

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 583 experiments for
(no ligands specified)

Metal : Cu+

(no references specified)

(no experimental details specified)

e- HL Electron (442)
Electron;-----
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
-----Cu+ EMF non-aq 25°C 100% C I 1980APa (447) 1
E0(Cu(s)/Cu+)= -686mV

Medium: DMSO, 1 M NH4ClO4. E0 referred to E0(aq)=0 for the Ag(s)/Ag+ elect.

Cu+ vlt non-aq 25°C 100% U 1972FDc (448) 2
K(Cu+ + e=Cu(s))=5.51(0.326V)

Medium: DMSO containing 0.1 M Et4NClO4 or LiClO4; K in M units

Cu+ EMF NaNO3 25°C 2.00M U 1967PCa (449) 3
K=3.3, 195mV

K: CuBr2+e=Cu(s)+2Br

Cu+ EMF none 25°C 0.0 U 1953SUa (450) 4
K(CuN3(s)+e)=-0.52(-30.6 mV)-----
Cu+ oth none 25°C 0.0 U 1952LAb (451) 5
K(Cu+e=Cu(s))=8.80?(521 mV?)

From thermodynamic data. K(0.5Cu2O(s)+0.5H2O+e=Cu(s)+OH)=-6.04(-358 mV)

K(CuCl(s)+e=Cu(s)+Cl)=2.31(137 mV)

Cu+ EMF none 25°C 0.0 U T 1918NCa (452) 6
K=2.03(120.0 mV)

K:CuCl(s)+e=Cu(s)+Cl. At 15 C: K=2.21(126.3 mV), 35 C: 1.85(113.2 mV)

AsOS2--- H3L CAS 128115-83-3 (9037)

Dithioarsenite; Arsenodithioite;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
-----Cu+ sol none 25°C 0.0 C 2000CHb (1043) 7
K(Cu+H2AsOS2)=19.82

Dissolution of CuS-Cu1.8S-Cu3AsS4 phase in HS- solutions, pH 3.5-10.

Ks(0.5As2S3(s)+0.5H2S(aq)+H2O=H+H2AsOS2)=-8.23.

BF4- HL (2497)

Tetrafluoroborate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	con	non-aq	25°C	100%	U		K1=1.0	1969YKa (1193)	8
Medium: MeCN									

Br-		HL		Bromide			CAS 10035-10-6	(19)	
Bromide;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sol	NaClO4	25°C	5.00M	U			1990SGa (1884)	9
							B(Cu2Br5)=15.68		
							B(Cu3Br7)=24.24		
Cu+	sp	NaCl	25°C	0.50M	U	TI		1990SMc (1885)	10
							K3=1.22		
Data at I to 6.0 M and 5 - 45 C									
Cu+	ISE	non-aq	25°C	100%	U		B2=17.9	1988LEc (1886)	11
Medium: propylene carbonate, 0.1 M Et4NClO4. Kso=-15.8.									
Cu+	sol	none	25°C	0.0	C	I	K1=3.53 B2= 5.86	1987FLa (1887)	12
							B3=6.43		
							B4=21.3		
Extrapolated from data for 0.1-3.95 M KBr, using Pitzer theory.									
Cu+	ISE	non-aq	25°C	100%	U	IH	K1=6.97 B2=8.81	1987JPa (1888)	13
Medium: tetrahydrothiophene, 0.1M Bu4NBF4									
Cu+	ISE	non-aq	25°C	100%	C	H	K1=2.78 B2=3.88	1986AIb (1889)	14
Medium: DMSO, 0.1 M NH4ClO4. DH(K1)=10.2; DH(B2)= 30.2 kJ mol ⁻¹									
Cu+	ISE	non-aq	25°C	100%	C	H	K1=3.39 B2=7.21	1983ANa (1890)	15
Medium: Acetonitrile; DH(K1)=10.5, DH(K2)=16.7 kJ mol ⁻¹									
Cu+	ISE	non-aq	25°C	100%	C	H	K1=4.19 B2=7.94	1980ABd (1891)	16
Medium: DMSO, 1 M NH4ClO4; DH(K1)=-9.3, DH(K2)=2.1 kJ mol ⁻¹									
Cu+	sp	NaClO4	25°C	5.00M	U			1980SFa (1892)	17
							B3=1.11		
Cu+	ISE	NaClO4	25°C	5.00M	C		B2=6.28	1977ATa (1893)	18
							B3=7.45		
							Kso=-8.89		
Cu+	vlt	non-aq	25°C	100%	U		K1=5.0 B2=9.6	1972FDc (1894)	19
Medium: DMSO, 0.1 M Et4NClO4									
Cu+	ISE	non-aq	25°C	100%	U		K1=3.8 B2=7.7	1972HRa (1895)	20

Medium: MeCN, 0.1 M Et4NClO4. K(Et4N+L)=1.0. Cu-ISE

Cu+ ISE non-aq 25°C 100% U K1=3.5 B2=7.3 1971SKa (1896) 21
Medium: MeCN, 0.1 M Et4NClO4. K(Et4N+L)=1.0. CuHg electrode

Cu+ ISE oth/un 25°C var U B3=6.14 1970BPe (1897) 22

Cu+ sol oth/un 20°C var U T Ks(CuL(s)+L=CuL2)=-0.05 1970TMb (1898) 23

Medium: KBr. Ks=-0.50(50 C)

Cu+ sol NaNO3 25°C 2.0M U Ks2=-2.42 K3=1.01 1967PCa (1899) 24

Cu+ sol none 25°C 0.0 U B2=5.92 K(CuBr(s)=Cu+Br)=-8.28 1938LAa (1900) 25

Additional method: Cu electrode. I=0 corr.

Cu+ sol oth/un 19°C var U I B2=5.04 K(CuBr(s)=Cu+Br)=-7.38 K(CuBr(s)+Br=CuBr2)=-2.34 1902BSa (1901) 26

Also with Cu electrode. Medium: KBr

CN- HL Cyanide CAS 74-90-8 (230)
Cyanide;

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

Cu+ cal NaCl 25°C 1.0M C H DH(B4)=-237.9 kJ mol-1, DS(B4)=-190.3 J mol-1 K-1. 1996SMc (2638) 27

Cu+ gl NaCl 25°C 1.00M U K1=16.33 B2=23.97 B3=29.40 B4=31.78 1993HMc (2639) 28

Cu+ EMF oth/un 25°C var U B2=16.26 1974KHa (2640) 29

Cu+ EMF oth/un 25°C ? U B2=23.84 K3=4.54 K4=1.84 1973BZb (2641) 30

Cu+ EMF oth/un 25°C 0.03M U B2=21.7 B3=26.8 B4=27.9 1972HFa (2642) 31

Medium: 0.025 M KCN

Cu+ sp non-aq 190°C 100% U B2=7.25 1972HNa (2643) 32
Medium: liquid KSCN

Cu+	sp	oth/un	25°C	dil	U			1971PKa	(2644)	33
						K3=5.20				
Cu+	EMF	non-aq	370°C	100%	U	K1=2.4	B2=3.5	1970IJa	(2645)	34
Medium:	fused	(Li,K)Cl								
Cu+	sp	NaCl04	25°C	2.0M	U			1969KHb	(2646)	35
						K4=2.62				
Cu+	vlt	non-aq	195°C	100%	U	B2=5.70		1967ETa	(2647)	36
Medium:	liquid	KSCN								
Cu+	gl	oth/un	25°C	0.0	U	H		1967IJa	(2648)	37
						K3=5.30				
						K4=1.5				
Medium:	0	corr.	By calorimetry:	DH(K3)=-46.4	kJ mol ⁻¹ ,	DS=-56	J K ⁻¹ mol ⁻¹ ,			
				DH(K4)=-46.8,	DS=-130.	DH(B2)=-121.6,	DS=-50.	DH(Cu+Cl=CuCl(s))=-19.1		
Cu+	sp	oth/un	?	?	U			1966ESa	(2649)	38
						K4=2.53				
Cu+	cal	oth/un	25°C	0.60M	U			1965BRd	(2650)	39
						K3=5.0				
						K4=2.64				
Cu+	sp	oth/un	25°C	0.01M	U			1959BWa	(2651)	40
						K3=5.34				
						K4=1.74				
Medium:	KOH									
Cu+	sp	oth/un	25°C	.001M	U	I		1958SWa	(2652)	41
						K3=4.10				
At 0	corr,	K3=4.59,	K4=1.72.							
Cu+	sp	oth/un	20°C	var	U	T	B2=21.7	1957R0b	(2653)	42
						K3=4.6				
						K4=2.3				
Medium:	KCN.	B2=17.7,	K3=3.9,	K4=1.23	at 80 C.	Also used:	Cu electrode			
Cu+	oth	oth/un	25°C	0.10M	U	TIH		1956PJb	(2654)	43
						K3=4.82				
						K4=2.24				
DH(K3)=-84	kJ mol ⁻¹ ,	DH(K4)=-50.	29 C:	K3=4.61,	K4=2.12.	At I=0	corr.: 29 C			
K3=4.38,	K4=1.59.	At 25 C:	B2=24.0,	K3=4.59,	K4=1.70,	B4=30.3.	Method ir			
Cu+	ISE	none	25°C	0.0	U			1953SUb	(2655)	44
						B4=27.56				
Method:	Cu amalgam	electrode								

