-5 (1034)

2-(2-Propyl)-8-mercaptoquinoline;

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

Zn++ gl non-aq 25°C 100% U K1=5.9 B2=11.3 1984UBa (81252)4499

Medium: DMF, 0.1 M LiClO<sub>4</sub>

\*\*\*\*\*

C12H13N3 L CAS 1539-42-0 (932)

bis-((2-Pyridyl)methyl)-amine (Di-2-picolyamine); C<sub>5</sub>H<sub>4</sub>N.CH<sub>2</sub>NHCH<sub>2</sub>.C<sub>5</sub>H<sub>4</sub>N

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

Zn++ gl KNO<sub>3</sub> 20°C 0.10M C H K1=7.63 B2=12.15 1977AHc (81274)4500

Calorimetry: DH1=-32.0 kJ mol<sup>-1</sup>, DS1=37.7; DH(B2)=-54.8, DS(B2)=-48.5

-----  
Zn++ gl KCl 25°C 0.10M U K1=6.8 1968GRa (81275)4501  
-----

Zn++ gl KNO<sub>3</sub> 25°C 0.10M U K1=7.57 B2=11.93 1968RBa (81276)4502

\*\*\*\*\*

C12H13N3O5 HL CAS 76877-48-0 (1289)

2-(4',5'-Dimethyl-2-thiazolylazo)-4-methylphenol;

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

Zn++ gl diox/w 25°C 60% U K1=7.42 B2=14.72 1981KTa (81298)4503

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C12H13N5O<sub>4</sub> L Ethenoadenosine CAS 39007-51-7 (6331)

N<sub>6</sub>-Ethenoadenosine;

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

Zn++ gl NaNO<sub>3</sub> 25°C 0.10M C K1=1.51 1983SSc (81316)4504

Using proton nmr: K1=1.54

\*\*\*\*\*

C12H14N2O<sub>2</sub> HL CAS 7524-52-9 (215)

Tryptophan methyl ester; C<sub>8</sub>H<sub>6</sub>N.CH<sub>2</sub>.CH(NH<sub>2</sub>).COOCH<sub>3</sub>

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

Zn++ sp non-aq 15°C 100% U M 1993MEa (81336)4505

K(ZnA+L)=4.01

K(ZnB+L)=3.21

Medium: CHCl<sub>3</sub>. A=5,15-Bis(2-hydroxy-1-naphthyl)-2,3,7,8,12,13,17,18-octa-ethylporphine, B=5,15-Bis(2-methoxy-1-naphthyl) deriv. of A

\*\*\*\*\*

C12H14N2O<sub>3</sub> HL (6602)

2,3-Dehydro-N-phenylalanyl-alanine; NH<sub>2</sub>.CH(CH<sub>2</sub>.C<sub>6</sub>H<sub>5</sub>)CO.NH.C(COOH):CH<sub>2</sub>

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

Zn++	gl	KCl	25°C	0.10M	C			K1=2.67 B(ZnH-1L)=-4.39 B(ZnH-1L2)=-1.35 B(ZnH-2L2)=-9.84	1994JBa (81340)	4506
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C12H14N4 L (7104)

6,6'-Bis(aminomethyl)-2,2'-bipyridyl;

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

Zn++	gl	KCl	25°C	0.10M	C			K1=10.02 K(ZnL+H)=4.86 *K(ZnL)=-9.46	1995WRa (81349)	4507
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C12H14N4O2 HL CAS 258823-84-6 (9007)

N-(2-Pyridinylmethyl)-L-histidine;

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

Zn++	gl	KNO3	25°C	0.10M	M			K1=15.31	2002YKa (81353)	4508
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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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Zn++	gl	alc/w	25°C	50%	C			K1=3.95	1999GAa (81362)	4509
------	----	-------	------	-----	---	--	--	---------	-----------------	------

Medium: 50% EtOH/H<sub>2</sub>O, 0.10 M NaNO<sub>3</sub>.

Zn++	gl	NaNO3	25°C	0.10M	U	M		1988SSg (81363)	4510
------	----	-------	------	-------	---	---	--	-----------------	------

K(Zn(NTA)+L)=1.49

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C12H14N5O7P H2L e-AMP CAS 361-99-9 (6334)

1,N6-Ethenoadenosine-5'-monophosphoric acid;

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

Zn++	gl	NaCl04	25°C	0.10M	C			K1=3.18	1984SSe (81381)	4511
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C12H14N6O2 L Cyclo-(His-His) CAS 16944-59-5 (5719)

Cyclo-(Histidyl-histidyl)

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

Zn++	gl	NaCl04	25°C	0.10M	M			K1=2.55 B2= 5.45	2001GVa (81391)	4512
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C12H14O3 HL CAS 543-05-8 (4900)  
Ethyl 2-phenylacetoacetate; CH3.CO.CH(C6H5).CO.O.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	diox/w	30°C	75%	U			K1=9.79	1973AAa (81399)	4513
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C12H14O14 H6L CAS 111451-17-3 (5895)  
3,6-Dioxaoctane-1,2,4,5,7,8-hexacarboxylic acid; (CH2(COOH).CH(COOH).O.CH(COOH)-)2

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

Zn++	gl	KCl	25°C	0.10M	C			K1=8.07	1989MMd (81411)	4514
								K(ZnL+H)=4.53		
								K(ZnHL+H)=3.54		
								K(ZnH2L+H)=2.94		
								K(ZnL+Zn)=2.92		

\*\*\*\*\*

C12H15NO2 HL (4924)  
2-Pyridoyl pivaloyl methane; C5H4N.CO.CH2.CO.C(CH3)3

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

Zn++	gl	diox/w	30°C	75%	U			K1=10.33 B2=19.33	1972UDa (81426)	4515
------	----	--------	------	-----	---	--	--	-------------------	-----------------	------

Medium: 75% v/v dioxan, 0.01 M Me4NC104

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C12H15NO2 HL (4925)  
3-Pyridoyl pivaloyl methane; C5H4N.CO.CH2.CO.C(CH3)3

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

Zn++	gl	diox/w	30°C	75%	U			K1=9.45 B2=18.17	1972UDa (81431)	4516
------	----	--------	------	-----	---	--	--	------------------	-----------------	------

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*

C12H15NO2 HL (4926)  
4-Pyridoyl pivaloyl methane; C5H4N.CO.CH2.CO.C(CH3)3

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

Zn++	gl	diox/w	30°C	75%	U			K1=9.29 B2=17.87	1972UDa (81437)	4517
------	----	--------	------	-----	---	--	--	------------------	-----------------	------

Medium: 75% v/v dioxan, 0.01 M Me4NC104

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C12H15NO4S H2L Salicyl-Met CAS 65055-24-5 (6176)  
N-Salicyl-methionine; HO.C6H4.CO.NH.CH(CH2.CH2.S.CH3)COOH

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

Zn++	gl	alc/w	25°C	50%	U			K1=3.76 B2= 7.26	1989MSi (81483)	4518
								B(ZnH-1L)=-5.66		
								K(Zn+OH+L)=8.34		



Medium: 50% v/v EtOH/H<sub>2</sub>O, 0.2 M NaNO<sub>3</sub>.

\*\*\*\*\*

C<sub>12</sub>H<sub>15</sub>N<sub>5</sub>O<sub>5</sub> H<sub>3</sub>L (4930)

1-Hydroxy-4-methylphenyl-2-methyleneiminodiethanoic acid;

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

Zn++ gl KCl 25°C 0.10M U K<sub>1</sub>=13.1 1977RTb (81490)4519  
K(Zn+HL)=8.0  
-----

Zn++ gl oth/un 25°C 0.0 U K<sub>1</sub>=13.10 1970TTb (81491)4520  
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C<sub>12</sub>H<sub>15</sub>N<sub>6</sub>O<sub>6</sub> H<sub>2</sub>L (4931)

2-(Bis(2-hydroxyethyl)amino)-1,4-dibenzoic acid;

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

Zn++ gl oth/un 25°C 0.10M U K<sub>1</sub>=2.40 1973WUa (81514)4521  
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C<sub>12</sub>H<sub>15</sub>N<sub>6</sub>O<sub>6</sub>S H<sub>2</sub>L CAS 34605-45-3 (4959)

4-Toluenesulfonyl glutamic acid;

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

Zn++ gl NaNO<sub>3</sub> 25°C 0.10M C M 1999BMa (81519)4522  
K(Zn+H-1L+H)=15.12  
K(Zn+H-1L+2H)=19.56

Additional method: polarography. Also data for ternary complexes with  
bipyridine.

-----  
Zn++ vlt KCl 25°C 0.10M U 1968RFa (81520)4523  
B<sub>3</sub>=14.02  
-----

\*\*\*\*\*

C<sub>12</sub>H<sub>15</sub>N<sub>5</sub>O HL (4920)

2-(5-Methyl-4-imidazolylazo)-4-dimethylaminophenol;

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

Zn++ gl diox/w 25°C 50% U K<sub>1</sub>=11.7 B<sub>2</sub>=21.30 1968YTa (81533)4524

Medium: 50% dioxan, 0.1 M KNO<sub>3</sub>

\*\*\*\*\*

C<sub>12</sub>H<sub>16</sub>N<sub>2</sub>O<sub>3</sub> HL Ala-Phe CAS 3061-90-3 (6981)

Alanyl-phenylalanine; H<sub>2</sub>N.CH(CH<sub>3</sub>)CO.NH.CH(CH<sub>2</sub>.C<sub>6</sub>H<sub>5</sub>)COOH

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

Zn++ gl KNO<sub>3</sub> 25°C 0.10M C T K<sub>1</sub>=3.29 2000RNb (81570)4525  
Data for 35 and 45 C.

-----  
Zn++ gl KNO<sub>3</sub> 20°C 0.5M U K<sub>1</sub>=2.95 1974KHb (81571)4526

\*\*\*\*\*

C12H16N2O8                      H4L                      (6460)  
 1,4-Diaminobut-2-yne-N,N,N',N'-tetraethanoic acid;  
 (HOOC.CH2)2N.CH2.CC.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	U		K1=9.30 K(Zn+HL)=6.48 K(Zn+ZnL)=5.8	1979TSa (81598)	4527

\*\*\*\*\*

C12H16N2O8S4                      H6L                      (7852)  
 N,N'-Bis(dithiocarboxy)-N,N'-bis-1,1'-(1,2-dicarboxyethyl)ethylenediamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	20°C	0.1M	U		K1=14.5	1999SAa (81613)	4528

\*\*\*\*\*

C12H16N4O4                      L                      PgHisOMe                      CAS 21575-88-6 (718)  
 L-Pyroglutamyl-histidine methyl ester;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		K1=2.12 K(Zn+HL=ZnL+H)=-4.23	1989BKa (81622)	4529

\*\*\*\*\*

C12H16N5O13P3                      H4L                      e-ATP                      CAS 37482-17-0 (5714)  
 1,N6-Ethenoadenosine 5'-triphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	U		K1=5.44 K(Zn+HL)=3.26 K(ZnL+H)=4.3 *K(ZnL(H2O))=-9.0	1986SSb (81627)	4530

\*\*\*\*\*

C12H16N6O3                      HL                      His-His                      CAS 306-14-9 (846)  
 Histidyl-histidine; H2N.CH(CH2.C3H3N2).CO.NH.CH(CH2.C3H3N2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=5.79    B2= 9.18 B(ZnHL)=12.02 B(ZnH-1L)=-3.18	2002Vva (81652)	4531
Zn++	gl	KNO3	37°C	0.15M	U	H	K1=4.97    B2=9.61 K(Zn+H2L)=2.31 K(Zn+HL)=4.06 K(Zn+2HL)=7.53 K(2ZnL=Zn2L2)=3.37	1976APa (81653)	4532

K(Zn+HL+L)=8.99, K(ZnHL+ZnL)=2.96

-----  
Zn++ gl KCl 25°C .058M U T K1=4.30 B2=8.20 1961SMa (81654)4533  
At 0 C K1=10.50, K2=6.30 ?

\*\*\*\*\*

C12H16O2 HL CAS 5581-75-9 (5590)

6-Phenylhexanoic acid; C6H5.(CH2)5.COOH

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

-----  
Zn++ gl diox/w 25°C 50% C I M K1=2.47 1985BSd (81665)4534

K(Zn(phen)+L)=2.50

In 50% EtOH: K1=1.96, K(Cu(phen)+L)=2.10

\*\*\*\*\*

C12H16O4S6 L CAS 66785-63-5 (7805)

1,4,7,10,13,16-Hexathiacyclooctadecane-2,3,11,12-tetraone;

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

-----  
Zn++ con none 25°C 0.0 C T H K1=4.76 1998GRa (81687)4535

DH(K1)=-45.8 kJ mol<sup>-1</sup>, DS(K1)=-62 J K<sup>-1</sup> mol<sup>-1</sup>.

Also data for 15-45 C.

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C12H17NOS HL CAS 34282-27-4 (3393)

N-(2,6-Diethylphenyl)mercaptoacetamide; HS.CH2.CO.NH.C6H3(CH2.CH3)2

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

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Zn++ gl diox/w 30°C 75% U K1=10.18 B2=19.25 1961MAe (81709)4536

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C12H17N3O10 H4L Asp-Asp-Asp (6445)

Aspartyl-aspartyl-aspartic acid;

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

-----  
Zn++ gl KNO3 25°C 0.10M C K1=4.55 1995KLa (81734)4537

B(ZnH-1L)=-4.58

B(ZnH-2L)=-13.46

\*\*\*\*\*

C12H17N4OClS HL Vitamin B1 CAS 59-43-8 (2777)

Thiamine, Aneurine;

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

-----  
Zn++ gl KNO3 35°C 0.10M C K1=2.30 1999DSb (81743)4538

-----  
Zn++ gl KNO3 35°C 0.10M U M K1=2.30 B2=4.10 1989SRc (81744)4539

K(ZnL+thymine)=4.97

K(ZnL+uracil)=4.35

\*\*\*\*\*

C12H17N4O4PS                      H2L                      CAS 495-23-8 (895)  
Thiamine orthophosphoric acid, Aneurine monophosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	35°C	0.10M	C		K1=3.54	1997PSb (81759)	4540
Zn++	gl	NaCl	23°C	0.15M	U		K1=2.35	1989DBb (81760)	4541
Zn++	gl	KNO3	45°C	0.10M	U T		K1=3.24 K(ZnL+H)=2.46	1981TTa (81761)	4542

5 C: K1 = 2.93

Zn++	gl	KNO3	35°C	0.10M	U		K1=3.54 K(Zn+HL)=2.73	1978KBa (81762)	4543
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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
Zn++	gl	KNO3	25°C	0.10M	C		K1=5.56    B2=10.06	1988YSc (81801)	4544

\*\*\*\*\*

C12H18N2O8                      H2L                      CAS 93031-52-8 (5829)  
1,4-Dioxa-7,10-diazayclododecane-5,12-dione-7,10-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	C		K1=8.57	2002DCb (81827)	4545

Medium: 0.10 M Me4NNO3.

\*\*\*\*\*

C12H18N2O8                      H4L                      (8011)  
trans-1,4-Diaminobuten-2-N,N,N',N'-tetraethanoic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U		K1=10.80 K(Zn+HL)=7.52 K(ZnL+Zn)=5.4	1976TTb (81888)	4546

\*\*\*\*\*

C12H18N2O10                      H5L                      CAS 105147-09-9 (1081)  
1-Carboxy-1,3-diaminopropane-N,N,N',N'-tetraethanoic acid;  
(HOOCCH2)2NCH(COOH)(CH2)2N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=16.94 K(Zn+H2L)=4.62 K(Zn+HL)=10.31 B(Zn2L)=19.49	1988MGa (81906)	4547

$$K(\text{ZnL}+\text{H})=4.52$$

$$K(\text{ZnHL}+\text{H})=2.92$$

\*\*\*\*\*

C12H18N4O7P2S H3L Cocarboxylase T CAS 136-09-4 (894)

Thiamine pyrophosphoric acid, Aneurine pyrophosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	U			2000MLa (81926)	4548
							K(2Zn+2HL+2H=Zn2H4L2)=20.66		
							K(2Zn+2HL+H=Zn2H3L2)=15.50		
							K(2Zn+2HL=Zn2H2L2)=10.11		

Zn++	gl	KNO3	35°C	0.10M	C	M	K1=3.70	1999PSb (81927)	4549
Ternary complexes with many aminoacids.									

Zn++	gl	NaCl	23°C	0.15M	U		K1=4.54	1989DBb (81928)	4550
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Zn++	gl	KNO3	45°C	0.10M	U	T	K1=4.20	1981TTa (81929)	4551
							K(ZnL+H)=2.76		

5 C: K1 = 3.85

Zn++	gl	KNO3	35°C	0.10M	U		K1=4.55	1978KBa (81930)	4552
							K(Zn+HL)=2.89		

\*\*\*\*\*

C12H18N4O9 H3L CAS 43101-37-7 (2935)

Tetraglycine-N,N-diethanoic acid; (HOOC.CH2)2N.CH2.CO.Gly-Gly-Gly-OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=7.00	1974MMb (81949)	4553
							K(ZnL+H)=3.41		

\*\*\*\*\*

C12H19NOS2 L (5424)

2-(2-Pyridyl)-1,3-dithioethyl-2-propanol; C2H5.S.CH2.C(OH)(C5H4N).CH2.S.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U		K1=1.20	1981CBa (81973)	4554

\*\*\*\*\*

C12H19NO6 H3L (3991)

N-(2'-Carboxycycloheptyl)iminodiethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U		K1=12.28	1966IMa (81978)	4555

\*\*\*\*\*

C12H20N2O2 H2L CAS 6310-76-5 (3387)

4,4'-Ethylenedi-iminodi(pentan-2-one);

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	0.2M	U		K1=5.96	1999MTc (82003)	4556

Medium: 0.2 M KCl in 3:7 v/v H2O/EtOH

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C12H20N2O6	H3L	CAS 111652-02-9	(8144)
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Azetidine-2-carboxy-1-(4-azaheptane-1,5-dicarboxylic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=10.5	1989ARa (82009)	4557

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C12H20N2O8	H4L	CAS 1798-13-6	(4935)
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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
Zn++	vlt	KNO3	20°C	0.10M	U		K1=18.23	1968NLa (82014)	4558

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C12H20N2O8	H4L	CAS 40623-42-5	(1101)
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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
Zn++	ISE	KNO3	25°C	0.10M	U		K1=10.25	1972GBE (82047)	4559

Zn++	gl	KNO3	30°C	1.0M	U		K1=7.15	1972TSf (82048)	4560
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C12H20N2O8	H4L	CAS 61368-60-3	(3389)
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1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	KNO3	20°C	0.10M	U		K1=16.22	1976Nka (82118)	4561

Zn++	gl	KNO3	20°C	0.10M	U		K1=16.02	1966MKb (82119)	4562
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C12H20N2O8	H4L	CAS 40623-42-5	(3388)
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1,2-Diaminoethane-N,N'-diethanoic-N,N'-dipropanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	30°C	0.10M	U		K1=14.5	1952CMc (82154)	4563

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C12H20N2O8	H4L	CAS 2458-58-4	(922)
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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
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Zn++ cal KNO3 20°C 0.10M U H 1964ANa (82196)4564  
DH(K1)=-14.5 kJ mol<sup>-1</sup>, DS=237 J K<sup>-1</sup> mol<sup>-1</sup>

Zn++      g1    KNO<sub>3</sub>    20°C 0.10M U      K<sub>1</sub>=15.04      1964LAa (82197)4565  
K(Zn+HL)=7.42

\*\*\*\*\*  
C12H20N2O8                      H3L      Mugineic acid      CAS 69199-37-7    (9036)  
2-Carboxy-a-[(3-carboxy-3-hydroxypropyl)amino]-b-hydroxy-1-azetidinebutanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++      gl    KNO3    20°C 0.10M U      K1=10.7      1981STc (82245)4566

\*\*\*\*\*  
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
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Zn++	ISE	KN03	20°C 0.10M U	K1=18.92 K(Zn+HL)=2.57	1971ISa (82262)4567
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Zn++ vlt KN03 20°C 0.10M U K1=19.07 1966DMa (82263)4568

Zn++            oth KNO3    20°C 0.10M U            K1=18.5            1965JMb (82264)4569  
Method: electrophoresis

Zn++      vlt KNO3      20°C 0.10M U      K1=18.85      1964MNa (82265)4570

\*\*\*\*\*  
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
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Zn <sup>+2</sup>	ISE	KNO <sub>3</sub>	20°C	0.1M U	K <sub>1</sub> =17.35	1971ISa (82365)4571
					K(Zn+HL)=3.52	

Zn++ vlt KN03 20°C 0.10M U K1=17.13 1966DMa (82366)4572

Zn++            oth KNO3    20°C 0.10M U            K1=18            1965JMb (82367)4573  
Method: electrophoresis

Zn++      vlt KNO3      20°C 0.10M U      K1=17.35      1964MNa (82368)4574

\*\*\*\*\*  
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
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Zn++ gl KNO3 20°C 0.10M U H K1=13.44 1964ANa (82438)4575  
K(Zn+HL)=8.05

By calorimetry: DH(K1)=-15.5 kJ mol<sup>-1</sup>, DS=205 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Zn++ gl KCl 20°C 0.10M U K1=13.17 1964PCa (82439)4576  
\*\*\*\*\*

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  
-----

Zn++ cal KNO3 25°C 0.10M U H 1965WHa (82505)4577  
DH(K1)=-31.8 kJ mol<sup>-1</sup>, DS=194 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Zn++ gl KNO3 20°C 0.10M U H K1=15.3 1964ANa (82506)4578  
K(Zn+HL)=8.5

By calorimetry: DH(K1)=-25.0 kJ mol<sup>-1</sup>, DS=207 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Zn++ gl KCl 20°C 0.10M U K1=15.25 1964PCa (82507)4579  
-----

Zn++ EMF KNO3 25°C 0.10M U K1=15.3 1960HRa (82508)4580  
\*\*\*\*\*

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

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

Zn++ oth oth/un ? ? U 1967LDa (82579)4581  
B(Zn2L)=19.84

Method: high-frequency titration.

\*\*\*\*\*

C12H20N4 L (6709)  
3,7,10,16-Tetraazabicyclo[10.3.1]hexadeca-1(16),12,14-triene;

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

Zn++ gl KNO3 25°C 0.10M C K1=14.27 1993CDa (82603)4582  
K(Zn(OH)L+H)=7.83

\*\*\*\*\*

C12H20N4O3 HL Leu-His CAS 38062-71-4 (5768)  
Leucyl-histidine;

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

Zn++ gl NaNO3 37°C 0.10M C 1984RRc (82611)4583  
B(ZnHL)=10.01  
B(ZnHL2)=13.65  
B(ZnH-1L)=-3.28

\*\*\*\*\*

C12H20N4O6 H2L (7078)



1,4,7,10-Tetraazacyclododeca-2,9-dione-4,7-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	nmr	none	23°C	0	U	M		K(ZnL+HA)=2.1 K(ZnL+B)=2.0	1997IMa (82618)	4584

HA=histamine, B=imidazole

Zn++	gl	KCl	25°C	0.10M	C			K1=8.98 K(ZnL+H)=1.47 K(ZnL=ZnH-1L+H)=-9.56 K(ZnH-1L=ZnH-2L+H)=-11.94	1995IOb (82619)	4585
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\*\*\*\*\*  
C12H20N6O L (5462)  
1,9-Bis(4-imidazolyl)-2,8-diaza-5-oxanonane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C			K1=9.52	1982BTb (82633)	4586

\*\*\*\*\*  
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
Zn++	gl	KNO3	20°C	0.10M	C			K1=17.00	1978NLa (82664)	4587

\*\*\*\*\*  
C12H21NO6 H3L (7209)  
1-Carboxy-1-aminoheptane-N,N-diethanoic acid; H00C.CH(C6H13)N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	20°C	0.10M	U			K1=10.21	1985LBc (82688)	4588

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U			K1=18.3	1975HTa (82722)	4589

By competition with Cd ion.  
\*\*\*\*\*  
C12H21N3O6 H3L CAS 111769-28-9 (8145)  
Azetidine-2-carboxy-1-(4-azaheptane-1-amino-1,5-dicarboxylic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C			K1=15.4	1989ARa (82746)	4590

For racemic isomer: K1=12.3

-----  
Zn++ gl oth/un 25°C 0.10M M K1=14.7 1983BSd (82747)4591  
Medium: 0.10 M KClO4.

\*\*\*\*\*

C12H21N3O6 H3L CAS 31824-09-6 (4936)  
cis,cis-1,3,5-Tris(carboxymethylamino)cyclohexane;

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

Zn++ gl KCl 25°C 0.10M U K1=13.41 1971Z0a (82756)4592  
K(Zn+HL)=7.87

\*\*\*\*\*

C12H21N5O3 HL His-Lys CAS 37700-85-9 (5770)  
Histidyl-lysine;

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

Zn++ gl NaNO3 37°C 0.10M C 1984RRc (82764)4593  
B(ZnHL)=14.78  
B(ZnH2L2)=28.60

\*\*\*\*\*

C12H21N7 L (1870)  
1,9-Bis(4-imidazolyl)-2,5,8-triazanonane;

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

Zn++ cal KNO3 25°C 0.1M C H K1=13.30 1982TMc (82773)4594  
DH(K1)=-42.6 kJ mol<sup>-1</sup>

-----  
Zn++ cal KNO3 25°C 0.10M C 1982Tmd (82774)4595  
DH1=-46.2 kJ/mol

-----  
Zn++ gl KNO3 25°C 0.10M C K1=13.303 1978THb (82775)4596  
K(ZnL+H)=2.69

\*\*\*\*\*

C12H22N2O6 H2L (6394)  
1,7-Dioxa-4,10-diazacyclododecan-4,10-diethanoic acid;

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

Zn++ gl R4N.X 25°C 0.10M C K1=12.277 1992ADa (82786)4597  
Medium: 0.1 M Me4NNO3

\*\*\*\*\*

C12H22N2O6 H2L (6641)  
7,10-Diaza-1,4-Dioxacyclododecane-7,10-diethanoic acid;

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

Zn++ gl R4N.X 25°C 0.10M C K1=12.52 1992ADa (82800)4598

Medium: 0.1 M Me4NNO3

\*\*\*\*\*

C12H22N4O6 H2L ICRF 243 (5772)

DL-NN'-Dicarboxamidomethyl-NN'-dicarboxymethyl-2,3-diaminobutane;

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

Zn++ gl NaCl 37°C 0.15M U K1=11.720 1985HCa (82830)4599  
B(ZnH-1L2)=4.254

\*\*\*\*\*

C12H22N4O6 H2L ICRF 226 CAS 83266-80-2 (8370)

N,N'-(1-Ethyl-1,2-ethanediy1)bis[N-(2-amino-2-oxoethyl)glycine];

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

Zn++ gl NaCl 37°C 0.15M C K1=11.219 1982HMB (82839)4600  
B(ZnHL)=12.941  
B(ZnHL2)=20.849  
B(ZnH2L2)=24.316

\*\*\*\*\*

C12H22N4O6 H2L ICRF 236 (5771)

meso-NN'-Dicarboxamidomethyl-NN'-dicarboxymethyl-2,3-diaminobutane;

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

Zn++ gl NaCl 37°C 0.15M U K1=9.904 1985HCa (82848)4601  
B(NiHL)=11.349

\*\*\*\*\*

C12H23N3O5 H2L (6393)

1-Oxa-4,7,10-triazacyclododecan-4,10-diethanoic acid;

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

Zn++ gl R4N.X 25°C 0.10M C K1=16.12 1992ADa (82967)4602  
Medium: 0.1 M Me4NNO3

\*\*\*\*\*

C12H23N3O5 H2L CAS 499238-78-7 (8836)

N-Hydroxy-N'-[5-(hydroxymethylamino)-5-oxopentyl]-N-methylpentanediamide;

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

Zn++ gl KNO3 25°C 0.20M C K1=7.54 2004FBa (82982)4603  
B(ZnHL)=14.02  
B(Zn2L3)=21.7

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C12H23N3O5 H2L CAS 499238-79-8 (8835)

N-Hydroxy-N'-[6-(hydroxymethylamino)-6-oxohexyl]-N-methylbutanediamide;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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2-(4-Imidazolyl)-1,5,9-triazacyclododecane;

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1,1'-Diaminobicyclohexyl;

\*\*\*\*\*

Leucyl-leucine;  $\text{H}_2\text{N} \cdot \text{CH}(\text{CH}_2 \cdot \text{CH}(\text{CH}_3)_2) \cdot \text{CO} \cdot \text{NH} \cdot \text{CH}(\text{CH}_2 \cdot \text{CH}(\text{CH}_3)_2) \cdot \text{COOH}$

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\*\*\*\*\*

Hexamethylene-N,N'-diethyldihydroxamic acid;  $\text{CH}_3\text{CH}_2\text{N}(\text{OH})\cdot\text{CO}\cdot(\text{CH}_2)_6\cdot\text{CO}\cdot\text{N}(\text{OH})\text{CH}_2\text{CH}_3$

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$$B(Zn2L2)=19.00$$

\*\*\*\*\*

5,12-Dimethyl-1,4,8,11-tetraazacyclotetradeca-4,11-diene;

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C12H24N4O4 H2L (7522)  
1,4,8,11-Tetraazacyclotetradecane-6,13-dicarboxylic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.50M	U		K1=26.3 K(ZnL+H)=5.4 K(ZnHL+H)=4.8 *K(ZnL)=-10.5	1997BLd (83100)	4612

\*\*\*\*\*

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
Zn++	con	mixed	25°C	90%	C		K1=1.61	2003ISa (83178)	4613
Medium: 90% v/v DMSO/H2O.									
Zn++	con	alc/w	25°C	40%	C		K1=1.59	2001ISa (83179)	4614
Medium: 40% v/v EtOH/H2O.									
Zn++	con	none	25°C	0.0	C		K1=0.53	2000KTa (83180)	4615
Zn++	nmr	non-aq	27°C	100%	U	I	K1=2.07	2000SMd (83181)	4616
Competitive method by 7Li nmr. Medium: acetonitrile (AN). Also data for 50% w/w AN/nitrobenzene (K1=2.33) and 50% w/w AN/nitromethane (K1=2.48).									
Zn++	vlt	alc/w	25°C	100%	C		K1=2.22	1987CBd (83182)	4617
Medium: methanol, 0.10 M Et4NI or Bu4NClO4. Method: polarography.									

\*\*\*\*\*

C12H26N2O4 L CAS 41775-36-4 (2470)  
1,4,7,13-Tetraoxa-10,16-diazacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	C		K1=4.26	1983LCa (83727)	4618

\*\*\*\*\*

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
Zn++	gl	R4N.X	25°C	0.05M	C		K1=3.0	1997BCc (83756)	4619
Medium: 0.05 M Me4NClO4									
Zn++	gl	R4N.X	25°C	0.10M	C		K1=3.77	1985CSb (83757)	4620
Medium: 0.10 M Et4NClO4.									
Zn++	gl	R4N.X	25°C	0.10M	C		K1=4.31	1983LCa (83758)	4621

Zn++ gl alc/w 25°C 95% C K1=2.5 1981ANa (83759)4622  
Medium: 95% MeOH, 0.1 M Me4NCl

Zn++ gl alc/w 25°C 100% C K1=4.84 1979SAa (83760)4623  
B(ZnHL)=13.86  
Medium: MeOH, 0.05 M Et4NClO4

Zn++ gl R4N.X 25°C 0.10M C K1=3.19 1977ASc (83761)4624  
\*\*\*\*\*  
C12H26N4O L (7316)  
7-Oxa-1,4,10,13-tetraazabicyclo[2(1,13).2.11]heptadecane

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaNO3 25°C 0.10M U K1=5.81 1987HEa (83942)4625  
\*\*\*\*\*  
C12H26N12 L (7007)  
1,10-Di(2-(5-tetraazolyl)ethyl)-1,4,7,10-tetraazadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaNO3 20°C 0.10M U K1=14.76 1981ESa (83967)4626  
\*\*\*\*\*  
C12H26S L CAS 6294-31-3 (5697)  
S,S-Dihexylsulfide; C6H13.S.C6H13

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ ISE non-aq 25°C 100% U K1=-0.16 1986MMb (84030)4627  
Medium: acetone, Bu4NClO4  
\*\*\*\*\*  
C12H27N3 H3L CAS 69881-53-4 (2424)  
2,2,4-Trimethyl-1,5,9-triazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaNO3 25°C 0.10M U K1=7.68 1979RJa (84051)4628  
K(ZnL=ZnLOH+H)=-9.56  
\*\*\*\*\*  
C12H27N3O2 L (7053)  
1,4-Dioxa-7,11,15-triazacycloheptadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 25°C 0.10M C K1=7.09 1994CDa (84056)4629  
K(ZnLOH+H)=8.06  
\*\*\*\*\*  
C12H27N3O3 L THETAC (7199)  
1,4,7-Tris(hydroxyethyl)-1,4,7-triazacyclononane

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	U		K1=12.07	1983SMc (84080)	4630
*****									
		C12H27N3S3	HL	TACN-TM			(6952)		
1,4,7-Tris(2-mercaptoethyl)-1,4,7-triazacyclononane;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	C		K1=23.9 B(ZnHL)=34.1 B(ZnH2L)=40.4	1995Mwa (84097)	4631
*****									
		C12H27N5O2	HL				(7521)		
6-Methyl-1,4,8,11-tetraazacyclotetradecane-6-amino-3-carboxylic acid									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.50M	U		K1=14.7 K(ZnL+H)=6.6 K(ZnHL+H)=5.0 *K(ZnL)=-10.8	1997BLd (84109)	4632
*****									
		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
Zn++	gl	R4N.X	25°C	0.10M	C		K1=13.10 B(ZnHL)=19.84 B(ZnH2L)=25.48 B(Zn2L)=16.10 B(Zn2H-1L)=8.39	2000PSa (84146)	4633
Medium: 0.10 M [Et4N]NO3.									