Cu+ oth none 25°C 0.0 U B2=16 1952LAb (2656) 45
 Method: combination of thermodynamic data

Cu+ ISE oth/un 18°C var U B3=20.78(?) 1951STa (2657) 46

Cu+ sol none 25°C 0.0 U B2=23.8 1950VKa (2658) 47
 $K(\text{CuL(s)}=\text{Cu}+\text{L})=-19.49$
 $K(\text{CuL(s)}+\text{HL}=\text{CuL}_2+\text{H})=-4.9$

Additional method: Cu electrode

Cu+ EMF oth/un 18°C var U B4=28 1941BJa (2659) 48
 $K_4=\text{ca.}2$

Method: Cu amalgam electrode.

Cu+ EMF oth/un 18°C var U B4=27.3 1904KUa (2660) 49

Method: Cu amalgam electrode

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

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

Cu+ ISE NaCl04 25°C 3.0M C I M 1997CIb (2784) 50
 $K(\text{Cu}+\text{CO(g)})=1.30$
 $K(\text{Cu}+2\text{CO(g)})=-0.41$
 $K(\text{Cu}+\text{CO(g)}+\text{Cl})=3.16$
 $K(\text{Cu}+\text{CO(g)}+2\text{Cl})=3.64$

$K(\text{CO(g)}=\text{CO(aq)})=-5.39$. At $I \rightarrow 0$: $K(\text{Cu}+\text{CO(g)})=1.3$, $K(\text{Cu}+\text{CO(aq)})=6.3$,
 $K(\text{Cu}+2\text{CO(g)})=-0.5$, $K(\text{Cu}+2\text{CO(aq)})=9.6$, $K(\text{Cu}+\text{CO(aq)}+\text{Cl})=8.4$

Cu+ sp mixed ? 1.6% U 1992MKa (2785) 51
 $K(\text{Cu(phen)}+\text{L})=1.4$

Medium 1.56% v/v MeCN/acetone.

Cu+ con non-aq 20°C 100% U 1986NLa (2786) 52
 $K(\text{CuA}+\text{L})=1.44$

Medium: CH₃CN; A=2,6-di(4-aza-5-methylpent-1,4-diene)-pyridine. Data also for related ligands

Cu+ sp non-aq 20°C 100% U M 1977GAb (2787) 53
 $K(\text{CuA}+\text{L})=4.67$

Medium: Acetone. MA=Di fluoro-3,3'-(trimethylenedinitrilo)bis(2-butanone oximato)-borate-copper(I). $K(\text{CuA}+\text{L})=4.83$ by cyclic voltammetry

C₆N₆Fe---- H₄L (2191)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	ISE	oth/un	25°C	0.0	U			1964RPa (3564)	54
							Ks(K2Cu2L)=-26.66		

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	oth/un	100°C	0	C T		B2=4.84 B3=3.91 B4=1.3	2002LBa (4736)	55

Calculated from data for 1.5-9.1 m LiCl solutions. Data for 100-250 C. By extrapolation, at 25 C, B2=5.46, B3=4.75, B4=2.77.

Cu+	sol	NaCl	50°C	0.0	C T		K1=3.99 B2= 5.01 B3=5.51	2001LMa (4737)	56
-----	-----	------	------	-----	-----	--	-----------------------------	----------------	----

Method: solubility of cuprite (Cu2O) in buffered NaCl (0.001-2.0 m) at 50-250 C.

Cu+	ISE	NaCl04	25°C	3.0M	C I		K1=3.00 B2=5.52 B3=5.46 B4=4.8	1998CIa (4738)	57
-----	-----	--------	------	------	-----	--	--------------------------------------	----------------	----

At I=0, SIT extrapolation: K1=3.16, B2=5.37, B3=4.7, B4=2.8

Cu+	sol	NaCl	25°C	0.0	C T		K1=3.30 B2= 5.57 B3=4.86 Ks(CuCl(s)=CuCl)=-2.94 Ks(CuCl(s)+Cl=CuCl2)=-1.15 Ks(CuCl(s)+2Cl=CuCl3)=-2.16	1998XGa (4739)	58
-----	-----	------	------	-----	-----	--	--	----------------	----

Method: solubility of CuCl in HCl/NaCl solutions (0.01-1.0 m), pH 0-3.5. Values corrected to I=0. Ks values at 40 C. Data for 40-150 C.

Cu+	vlt	NaCl	25°C	1.0M	C		B2=4.9	1993WSb (4740)	59
-----	-----	------	------	------	---	--	--------	----------------	----

Method: pulse voltammetry at microelectrodes.

Cu+	sp	NaCl	25°C	0.50M	U TI		K3=-0.39	1990SMc (4741)	60
-----	----	------	------	-------	------	--	----------	----------------	----

Data at I to 6.0 M and 5 - 45 C

Cu+	ISE	non-aq	25°C	100%	U		B2=19.9	1988LEc (4742)	61
-----	-----	--------	------	------	---	--	---------	----------------	----

Medium: propylene carbonate, 0.1 M Et4NClO4. Kso=-16.0.

Cu+	sp	NaCl04	25°C	1.0M	C I		K3=-0.183	1988SBd (4743)	62
-----	----	--------	------	------	-----	--	-----------	----------------	----

In 5.0 M NaClO4, K3=-0.188

Cu+	ISE	non-aq	25°C	100%	U IH		K1=7.006 B2=10.036	1987JPa (4744)	63
-----	-----	--------	------	------	------	--	--------------------	----------------	----

Medium: tetrahydrothiophene, 0.1M Bu4NBF4

 Cu+ ISE non-aq 25°C 100% C H K1=3.09 B2=5.00 1986AIb (4745) 64
 Medium: DMSO, 0.1 M NH4ClO4. DH(K1)=13.0; DH(B2)=30.4 kJ mol-1

Cu+ oth NaClO4 25°C 5.0M C B2=6.08 1984FRa (4746) 65
 B4=5.89
 B(Cu2Cl4)=11.9
 B(Cu3Cl6)=ca.19.7
 K(CuCl(s)+Cl)=-1.37

Method: recalculation from solubility and potentiometric data.
 K(CuCl(s)+2Cl)=-1.21, K(3CuCl(s)+6Cl)=-1.92.

Cu+ ISE non-aq 25°C 100% C H K1=4.02 B2=9.55 1983ANa (4747) 66
 Medium: Acetonitrile; DH(K1)=16.8, DH(K2)=4.4 kJ mol-1

Cu+ vlt oth/un 20°C 0.70M C B2=4.64 1983GDb (4748) 67
 Method: polarography. Medium: 0.70 M (NaClO4+NaCl).

Cu+ oth NaCl 25°C var C TIH 1981FRa (4749) 68
 Ks(CuCl(s)+Cl=CuCl2)=-1.22
 Ks(CuCl+2Cl=CuCl3)=-1.89
 Ks(2CuCl+2Cl=Cu2Cl4)=-3.09
 Ks(3CuCl+3Cl=Cu3Cl6)=-4.47

Method: analysis of literature data. Also data for KCl and NH4Cl media.
 DH(CuCl2)=27.8 kJ mol-1, DS(CuCl3)=13.9, DS(Cu2Cl4)=25.5, DS(Cu3Cl6)=5.94

Cu+ sol NaCl 250°C 0.00 U 1981VRa (4750) 69
 K(Cu2O+H2O+2Cl=2CuCl(OH))=-2.3

Cu+ ISE non-aq 25°C 100% C H K1=4.37 B2=8.87 1980ABd (4751) 70
 Medium: DMSO, 1 M NH4ClO4; DH(K1)=-6.4, DH(K2)=-7.8 kJ mol-1

Cu+ sol KCl 25°C 1.0M U B2=5.48 1980FRa (4752) 71
 B3=4.81
 B(Cu2L4)=10.3

Medium: 0.5 - 5.0 M HCl/KCl

Cu+ sp NaClO4 RT 3.0M C K3=0.041 1978DSa (4753) 72

Medium 3M: (NaClO4 +1.0 M HClO4 + 0.25-1.7 M NaCl)

Cu+ ISE NaCl 25°C 1.00M U B2=5.79 1978PHa (4754) 73
 B3=5.51

Cu+ cal NaClO4 25°C 5.0M C H K3=-0.12 1977ATb (4755) 74

Medium: 0.1 M HClO4/4.9 M NaClO4. DH(K3)=-19.9 kJ mol-1. DS(K3)=-69 J K-1 mol-1.

Cu+ sp NaClO4 25°C 5.00M C M 1976SFa (4756) 75

$K(\text{CuCl}_2 + \text{OH} = \text{CuClOH} + \text{Cl}) = 4.04$
 $K(\text{CuCl}_2 + \text{OH}) = 3.61$
 $K(\text{CuCl}_2 + 2\text{OH} = \text{CuCl}(\text{OH})_2 + \text{Cl}) = 6.58$

 Cu+ cal oth/un 25°C 0 C T 1975VKa (4757) 76

$\text{DH}(\text{Cu} + 2\text{Cl}) = -11.59 \text{ kJ/mol}$

$\text{DH}(\text{Cu} + 3\text{Cl}) = -26.57 \text{ kJ/mol}$

Extrapolation of data in HCl/HClO₄ medium to zero ionic strength

Also data for 15 and 35 C

 Cu+ sol NaClO₄ 25°C 1.0M U T 1973HIa (4758) 77

$K_s(\text{CuCl}(\text{s}) + \text{L} = \text{CuL}_2) = -1.23$

$K_s(\text{CuCl}(\text{s}) + 2\text{Cl} = \text{CuCl}_3) = -1.57$

$K_s(\text{CuCl}(\text{s}) + 3\text{Cl} = \text{CuCl}_4) = -1.89$

Medium: HClO₄. At 15 C: values: -1.38, -1.68, -2.00. Also other backgrounds

 Cu+ ISE non-aq 25°C 100% U K1=6.0 B2=12.20 1973SIIa (4759) 78

Medium: DMSO, 0.1 M Et₄NClO₄

 Cu+ vlt non-aq 25°C 100% U K1=6.0 B2=11.95 1972FDc (4760) 79

Medium: DMSO, 0.1 M Et₄NClO₄

 Cu+ ISE non-aq 25°C 100% U K1=4.9 B2=10.7 1972HRA (4761) 80

$K(\text{Et}_4\text{N} + \text{L}) = 1.54$

Medium: CH₃CN, 0.1 M Et₄NClO₄. Error in abstract?

 Cu+ ISE non-aq 25°C 100% U K1=4.3 B2=10.2 1971SKa (4762) 81

$K((\text{C}_2\text{H}_5)_4\text{N} + \text{L}) = 1.54$

Medium: MeCN, 0.1 M Et₄NClO₄

 Cu+ EMF non-aq 99°C 100% U 1971TEb (4763) 82

$K(\text{CuL}(\text{s}) + \text{SbL}_3 = \text{SbL} + \text{CuL}) = -8.5$

Medium: SbCl₃

 Cu+ sol NaClO₄ 25°C 5.0M U K1=2.7 B2=6.00 1970ARA (4764) 83

$K_3 = -0.01$

$K_4 < -1.3$

$K_{\text{so}} = -7.38$

$K(2\text{CuL}_2 = \text{Cu}_2\text{L}_4) = 1.1$

Cu amalgam electrode also used

 Cu+ ISE oth/un 25°C var U 1970BPe (4765) 84

$B_3 = 4.93$

 Cu+ kin NaNO₃ 20°C 0.20M U K1=3.63 B2=5.19 1970GZa (4766) 85

$B_3 = 5.19$

 Cu+ EMF non-aq 99°C 100% U 1969BBa (4767) 86

$K_s(\text{CuL}(\text{s}) + \text{L} = \text{CuL}_2) = -0.74$

Medium: SbCl₃

Cu+	oth none	50°C	0.0	U T	B2=4.94 B3=5.18	1969HEa (4768)	87
Estimated from literature data. 100 C: B2=5.06, B3=5.39; 150 C: B2=5.35, B3=5.77							
Cu+	oth oth/un	25°C	var	U	B2=5.38 B3=5.34	1969LIa (4769)	88
Cu+	EMF R4N.X	25°C	14.0M	U	B2=6.30 B3=6.08 B4=5.70	1969SBg (4770)	89
Medium: NH4NO3							
Cu+	EMF R4N.X	50°C	10.0M	U T H	B2=5.85 B3=5.45 B4=4.86	1969STc (4771)	90
Medium: NH4NO3. DH(B2)=-17.2 kJ mol ⁻¹ , DH(B3)=-36.4, DH(B4)=-48.5; B2=5.68, B3 At 80 C: B2=5.60, B3=5.00, B4=4.30 (m units). Suggests 13 polynuclear cpx.							
Cu+	ISE R4N.X	25°C	6.50M	U	B2=6.04 B3=5.98 B4=5.60 B(Cu2Cl3)=12.3 B(Cu2Cl4)=12.2	1968STd (4772)	91
Medium:NH4NO3. Many other equilibria considered							
Cu+	vlt non-aq	25°C	100%	U I	B2=9.3	1967MIc (4773)	92
Medium: MeOH, 1 M LiClO4. In EtOH, B2=12.3; in i-PrOH, B2=13.4, in i-BuOH: 14.1; in acetone: 20.9. Data also correcting for LiCl and LiClO4 pairs							
Cu+	vlt non-aq	25°C	100%	U	K1=4.9	B2=10.80	1965MIa (4774) 93
Medium:MeCN, 0.1 M Et4NClO4							
Cu+	ISE none	20°C	0.0	U	B2=5.5? K3=0.2 B3=5.7?	1961HUa (4775)	94
Cu+	sol NaClO4	25°C	4.0M	U	K(CuL(s)+L)=-1.35 K(CuL(s)+2L)=-1.39	1953VSA (4776)	95
Cu+	ISE oth/un	18°C	var	U	B3=5.30(?)	1952STa (4777)	96
Cu+	sol NaClO4	25°C	1.0M	U	K(CuL(s)+L)=-1.12 K(CuL(s)+2L)=-1.47	1950MDa (4778)	97
Cu+	sol none	25°C	0.0	U	B2=4.94	1948CHa (4779)	98

$$K_{so}(\text{CuL}) = -5.92 \quad ?$$

Halides, comparative (for book data under ligand 80)