Zn++	gl	R4N.X	25°C	0.10M	U		K1=13.25 K(Zn+HL)=6.66 K(Zn+H2L)=5.56	1996BJa (84147)	4634
Medium: 0.1 M Me4NCl									
*****									
		C12H28N4	L				CAS 76282-33-2 (2883)		
1,4,7,10-Tetramethyl-1,4,7,10-tetraazacyclododecane;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	U		K1=14.04	1990HWa (84176)	4635
*****									
		C12H28N4	L				CAS 24772-41-6 (145)		
1,5,9,13-Tetraazacyclohexadecane; cyclo(-(NH.CH2.CH2.CH2)4-)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	U		K1=13.02	1991LHa (84191)	4636
Zn++	cal	non-aq	25°C	100%	U	HM		1981GMb (84192)	4637
DH(2ZnBr2+L=ZnBrL+ZnBr3)=-152.7. Ternary complexes with C5H5N and CH3CN. Medium: CH3CN									
Zn++	gl	KNO3	25°C	0.50M	U	H	K1=13.05	1980MPa (84193)	4638
DH(K1)=-29.7 kJ mol <sup>-1</sup> , DS(K1)=150.1 J K <sup>-1</sup> mol <sup>-1</sup> *****									
C12H28N4 L (6828) 1-(3-Aminopropyl)-1,5,9-triazacyclododecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	M		K1=11.7	1992KKb (84200)	4639
*****									
C12H28N4O L (7305) 1-(2-Hydroxyethyl)-1,4,8,11-tetraazacyclotetradecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	C		K1=10.3 B(ZnH-1L)=2.0	1997RWa (84205)	4640
Medium: Et4NClO4 *****									
C12H28N4O2 L CAS 296-36-6 (2472) 1,10-Dioxa-4,7,13,16-tetraazacyclooctadecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	dis	non-aq	25°C	100%	C	I		2004CCa (84221)	4641
K(Zn+A+L(org)=ZnAL(org))=11.05 Distribution of ZnA2 from H2O into CH2Cl2. A is nitrate. For the N-tetra-benzyl- derivative, K'=11.62. Distribution into CHCl3, K=11.88; K'=12.62.									
Zn++	gl	NaNO3	25°C	0.10M	U		K1=10.51	1990WHa (84222)	4642
Zn++	gl	NaNO3	25°C	0.10M	C		K1=10.51	1989HBa (84223)	4643
Zn++	gl	R4N.X	25°C	0.10M	C		K1=10.90	1983LCa (84224)	4644
*****									
C12H28N4O2 L CAS 40025-71-6 (5880) 1,4-Dioxa-7,10,13,16-Tetraazacyclooctadecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	C		K1=9.52 B(ZnHL)=14.88	1989HBa (84242)	4645



B(ZnH2L)=20.28

\*\*\*\*\*

C12H29N5 L CAS 82583-20-6 (97)  
1,4,7,11,14-Pentaazacycloheptadecane; cyclo(-(NH.C2H4)3.CH2(NH.C2H4)2.CH2-)

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

Zn++ gl NaCl04 25°C 0.20M M H K1=15.8 1978KKb (84257)4646  
B(ZnHL)=20.1

DH1=-53.1 kJ mol-1

\*\*\*\*\*

C12H30N3O9P3 H6L DOPHET CAS 123325-12-2 (227)  
1,4,7-Tris(beta-dioxyposphorylethyl)-1,4,7-triazacyclononane;

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

Zn++ gl KNO3 25°C 1.0M U K1=17.0 1988MKa (84274)4647  
K(Zn+HL)=12.9  
K(Zn+H2L)=11.1  
K(Zn+H3L)=6.9

\*\*\*\*\*

C12H30N4 L (6740)  
Tris(2-(dimethylamino)ethyl)amine; N(CH2CH2.N(CH3)2)3

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

Zn++ gl NaCl04 25°C 1.0M U T H K1=9.68 1995CXa (84299)4648  
\*K(ZnL(H2O))=-8.86

Data for 35 and 45 C. By calorimetry, DH(\*K1)=25.5 kJ mol-1, DS(\*K1)=-84  
J K-1 mol-1.

-----  
Zn++ gl NaCl04 25°C 1.00M C K1=9.75 1994AGa (84300)4649  
K(Zn+HL)=5.31

\*\*\*\*\*

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  
-----

Zn++ gl NaCl04 25°C 0.15M C K1=18.70 1989BBa (84316)4650  
B(ZnHL)=22.63

-----  
Zn++ gl NaCl04 25°C 0.20M U H K1=17.8 1980KKb (84317)4651  
DH=-51.9 kJ mol-1, DS=167 J K-1 mol-1

\*\*\*\*\*

C12H30N6 L CAS 212697-43-3 (9176)  
1,4,7-Tris(2-aminoethyl)-1,4,7-triazacyclononane;

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

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

Zn++ gl NaClO4 25°C 0.15M C H K1=14.02 1991ABa (84426)4658  
B(ZnHL)=21.96  
K(Zn+HL)=11.68

DH(K1)=-49.4 kJ mol<sup>-1</sup>.

\*\*\*\*\*

C12H32N6 L CAS 62708-55-8 (8897)

3,7,10,14-Tetraazahexadecane-1,16-diamine;

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

Zn++ gl R4N.X 25°C 0.10M C H K1=13.84 2002BBg (84433)4659

K(ZnL+H)=6.58

K(ZnHL+H)=6.40

Medium: 0.10 M Me4NCl. By calorimetry, DH(K1)=-64.4 kJ mol<sup>-1</sup>, DS(K1)=48

J K<sup>-1</sup> mol<sup>-1</sup>; DH(ZnL+H)=-26.3, DS(ZnL+H)=38; DH(ZnHL+H)=-37.2, DS=-2.7.

-----  
Zn++ gl R4N.X 25°C 0.10M C H 2002BBg (84434)4660

K(ZnL+OH)=2.66

Medium: 0.10 M Me4NCl. By calorimetry, DH(ZnL+OH)=-0.4 kJ mol<sup>-1</sup>,

DS(ZnL+OH)=52 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C12H32N6 L CAS 62497-72-7 (8838)

4,7,10,13-Tetraazahexadecane-1,16-diamine;

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

Zn++ gl NaClO4 25°C 0.15M C K1=14.45 2002AGa (84439)4661

K(ZnL+H)=9.27

K(ZnHL+H)=6.11

B(ZnH-2L)=2.66

\*\*\*\*\*

C12H32N6 L (3377)

5-Ethyl-5-(4-amino-2-azabutyl)-1,9-diamino-3,7-diazaanonane;

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

Zn++ gl NaClO4 25°C 0.10M U K1=16.4 1963GCb (84444)4662

K(Zn+HL)=12.1

\*\*\*\*\*

C13H8O3 HL CAS 719-41-5 (3397)

1-Hydroxyxanthone (1-Hydroxy-9-xanthenone)

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

Zn++ gl KCl 25°C 0.10M U K1=6.04 1986DDa (84490)4663

\*\*\*\*\*

C13H9NOBrCl HL (6173)

N-(2-Hydroxy-5-bromobenzylidene)-4-chloroaniline; Cl.C6H4.N:CH.C6H3(OH)Br

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

-----  
Zn++ gl mixed 28°C 75% U K1=5.07 1988MNB (84530)4664  
\*\*\*\*\*

C13H9NOS HL (4945)  
2-(2'-Thienyl)-8-hydroxyquinoline; HO.C9H5N.C4H3S  
-----

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

Zn++ gl diox/w 25°C 50% U K1=6.61 B2=14.99 1969CBa (84537)4665  
Medium: 50% dioxan, 0.1 M NaClO4  
\*\*\*\*\*

C13H9NOS HL CAS 3411-95-8 (1683)  
2-(2-Hydroxyphenyl)benzothiazole;  
-----

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

Zn++ gl alc/w 20°C 50% U K1=<5.7 1959H0a (84545)4666  
-----

Zn++ gl diox/w 25°C 50% U K1=7.57 B2=13.66 1954CFa (84546)4667  
\*\*\*\*\*

C13H9NO2 HL (3403)  
2-(2'-Hydroxyphenyl)benzoxazole;  
-----

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

Zn++ gl alc/w 20°C 50% U K1=7.5 1959H0a (84561)4668  
\*\*\*\*\*

C13H9NO2BrCl HL CAS 104614-71-3 (9109)  
4-Bromo-N-(3-chlorophenyl)-N-hydroxybenzamide;  
-----

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

Zn++ gl diox/w 25°C 50% C M K1=7.76 2001AMc (84574)4669  
B(Zn(gly)L)=13.79  
Medium: 50% v/v dioxane/H2O  
\*\*\*\*\*

C13H9NO2ClF HL CAS 104614-72-4 (9107)  
N-(3-Chlorophenyl)-4-fluoro-N-hydroxybenzamide;  
-----

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

Zn++ gl diox/w 25°C 50% C M K1=7.99 2001AMc (84582)4670  
B(Zn(gly)L)=14.21  
Medium: 50% v/v dioxane/H2O  
\*\*\*\*\*

C13H9NO2Cl2 HL CAS 67201-86-9 (9108)  
4-Chloro-N-(3-chlorophenyl)-N-hydroxybenzamide;  
-----

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

Zn++ gl diox/w 25°C 50% C M K1=7.78 2001AMc (84590)4671  
B(Zn(gly)L)=13.79

Medium: 50% v/v dioxane/H2O

\*\*\*\*\*

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

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

Zn++ sp NaClO4 20°C 0.05M U K1=9.87 B2=19.74 1964NAc (84610)4672

\*\*\*\*\*

C13H9N3O4 HL (6260)  
3-Formyl-4-hydroxy-3'-nitroazobenzene; HO.(CHO)C6H3.N:N.C6H4.NO2

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

Zn++ gl KNO3 28°C 0.20M U K1=5.40 B2=9.35 1977WJa (84634)4673

Data also for 2' and 4'-nitro analogues

\*\*\*\*\*

C13H9N3O4S2 H2L CAS 2536-61-0 (4031)  
1-(1',3'-Thiazol-2'-ylazo)-2-hydroxynaphthalene-6-sulfonic acid;

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

Zn++ gl alc/w 25°C 50% U I K1=7.0 B2=13.3 1967NPb (84640)4674

Medium: 50% MeOH, 0.1 M NaClO4. In 0% MeOH: K1=6.3, K2=5.7

\*\*\*\*\*

C13H10NOBr HL (6171)  
N-(2-Hydroxy-5-bromobenzylidene)aniline; C6H5.N:CH.C6H3(OH)Br

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

Zn++ gl diox/w 28°C 75% U K1=5.56 1988MNb (84671)4675

\*\*\*\*\*

C13H10N2O2Br H2L (1385)  
2'-Hydroxy-5'-bromobenzophenone oxime; Br(HO)C6H3.C(:NOH)C6H5

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

Zn++ gl diox/w 30°C 50% U K1=5.06 1982UVa (84688)4676

\*\*\*\*\*

C13H10N2O2Br HL CAS 82461-64-1 (1121)  
N-Phenyl-2-bromobenzohydroxamic acid; Br.C6H4.CO.N(C6H5)OH

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

Zn++ gl diox/w 25°C 50% U T H K1=7.65 B2=13.68 1977AGc (84700)4677  
At 35 C: K1=7.49, K2=5.87. DH(K1)=-29.9 and DH(K2)=-28.2 kJ mol<sup>-1</sup>

-----  
Zn++ gl diox/w 35°C 50% U K1=7.49 B2=13.36 1974ATa (84701)4678

\*\*\*\*\*

C13H10NO2Cl HL (8130)

N-(2-Chlorophenyl)benzohydroxamic acid;

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

Zn++ gl diox/w 25°C 50% U K1=7.78 B2=14.53 1986ARb (84707)4679

Also data for the N-(2-chlorophenyl)-3-methoxy, 3-methyl, 3-fluoro,  
3-chloro, 3-bromo-, 3-iodo and 3-nitro-benzohydroxamic acids.

\*\*\*\*\*

C13H10NO2Cl HL CAS 36016-24-7 (1818)

N-(4-Chlorophenyl)benzohydroxamic acid; C6H5.CO.N(C6H4Cl)OH

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

Zn++ gl diox/w 25°C 70% U K1=5.53 B2=10.27 1967JSa (84716)4680

Medium: 70% dioxan, 0.1 M KCl

\*\*\*\*\*

C13H10NO2Cl HL CAS 78154-49-1 (5649)

N-3-Chlorophenylbenzohydroxamic acid;

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

Zn++ gl diox/w 25°C 50% C M K1=8.13 2001AMc (84730)4681  
B(Zn(gly)L)=14.48

Medium: 50% v/v dioxane/H2O

-----  
Zn++ gl diox/w 30°C 50% U K1=8.74 B2=15.35 1994JBb (84731)4682

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

-----  
Zn++ gl diox/w 25°C 50% U K1=7.24 B2=13.14 1989PMb (84732)4683

\*\*\*\*\*

C13H10NO2Cl HL CAS 105417-12-7 (1122)

N-Phenyl-2-chlorobenzohydroxamic acid; Cl.C6H4.CO.N(C6H5)OH

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

Zn++ gl diox/w 25°C 50% U T H K1=7.67 B2=13.74 1977AGc (84748)4684

At 35 C: K1=7.52, K2=5.92. DH(K1)=-26.4 and DH(K2)=-26.4 kJ mol<sup>-1</sup>

-----  
Zn++ gl diox/w 35°C 50% U K1=7.52 B2=13.44 1974ATa (84749)4685

\*\*\*\*\*

C13H10NO2F HL CAS 90493-82-6 (1123)

N-Phenyl-2-fluorobenzohydroxamic acid; F.C6H4.CO.N(C6H5)OH

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

Zn++ gl diox/w 25°C 50% U T H K1=7.61 B2=13.41 1977AGc (84757)4686

At 35 C: K1=7.40, K2=5.69. DH(K1)=-36.9 and DH(K2)=-19.4 kJ mol<sup>-1</sup>

-----

Zn++ gl diox/w 35°C 50% U K1=7.40 B2=13.09 1974ATa (84758)4687  
\*\*\*\*\*

C13H10N2I HL CAS 90493-83-7 (1120)  
N-Phenyl-2-iodobenzohydroxamic acid; I.C6H4.CO.N(C6H5)OH

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

Zn++ gl diox/w 25°C 50% U T H K1=7.58 B2=13.54 1977AGc (84766)4688  
At 35 C: K1=7.40, K2=5.64. DH(K1)=-31.7 and DH(B2)=-56.3 kJ mol<sup>-1</sup>

-----  
Zn++ gl diox/w 35°C 50% U K1=7.40 B2=14.04 1974ATa (84767)4689  
\*\*\*\*\*

C13H10N2 L CAS 3002-77-5 (3400)  
2-Methyl-1,10-phenanthroline;

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

Zn++ dis KCl 25°C 0.10M U K1=4.96 B2=9.36 1962IMa (84776)4690  
K3=3.35

\*\*\*\*\*  
C13H10N2 L CAS 3003-78-6 (2752)  
5-Methyl-1,10-phenanthroline;

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

Zn++ gl KNO3 35°C 0.10M C M K1=5.57 B2=10.34 1998LYa (84795)4691  
B(ZnLA)=15.25  
B(ZnHLA)=21.36

A is 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime.

-----  
Zn++ gl KNO3 25°C 0.10M C M K1=6.62 B2=12.60 1991DAc (84796)4692  
Data for ternary complexes with acetohydroxamic acid

-----  
Zn++ ISE alc/w 25°C 50% U K1=5.82 B2=11.53 1972BBa (84797)4693  
B3=16.54

Medium: 50% EtOH, 0.1 M KNO3

-----  
Zn++ dis KCl 25°C 0.10M U K1=6.62 B2=12.58 1962MBa (84798)4694  
K3=5.67

-----  
Zn++ gl KNO3 25°C 0.10M U K2=6.0 1956YSb (84799)4695  
K3=5.0

\*\*\*\*\*  
C13H10N2O HL CAS 5496-07-1 (3404)  
2-(2'-Hydroxyphenyl)benzimidazole;

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

Zn++ gl alc/w 35°C 60% U K1=6.20 B2=11.70 1984MLa (84820)4696  
-----

Zn++ gl alc/w 20°C 50% U K1=7.5 B2=14.4 1959H0a (84821)4697  
\*\*\*\*\*

C13H10N2O HL CAS 65782-79-8 (4978)  
4-Amino-5-hydroxyacridine;

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

Zn++ gl diox/w 25°C 50% U K1=7.69 B2=14.84 1970CBc (84831)4698  
Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*  
C13H10N2O L Pyocyanine CAS 83-06-5 (2186)  
Pyocyanine;

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

Zn++ sp non-aq 25°C 100% U K1=3.3 1978MSc (84836)4699  
Medium: DMSO

\*\*\*\*\*  
C13H10N2O2 HL CAS 27147-03-1 (6307)  
2-Hydroxy-5-(phenylazo)benzaldehyde; C6H5.N:N.C6H3(CHO)(OH)

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

Zn++ gl diox/w 28°C 50% U K1=5.00 B2=9.18 1975JTb (84845)4700  
\*\*\*\*\*

C13H10N2O3 HL CAS 19357-10-9 (9111)  
N-(2-Pyridyl)-2-carboxybenzamide;

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

Zn++ gl mixed 25°C 40% U K1=5.73 B2=10.04 2002GSa (84858)4701  
Medium: 40% v/v DMF/H2O, 0.1 M NaClO4.

\*\*\*\*\*  
C13H10N2O4 H2L CAS 15766-65-6 (1384)  
2-Hydroxy-5-nitrobenzophenone oxime; HO(NO2)C6H3.C(:NOH)C6H5

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

Zn++ gl diox/w 30°C 50% U K1=4.59 B2=8.52 1982UVa (84869)4702  
\*\*\*\*\*

C13H10N2O4 HL CAS 2029-61-0 (178)  
N-Phenyl-2-nitrobenzohydroxamic acid; O2N.C6H4.CO.N(C6H5).OH

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

Zn++ gl diox/w 25°C 50% U T H K1=7.22 B2=12.86 1977AGc (84893)4703  
At 35 C: K1=7.12, K2=5.44. DH(K1)=-17.6 and DH(K2)=-35.2 kJ mol<sup>-1</sup>

-----  
Zn++ gl diox/w 35°C 50% U K1=7.12 B2=12.56 1974ATa (84894)4704  
\*\*\*\*\*



C13H10N2O5	H3L	(1389)					
2,4-Dihydroxy-5-nitrobenzophenone oxime; (HO)2(NO2)C6H2.C(:NOH)C6H5							
-----							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Reference ExptNo
-----							
Zn++	gl	diox/w	30°C	50%	U	K1=6.92	1982UVa (84915)4705
*****							
C13H10N4Br2S	HL	CAS 104654-49-1	(5015)				
Di-4-bromophenylthiocarbazon; Br.C6H4.N:N.CS.NH.NH.C6H4.Br							
-----							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Reference ExptNo
-----							
Zn++	gl	diox/w	25°C	50%	U	K1=5.35	1970AFb (84946)4706
Medium: 50% dioxan, 0.1 M							
*****							
C13H10N4Cl2S	HL	CAS 19403-31-7	(5014)				
Di-4-chlorophenylthiocarbazon; Cl.C6H4.N:N.CS.NH.NH.C6H4.Cl							
-----							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Reference ExptNo
-----							
Zn++	gl	diox/w	25°C	50%	U	K1=5.37	1970AFb (84950)4707
Medium: 50% dioxan, 0.1 M							
*****							
C13H10N4F2S	HL	CAS 2805-80-3	(5017)				
Di-4-fluorophenylthiocarbazon; F.C6H4.N:N.CS.NH.NH.C6H4.F							
-----							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Reference ExptNo
-----							
Zn++	sp	diox/w	25°C	50%	U	K1=5.75	1970AFb (84954)4708
Medium: 50% dioxan, 0.1 M							
*****							
C13H10N4I2S	HL	CAS 2059-77-0	(5016)				
Di-4-iodophenylthiocarbazon; I.C6H4.N:N.CS.NH.NH.C6H4.I							
-----							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Reference ExptNo
-----							
Zn++	gl	diox/w	25°C	50%	U	K1=5.02	1970AFb (84958)4709
Medium: 50% dioxan, 0.1 M							
*****							
C13H10N4S	HL	CAS 3788-81-6	(4014)				
2-Picolinylaldehyde 2-benzothiazolylhydrazon;							
-----							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Reference ExptNo
-----							
Zn++	gl	diox/w	25°C	50%	U	K1=9.33 B2=18.38	1965HRa (84965)4710
*****							
C13H10O2S	H2L	CAS 88220-26-2	(6572)				
3-(1-Naphthyl)-2-mercaptopropenoic acid;							
-----							
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Reference ExptNo

-----  
Zn++ gl alc/w 25°C 50% C K1=9.684 B2=18.89 1989IBa (84975)4711  
Medium: 50% v/v EtOH/H2O, 1.0 M NaClO4.

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C13H10O2S H3L CAS 88220-26-2 (6056)  
3-(2-Naphthyl)-2-mercaptopropenoic acid;

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

Zn++ gl alc/w 25°C 50% C K1=9.70 B2=19.04 1987IBa (84979)4712  
B(ZnHL)=12.79

Medium: 50% v/v EtOH/H2O, 1.0 M NaClO4

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C13H11NO HL CAS 779-84-0 (3406)  
N-Salicylideneaniline; HO.C6H4.CH:N.C6H5

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

Zn++ gl diox/w 27°C 50% U K1=5.40 1972SDb (85027)4713  
Medium: 50% dioxan, 0.1 M NaClO4

Zn++ sp alc/w 30°C 10% U 1969DNa (85028)4714  
K(Zn+HL=ZnL+H)=-4.34

Medium: 10% EtOH, 0.2 M NaClO4

\*\*\*\*\*

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  
-----

Zn++ gl diox/w 25°C 75% U K1=16.5 1998FHa (85039)4715  
Medium: 75% (v/v) dioxane/water; 0.1 M KNO3.

\*\*\*\*\*

C13H11NOS HL CAS 56048-80-7 (5018)  
N-Thiobenzoyl-N-phenylhydroxylamine; C6H5.CS.N(C6H5)OH

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

Zn++ gl diox/w 30°C 75% U K1=10.12 B2=18.72 1971DTc (85055)4716

\*\*\*\*\*

C13H11NO2 HL CAS 1761-56-4 (3408)  
2-(Salicylideneamino)phenol, Salicylaldehyde-2-hydroxyanil; HO.C6H4.CH:N.C6H4.OH

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

Zn++ gl diox/w 25°C 75% U K1=12.9 1998FHa (85067)4717  
Medium: 75% (v/v) dioxane/water; 0.1 M KNO3.

\*\*\*\*\*

C13H11NO2 H2L (1383)

2-Hydroxybenzophenone oxime; HO.C6H4.C(:NOH)C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	50%	U		K1=5.71	1982UVa (85073)	4718
*****									
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
Zn++	gl	alc/w	25°C	50%	U		K1=5.3 B2=10.40	1977DWa (85080)	4719
*****									
C13H11NO2		HL					CAS 87-17-2	(4016)	
N-Phenyl-2-hydroxybenzamide; HO.C6H4.CO.NH.C6H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=5.06	1964JVa (85095)	4720
Medium: 75% dioxan, 0.1 M NaClO4									
*****									
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
Zn++	gl	diox/w	30°C	50%	U		K1=9.27 B2=15.71	1994JBb (85129)	4721
Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.									
*****									
Zn++	gl	diox/w	25°C	50%	U		K1=6.06 B2=10.58	1976BLa (85130)	4722
Zn++	gl	diox/w	35°C	50%	U		K1=7.71 B2=14.34	1974ATa (85131)	4723
Zn++	gl	diox/w	25°C	50%	U		K1=7.51 B2=14.14	1972STf (85132)	4724
Zn++	EMF	diox/w	25°C	70%	U		K1=5.76 B2=10.82	1967JSb (85133)	4725
Medium: 70% v/v dioxan/H2O, 0.1 M KCl									
*****									
C13H11NO3		H3L					CAS 3147-44-2	(1388)	
2,4-Dihydroxy-benzophenone oxime; (HO)2C6H3.C(:NOH)C6H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	50%	U		K1=7.22	1982UVa (85191)	4726
*****									
C13H11NO3		H2L					CAS 156357-28-7	(8319)	
N-(p-Hydroxyphenyl)benzohydroxamic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++ gl diox/w 30°C 50% U K1=8.31 B2=14.78 1994JBb (85198)4727  
Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.

For N-(m-hydroxyphenyl)benzohydroxamic acid, K1=8.29, K2=6.61.

\*\*\*\*\*

C13H11N05 HL Oxolinic acid CAS 14698-29-4 (2755)

1-Ethyl-6,7-dioxymethylene-quinoline-4-one-3-carboxylic acid;

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

Zn++ sp oth/un 25°C 0.05M C 2000MPa (85213)4728

K1eff=3.19

Medium: 0.05 M ethanoate buffer, pH=5.5. Method: spectrofluorimetry.

For 7-Hydroxymethylinalidixic acid (C12H12N2O4) K1eff=3.77

-----  
Zn++ sp KCl 25°C 0.10M U K1=4.3 1978TSb (85214)4729

\*\*\*\*\*

C13H11N2O3F3 HL (5563)

3-(2-Acetylphenylhydrazon)-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  
-----

Zn++ gl diox/w 25°C 75% U K1=8.77 B2=17.02 1990ASb (85239)4730

\*\*\*\*\*

C13H11N3O5 L (1274)

1-Benzoyl-3-pyridin-2-ylthiourea; C5H4N.NH.CS.NH.CO.C6H5

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

Zn++ gl alc/w 25°C 75% U K1=5.51 B2=9.21 1980Smb (85264)4731

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C13H11N3O2 H2L CAS 62031-25-8 (1119)

4-Hydroxy-3-oximinomethylazobenzene; (HO)(HO.N:CH)C6H3.N:N.C6H5

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

Zn++ gl alc/w 28°C 60% U K1=6.65 B2=11.80 1978WPa (85275)4732

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Zn++ gl alc/w 25°C 42% U K1=4.97 B2=9.58 1974MSb (85276)4733

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C13H11N3O5S H3L (5019)

4-Hydroxy-3-oximinomethylazobenzene-4'-sulfonic acid;

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

Zn++ gl alc/w 25°C 42% U K1=3.67 B2=7.10 1973DSa (85294)4734

Medium: 42% EtOH, 0.2 M NaClO4

\*\*\*\*\*

C13H11N5O2 L CAS 4453-80-9 (8115)

3-Nitro-1,5-diphenylformazan;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	50%	C T H			K1=6.58 B2=12.02	2001SKb (85311)	4735
Medium: 50% v/v dioxane/water, 0.1 M KCl. Data for 20-40 C. DH(K1)=-30.7 kJ mol-1, DH(K2)=-24.6.										
*****										
C13H11N5O4S		H2L						(3417)		
4-Hydroxy-6-p-sulfoanilinomethylpteridine;										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	oth/un	20°C	0.01M	U			K1=3.4	1953ALa (85317)	4736
*****										
C13H12N2O6S2		H2L						(1333)		
4-Sulfono-salicylidene sulfanilamide; H03S.C6H3(OH).CH:N.S02.C6H4.NH2										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KN03	32°C	0.10M	U T			K1=6.03	1981SBb (85383)	4737
*****										
C13H12N4O		L						Diphenylcarbazon. CAS 538-62-5 (1195)		
Diphenylcarbazon; C6H5.NH.NH.CO.N:N.C6H5										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	U			K1=6.4 B2=12.90	1986MHB (85402)	4738
-----										
Zn++	sp	NaClO4	25°C	50%	C			K1=6.32 B2=12.44	1985MAb (85403)	4739
Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.										
-----										
Zn++	sp	diox/w	25°C	50%	U			K1=5.76	1964MFa (85404)	4740
*****										
C13H12N4S		L						Dithizone CAS 60-10-6 (1801)		
Diphenylthiocarbazon; C6H5.NH.NH.CS.N:N.C6H5										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	sp	diox/w	25°C	50%	C			K1=6.14	1985MAb (85440)	4741
Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.										
-----										
Zn++	sp	NaClO4	25°C	0.10M	U			K1=6.93 B2=13.96	1973BSe (85441)	4742
-----										
Zn++	sp	diox/w	25°C	50%	U			K1=6.16	1970AFb (85442)	4743
Medium: 50% dioxan, 0.1 M										
-----										
Zn++	sp	diox/w	25°C	50%	U			K1=6.18	1964MFa (85443)	4744
-----										
Zn++	dis	NaClO4	25°C	1.0M	U	M		K1=5.05	1962HFa (85444)	4745
Ternary complexes with diethyldithiocarbamic acid										

C13H12O5                      HL                      CAS 17426-76-5    (3401)  
O,O-Dimethylpurpurogallin

C<sub>13</sub>H<sub>13</sub>NO                      HL                      CAS 24403-51-8    (3410)  
1,2,3,4-Tetrahydro-9-hydroxyacridine;

C13H13NO L CAS 35854-45-6 (297)  
2-(2-Phenyl-2-hydroxy)ethylpyridine; (C6H5)(OH)CHCH2C5H4N

C13H13N3O HL (4018)  
3-Hydroxy-1-(2'-methylphenyl)-3-phenyltriazene;

C13H13N3O HL CAS 5756-83-2 (4019)  
3-Hydroxy-1-(4'-methylphenyl)-3-phenyltriazene;

C13H13N3O2 HL CAS 5756-89-8 (4021)  
3-Hydroxy-1-(4'-methoxyphenyl)-3-phenyltriazene;

C13H13N5OS                      HL                      CAS 220035-45-0    (8639)  
alpha-Pyridoin thiosemicarbazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++ gl diox/w 30°C 50% U TIH K1=8.52 B2=15.45 19980Fa (85527)4752  
 Medium: 50% H2O/dioxane, 0.10 M KNO3. Data for 50% v/v H2O/dioxane, I =  
 0.05-0.20 M, and for 40 and 50 C at I=0.10. DH and DS values.

\*\*\*\*\*

C13H13O2Br HL (6846)  
 3-Benzoyl-5-bromohexa-5-ene-2-one; CH2=CBr.CH2.CH(CO.CH3)CO.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KCl	25°C	0.20M	U		K1=4.47	1992CMd (85534)	4753
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C13H13O2Cl HL (6842)  
 3-Benzoyl-5-chlorohex-5-ene-2-one; CH2=CCl.CH2.CH(CO.CH3)CO.C6H5

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

Zn++	gl	KCl	25°C	0.20M	U		K1=4.50	1992CMd (85542)	4754
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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
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Zn++	gl	NaClO4	20°C	0.10M	U		K1=5.10	1985SIb (85558)	4755
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C13H14N2 L CAS 104986-55-2 (4972)  
 1,3-Bis(2'-pyridyl)-propane; C5H4N.CH2.CH2.CH2.C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	KNO3	20°C	0.10M	U		K1=1.3	1970BAa (85570)	4756
------	----	------	------	-------	---	--	--------	-----------------	------

K(Zn+HL)=1.0

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C13H14N2 L (6631)  
 1,3-Bis(4-pyridyl)propane;

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

Zn++	sp	non-aq	25°C	100%	U	HM		1992UNa (85575)	4757
------	----	--------	------	------	---	----	--	-----------------	------

K(Zn2A+L=Zn2AL)=1.36

K(ZnB+L=ZnBL)=4.63

K(Zn2C+L=Zn2CL)=5.54

Medium: CHCl3. A,C=substituted porphyrins, B=substituted porphyrin dimer.

\*\*\*\*\*

C13H14N2O L CAS 87413-05-6 (6300)  
 1-Benzyl-1,4-dihydronicotinamide;

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

Zn++	sp	non-aq	25°C	100%	U			1989FKb (85578)	4758
------	----	--------	------	------	---	--	--	-----------------	------

$$K(\text{ZnP}+\text{L})=1.70$$

Medium: CH<sub>2</sub>Cl<sub>2</sub>. ZnP=tetraphenylporphyrinatozinc(II)

\*\*\*\*\*

C13H14N2O2S HL CAS 4384-37-1 (4032)

2-(4'-Methylphenylsulfonamido)aniline; CH<sub>3</sub>.C<sub>6</sub>H<sub>4</sub>.SO<sub>2</sub>.NH.C<sub>6</sub>H<sub>4</sub>.NH<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	?	50%	U		K1=9.33 B2=18.24	1968BRa (85591)	4759

Medium: 50% dioxan, 0.01 M

\*\*\*\*\*

C13H14N2O2S L CAS 75391-97-8 (9289)

2-(p-Toluenesulfonylaminomethyl)pyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	80%	C		K1=7.66 B2=14.57	2003CKa (85596)	4760

Medium: 80% MeOH/H<sub>2</sub>O, 0.1 M Me<sub>4</sub>NNO<sub>3</sub>.