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu+        sol NaNO3  25°C  5.0M U    M                      1959FSc (7393) 109
                        B(Cu(SCN)2I)/Kso(CuSCN))=-2.62
                        B(Cu(SCN)3I)/Kso(CuSCN))=-2.70
                        B(Cu(SCN)2I2)/Kso(CuSCN))=-2.45
                        B(Cu(SCN)3I2)/Kso(CuSCN))=-2.70
B(CuIBr)/Kso(CuI))=-2.06, B(CuIBr2)/Kso(CuI))=-2.92
*****
I-          HL      Iodide          CAS 10034-85-2 (20)
Iodide;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu+        ISE non-aq 25°C 100% U          B2=17.2      1988LEc (7983) 110
Medium: propylene carbonate, 0.1 M Et4NClO4. Kso=-17.0.
-----
Cu+        kin NaClO4 25°C 1.00M C          K1=5.7       1988SMa (7984) 111
-----
Cu+        ISE non-aq 25°C 100% U  IH      K1=6.98      B2=9.38      1987JPa (7985) 112
Medium: tetrahydrothiophene, 0.1M Bu4NBF4
-----
Cu+        ISE non-aq 25°C 100% C   H       K1=2.69      B2=3.59      1986AIb (7986) 113
Medium: DMSO, 0.1 M NH4ClO4. DH(K1)=8.5 kJmol-1
-----
Cu+        ISE non-aq 25°C 100% C   H       K1=3.13      B2=5.97      1983ANa (7987) 114
Medium: Acetonitrile; DH(K1)=8.5, DH(K2)=12.8 kJ mol-1
-----
Cu+        ISE non-aq 25°C 100% C   H       K1=4.71      B2=7.67      1980ABd (7988) 115
                        B(Cu2I)=6.5
Medium: DMSO, 1.0 M NH4ClO4. DH(K1)=-13.6 kJ mol-1, DS=45 J K-1 mol-1;
DH(B2)=-10.5, DS(K2)=67
-----
Cu+        sp  NaClO4 25°C 5.00M U          B3=0.20      1980SFa (7989) 116
-----
Cu+        ISE NaClO4 25°C 5.00M C          B2=8.68      1977ATa (7990) 117
                        B3=10.43
                        B4=9.40
                        B(Cu2I6)=22.0
                        Kso=-12.72
-----
Cu+        sol KNO3   25°C 0.33M U    M                      1977GTa (7991) 118
                        B(CuINbO3)=12.19
                        B(CuINbO3)=11.92 by potent'ry
-----
Cu+        vlt non-aq 25°C 100% U          K1=5.5       B2=8.2       1972FDc (7992) 119
Medium: DMSO, 0.1 M Et4NClO4
-----

```

Cu+ ISE non-aq 25°C 100% U I K1=3.2 B2=6.4 1972HRa (7993) 120
Medium: MeCN, 0.1 M Et4NClO4. K(Et4N+I)=0.7. In 0.1 NaClO4: K1=3.1, B2=6.2

Cu+ EMF non-aq 25°C 100% U I K1=3.1 B2=5.8 1971SKa (7994) 121
Medium: MeCN, 0.1 M Et4NClO4. K(Et4N+I)=0.7. In 0.1 NaClO4: K1=3.1, B2=5.7

Cu+ ISE oth/un 25°C var U B3=8.81 1970BPe (7995) 122

Cu+ sol non-aq 20°C 100% U Ks2(CuI(s)+I=CuI2)=0.22 1970TZA (7996) 123

Medium: acetone

Cu+ sol NaNO3 20°C 3.90M U B2=8.68 1968GYb (7997) 124
B2=(9.68?)
B4=8.44(9.44?)
Ks2=-2.28
Ks4=-2.52

Cu+ sol oth/un 320°C var U T Ks(CuI2(s)+I)=-0.13 1964GGa (7998) 125
Medium:KI. Ks=-1.17(200 C), -0.68(260 C), -0.32(300 C)

Cu+ sol NaNO3 20°C 0.60M U I B2=9.03 1962GSb (7999) 126
K(CuI(s)+I=CuI2)=-3.0
K(CuI(s)+2I=CuI3)=-2.28
In 4 M: B4=9.85, K(CuL(s)+3L=CuL4)=-2.18. In EtOH: K(CuL(s)+L=CuL2)=0.23.
By Cu electrode, I=KI var: B3=9.74, Kso(CuL)=-12.03. In 30% Me2CO: B4=9.9

Cu+ sol NaNO3 25°C 5.0M U K(CuI(s)+2I=CuI3)=-2.58 1959FSc (8000) 127
K(CuI(s)+3I=CuI4)=-2.23
B3=9.38
K4=0.35

Cu+ kin oth/un 25°C var U B6/B3=3.23 1958HSa (8001) 128

Cu+ sol oth/un 19°C var U B2=8.19 1902BSa (8002) 129
Kso(CuL)=-11.30
K(CuL(s)+L=CuL2)=-3.11

Cu+ ISE none 25°C 0.0 U B2=8.85 1902BSa (8003) 130
Kso(CuL)=-11.96

Method: Cu electrode and solubility, I=0 corr.

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

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

Cu+	gl	NaClO4	25°C	1.00M	C			B2=11.381 B(Cu(L)Cl)=8.92 B(Cu(L)2Cl)=11.33 B(Cu(L)Cl2)=8.82	1995SHb	(9138)	131
Cu+	sp	R4N.X	25°C	0.43M	C	I		K3=-1.42	1986BJa	(9139)	132
Cu+	gl	NaNO3	20°C	1.00M	C			B2=10.46	1978CPa	(9140)	133
Cu+	EMF	R4N.X	20°C	0.50M	U			B2=10.18	1973PEa	(9141)	134
Medium: NH4NO3											
Cu+	vlt	oth/un	30°C	var	U			B2=10.13	1971SSe	(9142)	135
Cu+	vlt	KNO3	30°C	0.50M	U			B2=10.4 B(Cu(OH)L)=10.9	1967FHa	(9143)	136
Cu+	vlt	R4N.X	rt	2.0M	U			B2=11.2	1940SFa	(9144)	137
Medium: NH4NO3.											
Cu+	EMF	R4N.X	18°C	2.0M	U	H		K1=5.93 B2=10.86	1934BJb	(9145)	138
Method: Cu/Hg electrode. Medium: NH4NO3. DH(B2)=-66.9 kJ mol-1											
Cu+	ISE	oth/un	21°C	var	U			B2=8.74	1901B0a	(9146)	139

N3-		HL		Azide				CAS 7782-79-8		(441)	
Azide;											
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values		Reference	ExptNo
Cu+	vlt	NaClO4	25°C	4.0M	U			B3=7.76		1972Snd	(10201) 140
Cu+	EMF	oth/un	25°C	0.0	U			Kso(CuL(s))=-8.31 K(CuL(s)+e=Cu(s)+L)=-0.52		1953SUa	(10202) 141
Cu+	sol	oth/un	rt	dil	U			Kso(CuL(s))=-8.3		1943SCa	(10203) 142

OH-		HL		Hydroxide				(57)			
Hydroxide;											
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values		Reference	ExptNo
Cu+	oth	none	60°C	0.0	U	T		*Kso=-1.01		1969HEa	(11264) 143
Method:Estimated data. *Kso=-0.48(100 C), 0.05(150 C), 0.62(200 C),											

Phosphate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	EMF	NaClO4	25°C	3.0M	C	I		1993CIb (13159)	153
K(Cu+H2PO4)=0.52 K(Cu+2H2PO4)=1.48 K(Cu+2H2PO4=CuH3(PO4)2+H)=-2.9 Method: Cu++ + Cu(s)=2Cu+. At I=0 (SIT): KCu+H2PO4=0.87, K(Cu+2H2PO4)=1.8 K(Cu+2H2PO4=CuH3(PO4)2+H)=-3.0 *****									
P207----		H4L		Pyrophosphate			CAS 2466-09-3	(198)	
Diphosphate; from (HO)2PO.0.PO(OH)2									
Cu+	vlt	oth/un	25°C	0.10M	U		B2=26.72	1949RRa (13580)	154
Medium:Na4L *****									
P208----		H4L					CAS 13825-81-5	(2402)	
Peroxodiphosphate, also cyclic metaposphates, thiophosphates etc.;									
Cu+	con	none	25°C	0.0	U		K1=1.15	1969YKa (13690)	155
Ligand:hexafluorophosphate, PF6 - Medium:MeCN *****									
S--		H2L		Sulfide			CAS 7783-06-4	(705)	
Sulfide;									
Cu+	sol	none	25°C	0.0	C	T H		2003MSa (14334)	156
K(Cu+2HS=Cu(HS)2)=17.3 Calc. from the solubility of Cu2S (chalcocite) in HS- solutions (0.02-0.15 m). Data for 25-350 C. At 25 C, DH(K)=-102 kJ mol-1, DS=-11.1 J K-1 m-1.									
Cu+	sol	none	25°C	0.0	C			2000CHb (14335)	157
Dissolution of Cu-S phases in HS- solutions, pH 3.5-10. Ks(0.5As2S3+3H2O=H3AsO3+1.5H2(aq))=-12.28; Ks(1.5As2S3(s)+1.5H2S(aq)=H+H2As3S6)=-5.38									
Cu+	vlt	oth/un	25°C	0.72M	C			1999AVb (14336)	158