\*\*\*\*\*

C13H14N2O3 HL (4989)

1-Phenyl-3-methyl-4-ethoxycarbonylpyrazol-5-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	dis	NaClO <sub>4</sub>	?	0.10M	U		K1=2.05 B2=5.52	1971NSb (85598)	4761

\*\*\*\*\*

C13H14N2O3 HL (4940)

3-(2-Acetylphenylhydrazon)pentane-2,4-dione; (CH<sub>3</sub>.CO)<sub>2</sub>C:N.NH.C<sub>6</sub>H<sub>4</sub>(CO.CH<sub>3</sub>)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	75%	U		K1=10.60 B2=20.12	1990ASb (85602)	4762

\*\*\*\*\*

C13H14N2O3 HL Antineoplaston CAS 91531-30-5 (8098)

3-(N-Phenylacetyl amino)-2,6-piperidinedione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	alc/w	45°C	50%	C		K1=7.13	1996MMc (85624)	4763

Medium: 50% v/v MeOH/H<sub>2</sub>O, 0.10 M KNO<sub>3</sub>.

\*\*\*\*\*

C13H14N3O5P H2L CAS 80767-75-5 (1467)

2-Hydroxy-4-nitrophenyl-N-(2-pyridylmethyl)aminomethylphosphinic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO <sub>4</sub>	20°C	0.10M	U		K1=5.70	1985SIb (85635)	4764

\*\*\*\*\*

C13H14N3O5P H2L CAS 80767-76-6 (1468)

2-Hydroxy-4-nitrophenyl-N-(3-pyridylmethyl)aminomethylphosphinic acid;



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	20°C	0.10M	U		K1=5.80	1985SIb (85648)	4765
*****									
C13H14N4		L					CAS 13103-75-8	(473)	
4-(2-Pyridylazo)-N,N-dimethylaniline; C5H4N.N:N.C6H4.N(CH3)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	NaNO3	25°C	0.30M	U	M	K1=2.31 K(ZnA+L)=2.08 K(ZnB+L)=1.94 K(ZnC+L)=2.39	1971CHe (85669)	4766
A=diethylenetriamine; B=triethylenetetramine; H2C=iminodiethanoic acid									
Zn++	kin	NaNO3	25°C	0.30M	U	M	K1=2.40 K(ZnA+L)=2.21 K(ZnB+L)=1.57 K(ZnC+L)=2.45	1971CHe (85670)	4767
A=diethylenetriamine; B=triethylenetetramine; H2C=iminodiethanoic acid									
Zn++	kin	NaNO3	25°C	0.30M	U	M	K(ZnA+L)=1.54 K(ZnB+L)=2.37 K(ZnC+L)=2.40	1971CHe (85671)	4768
H2A=ethylenediamine-N,N-diethanoic acid; H2B=cystine; H5C=tripolyphosphoric acid.									
Zn++	sp	NaNO3	25°C	0.30M	U	M	K(ZnA+L)=1.57 K(ZnB+L)=2.76 K(ZnC+L)=1.18 K(ZnD+L)=2.46	1971CHe (85672)	4769
H2A=ethylenediamine-N,N-diethanoic acid; H2B=cystine; H3C=nitritotriethanoic acid; H5D=tripolyphosphoric acid.									
Zn++	kin	KNO3	16°C	0.10M	U		K1=2.62	1964WIa (85673)	4770
Zn++	sp	NaNO3	25°C	0.15M	U		K1=2.36	1953KMa (85674)	4771
*****									
C13H14N4O		L					CAS 354122-81-9	(8808)	
N-Glycylbis(pyridin-2-yl)methylamine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.20M	C		B2=6.66 B(ZnH-1L)=-3.23 B(ZnH-2L)=-11.94 B(ZnH-1L2)=-0.7	20010Va (85689)	4772

$$B(\text{ZnH}-2\text{L}2)=-9.12$$

\*\*\*\*\*

C13H14N10 L CAS 41785-01-7 (9049)

Trimethylene-N6,N6'-bisadenine;

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

Zn++ gl KNO3 25°C 0.10M C K1=4.2 2003GFa (85691)4773

$$B(\text{Zn}2\text{L})=7.4$$

$$B(\text{ZnHL})=8.4$$

$$B(\text{Zn}2\text{HL})=11.7$$

$$K(\text{Zn}+\text{HL})=4.0$$

$$K(\text{ZnHL}+\text{Zn})=3.3.$$

\*\*\*\*\*

C13H15NO HL CAS 91956-75-1 (4023)

2-Butyl-8-hydroxyquinoline;

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

Zn++ gl oth/un 25°C 0.0 U K1=9.75 B2=19.99 1966KUc (85698)4774

\*\*\*\*\*

C13H15NO4 HL CAS 35104-87-2 (4997)

2-Nitrobenzoyl pivaloyl methane; O2N.C6H4.CO.CH2.CO.C(CH3)3

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

Zn++ gl diox/w 30°C 75% U K1=8.75 B2=16.77 1972UDa (85712)4775

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*

C13H15NO4 HL CAS 18362-53-3 (4998)

4-Nitrobenzoyl pivaloyl methane; O2N.C6H4.CO.CH2.CO.C(CH3)3

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

Zn++ gl diox/w 30°C 75% U K1=8.88 B2=17.20 1972UDa (85719)4776

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*

C13H15NO6 H3L (4999)

2-Benzylnitritotriethanoic acid;

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

Zn++ oth oth/un 25°C 0.10M U K1=10.24 1962HKa (85730)4777

\*\*\*\*\*

C13H15NO6 H3L (4026)

N-(1'-Carboxy-1'-phenylethyl)iminodiethanoic acid;

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

Zn++ gl KCl 20°C 0.10M U K1=11.45 1966IMa (85748)4778

\*\*\*\*\*  
 C13H15N06                      H3L                                      (4025)  
 N-(alpha-Carboxy-4'-methylbenzyl)iminodiethanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U		K1=9.90	1966IMb (85754)	4779

\*\*\*\*\*

C13H15N07                      H3L                                      CAS 50444-50-3 (4027)  
 N-(alpha-Carboxy-4'-methoxybenzyl)iminodiethanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	20°C	0.10M	U		K1=9.95	1966IMb (85763)	4780

\*\*\*\*\*

C13H15N203P                      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
Zn++	gl	NaCl04	20°C	0.10M	U		K1=5.70	1985SIa (85775)	4781

\*\*\*\*\*

C13H15N203P                      H2L                                      CAS 80767-73-3 (1461)  
 2-Hydroxyphenyl-(N-3-pyridylmethylamino)methylphosphinic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	20°C	0.10M	U		K1=5.80	1985SIa (85788)	4782

\*\*\*\*\*

C13H15N203P                      H2L                                      CAS 80767-74-4 (1462)  
 2-Hydroxyphenyl-(N-4-pyridylmethylamino)methylphosphinic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	20°C	0.10M	U		K1=5.80	1985SIa (85801)	4783

\*\*\*\*\*

C13H15N204P                      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
Zn++	gl	NaCl04	20°C	0.10M	U		K1=8.10 K(Zn+HL)=4.05	1985SIa (85814)	4784

\*\*\*\*\*

C13H15N204P                      H3L                                      CAS 85946-85-6 (1464)  
 2-Hydroxyphenyl-(N-3-pyridylmethylamino)methylphosphonic acid;  
 C6H4(OH)CH(PO3H2).NH.CH2.C5H4N  
 -----

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



Glycyltryptophan;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	oth/un	25°C	0.10M	U			K1=3.3	1954PEa (85897)	4793
*****										
C13H15O2Br		HL						CAS 41070-38-6	(4994)	
2-Bromobenzoyl pivaloyl methane; Br.C6H4.CO.CH2.CO.C(CH3)3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U			K1=9.08 B2=17.45	1972UDa (85916)	4794
Medium: 75% v/v dioxan, 0.01 M Me4NC1O4										
*****										
C13H15O2Br		HL						CAS 41070-33-1	(4995)	
4-Bromobenzoyl pivaloyl methane; Br.C6H4.CO.CH2.CO.C(CH3)3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U			K1=9.46 B2=18.22	1972UDa (85921)	4795
Medium: 75% v/v dioxan, 0.01 M Me4NC1O4										
*****										
C13H15O2Cl		HL						CAS 41070-37-5	(4992)	
2-Chlorobenzoyl pivaloyl methane; Cl.C6H4.CO.CH2.CO.C(CH3)3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U			K1=9.11 B2=17.49	1972UDa (85926)	4796
Medium: 75% v/v dioxan, 0.01 M Me4NC1O4										
*****										
C13H15O2Cl		HL						CAS 41070-30-8	(4993)	
4-Chlorobenzoyl pivaloyl methane; Cl.C6H4.CO.CH2.CO.C(CH3)3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U			K1=9.60 B2=18.44	1972UDa (85931)	4797
Medium: 75% v/v dioxan, 0.01 M Me4NC1O4										
*****										
C13H16N4O5		HL						CAS 76877-51-5	(1290)	
2-(4',5'-Dimethyl-2-thiazolylazo)-5-dimethylaminophenol;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	60%	U			K1=9.66 B2=18.92	1981KTa (85941)	4798
*****										
C13H16N6O		L						(5437)		
Tri-(N-methyl-imidazol-2-yl)-methanol;										

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

Zn++ gl KNO3 25°C 0.20M U K1=3.15 B2=5.85 1980BHa (85950)4799  
\*\*\*\*\*

C13H16N8O L CAS 499196-34-8 (8833)  
N-Histidylbis(imidazol-2-yl)methylamine;

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

Zn++ gl KCl 25°C 0.20M C K1=6.82 B2= 9.97 20020Va (85954)4800  
B(ZnH3L2)=28.08  
B(ZnH2L2)=22.79  
B(ZnHL2)=16.85  
B(ZnH2L)=16.84

B(ZnHL)=12.16, B(ZnH-1L)=-0.52.

\*\*\*\*\*

C13H16O2 HL Mesitoylacetone CAS 6450-57-3 (4010)  
1-(2',4',6'-Trimethylphenyl)butane-1,3-dione;

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

Zn++ gl diox/w 30°C 75% U K1=8.89 B2=16.62 1965UFa (85958)4801  
\*\*\*\*\*

C13H16O2 HL CAS 13988-67-5 (4973)  
Benzoyl pivaloyl methane; C6H5.CO.CH2.CO.C(CH3)3

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

Zn++ gl diox/w 30°C 75% U K1=9.82 B2=18.83 1972UDa (85962)4802  
Medium: 75% v/v dioxan, 0.01 M Me4NClO4

\*\*\*\*\*

C13H17NO3 HL CAS 94287-43-2 (902)  
L-2-(Benzoylamino)-4-methylpentanoic acid; (CH3)2CHCH2CH(NHCO.C6H5)COOH

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

Zn++ gl KNO3 25°C 0.10M U T H K1=2.74 1980SKa (85974)4803  
In 50% v/v dioxan. Temperature range 25-45C. At 35C, DH=8.1 and DS=79.7.

\*\*\*\*\*

C13H17NO6 H2L CAS 77553-78-7 (6078)  
N-(2-Hydroxy-1-(hydroxybenzyl)-iminodiethanoic acid;  
HO.CH2.CH(CH(OH)(C6H5)).N(CH2.COOH)2

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

Zn++ gl NaClO4 25°C 1.0M C K1=7.93 B2=13.20 1981ASb (85986)4804  
B(ZnHL)=9.77  
B(ZnH-1L)=-0.29

\*\*\*\*\*

C13H17N3O L Aminopyrine (2030)  
1-Phenyl-2,3-dimethyl-4-dimethylamino-5-pyrazolone, Dimethylaminoantipyrine;

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.50M	U		K1=1.00 B2=1.29	1978LWa	(85995)4805

\*\*\*\*\*

C13H17N3O5 HL (6006)

N-Benzyloxycarbonyl-alanylglycyl hydroxamic acid;

C6H5.CH2.O.CO.NH.CH(CH3).CO.NH.CH2.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=4.0	1987CSb	(86014)4806

\*\*\*\*\*

C13H18N2O4 L (6005)

N-Benzyloxycarbonyl-valyl hydroxamic acid; C6H5.CH2.O.CO.NH.CH(CH(CH3)2).CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U		K1=4.8 B2=8.2	1987CSb	(86031)4807

\*\*\*\*\*

C13H18N2O4 H2L CAS 13933-94-3 (4028)

Pyridoxylidenevaline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	non-aq	27°C	100%	U		B2=11.5	1967MMb	(86040)4808

\*\*\*\*\*

Medium: MeOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	oth/un	25°C	0.10M	U		K1=7.94	1961DRa	(86041)4809

\*\*\*\*\*

C13H19N3 L (6739)

2,6-Bis(pyrrolidin-2-yl)pyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.12M	U	H	K1=9.06	1993BGb	(86066)4810

\*\*\*\*\*

B(rac-ZnL2)=12.60

B(meso-ZnL2)=13.63

B(Zn(OH)L)=18.14

B(Zn(OH)2L)=29.01

\*\*\*\*\*

C13H19N3O4 H2L CAS 380371-98-2 (8005)

N-Benzyl-iminobis(propionohydroxamic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=8.34	2001SGb	(86075)4811

\*\*\*\*\*

B(ZnHL)=14.68

\*\*\*\*\*

C13H19N3O8 H3L b-Asp-b-Asp-Pro CAS 91921-49-2 (8149)

Pyrrolidine-2-carboxy-N-(1,5-dicarboxy-1-amino-4-azaheptane-3,7-dione);

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3   25°C 0.10M C      K1=5.36      1989ARa (86077)4812
*****
C13H20N04P      H3L      (1471)
2-Hydroxyphenyl-N-(cyclohexylamino)methylphosphonic acid;
C6H4(OH)CH(PO3H2).NH.C6H11
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  NaCl04 20°C 0.10M U      K1=6.80      1985SIb (86085)4813
                        K(Zn+HL)=3.30
*****
C13H20N6O5      HL      Asp-Ala_HisNH2 CAS 83354-03-4 (8246)
Aspartyl-alanyl-histidinamide;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KCl     25°C 0.50M U      K(Zn+H2L)=1.86
                        K(Zn+HL)=5.28
                        K(2Zn+HL)=9.1
*****
C13H21N3O      L      CAS 473793-88-3 (8976)
7-Oxa-3,11,17-triazabicyclo[11.3.1]heptadeca-1(17),13,15-triene;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3   25°C 0.10M C      K1=6.86      2001CDb (86163)4815
*****
C13H22N2O8      H4L      CAS 1798-14-7 (921)
(Pentamethylenedinitrilo)tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2CH2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  KNO3   20°C 1.0M C      K1=14.00      1999ANa (86181)4816
                        B(NiHL)=19.26
                        K(NiL+NiHL)=2.80
-----

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-----
Zn++      gl  KNO3   20°C 0.10M U      H      K1=12.67      1964ANa (86182)4817
                        K(Zn+HL)=7.8
By calorimetry: DH(K1)=-11.3 kJ mol-1, DS=204 J K-1 mol-1
*****
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
-----
Zn++      vlt KNO3   20°C 0.10M U      K1=18.17      1974NLa (86216)4818
-----

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\*\*\*\*\*

C13H22N2O8 H4L (7164)

2,4-Diaminopentane-N,N,N',N'-tetraethanoic acid;  
(HOOCCH2)2NCH(CH3)CH2CH(CH3)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	20°C	0.10M	U		K1=16.96	1981NSc (86244)	4819

\*\*\*\*\*

C13H22N2O8 H4L (5003)

3-Methyl-1,2-diaminobutane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	vlt	KNO3	20°C	0.10M	U		K1=18.53	1968NLb (86271)	4820

\*\*\*\*\*

C13H22N4 L (6710)

3,7,11,17-Tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=12.816 K(Zn(OH)L+H)=8.48	1993CDa (86321)	4821

\*\*\*\*\*

C13H22N4O4S2 H2L CAS 206430-11-7 (7583)

N-Acetyl-cysteinyl-prolinyl-cysteine amide;  
CH3CONHCH(CH2SH)COC4H7NCONHCH(CH2SH)CONH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=9.31 B(Zn2L2)=23.45	1998GGb (86335)	4822

\*\*\*\*\*

C13H22N4O6 H2L CAS 93031-56-2 (7079)

1,4,7,10-Tetraazacyclotrideca-2,9-dione-4,7-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	nmr	none	23°C	0	U	M		1997IMa (86342)	4823

\*\*\*\*\*

K(ZnL+HA)=2.3

K(ZbL+B)=2.2

HA=histamine, B=imidazole

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	C		K1=9.13 K(ZnL+H)=2.36 K(ZnL=ZnH-1L+H)=-9.97 K(ZnH-1L=ZnH-2L+H)=-11.24	1995IOb (86343)	4824