K(Cu+HL)=16.67 K(Cu+2HL)=23.17 Method: determination of Cu by cathodic stripping voltammetry using oxine as competitive ligand. Medium: seawater, pH 8.0, S=35.									
Cu+	sol	oth/un	22°C	0.0	M			1999MSb (14337)	159
K(Cu+HS)=ca. 13 K(Cu+2HS)=17.18 K(2Cu+3HS=Cu2S(HS)2+H)=29.87									

Method: solubility of Cu₂S (chalcocite) in H₂S/HS⁻ solutions, pH 4-11.
 $K_s(0.5\text{Cu}_2\text{S}+1.5\text{HS}+0.5\text{H}=\text{Cu}(\text{HS})_2)=-0.13$, $K_s(0.5\text{Cu}_2\text{S}+0.5\text{HS}+0.5\text{H}=\text{CuHS})=\text{ca. } -4$.

Constants at $I=0$. Results from solubility measurements in penicillamine soln

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

From recalculation of literature data.

Derived from thermodynamic data and $K(\text{H}+\text{S}=\text{HS})=17.3$.

Method: recalc. from literature data using $K(H+S=HS)=18.57$ and $K(H+HS)=6.99$

From thermodynamic data

Cu+ ISE none 10°C 0.0 U T 1936RAa (14348) 170
Kso(Cu2L)=-51.02

By Cu electrode. I=0 corr. From thermodynamic data Kso=-49.44(25 C)

Cu+ ISE oth/un 18°C var U T 1921TRa (14349) 171

Kso(Cu2L)=-46.7

K(0.5Cu2L(s))=-11.85

By Cu electrode. K=0.5Cu2L+H=Cu+0.5H2L(g)

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

Thiocyanate;

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

Cu+ sp non-aq 25°C 100% C K1=0.32 1998AEa (14909) 172

Medium: N,N-Dimethylthioformamide. Methods: IR and FT Raman spectroscopy.

Ligand is N-bonded (isothiocyanate).

Cu+ ISE non-aq 25°C 100% U IH K1=6.005 B2=8.77 1987JPa (14910) 173

Medium: tetrahydrothiophene, 0.1M Bu4NBF4

Cu+ ISE non-aq 25°C 100% C H T K1=2.62 B2=3.83 1986AIb (14911) 174

Medium: DMSO, 0.1 M NH4ClO4. DH(K1)=4.7; DH(B2)=11.6 kJ mol-1

Cu+ ISE NaClO4 25°C 5.00M C 1977ATa (14912) 175

B3=11.60

B4=12.02

B(Cu2L6)=24.34

Kso=-14.77

Cu+ sp non-aq 130°C 100% U 1974HNa (14913) 176

B4=6.80

Medium: dimethylsulfone. Using current-voltage studies, B4=5.02

Cu+ vlt non-aq 25°C 100% U T K1=4.3 B2=9.3 1972FDc (14914) 177

Medium: DMSO, 0.1 M Et4NClO4

Cu+ sol R4N.X 60°C 2.0M U 1971GPb (14915) 178

Kso(CuL(s)+2L=CuL3)=-2.41

Cu+ ISE non-aq 25°C 100% U K1=3.6 B2=7.2 1971SKa (14916) 179

Medium: acetonitrile, 0.1 M NaClO4

Cu+ nmr oth/un 20°C var U 1970YHa (14917) 180

K=ca.-3

Method: nmr. K: Cu(CN)4+L=Cu(CN)3L+CN

Cu+ sol NaNO3 20°C 2.0M U I 1966SDd (14918) 181

Kso=-11.32

B(CuLBr)=7.76

B(CuL(NO2))=8.37

I=4: Kso=-11.15, B(CuLCl)=7.31. I=4.4 NH4NO3: K(CuL(s)+3L=CuL4)=-2.71

Cu+	sol	NaNO3	25°C	5.0M	U				1959FSc (14919)	182
									K(CuL(s)+L=CuL2)=-2.40	
									K(CuL(s)+2L=CuL3)=-2.50	
									K(CuL(s)+3L=CuL4)=-2.92	
									B2=11.00	
									K(CuL(s)=Cu+L)=-13.40 assumed. K3=-0.10, K4=-0.42	
Cu+	sol	R4N.X	rt	var	U				1958SPd (14920)	183
									B4=10.64	
									Medium: NH4SCN. By Cu electrode B4=10.88	
Cu+	sol	oth/un	rt	var	U				1958SPd (14921)	184
									B4=10.64	
									Medium: NH4L; K(CuL(s)=Cu+L)=-13.40 assumed	
Cu+	EMF	oth/un	20°C	var	U				1958SPd (14922)	185
									B4=10.88	
									Medium: NH4L; K(e + Cu+=Cu(s))=ca.9.0(526 mV) assumed; method: emf with Cu electrode.	
Cu+	sol	oth/un	20°C	var	U T H				1956GOa (14923)	186
									K(CuL(s)=Cu+L)=-12.73	
									K(CuL(s)+3L=CuL4)=-2.65	
									By Cu electrode: B3=9.90, B4=10.09, B5=9.59, B6=9.27. B4=9.53(40 C), 9.04 (60 C). DH(B4)=-49 kJ mol ⁻¹ . In acetone, 20 C: K(CuL(s)+L=CuL2)=0.45	
Cu+	ISE	oth/un	18°C	var	U				1951STa (14924)	187
									B2=12.11(?)	
Cu+	vlt	oth/un	25°C	var	U				1950KMa (14925)	188
									B4=9.15	
Cu+	sol	none	25°C	0.0	U				1950VKa (14926)	189
									K=-8.88	
									K: K(CuL(s)+2HCN=Cu(CN)2+2H+L)	
Cu+	sol	oth/un	25°C	var	U				1950VKa (14927)	190
									K(CuL(s)=Cu+L)=-14.32	
									Additional method: Cu electrode	
Cu+	con	oth/un	18°C	dil	U				1893KRa (14928)	191
									K(CuL(s)=Cu+L)=-10.8?	

S03--			H2L		Sulfite				CAS 7782-99-2 (801)	
Sulfite;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	vlt	oth/un	25°C	0.8?M	U			B2=8.5	1955TSb (15448)	192

K3=0.8

Medium:Na2SO4.

Cu+ ISE oth/un 25°C 1?M U K1=7.85 B2=8.70 1955TSb (15449) 193
K3=0.66

Method: Cu electrode. Medium: Na2SO4

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

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

Cu+ gl oth/un 25°C 2.40M U K1=8.90 B2=9.30 1976GDa (16830) 194
B3=10.34
B4=11.51

Medium: Na2SO4, B values also available for K2SO4 medium

Cu+ sol oth/un 25°C 0.20M U M 1976GDa (16831) 195
K(CuSCN+S203)=-0.51
B(CuSCN+S203)=12.22

Medium: Na2S203, data also available for K2S203 medium

Cu+ gl oth/un 25°C ? U M K1=9.0 B2=10.8 1976GDb (16832) 196
B3=11.4
B4=12.7
B(CuI(S203))=13.04 by solub'ty

Cu+ gl oth/un 25°C 0.19M U M K1=9.0 B2=9.70 1975GBa (16833) 197
B3=10.30
B4=11.04
B(CuI(S203))=12.55 by solub'ty

Cu+ ISE oth/un 25°C var U 1970BPe (16834) 198
B3=13.77

Cu+ ISE oth/un 25°C var U 1970BPe (16835) 199
B(CuL2Cl)=12.89
B(CuL2Br)=13.04
K(CuL2I)=13.60

Cu+ sol oth/un 20°C 3.0M U M 1968GYb (16836) 200
Ks(CuSCN(s)+L)=-0.42
B(CuLSCN)=13.90
Kso(CuSCN)=-14.32
Ks(CuI(s)+L)=0.42

Medium: Na2SO4. B(CuLI)=12.38

Cu+ vlt KNO3 25°C 1.20M U 1958DAa (16837) 201
B3=14.30

Cu+ vlt oth/un 25°C 0.80M U K1=10.35 B2=12.27 1955TSa (16838) 202
K3=1.44

Medium: Na2SO4. By Cu electrode B3=13.64

Cu+ sol oth/un 25°C var U M 1952YPa (16839) 203
B(Cu(SCN)L2)=12.89
B(CuIL2)=12.51

Cu+ ISE oth/un 18°C var U B2=11.69 1951STa (16840) 204

Se-- H2L Selenide (6335)
Selenide;

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

Cu+ oth none 25°C 0.0 U 1964BUE (16938) 205
Kso=-60.8

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

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

Cu+ ISE oth/un 20°C dil U I 1960GSd (16982) 206
K(CuL(s)=Cu+L)=-9.74

By solubility in acetone: K(CuCl(s)+L=CuCL)=-0.62

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

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

Cu+ vlt NaCl04 25°C 2.0M U I 1975NFa (17457) 207
B4=16.47

CH4N2S L Thiourea CAS 62-56-6 (51)
Thiocarbamide, Thiourea; (H2N)2CS

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

Cu+ oth NaCl04 25°C 1.00M U K1=7.51 B2=13.04 1986KGa (17820) 208
B3=15.88
B4=18.66

Numerical re-evaluation of results given in J.Inorg.Nucl.Chem. 42, 87 (1980)
Measurements in 1M HCl04; old value of K1 = 10.2

Cu+ vlt KCl 25°C 0.10M U B2=12.30 1976FLa (17821) 209
B3=14.30
B4=15.53

Cu+ ISE non-aq 25°C 100% U B2=6.3 1972HRa (17822) 210
Medium: MeCN, 0.1 M Et4NClO4

Cu+ vlt NaNO3 25°C 0.10M U B4=15.4 19500La (17823) 211

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

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

Cu+ vlt KNO3 30°C 2.00M U B2=9.21 1971SSe (18013) 212

Cu+ vlt KNO3 30°C 2.00M U B2=9.62 1971SSe (18014) 213

C2H2 L Acetylene CAS 74-85-1 (703)
Ethyne; HCCH

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

Cu+ EMF NaClO4 25°C 3.0M C M K1=5.14 1999CTa (18354) 214
*K1=-9.05
K(Cu+L+Cl)=6.56
K(Cu+L+2Cl)=7.18
*Ks(2Cu+L=Cu2C2(s,am)+2H)=14.7

Based on the solubility constant: L(g)=L(aq), Kp=2.5.10-4 M/kPa
Method: Cu/CuHg electrode

Cu+ sp mixed ? 1.6% U K(Cu(phen)+L)=1.2 1992MKa (18355) 215

Medium 1.56% v/v MeCN/acetone.

C2H3N L Cyanomethane CAS 75-05-8 (1399)
Acetonitrile; CH3.CN

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

Cu+ sp NaClO4 21°C 0.14M C K1=2.63 B2= 4.02 2001KJa (19183) 216
B3=4.30

Medium: 0.11 M NaClO4, 0.033 M HClO4.

Cu+ ISE mixed 25°C 0.10M U K1=-0.08 B2=-0.54 1974RZa (19184) 217
Medium: DMSO, 0.1 M LiClO4

Cu+ kin NaNO3 20°C 0.20M U K1=3.27 1970GZa (19185) 218

Cu+ vlt oth/un 20°C 0.20M U K3=0.05 1970ZUa (19186) 219

Cu+ EMF NaClO4 25°C 0.10M U I B2=3.9 1967MId (19187) 220

Medium: 0.1(?) LiClO₄. In MeOH: K1=2.5, B2=3.9, B3=4.5, B4=4.2; EtOH: 3.7, 5.4, 5.9, 5.9; Pr-2-OH: 3.1, 5.3, 5.9, 6.1; Acetone: 4.4, 6.3, 6.7, 7.2. Also other media

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	sp	mixed	?	1.6%	U			K(Cu(phen)+L)=2.2	1992MKa (19425)	222

Cu+ ISE non-aq 25°C 100% U H 1993LMa (22094) 226
 $K(\text{CuS4}+\text{L}=\text{CuS3L}+\text{S})=0.44$
 $K(\text{CuS4}+2\text{L}=\text{CuS2L2}+2\text{L})=-0.05$
 $K(\text{CuS4}+3\text{L}=\text{CuSL3}+3\text{S})=-0.61$

$$K(\text{CuS}_4+4\text{L}=\text{CuL}_4+4\text{S})=-2.13$$

Medium (S): MeCN. Also MeCN-DMSO mixtures.

C2H6O3S2 H2L CAS 3375-50-6 (1795)

(2-Mercaptoethyl)sulfonic acid; HS.CH2.CH2.SO3H

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

Cu+	gl	mixed	20°C	4%	U	M		1976VKa (22165)	227
-----	----	-------	------	----	---	---	--	-----------------	-----

$$\text{Keff}=8.2$$

Medium: 4% CH3CN, 0.1 M NaClO4. Keff: Cu(CH3CN)4+L=Cu(CH3CN)3L+CH3CN

C2H7N L Ethylamine CAS 75-04-7 (156)

Ethylamine; CH3.CH2.NH2

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

Cu+	vlt	KNO3	30°C	0.50M	U		B2=10.1	1967FHa (22270)	228
-----	-----	------	------	-------	---	--	---------	-----------------	-----

$$\text{B}(\text{CuL}(\text{OH}))=10.8$$

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

Cu+	vlt	KNO3	30°C	2.0M	U		B2=9.41	1971SSe (22400)	229
-----	-----	------	------	------	---	--	---------	-----------------	-----

Alternative method:EMF with Redox electrode

Cu+	vlt	KNO3	30°C	2.0M	U		B2=9.51	1971SSe (22401)	230
-----	-----	------	------	------	---	--	---------	-----------------	-----

C2H7NS HL CAS 60-23-1 (588)

2-Aminoethanethiol; H2N.CH2.CH2.SH

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

Cu+	sp	NaClO4	20°C	1.00M	U		K1=10.80 B2=13.50	1978BKc (22489)	231
-----	----	--------	------	-------	---	--	----------------------	-----------------	-----

Cu+	gl	mixed	20°C	4%	U	M		1976VKa (22490)	232
-----	----	-------	------	----	---	---	--	-----------------	-----

$$\text{Keff}=11.6$$

Medium: 4% CH3CN, 0.1 M NaClO4. Keff: Cu(CH3CN)4+L=Cu(CH3CN)2L+2CH3CN

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

Cu+	vlt	KNO3	30°C	2.00M	U		B2=10.63	1971SSe (23144)	233
-----	-----	------	------	-------	---	--	----------	-----------------	-----

Cu+	EMF	oth/un	25°C	0.30M	U		B2=11.4	1961JWa (23145)	234
-----	-----	--------	------	-------	---	--	---------	-----------------	-----

Method: platinum electrode. Medium: K2SO4

 Cu+ ISE oth/un 25°C ? U B2=10.8 1948BNa (23146) 235

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

Cu+ gl NaCl04 25°C 0.30M C T K1=5.78 B2=11.0 1997SJa (23874) 236
 IUPAC evaluation

 Cu+ vlt KNO3 25°C 0.20M U K1=11.1 1972CMc (23875) 237

Cu+ ISE oth/un 20°C 0.15M U K1=5.78 B2=10.98 1962HPa (23876) 238
 Medium: Na2SO4

 Cu+ EMF oth/un 25°C 0.30M U B2=10.44 1961JWa (23877) 239
 Method: platinum electrode. Medium: K2SO4

 Cu+ vlt KNO3 25°C 0.15M U B2=10.8 1954LWa (23878) 240

 C3H4O2 HL Acrylic acid CAS 79-10-7 (2044)
 Propenoic acid; CH2:CH.CO2H

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

Cu+ sp oth/un 23°C 1.00M U M 1973HLA (23983) 241
 $K(\text{Cu}+(\text{NH}_3)_5\text{CoL})=4.60$

C3H5Cl L Allyl chloride CAS 107-05-1 (3546)
 3-Chloropropene; H2C:CH.CH2.Cl

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

Cu+ ISE oth/un 25°C ? U T HM 1965TFb (24637) 242
 $K(\text{CuCl}_3+\text{L})=0.00$

$K'(\text{CuCl}_3+\text{L}=\text{CuCl}_2\text{L}+\text{Cl})=-0.05$

5-25 C: $K=0.89(5\text{ C}), 0.43(15\text{ C})$; $K'=0.48(5\text{ C}), 0.18(15\text{ C})$.

At 25 C: $\text{DH}(K)=-71.5\text{ kJ mol}^{-1}$, $\text{DS}=-238\text{ J K}^{-1}\text{ mol}^{-1}$; $\text{DH}(K')=-30$, $\text{DS}=-100$

C3H6N2OS L CAS 591-08-2 (1423)
 N-Acetylthiourea; CH3.CO.NH.CS.NH2

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

Cu+ vlt KCl 25°C 0.10M U B2=11.53 1976FLa (24771) 243
 B3=12.75
 B4=13.81

C3H6N2S L CAS 96-45-7 (386)

2-Imidazolidinethione; C3H6N2(:S)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	KCl	25°C	0.10M	U		B2=11.91 B3=13.52 B4=14.86	1976FLa (24835)	244

 C3H6O HL Allyl alcohol CAS 107-18-6 (62)
 Prop-2-en-1-ol; CH2:CH.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO4	25°C	0.10M	U		K1=4.7	1966MAd (24845)	245
Cu+	ISE	oth/un	25°C	?	U T HM		K(CuCl3+L=CuCl2L+Cl)=1.32 K'(CuCl2+L)=1.83	1965TFb (24846)	246

K=1.0(50 C), 0.80(70 C), 0.65(85 C); K'=1.72(50 C), 1.65(70 C), 1.6(85 C).
 At 25 C: DH(K)=-25.1 kJ mol⁻¹, DS=-58.5 J K⁻¹ mol⁻¹, DH(K')=-8.4, DS=8.4

Cu+	sol	KN03	25°C	0.10M	U		K1=4.72	1949KAb (24847)	247