\*\*\*\*\*

C13H22N6O L CAS 290345-99-2 (7758)

N,N'-Bis(5-methylimidazol-4-ylmethyl)-1,3-diaminopropan-2-ol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	C	I	K1=9.63 B(ZnHL)=13.83 B(ZnH-1L)=0.10	2000GKc (86363)	4825
In 65%w/w EtOH/H2O; 0.05 NaC6H6SO3, K1=10.97, B(ZnHL)=14.43, B(ZnH-1L)=1.19, B(Zn2H-2L)=-0.37, B(Zn2H-3L)=-10.38. *****									
C13H22O2		HL				CAS 41070-22-8 (4974)			
Hexahydrobenzoyl pivaloyl methane; C6H11.CO.CH2.CO.C(CH3)3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=9.98	1972UDa (86372)	4826
Medium: 75% v/v dioxan, 0.01 M Me4NC1O4 *****									
C13H24N2O6		H2L				(5610)			
1,11-Dioxa-4,8-diazacyclotridecane-N,N'-diethanoic acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	R4N.X	25°C	0.10M	C		K1=10.26 K(ZnL+H)=4.08	1998CCd (86403)	4827
Medium: 0.10 M Me4NN03. *****									
C13H24N4O4S2		H2L				CAS 206430-06-0 (7579)			
N-Acetyl-cysteinyl-valinyl-cysteine amide; CH3CONHCH(CH2SH)CONHCH(CH(CH3)2)CONHCH(CH2SH)CONH2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KN03	25°C	0.10M	C		K1=9.39 B(Zn2L2)=23.26	1998GGb (86425)	4828
*****									
C13H25N5		L				(7379)			
1-(Imidazol-4-ylmethyl)-1,5,9-triazacyclododecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.15M	C		K1=10.08 K(ZnL+H)=4.96 K(ZnL=ZnH-1L+H)=-10.87	1997DMb (86432)	4829
*****									
C13H25N5		L				(7380)			
1-(Pyrazol-3-ylmethyl)-1,5,9-triazacyclododecane;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.15M	C		K1=9.25	1997DMb (86435)	4830

K(ZnL+H)=5.36

K(ZnL=ZnH-1L+H)=-8.97

\*\*\*\*\*

C13H25N5 L (2943)  
2,6-Bis-(5-(1,4-diazaheptyl)pyridine; (H2N.C2H4.NH.CH(CH3))2.C5H3N

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

Zn++ cal KNO3 25°C 0.1M C H K1=15.73 1982Tmc (86443)4831  
DH(K1)=-58.1 kJ mol-1  
-----

Zn++ cal KNO3 25°C 0.10M C 1982Tmd (86444)4832  
DH1=-58.1 kJ/mol  
-----

Zn++ gl KNO3 25°C 0.10M C K1=15.73 1978HMa (86445)4833  
K(ZnL+H)=2.74  
-----

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C13H28N4O2 L CAS 17023-02-8 (7247)  
3,3,9,9-Tetramethyl-4,8-diazaundecane-2,10-dione dioxime;  
(HON:C(CH3)C(CH3)2NHCH2)2CH2

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

Zn++ gl NaCl 25°C 0.15M C K1=5.01 2004NJa (86530)4834  
B(ZnH-1L)=0.26  
B(ZnH-2L)=-8.79  
-----

Zn++ gl KNO3 35°C 0.10M C M K1=9.91 1998LYa (86531)4835  
B(ZnHL)=16.40

Ternary complexes with 5-substituted-1,10-phenanthrolines.

\*\*\*\*\*

C13H29N3O L (6454)  
4,8,12-Trimethyl-1-oxa-4,8,12-triazacyclotetradecane;

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

Zn++ gl KNO3 25°C 0.10M U K1=6.36 1991ACa (86546)4836  
B(ZnH-1L)=-1.58  
B(ZnH-2L)=-12.49  
K(ZnL+OH)=5.88  
K(ZnL+2OH)=8.79  
-----

\*\*\*\*\*

C13H30N2O4 L CAS 139-90-2 (3415)  
N-(2-Hydroxyethyl)-N,N',N'-tri(2-hydroxypropyl)ethylenediamine;

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

Zn++ gl KNO3 25°C 0.50M U K1=5.67 1960Hda (86556)4837

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C13H30N4O L CAS 252191-62-1 (7610)

1-(3-Hydroxypropyl)-1,4,8,11-tetraazacyclotetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	R4N.X	25°C	0.10M	C			K1=13.0 K(Zn+HL)=6.6 K(ZnL=ZnH-1L+H)=-8.2	1999DWa (86565)	4838
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Medium: 0.1 M NEt4ClO4

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C14H8N3OCl	HL	CAS	25732-24-5	(5080)
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10-Chloro-7-hydroxyindolo(2,3-b)quinoxaline;

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

Zn++	sp	diox/w	?	50%	U			K(Zn+HL=ZnL+H)=(?)3.71	1970KMc (86595)	4839
------	----	--------	---	-----	---	--	--	------------------------	-----------------	------

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C14H8N3O8S2F3	HL	(9231)
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1-(2-Thenoyl),4-trifluoro,2-[2-hydroxy-2-sulpho-5-nitrophenylazo]butadi-1,3-one;

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

Zn++	gl	KCl	25°C	0.1M	U			K1=7.47 B2=14.03	2004ACa (86605)	4840
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C14H8N4O4Br2S	H2L	3,5-di-Br-PAHQ5	(7223)
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7-(3,5-Dibromo-2-pyridyl)-azo)-8-hydroxyquinoline-5-sulfonic acid;

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

Zn++	sp	KNO3	25°C	0.10M	C			K1=16.01	1990HCa (86615)	4841
------	----	------	------	-------	---	--	--	----------	-----------------	------

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C14H8N4O4Cl2S	H2L	(6672)
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7-((3,5-Dichloro-2-pyridyl)azo)-8-hydroxyquinoline-5-sulfonic acid;

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

Zn++	sp	KNO3	25°C	0.10M	C			K1=15.96	1990HCa (86619)	4842
------	----	------	------	-------	---	--	--	----------	-----------------	------

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C14H8O4	H2L	Quinizarin	CAS	81-64-1	(1060)
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1,4-Dihydroxyanthraquinone;

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

Zn++	sp	alc/w	20°C	50%	U			K(Zn+HL)=4.9	1982Kmd (86661)	4843
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Medium: 50% v/v EtOH/H2O

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C14H8O7S	H3L	DASA	CAS	83-61-4	(950)
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1,2-Dihydroxyanthraquinone-3-sulfonic acid, Alizarin Red S;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl04	30°C	0.0	U	I	K1=8.61 B2=15.04	1972GDa	(86706)4844
I=0.02: K1=9.11, K2=6.72; 0.05: K1=9.22, K2=6.75; 0.15: K1=9.32, K2=6.70; 0.2: K1=8.72, K2=6.32									
*****									
C14H9N02		HL					CAS 641-63-4	(4038)	
2-(2'-Pyridyl)indan-1,3-dione;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	30°C	75%	U		K1=9.64 B2=18.98	1964Cmb	(86785)4845
*****									
C14H9N20Cl5		HL					(562)		
N-(2'-Hydroxy-5'-chlorobenzylidene)-4-aminobenzothiazole;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	0.10M	U		K1=6.1 B2=12.90	1978SUa	(86817)4846
*****									
C14H9N30		HL					CAS 25732-18-7	(5042)	
1-Hydroxyindolo(2,3-b)quinoxaline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	?	50%	U		K1=6.47 B2=14.02	1970KMc	(86825)4847
*****									
Zn++	gl	diox/w	25°C	50%	U		K1=7.25 B2=14.28	1970MKg	(86826)4848
Medium: 50% v/v dioxan, 0.01 M (H,K)N03									
*****									
C14H9N30		HL					CAS 25732-19-8	(5043)	
4-Hydroxyindolo(2,3-b)quinoxaline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	?	50%	U		K1=6.48 B2=14.11	1970KMc	(86837)4849
*****									
Zn++	gl	diox/w	25°C	50%	U		K1=8.23 B2=15.01	1970MKg	(86838)4850
Medium: 50% v/v dioxan, 0.01 M (H,K)N03									
*****									
C14H9N706		H3L					(5044)		
1,5-Bis(2-hydroxy-4-nitrophenyl)-3-cyanoformazan;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	NaCl04	25°C	0.10M	U			1971BSf	(86858)4851
							B(ZnH4L2)=53.5		
*****									
C14H10N02F3		HL					CAS 530-28-9	(2574)	
N-(3-Trifluoromethylphenyl)-2-aminobenzoic acid; HOOC(C6H4)NH(C6H4)CF3									

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  mixed  22°C  90%  U          K1=2.51          1982GKb (86895)4852
Medium: 90% DMF/H2O
*****
C14H10N2O5          HL          CAS 5005-14-1  (563)
N-(2'-Hydroxybenzylidene)-4-aminobenzothiazole;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  diox/w 25°C  0.10M U          K1=7.7    B2=14.40  1978SUa (86898)4853
*****
C14H10N2O5          H3L          CAS 85545-78-4  (6309)
3,2'-Dicarboxy-4-hydroxyazobenzene; (HO)(COOH)C6H3.N:N.C6H4.COOH
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  alc/w  25°C  75%  U          K1=13.19  B2=23.26  1976RKa (86904)4854
*****
C14H10N4O2S          HL          (6854)
3-Phenyl-5-mercapto-4-(2-nitrophenyl)-1,2,4-triazole; C6H5.C2N3(SH)(C6H4.NO2)
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  mixed  30°C  70%  U          K1=4.87    B2=8.94   1991SMc (86918)4855
Medium: 70% DMF. Data also for 4-chlorophenyl, 2-nitrophenyl, 4-nitrophenyl,
3,5-dinitrophenyl analogues
*****
C14H11NO2          HL          CAS 10472-94-3  (4040)
1-Phenyl-3-(2'-pyridyl)propane-1,3-dione; C6H5.CO.CH2.CO.C5H4N
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  diox/w 25°C  75%  U  I      K1=10.86  B2=20.90  1967WHa (86939)4856
Medium: 75% dioxan, 0.01 M. In 0.002 M K1=11.15, K2=10.85
*****
C14H11NO2          HL          CAS 10472-95-4  (4041)
1-Phenyl-3-(3'-pyridyl)propane-1,3-dione; C6H5.CO.CH2.CO.C5H4N
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Zn++      gl  diox/w 25°C  75%  U  I      K1=10.15  B2=19.47  1967WHa (86943)4857
Medium: 75% dioxan, 0.01 M. In 0.002 M: K1=10.39, K2=9.86
*****
C14H11NO2          HL          CAS 6312-20-3   (4042)
1-Phenyl-3-(4'-pyridyl)propane-1,3-dione; C6H5.CO.CH2.CO.C5H4N
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----

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Zn++ gl diox/w 25°C 75% U I K1=9.62 B2=18.43 1967WHa (86947)4858  
Medium: 75% dioxan, 0.01 M. In 0.002 M: K1=9.92, K2=9.50

\*\*\*\*\*

C14H11NO3 H2L CAS 7316-93-5 (5047)

N-Salicylideneanthranilic acid; HO.C6H4.CH:N.C6H4.COOH

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

Zn++ gl diox/w 30°C 50% U K1=4.65 B2=8.49 1972MGa (86951)4859

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C14H11NO4 H2L CAS 279-92-0 (3430)

2,2'-Iminodibenzoic acid; HOO.C6H4.NH.C6H4.COOH

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

Zn++ gl alc/w 25°C 50% U K1=4.48 B2=7.99 1973DSb (86965)4860

Medium: 50% EtOH, 0.2 M NaClO4

-----  
Zn++ gl diox/w 35°C 50% U K1=5.6 1958YSa (86966)4861  
-----

Zn++ gl diox/w 35°C 50% U K1=5.6 1958YSa (86967)4862

\*\*\*\*\*

C14H11NO4 H2L CAS 156357-30-1 (8320)

N-(p-Carboxyphenyl)benzohydroxamic acid;

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

Zn++ gl diox/w 30°C 50% U K1=8.07 B2=14.29 1994JBb (86974)4863

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

For N-(o-carboxyphenyl)benzohydroxamic acid, K1=7.70, K2=5.95.

\*\*\*\*\*

C14H11N3O HL CAS 24854-76-0 (1380)

2-(1H-Benzimidazol-2-yl-methylene-amino) phenol;

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

Zn++ gl diox/w 30°C 60% U K1=7.80 1984ORa (86990)4864

Data also for 4-Cl- and 4-NO2- analogues

\*\*\*\*\*

C14H11N5O2 H3L (5046)

1,5-Bis(2-hydroxyphenyl)-3-cyanoformazan; HO.C6H4.N:N.C(CN):N.NH.C6H4.OH

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

Zn++ sp NaClO4 25°C 0.10M U 1971BSf (87007)4865

K(ZnH4L2)=60.0

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C14H11N5O8S2 H5L CAS 1105-53-9 (5084)

1,5-Bis(2-hydroxy-5-sulfophenyl)-3-cyanoformazan;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	sp	NaClO4	25°C	0.10M	U		B(ZnH4L2)=78.4	1971BSf (87013)	4866

Zn++	gl	NaNO3	20°C	0.10M	U		K1=15.97	1971SEa (87014)	4867
*****									
C14H11O2NF2S		HL		CAS 51679-49-3		(2928)			
N-((3-Difluoromethylthio)phenyl)anthranilic acid;H00C(C6H4).NH.(C6H4).S.CHF2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	mixed	22°C	90%	U		K1=2.70	1982GKb (87025)	4868
Medium: 90% DMF/H2O									
*****									
C14H11O2NF2S		HL		CAS 51679-50-4		(2929)			
N-((4-Difluoromethylthio)phenyl)anthranilic acid;H00C(C6H4).NH.(C6H4).S.CHF2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	mixed	22°C	90%	U		K1=2.59	1982GKb (87030)	4869
Medium: 90% DMF/H2O									
*****									
C14H12NOBr		HL		CAS 20772-74-1		(6172)			
N-(2-Hydroxy-5-bromobenzylidene)-4-methylaniline; H0(Br)C6H3.CH:N.C6H4.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	mixed	28°C	75%	U		K1=6.32	1988MNb (87038)	4870
*****									
C14H12NO2Cl		HL		CAS 67055-92-9		(6301)			
N-(3-Chlorophenyl)-4-methylbenzohydroxamic acid; CH3.C6H4.CO.N(C6H4Cl)OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	C	M	K1=8.30 B(Zn(gly)L)=14.78	2001AMc (87058)	4871
Medium: 50% v/v dioxane/H2O									

Zn++	gl	diox/w	25°C	50%	U		K1=7.41 B2=13.56	1989PMb (87059)	4872
Data also for 4-fluoro, 4-chloro, 4-bromo, 4-nitro and 4-methoxy analogues									
*****									
C14H12NO3Cl		HL		CAS 67135-47-1		(9106)			
N-(3-Chlorophenyl)-N-hydroxy-4-methoxybenzamide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	50%	C	M	K1=8.35 B(Zn(gly)L)=14.97	2001AMc (87093)	4873



Medium: 50% v/v dioxane/H2O

\*\*\*\*\*

C14H12N2 L CAS 484-11-7 (450)

2,9-Dimethyl-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	dis	KCl	25°C	0.10M	U			K1=4.1 B2=7.7	1962IMa	(87120)4874

Zn++	gl	KNO3	25°C	0.10M	U			K1=3.1	1956YSb	(87121)4875
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C14H12N2 L CAS 3248-05-3 (3427)

4,7-Dimethyl-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	dis	oth/un	25°C	0.10M	U			K1=6.90 B2=13.08 K3=6.04	1963BMb	(87142)4876

Zn++	gl	KNO3	25°C	0.10M	U			K2=6.3 K3=5.4	1956YSb	(87143)4877
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C14H12N2 L CAS 3002-81-1 (451)

5,6-Dimethyl-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	dis	oth/un	25°C	0.10M	U			K1=6.87 B2=12.89 K3=5.71	1963BMb	(87156)4878

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C14H12N2O5 H2L (7309)

Salicylaldehyde thiobenzoylhydrazone; HO.C6H4.CH:N.N:C(SH).C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	75%	U			K1=16.9	1998FHa	(87163)4879

Medium: 75% (v/v) dioxane/water; 0.1 M KNO3.