C3H7NO2		HL						CAS 56-41-7 (86)	
2-Aminopropanoic acid; H2N.CH(CH3).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	EMF	oth/un	25°C	0.30M	U		B2=9.6	1961JWa (26157)	248
Method: platinum electrode. Medium: K2SO4									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	EMF	oth/un	25°C	0.30M	U		B2=9.2	1961JWa (26600)	249
Method:platinum electrode. Medium: K2SO4									

 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
Cu+	gl	NaCl	25°C	1.00M	C	M		1997TMa (26766)	250
							B(CuLA)=15.71 B(CuHLA)=25.89 B(Cu2HLA)=37.54 B(CuH4LB)=44.50		

B(Cu2HLB)=38.29, B(Cu2H2LB2)=58.92. HA=penicillamine, H4B=glutathione

Cu+ sp NaClO4 20°C 1.00M U K1=11.38 1978BKc (26767) 251

Cu+ gl mixed 20°C 4% U M Keff=14.0 1976VKa (26768) 252

Medium: 4% CH3CN/H2O, 0.1 M NaClO4. Keff: Cu(CH3CN)4+L=Cu(CH3CN)2L+2CH3CN

Cu+ vlt R4N.X 25°C 1.0M U K1=19.2 1951SKa (26769) 253
Medium; NH4Cl

C3H8N2S L DiMe-Thiourea CAS 61805-96-7 (1078)
1,3-Dimethylthiourea; CH3.NH.CS.NH.CH3

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

Cu+ vlt KCl 25°C 0.10M U B2=12.52 1976FLa (27626) 254
B3=13.91
B4=14.98

C3H8N2S L Ethyl-thiourea CAS 625-53-6 (1079)
N-Ethylthiourea; C2H5.NH.CS.NH2

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

Cu+ vlt oth/un 25°C 0.10M U B2=13.08 1976FLa (27632) 255
B3=14.41
B4=16.23

Medium: HCl

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

Cu+ ISE KNO3 25°C 0.10M U B(Cu2L2)=19.84 19680Fa (27784) 256

C3H9NS L CAS 18542-42-2 (1215)
1-Amino-3-thiabutane; H2N.CH2.CH2.S.CH3

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

Cu+ ISE oth/un 20°C 0.15M U K1=5.65 B2=10.98 1962HPa (27944) 257
Medium: Na2SO4

C3H9NS HL CAS 10229-29-5 (2596)
2-Aminopropanethiol; H2N.CH(CH3).CH2.SH.

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

Cu+ sp NaClO4 20°C 1.00M U K1=10.08 1978BKc (27945) 258

C3H9NS HL CAS 462-47-5 (1566)
3-Aminopropane-1-thiol; H2N.CH2.CH2.CH2.SH

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

Cu+ sp NaClO4 20°C 1.00M U K1=11.92 B2=15.12 1978BKc (27952) 259

C3H9NS HL CAS 10061-40-2 (2593)
N-Methyl-2-aminoethanethiol; CH3.NH.CH2.CH2.SH

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

Cu+ sp NaClO4 20°C 1.00M U K1=10.77 B2=13.92 1978BKc (27957) 260

C4H2N2 L CAS 764-42-1 (8583)
Fumaronitrile;

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

Cu+ kin KCl 25°C 0.14M C K1=2.93 B2= 3.30 2002KJa (28614) 261

C4H3N2O2I H2L 5-Iodouracil CAS 696-07-1 (8652)
5-Iodo-2,4-dihydroxypyrimidine;

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

Cu+ gl NaNO3 25°C 0.10M C M 2000SSd (28701) 262
K(Co+HL)=6.88
K(Cu+L+OH)=18.02
K(Cu+L+2OH)=20.23
K(CuLOH+OH)=3.08

Also data for ternary complexes.

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

Cu+ kin KCl 25°C 0.14M C 2002KJa (29063) 263
K(Cu+HL)=4.25
K(Cu+H2L)=3.34

Cu+ sol NaClO4 25°C 0.10M U K1=3.05 1949KAa (29064) 264

C4H4O4 H2L Fumaric acid CAS 110-17-8 (289)
trans-Butenedioic acid; HOOC.CH:CH.COOH

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

Cu+	kin	KCl	25°C	0.14M	C			K1=3.86		2002KJa (29188)	265

Cu+	sp	NaClO4	23°C	1.00M	U	T				1973HLa (29189)	266
K(Cu+(NH3)5CoL)=3.64											
K(5 C)=4.18, K(40 C)=3.18											

Cu+	sol	NaClO4	25°C	0.10M	U			K1=3.96		1949KAa (29190)	267

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

Cu+	gl	mixed	20°C	4%	U			K1=4.94	B2=11.93	1977GZa (29479)	268
Medium: 0.15 M MeCN, 0.2 Na2SO4											

C4H6N2		L				Diacetonitrile		CAS 1118-61-2		(4251)	
3-Aminocrotononitrile; CH3.C(NH2):CH.CN											

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

Cu+	vlt	non-aq	25°C	100%	U			B2=11.0		1969PIa (29490)	269
B3=13.3											
Medium: propylene carbonate, 0.1 M Me4NClO4											

Cu+	ISE	non-aq	25°C	100%	U					1969PIa (29491)	270
B3=13.5											
Medium: propylene carbonate, 0.1 M Me4NClO4											

C4H6N2		L				N-Me-Imidazole		CAS 616-47-7		(354)	
N-Methyl-1,3-diazole; C3H3N2.CH3											

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

Cu+	sp	non-aq	30°C	100%	U	M				1977GAb (29583)	271
K(CuA+L)=1.20											
Medium: Acetone. MA=Difluoro-3,3'-(trimethylenedinitrilo)bis(2-butanone oximato) borate-copper(I)											

Cu+	gl	oth/un	20°C	0.20M	U			B2=11.45		1969ZUa (29584)	272

C4H6O		L						CAS 627-41-8		(4248)	
3-Methoxyprop-1-yne; HCC.CH2.OCH3											

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

Cu+	sp	mixed	?	1.6%	U					1992MKa (29692)	273
K(Cu(phen)+L)=1.7											
Medium 1.56% v/v MeCN/acetone.											

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

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

Cu+	sol	NaClO4	25°C	0.10M	U			K1=3.20	1949KAa	(29715) 274
-----	-----	--------	------	-------	---	--	--	---------	---------	-------------

C4H8N2 L CAS 19355-69-2 (4254)
 3-Aminobutyronitrile; CH3.CH(NH2).CH2.CN

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

Cu+	vlt	non-aq	25°C	100%	U			B2=15.3	1969PIa	(32472) 275
-----	-----	--------	------	------	---	--	--	---------	---------	-------------

 Medium: propylene carbonate, 0.1 M Me4NC1O4

Cu+	ISE	non-aq	25°C	100%	U			B2=15.1	1969PIa	(32473) 276
-----	-----	--------	------	------	---	--	--	---------	---------	-------------

 Medium: propylene carbonate, 0.1 M Me4NC1O4

 C4H8N2S L Thiosinamine CAS 109-57-9 (2377)
 1-Allylthiourea; CH2:CH.CH2.NH.CS.NH2

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

Cu+	vlt	KCl	25°C	0.10M	U			B2=13.18	1976FLa	(33155) 277
								B3=14.58		
								B4=15.90		

 C4H8N2S HL CAS 2055-46-1 (1522)
 3,4,5,6-Tetrahydro-pyrimidine-2-thiol; C4H7N2.SH

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

Cu+	vlt	KCl	25°C	0.10M	U			B2=12.79	1976FLa	(33162) 278
								B3=14.98		
								B4=16.43		

 C4H8N2S L CAS 2122-19-2 (2372)
 4-Methylimidazolidine-2-thione, 4-Methyl-N,N'-ethylenethiourea

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

Cu+	vlt	KCl	25°C	0.10M	U			B2=12.43	1976FLa	(33165) 279
								B3=13.78		
								B4=15.11		

 C4H8O L CAS 56640-70-1 (2994)
 1-Methylallyl alcohol; CH2:CH.CH(CH3)OH