\*\*\*\*\*

C14H12N2O2 HL (6311)

4-Hydroxy-3-formyl-2'-methylazobenzene; (HO)(CH0)C6H3.N:N.C6H4.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	diox/w	28°C	50%	U			K1=4.88 B2=8.82	1975JTb	(87172)4880

\*\*\*\*\*

C14H12N2O2 HL (6328)

4-Hydroxy-3-formyl-4'-methylazobenzene; (HO)(CH0)C6H3.N:N.C6H4.CH3

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

Zn++ gl diox/w 28°C 50% U K1=4.75 B2=8.71 1975JTb (87182)4881  
\*\*\*\*\*

C14H12N2O2 H2L (7307)  
Salicylaldehyde benzoylhydrazone; HO.C6H4.CH:N.N:C(OH).C6H5

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl diox/w 25°C 75% U K1=16.6 1998FHa (87190)4882  
Medium: 75% (v/v) dioxane/water; 0.1 M KNO3.

\*\*\*\*\*

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  
-----

Zn++ sp none 25°C 0.0 U K1=7.58 1984MSc (87202)4883

Zn++ gl diox/w 30°C 75% U 1957SFb (87203)4884  
K(Zn+H2L=ZnL+2H)=-8.0

-----  
Zn++ gl diox/w 30°C 75% U K1=12.39 1952SNa (87204)4885

\*\*\*\*\*

C14H12N2O4 H2L (3433)  
2,2'-Hydrazodibenzoic acid; HOO.C6H4.NH.NH.C6H4.COOH

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

Zn++ gl diox/w 35°C 50% U K1=4.6 1958YSa (87237)4886

\*\*\*\*\*

C14H12N4O HL CAS 66751-18-6 (5048)  
1-(5-Methyl-4-imidazolylazo)-2-naphthol;

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

Zn++ gl diox/w 25°C 50% U K1=11.6 B2=21.30 1968YTa (87306)4887  
Medium: 50% dioxan, 0.1 M KNO3

\*\*\*\*\*

C14H12N4O L CAS 74126-83-3 (5438)  
Di(2-pyridyl)-imidazol-2-yl-methanol;

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

Zn++ gl KNO3 25°C 0.20M U K1=7.50 B2=14.17 1980BHa (87311)4888

\*\*\*\*\*

C14H12N4O2Br2 HL CAS 72833-87-5 (2533)  
2-(2-(3,5-Dibromopyridyl)azo)-5-dimethylaminobenzoic acid;

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

Zn++ sp diox/w 25°C 40% C K1=6.27 1986KHa (87316)4889

\*\*\*\*\*

C14H12OS HL CAS 15473-65-1 (5049)  
3-Mercapto-1-(2'-naphthyl)but-2-en-1-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl diox/w 30°C 75% U K1=10.28 B2=20.26 1969UTa (87324)4890  
Medium: 75% dioxan, 0.01 M Me4NI

\*\*\*\*\*

C14H12OS HL CAS 15473-98-0 (5050)  
4-Mercapto-4-(2'-naphthyl)but-3-en-2-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl diox/w 30°C 75% U K1=9.88 B2=19.41 1969UTa (87326)4891  
Medium: 75% dioxan, 0.01 M Me4NI

\*\*\*\*\*

C14H13NO HL CAS 982-76-3 (5058)  
N-(Salicylidene)-4-methylaniline; CH3.C6H4.N:CH.C6H4.OH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl diox/w 27°C 50% U K1=5.05 1972SDb (87382)4892  
Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C14H13NO2 H2L (1387)  
2'-Hydroxy-5'-methylbenzophenone oxime; HO(CH3)C6H3.C(:NOH)C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl diox/w 30°C 50% U K1=6.15 1982UVa (87389)4893

\*\*\*\*\*

C14H13NO2 HL DPAHA CAS 4463-22-3 (880)  
2,2'-Diphenylacetohydroxamic acid; (C6H5)2.CH.CO.NH.OH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl alc/w 20°C 50% U TIH K1=6.05 B2=10.80 1979RSb (87399)4894  
DH(K1)=-24.9 kJ mol<sup>-1</sup>, DS=30.6 J K<sup>-1</sup> mol<sup>-1</sup>, DH(K2)=-23.9, DS2=9

\*\*\*\*\*

C14H13NO2 HL N,2'-DPAHA CAS 13663-57-5 (879)  
N,2'-Diphenylacetohydroxamic acid; C6H5.CH2.CO.N(C6H5).OH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl alc/w 30°C 50% U M K1=6.55 B2=11.05 1992RAa (87418)4895  
B(ZnL(phen))=6.39

-----

Zn++ gl alc/w 20°C 50% U T H K1=6.68 B2=11.33 1985RSd (87419)4896  
30 C:K1=6.55, K2=4.50; 40 C, K1=6.43, K2=4.37; 50 C, K1=6.30, K2=4.23

DH(K1)=-27.5 kJ mol<sup>-1</sup>, DS=34 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-28.3, DS=5.6

-----  
Zn++ gl alc/w 30°C 50% U T K1=6.55 B2=11.05 1981RSa (87420)4897  
Medium: 50% v/v EtOH, 0.1 M KNO<sub>3</sub>

\*\*\*\*\*

C<sub>14</sub>H<sub>13</sub>N<sub>2</sub>O<sub>2</sub> HL CAS 1503-92-0 (1817)

N-(4-Tolyl)benzohydroxamic acid; C<sub>6</sub>H<sub>5</sub>.CO.N(C<sub>6</sub>H<sub>4</sub>.CH<sub>3</sub>).OH

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

-----  
Zn++ gl diox/w 30°C 50% U K1=9.96 B2=17.50 1994JBb (87439)4898  
Medium: 50% v/v dioxane/H<sub>2</sub>O, 0.10 M NaClO<sub>4</sub>.

-----  
Zn++ gl diox/w 25°C 70% U K1=6.23 B2=11.42 1969JSa (87440)4899

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C<sub>14</sub>H<sub>13</sub>N<sub>2</sub>O<sub>2</sub> HL CAS 1143-74-2 (4044)

N-2-Tolylbenzohydroxamic acid; C<sub>6</sub>H<sub>5</sub>.CO.N(C<sub>6</sub>H<sub>4</sub>.CH<sub>3</sub>).OH

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

-----  
Zn++ gl diox/w 30°C 50% U K1=9.57 B2=16.91 1994JBb (87472)4900  
Medium: 50% v/v dioxane/H<sub>2</sub>O, 0.10 M NaClO<sub>4</sub>.

-----  
Zn++ gl diox/w 25°C 50% U T K1=7.80 B2=14.55 1979AMa (87473)4901  
At 35 C, K1=7.69, K2=6.62. Also data for the 4-methyl-, 4-methoxy-,  
4-fluoro, 4-chloro-, 4-bromo- and 4-nitro-bezohydroxamic acid derivatives.

-----  
Zn++ gl diox/w 25°C 50% U K1=8.19 B2=14.90 1972STf (87474)4902

-----  
Zn++ oth diox/w 25°C 70% U K1=11.10 1968JSc (87475)4903

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C<sub>14</sub>H<sub>13</sub>N<sub>2</sub>O<sub>2</sub> HL CAS 14489-88-4 (203)

N-3-Tolylbenzohydroxamic acid; C<sub>6</sub>H<sub>5</sub>.CO.N(C<sub>6</sub>H<sub>4</sub>.CH<sub>3</sub>).OH

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

-----  
Zn++ gl diox/w 25°C 70% U T K1=9.23 B2=16.99 1975SAa (87491)4904

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C<sub>14</sub>H<sub>13</sub>N<sub>2</sub>O<sub>2</sub> HL CAS 17120-15-9 (380)

N-Phenyl-2-methylbenzohydroxamic acid; CH<sub>3</sub>.C<sub>6</sub>H<sub>4</sub>.CO.N(C<sub>6</sub>H<sub>5</sub>).OH

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

-----  
Zn++ gl diox/w 25°C 50% U TI K1=8.04 B2=14.44 1977AGb (87509)4905

-----  
Zn++ gl diox/w 25°C 50% U T H K1=8.04 B2=14.44 1977AGc (87510)4906  
At 35 C: K1=7.86, K2=6.21. DH(K1)=-31.7 and DH(K2)=-33.4 kJ mol<sup>-1</sup>

-----  
Zn++ gl diox/w 35°C 50% U K1=7.86 B2=14.07 1974ATa (87511)4907

Zn++ oth diox/w 30°C 50% U K1=8.16 B2=14.86 1973ASa (87512)4908  
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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  
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Zn++ gl alc/w 25°C 50% U K1=3.55 B2=6.60 1977DWa (87523)4909  
\*\*\*\*\*

C14H13NO3 H2L (1386)  
2-Hydroxy-5-methoxybenzophenone oxime; HO(CH3O)C6H3.C(:NOH)C6H5

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl diox/w 30°C 50% U K1=5.59 1982UVa (87535)4910  
\*\*\*\*\*

C14H13NO3 H2L CAS 51931-02-1 (5063)  
N-(2-Hydroxy-1-naphthalidene)-beta-alanine;

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

Zn++ oth NaClO4 30°C 0.10M U K1=4.95 1972MSe (87550)4911  
\*\*\*\*\*

C14H13NO3 HL CAS 34661-16-0 (1124)  
N-Phenyl-2-methoxybenzohydroxamic acid; CH3O.C6H4.CO.N(C6H5)OH

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

Zn++ EMF diox/w 25°C 50% U T H K1=8.84 B2=15.66 1977AGc (87562)4912  
At 35 C: K1=8.63, K2=6.65. DH(K1)=-36.9 and DH(K2)=-29.9 kJ mol<sup>-1</sup>

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Zn++ gl diox/w 35°C 50% U K1=8.63 B2=15.28 1974ATa (87563)4913  
\*\*\*\*\*

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  
-----

Zn++ gl NaClO4 25°C 0.10M U T H K1=3.78 1977SMd (87570)4914  
\*\*\*\*\*

C14H13N3O2 HL (4045)  
1-(4'-Acetylphenyl)-3-hydroxy-3-phenyltriazene;

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

Zn++ gl diox/w 25°C 70% U K1=7.79 B2=14.24 1964PSe (87592)4915  
Medium: 70% dioxan, 0.1 M KCl

\*\*\*\*\*  
C14H13N3O2S HL CAS 40788-59-8 (6178)

2-Benzenesufonamidomethylbenzimidazole; C<sub>6</sub>H<sub>5</sub>SO<sub>2</sub>NHCH<sub>2</sub>C<sub>7</sub>H<sub>5</sub>N<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	mixed	20°C	50%	M			K1=8.12	1988NRa (87603)	4916
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Medium: 0.25 M NaClO<sub>4</sub> in 50% acetone

Zn++	gl	diox/w	30°C	50%	C	M		K1=6.19 B2=11.99 K(Zn(gly)+L)=6.09 B(Zn(gly)L)=11.80	1987MSd (87604)	4917
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Medium: 50% v/v dioxane/H<sub>2</sub>O, 0.2 M NaNO<sub>3</sub>.

\*\*\*\*\*

C<sub>14</sub>H<sub>13</sub>N<sub>5</sub>O<sub>2</sub> HL (5394)  
1-(2-Pyridylmethylideneamino)-3-(salicylideneamino)thiourea;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	sp	mixed	25°C	40%	U			K1eff=4.69	1985RGa (87611)	4918
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Medium: 40% DMF, pH 4.5

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C<sub>14</sub>H<sub>13</sub>N<sub>5</sub>O<sub>2</sub> HL (5393)  
1-(2-Pyridylmethylideneamino)-3-(salicylideneamino)urea;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	sp	mixed	25°C	32%	U			K1eff=4.50	1985RGa (87621)	4919
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Medium: 32% DMF, pH 4.5

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C<sub>14</sub>H<sub>13</sub>O<sub>2</sub>P HL CAS 3064-56-0 (7013)  
2-(Diphenylphosphino)-ethanoic acid; (C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>P.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	gl	NaClO <sub>4</sub>	25°C	0.10M	U			K1=1.3	1979POa (87630)	4920
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C<sub>14</sub>H<sub>14</sub>N<sub>4</sub> L CAS 98240-13-2 (4033)  
N,N'-Bis(2'-picolinylidene)-1,2-diaminoethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Zn++	dis	non-aq	25°C	100%	C	M			20010Hb (87676)	4921
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Method: distribution from buffered 0.10 M NaCl into nitrobenzene.  
K(Zn+3L(org)+2A=ZnL<sub>3</sub>A<sub>2</sub>(org))=14.4. HA is picric acid.

\*\*\*\*\*

C<sub>14</sub>H<sub>15</sub>N<sub>2</sub>O<sub>8</sub>Cl H<sub>4</sub>L (1903)  
4-Chloro-1,2-diaminobenzene-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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$$K(\text{Zn+HL})=3.20$$

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C14H16N2 L CAS 1620-43-7 (5033)  
1,4-Bis(2'-pyridyl)butane; C5H4N.CH2.CH2.CH2.CH2.C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	20°C	0.10M	U		K1=1.0 K(Zn+HL) < 1	1970BAa (87833)	4929

\*\*\*\*\*

C14H16N2O2 L CAS 52411-34-4 (2475)  
2,2'(1,2-Ethanediylobis(oxy))bisaminobenzene; H2N.C6H4.OCH2CH2O.C6H4.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	25°C	85%	C T		K1 < 1.3	1983HBa (87857)	4930

\*\*\*\*\*

C14H16N2O8 H4L CAS 40774-59-2 (1901)  
1,2-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	1.00M	C	H	K1=12.89	1992ANb (87929)	4931
By calorimetry: DH(K1)=4.1 kJ mol <sup>-1</sup> , DS=260 J K <sup>-1</sup> mol <sup>-1</sup>									
Zn++	cal	NaClO4	25°C	1.00M	U	H	K1=12.89	1987MNa (87930)	4932
DH(K1)=-4.1 kJ mol <sup>-1</sup> ; DS(K1)=260 J K <sup>-1</sup> mol <sup>-1</sup>									
Zn++	gl	NaClO4	25°C	1.00M	C		K1=12.89 K(ZnL+H)=2.96 K(ZnHL+H)=1.3 K(ZnH-1L+H)=11.4	1985NKa (87931)	4933

\*\*\*\*\*

C14H16N2O8 H4L CAS 103012-22-2 (1904)  
1,3-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KCl	25°C	0.10M	U		K1=5.20 K(Zn+H2L)=1.8 K(Zn+HL)=3.95 B(Zn2L)=7.40	1968UHa (87980)	4934

\*\*\*\*\*

C14H16N2O8 H4L (6108)  
1,3-Phenylenediamine-N,N'-disuccinic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.50M	C	M	K1=3.966	1989FRa (87986)	4935



B(ZnH2L)=11.768

B(ZnHL)=8.483

B(Zn2L)=6.040

B(ZnLA)=6.59

B(ZnHLA)=12.35, B(ZnHLB)=11.68, B(ZnH2LB)=16.22, B(ZnH3LB)=20.22, B(ZnHLC)=11.74

B(ZnH2LC)=15.84, B(ZnH3LC)=20.23. H2A=Oxalic, H2B=Malonic, H2C=Succinic acid

\*\*\*\*\*

C14H16N2O8 H4L CAS 3020-07-3 (1905)

1,4-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2

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

Zn++ gl KCl 25°C 0.10M C K1=5.31 1997GHc (88001)4936

B(ZnH2L)=13.85

B(ZnHL)=9.33

B(Zn2L2)=15.46

B(Zn2HL2)=19.84

B(Zn3HL3)=29.73, B(ZnH3L2)=24.02, B(Zn2H2L2)=23.83, B(Zn3L3)=25.77,

B(ZnH4L2)=27.22, B(ZnHL2)=16.30, B(Zn2L)=9.14, B(ZnH2L2)=20.74.

\*\*\*\*\*

C14H16N2O8 H4L CAS 91856-15-4 (8449)

1,4-Phenylenediamine-N,N'-disuccinic acid;

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

Zn++ gl NaCl 25°C 0.50M C K1=5.32 B2= 8.29 1984RFe (88007)4937

B(ZnH2L)=12.2

B(ZnHL)=9.47

K(Zn+H2L)=0.95

K(Zn+HL)=2.84

\*\*\*\*\*

C14H17N2O4P H3L (1472)

2-Hydroxyphenyl-N-(2-(2'-pyridyl)ethylamino)methylphosphonic

acid;C6H4(OH)CH(PO3H2)NHCH2CH2C5H4N

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Zn++ gl NaCl04 20°C 0.10M U K1=8.15 1985SIb (88037)4938

K(Zn+HL)=4.05

\*\*\*\*\*

C14H17N5O3 HL Pipemidic acid CAS 51940-44-4 (2535)

8-Ethyl-5,8-dihydro-5-oxo-2-(1-piperaziny)pyrido[2,3-d]pyrimidine-6-carboxylic acid;

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

Zn++ sp oth/un 25°C 0.05M C 2000MPa (88054)4939

K1eff=3.45

Medium: 0.05 M ethanoate buffer, pH=5.5. Method: spectrofluorimetry.

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C14H18N2O HL (5069)

1-Phenyl-3-methyl-4-butyldpyrazol-5-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	dis	NaCl04	?	0.10M	U			K1=3.03 B2=6.06	1971NSb (88057)	4940

C14H18N2O2 HL (7898)

1-(2-Hydroxyphenyl)-2,5-diaza-8-oxonona-1,5-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	alc/w	25°C	0.2M	U			K1=4.78	1999MTc (88061)	4941

Medium: 0.2 M KCl in 3:7 v/v H2O/EtOH

C14H18N2O5 HL Aspartame CAS 22839-47-0 (417)

Aspartyl-phenylalanine methyl ester; H2NCH(CH2COOH)CONHCH(CH2Ph)COOCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaCl04	37°C	0.15M	C			K1=3.80 B2=6.87 B(ZnHL)=9.33 B(ZnHL2)=13.21 B(ZnH-1L)=-4.7	1976MTa (88074)	4942

C14H18N2O5 H2L HIDA (6633)

N-(2,6-Dimethyl-phenylcarbamoylmethyl)iminodiethanoic acid;  
(CH3)2C6H3.NH.CO.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	NaCl04	25°C	0.50M	U			K1=6.62 B2=8.47 B(ZnH-1L)=-0.73 B(ZnH-2L)=-10.69	1992GLa (88080)	4943

C14H18N4 L DPEN CAS 4608-34-3 (1850)

N,N'-Bis-(2-pyridylmethyl)-1,2-diaminoethane; (C5H4N.CH2.NH.CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	U	H		K1=11.13	1975APc (88099)	4944
DH(K1)=-47.3 kJ mol <sup>-1</sup> , DS=54.8 J K <sup>-1</sup> mol <sup>-1</sup>										
Zn++	gl	KCl	25°C	0.10M	U			K1=11.4	1968GRa (88100)	4945
Zn++	gl	oth/un	25°C	0.10M	U			K1=11.5	1964PCa (88101)	4946

C14H18N6O4 HL CAS 432038-60-3 (8908)

N-Acetyl-L-histidyl-L-histidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=3.35 B(ZnH-1L)=-3.74	2002VVa (88120)	4947

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C14H18O2	HL	CAS 41070-28-4	(5035)
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2-Toluoyl pivaloyl methane; CH3.C6H4.CO.CH2.CO.C(CH3)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	diox/w	30°C	75%	U		K1=9.66 B2=18.69	1972UDa (88123)	4948
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Medium: 75% v/v dioxan, 0.01 M Me4NC104

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C14H18O2	HL	CAS 41070-24-0	(5036)
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4-Toluoyl pivaloyl methane; CH3.C6H4.CO.CH2.CO.C(CH3)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Zn++	gl	diox/w	30°C	75%	U		K1=9.98 B2=19.03	1972UDa (88128)	4949
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Medium: 75% v/v dioxan, 0.01 M Me4NC104

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C14H18O3	HL	CAS 41070-25-1	(5037)
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2-Anisoyl pivaloyl methane; CH3O.C6H4.CO.CH2.CO.C(CH3)3

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

Zn++	gl	diox/w	30°C	75%	U		K1=10.01 B2=18.72	1972UDa (88133)	4950
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Medium: 75% v/v dioxan, 0.01 M Me4NC104

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C14H18O3	HL	CAS 41070-23-9	(5038)
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4-Anisoyl pivaloyl methane; CH3O.C6H4.CO.CH2.CO.C(CH3)3

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

Zn++	gl	diox/w	30°C	75%	U		K1=10.0 B2=19.11	1972UDa (88138)	4951
------	----	--------	------	-----	---	--	---------------------	-----------------	------

Medium: 75% v/v dioxan, 0.01 M Me4NC104

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C14H20N6O3	L	CAS 432038-56-7	(8907)
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L-Histidyl-L-histidine ethyl ester;

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

Zn++	gl	KNO3	25°C	0.10M	C		K1=5.70 B(ZnHL)=11.70 B(ZnH-1L)=-1.20 B(ZnH-2L)=-10.26	2002VVa (88189)	4952
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C14H20O5	L	Benzo15-crown-5	CAS 14098-44-3	(608)
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2,3-Benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	con	mixed	25°C	90%	C		K1=2.14	2003ISa (88206)	4953
Medium: 90% v/v DMSO/H2O.									
Zn++	con	alc/w	25°C	40%	C		K1=2.01	2001ISa (88207)	4954
Medium: 40% v/v EtOH/H2O.									
Zn++	nmr	non-aq	27°C	100%	C		K1=3.44	2000SMg (88208)	4955
Medium: acetonitrile. Method: competitive 7Li nmr technique.									

\*\*\*\*\*

C14H21N07 HL CAS 85906-10-1 (6635)  
2-(Benzylamino)-2-deoxy-D-glycero-D-gulo-heptonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=3.88 B2=6.33 B(ZnH-1L)=-5.4 B(ZnH2L2)=20.8	1992VDa (88406)	4956

\*\*\*\*\*

C14H21N706 HL GlyGlyHisGlyGly CAS 60343-81-9 (73)  
Glycyl-glycyl-histidyl-glycyl-glycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	37°C	0.15M	U		K1=2.91 B(ZnHL)=9.46 B(ZnH-1L)=-4.23 B(Zn2L2)=9.06 B(Zn2H-1L2)=2.24	1977APa (88418)	4957

\*\*\*\*\*

C14H22N208 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
Zn++	vlt	KNO3	25°C	1.0M	U	I	K1=18.0	1967JGb (88528)	4958
K1=18.5(I=0.1)									
Zn++	cal	KNO3	25°C	0.10M	U	T H		1965WHa (88529)	4959
DH(K1)=-32.2 kJ mol <sup>-1</sup> , DS=247 J K <sup>-1</sup> mol <sup>-1</sup>									
Zn++	cal	KNO3	20°C	0.10M	U	T H		1963ANb (88530)	4960
DH(K1)=-8.1 kJ mol <sup>-1</sup> , DS=342 J K <sup>-1</sup> mol <sup>-1</sup>									
Zn++	gl	KNO3	20°C	0.10M	U	H	K1=19.32	1963ANf (88531)	4961
By calorimetry: DH(K1)=-8.1 kJ mol <sup>-1</sup> , DS=343 J K <sup>-1</sup> mol <sup>-1</sup>									
Zn++	EMF	KNO3	25°C	0.10M	U		K1=18.6	1960HRa (88532)	4962

Zn++ vlt KNO3 20°C 0.10M U K1=18.67 1954SGa (88533)4963  
K(ZnL+H)=4.07

\*\*\*\*\*  
C14H22N2O10 H5L (1083)  
1-Carboxy-1,5-diaminopentane-N,N,N',N'-tetraethanoic acid;  
(HOOCCH2)2NCH(COOH)(CH2)4N(CH2COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 25°C 0.10M U K1=13.30 1988TGe (88895)4964  
K(Zn+H2L)=3.71  
K(Zn+HL)=10.38  
B(Zn2L)=18.70  
B(Zn2L2)=29.62

\*K(ZnH2L)=-3.21, \*K(ZnHL)=-6.02.

\*\*\*\*\*  
C14H22N4O L (5979)  
1-((6-(Dimethylamino)methyl)-2-pyridyl)methyl)hexahydro-5H-1,4-diazepin-5-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl NaClO4 50°C 0.50M C K1=4.32 1984Gcb (88908)4965  
Data also for complex with other lactam.

\*\*\*\*\*  
C14H22N4O8P2S H3L HETPP CAS 10241-38-0 (6093)  
2-(1 Hydroxyethyl)thiamine pyrophosphate;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KCl 25°C 0.20M U 2000MLa (88911)4966  
K(2Zn+2HL+2H=Zn2H4L2)=21.62  
K(2Zn+2HL+H=Zn2H3L2)=16.45  
K(2Zn+2HL=Zn2H2L2)=11.01

\*\*\*\*\*  
C14H22N4O9 H3L Ala-Ala-Asp-Asp (6444)  
Alanyl-alanyl-aspartyl-aspartic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 25°C 0.10M C K1=3.77 1995KLa (88916)4967  
B(ZnH-1L)=-4.77  
B(ZnH-2L)=-14.42

\*\*\*\*\*  
C14H22N4O9 H3L Ala-Asp-Ala-Asp (6443)  
Alanyl-aspartyl-alanyl-aspartic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Zn++ gl KNO3 25°C 0.10M C K1=3.84 1995KLa (88920)4968  
B(ZnH-1L)=-4.73

B(ZnH-2L)=-13.77

\*\*\*\*\*

C14H22N4O9                      H3L      Ala-Asp-Asp-Ala      (6442)  
Alanyl-aspartyl-aspartyl-alanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=3.69 B(ZnH-1L)=-4.50 B(ZnH-2L)=-13.10	1995KLa (88924)	4969

\*\*\*\*\*

C14H22N4O9                      H3L      Asp-Ala-Ala-Asp      (6441)  
Aspartyl-alanyl-alanyl-aspartic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C		K1=4.88 B(ZnH-1L)=-4.00 B(Zn(H-3L))=-12.57	1995KLa (88928)	4970

\*\*\*\*\*

C14H22N6O4                      L                                      CAS 204922-29-2      (7538)  
1-(2,4-Dinitrophenyl)-1,4,7,10-tetraazadodecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaNO3	25°C	0.10M	C		K1=7.89	1998KGa (88960)	4971

\*\*\*\*\*

C14H22N6O5                      HL      Asp-Ala-His-Me      CAS 66277-14-3      (2223)  
Aspartyl-alanyl-histidine-N-methylamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	M	K1=4.17    B2=6.43 B(ZnHL)=10.02 B(ZnH-1L)=-4.09 B(CuZnH-2L)=0.39	1983D0a (88974)	4972

Zn++	gl	KNO3	25°C	0.16M	M		K1=4.75    B2=8.15 B(ZnHL)=9.95 B(ZnH-1L)=-4.34	1979LSa (88975)	4973
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C14H22N8O2                      L                                      (7443)  
N,N'-Di(histidyl)-1,2-diaminoethane; C3H3N2CH2CH(NH2)CONHCH2CH2NHCOCH(NH2)CH2C3H3N2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaCl	25°C	0.10M	C	T	B(ZnHL)=12.33 B(Zn2L2)=16.47 B(Zn4H-4L2)=-2.29	1998TGa (88981)	4974

B(Zn4H-5L2)=-11.56  
 B(Zn4H-6L2)=-21.15, B(ZnH-2L)=-11.77. Also data at 90 C.  
 \*\*\*\*\*

C14H22O5                      H2L                      CAS 85785-29-1 (2250)  
 Di(hepta-4,6-dione)ether, (CH3.CO.CH2.CO.(CH2)3)2O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	diox/w	24°C	50%	U		K1=8.8	1979ACa (88987)	4975

\*\*\*\*\*  
 C14H22O8S4                      H4L                      (1160)  
 Ethane-tetramercaptopropionic acid; (CH.(S.CH2.CH2.COOH)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	U		K1=3.00	1975PJ a (88997)	4976

\*\*\*\*\*  
 C14H23N3O10                      H5L                      DTPA                      CAS 67-43-6 (238)  
 Diethylenetriamine-pentaethanoic acid; HOOCH2.N(CH2.CH2.N(CH2.COOH)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Zn++	gl	NaClO4	25°C	0.10M	C		K1=18.29 K(ZnL+H)=5.60 K(ZnHL+H)=3.06	2001CCa (89087)	4977

Zn++	vlt	KN03	25°C	0.10M	C		K1=18.61	2001CKb (89088)	4978
------	-----	------	------	-------	---	--	----------	-----------------	------

Method: cyclic voltammetry. Medium: pH 10.

Zn++	nmr	mixed	25°C	0.10M	U		K(LaL+Zn)=1.53	1998LVa (89089)	4979
------	-----	-------	------	-------	---	--	----------------	-----------------	------

Method: 13C nmr. Medium: 30% D2O/H2O, 0.1 M metal ion, pH=6.5.  
 Also data for the formation of borate esters.

Zn++	gl	NaCl	37°C	0.15M	C		K1=17.45    B2=21.78 B(ZnHL)=22.53 B(ZnH2L)=24.88	1984DMb (89090)	4980
------	----	------	------	-------	---	--	---	-----------------	------

Zn++	gl	oth/un	25°C	0.10M	U	H	K1=18.8	1974DTa (89091)	4981
------	----	--------	------	-------	---	---	---------	-----------------	------

DH=-44.3 kJ mol-1

Zn++	sp	oth/un	20°C	0.0	U		K1=18.73	1968KAb (89092)	4982
------	----	--------	------	-----	---	--	----------	-----------------	------

Zn++	cal	KN03	20°C	0.10M	U	T H		1965ANa (89093)	4983
------	-----	------	------	-------	---	-----	--	-----------------	------

DH(K1)=-36.8 kJ mol-1, DS=230 J K-1 mol-1

Zn++	cal	KN03	25°C	0.10M	U	H		1965WHa (89094)	4984
------	-----	------	------	-------	---	---	--	-----------------	------

DH(K1)=-44.3 kJ mol-1, DS=209 J K-1 mol-1

Zn++	EMF	KN03	25°C	0.10M	U		K1=18.8	1960HRa (89095)	4985
------	-----	------	------	-------	---	--	---------	-----------------	------

Zn++	gl	KNO3	25°C	0.10M	C	K1=18.0 K(ZnL+H)=5.6	1960WAa (89096)	4986
Zn++	EMF	oth/un	20°C	0.10M	U	K1=18.75 K(ZnL+Zn)=4.36 K(Zn+HL)=13.40	1959AND (89097)	4987
Zn++	gl	KNO3	25°C	0.10M	U	K1=18.3 B2=22.8	1959CFc (89098)	4988
Zn++	gl	oth/un	20°C	0.10M	U	K1=18.17	1958DRa (89099)	4989
*****								
C14H23N3S2		L		CAS 771500-58-4 (9194)				
5-(3-Aminopropyl)-2,8-dithia-5-aza-2,6-pyridinophane;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	R4N.X	25°C	0.10M	C	K1=8.5 K(ZnL+H)=6.0 K(ZnL+OH)=6.1	2004BBe (89457)	4990
Medium: 0.1 M Me4NO3								
*****								
C14H23N5O5S2		H2L		(7586)				
N-Acetyl-cysteinyl-(R)-Apa-cysteine amide; CH3CONHCH(CH2.SH)CONHC4H5NOCH2CONHCH(CH2SH)CONH2								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	KNO3	25°C	0.10M	C	K1=9.25 B(Zn2L2)=23.34	1998GGb (89465)	4991
*****								
C14H24N2O7		H3L		(3440)				
N-(2-Hydroxycyclohexyl)ethylenediamine-N,N',N'-triethanoic acid;								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Zn++	gl	oth/un	25°C	0.10M	U	K1=15.02	1960SAc (89488)	4992
*****								
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
Zn++	vlt	KNO3	20°C	0.10M	U	K1=16.04	1969NDc (89499)	4993
*****								
C14H24N2O8		H4L		(7165)				
1,2-Diaminohexane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)NCH2CH(C4H9)N(CH2COOH)2								
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo



Zn++ vlt KNO3 20°C 0.10M U K1=18.18 1974NLa (89524)4994  
 \*\*\*\*\*

C14H24N2O8 H4L HMDTA CAS 1633-00-7 (920)  
 1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; ((HOOCH2)2N)2CH2CH2CH2CH2

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

Zn++ gl KNO3 20°C 0.10M U H K1=12.68 1964ANa (89553)4995  
 K(Zn+HL)=8.15  
 K(ZnL+Zn)=3.7

By calorimetry:DH(K1)=-16.7 kJ mol<sup>-1</sup>, DS=186 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C14H24N2O8 H4L CAS 1633-00-7 (5076)  
 4-Methyl-1,2-diaminopentane-N,N,N',N'-tetraethanoic acid;  
 (HOOCH2)2NCH2CH(N(CH2COOH)2)CH2CH(CH3)2

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

Zn++ vlt KNO3 20°C 0.10M U K1=18.03 1968NLb (89622)4996  
 \*\*\*\*\*

C14H24N2O8 H4L EDTP (2936)  
 Diaminoethane-N,N,N',N'-tetrapropoic acid; (HOOCH2CH2)2N)2CH2CH2.N(CH2CH2.COOH)2

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

Zn++ gl NaClO4 25°C 0.10M C I K1=9.31 1989LKa (89669)4997  
 B(ZnHL)=13.71

-----  
 Zn++ gl KCl 30°C 0.10M U K1=7.8 1953CCb (89670)4998  
 \*\*\*\*\*

C14H24N2O9 H4L CAS 87720-52-3 (1593)  
 2,2'-Oxybis(propyliminodiethanoic acid)

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

Zn++ gl KCl 20°C 0.10M U K1=13.53 1961ISa (89701)4999  
 K(Zn+HL)=9.19

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## EXPLANATORY NOTES

DATA Flags are :-

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

EVALUATION Flags are :-

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

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