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

 Cu+ sol NaClO4 25°C 0.10M U K1=4.52 1949KAb (33173) 280

 C4H8O L CAS 513-42-8 (2995)
 2-Methylallyl alcohol; CH2:C(CH3).CH2.OH

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

 Cu+ sol oth/un 25°C 0.10M U K1=3.96 1949KAb (33176) 281

 C4H8O L Crotyl alcohol CAS 6117-91-5 (2993)
 But-2-en-1-ol; CH3.CH:CH.CH2.OH

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

 Cu+ nmr oth/un 30°C var U HM 1972IOa (33182) 282
 K(2cis-L+M(trans-L)2(H2O)=2trans-L+M(cis-L)2(H2O))=0.91. DH=-13.1 kJ mol-1

Cu+ sol KNO3 25°C 0.10M U K1=4.00 1949KAb (33183) 283

 C4H9NO2S HL CAS 88806-98-8 (3019)
 2-Amino-3-mercaptopropanoic acid methyl ester, cysteine methyl ester;
 HSCH2CH(NH2)COOCH3

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

 Cu+ gl mixed 20°C 4% U M 1976VKa (34056) 284
 Keff=13.6
 Medium: 4% CH3CN/H2O, 0.1 M NaClO4. Keff: Cu(CH3CN)4+L=Cu(CH3CN)2L+2CH3CN

 C4H9NO2S HL CAS 29768-80-7 (2597)
 2-Amino-4-mercaptoputanoic acid; HOOCH(NH2).CH2.CH2.SH

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

 Cu+ sp NaClO4 20°C 1.00M U K1=11.89 1978BKc (34112) 285

 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

 Cu+ gl KNO3 25°C 0.10M C K1=15.3 B2=24.64 2001KLb (34695) 286
 B(Cu3L4)=70.26
 B(Cu2L3)=48.9

 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

 Cu+ EMF non-aq 25°C 100% C I K1=2.47 B2= 4.63 1999THa (34762) 287
 Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.
 Also data for medium: DMSO

C4H11NO L CAS 5332-73-0 (5421)
 3-Methoxypropylamine; CH3O.CH2.CH2.CH2.NH2

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

Cu+	vlt	KN03	25°C	1.0M	U		K2=10.47	1994KNa (34854)	288
-----	-----	------	------	------	---	--	----------	-----------------	-----

Method: Pseudopolarography with differential pulse anodic stripping voltam.

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

Cu+	vlt	KN03	30°C	2.00M	U		B2=7.51	1971SSe (34956)	289
-----	-----	------	------	-------	---	--	---------	-----------------	-----

B2=7.98 from shift in E(1/2)

C4H11NS HL CAS 4104-45-4 (1790)
 1-Amino-2-methyl-2-mercaptopropane; H2N.CH2.C(CH3)(SH).CH3

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

Cu+	sp	NaCl04	20°C	1.00M	U		K1=9.92	1978BKc (35118)	290
-----	----	--------	------	-------	---	--	---------	-----------------	-----

Cu+	gl	mixed	20°C	4%	U	M		1976VKa (35119)	291
-----	----	-------	------	----	---	---	--	-----------------	-----

Keff=16.2

Medium: 4% CH3CN/H2O, 0.1 M NaCl04. Keff: Cu(CH3CN)4+L=Cu(CH3CN)2L+2CH3CN

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

Cu+	sp	NaCl04	20°C	1.00M	U		K1=10.63 B2=14.71	1978BKc (35134)	292
-----	----	--------	------	-------	---	--	-------------------	-----------------	-----

Cu+	gl	mixed	20°C	4%	U	M		1976VKa (35135)	293
-----	----	-------	------	----	---	---	--	-----------------	-----

Keff=13.5

Medium: 4% CH3CN/H2O, 0.1 M NaCl04. Keff: Cu(CH3CN)4+L=Cu(CH3CN)2L+2CH3CN

C4H11NS HL CAS 21100-03-8 (2592)
 4-Aminobutanethiol; H2N.CH2.CH2.CH2.CH2.SH

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

Cu+	sp	NaCl04	20°C	1.00M	U		K1=11.90 B2=15.20	1978BKc (35143)	294
-----	----	--------	------	-------	---	--	-------------------	-----------------	-----

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

Cu+	gl	NaClO4	25°C	0.15M	U		K1=<10	1999NGa (35771)	295
-----	----	--------	------	-------	---	--	--------	-----------------	-----

C5H5N L Pyridine CAS 110-86-1 (31)
 Pyridine, Azine;

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

Cu+	ISE	non-aq	20°C	100%	C		K1=1.85 B2=2.52 B3=3.26	1987DAa (36613)	296
-----	-----	--------	------	------	---	--	-------------------------	-----------------	-----

Medium: MeCN, 0.1 M Me4NClO4

Cu+	gl	NaNO3	20°C	1.00M	C		B2=9.45 K(Cu+2HL)=6.75 B(CuL(OH))=10.05	1978CPa (36614)	297
-----	----	-------	------	-------	---	--	---	-----------------	-----

Cu+	vlt	NaNO3	20°C	1.00M	U		K1=4.84 B2=7.59 B3=8.17 B4=8.51	1973CPa (36615)	298
-----	-----	-------	------	-------	---	--	---------------------------------	-----------------	-----

Cu+	vlt	R4N.X	30°C	2.0M	U		B2=8.14	1966GCa (36616)	299
-----	-----	-------	------	------	---	--	---------	-----------------	-----

Medium: 2.0 M NH4NO3, 0.1 C5H5NHCl

Cu+	EMF	oth/un	20°C	0.15M	U		K1=3.17 B2=6.64	1962HPa (36617)	300
-----	-----	--------	------	-------	---	--	-----------------	-----------------	-----

Method: platinum electrode. Medium: Na2SO4

Cu+	EMF	oth/un	25°C	0.30M	U		K1=3.9 K3=1.3 K4=0.8 B3=8.29	1961JWa (36618)	301
-----	-----	--------	------	-------	---	--	------------------------------	-----------------	-----

Method: platinum electrode. Medium: K2SO4

Cu+	vlt	oth/un	?	?	U		B2=3.3 ?	1950KMa (36619)	302
-----	-----	--------	---	---	---	--	----------	-----------------	-----

C5H5N5O HL Guanine CAS 73-40-5 (5387)
 2-Amino-6-hydroxypurine;

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

Cu+	gl	NaNO3	37°C	0.10M	U	M	K1=9.89 B(CuAL)=13.48 *K(CuAL)=-6.94 *K(Cu(OH)AL)=-8.12	1994MGd (36997)	303
-----	----	-------	------	-------	---	---	---	-----------------	-----

HA is 6-aminopenicillanic acid.

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
Cu+	gl	NaNO3	20°C	1.00M	C			K1=5.28 B2=8.00	1978CPa (37126)	304
Cu+	vlt	NaNO3	20°C	1.00M	U			K1=5.28 B2=8.00	1972CPe (37127)	305

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
Cu+	gl	NaNO3	20°C	1.00M	C			B2=7.97	1978CPa (37162)	306

C5H6N2 L 4-Aminopyridine CAS 504-24-5 (1356)
4-Aminoazine, 4-Pyridylamine; C5H4N.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	gl	NaNO3	20°C	1.00M	C			K1=7.03 B2=10.53	1978CPa (37176)	307
Cu+	vlt	NaNO3	20°C	1.00M	U			K1=7.03 B2=10.53	1972CPe (37177)	308

C5H8 L Cyclopentene CAS 142-29-0 (4289)
Cyclopentene; cyclo(-CH2.CH2.CH:CH.CH2-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	ISE	non-aq	30°C	100%	U			K1=2.86	1969HAb (37600)	309

Medium: 2=PrOH, 1.0 M LiClO4
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
Cu+	gl	mixed	20°C	4%	U			K1=4.90 B2=11.83	1977GZa (37623)	310

Medium: 0.15 M MeCN, 0.2 Na2SO4
C5H8N2 L CAS 1072-62-4 (929)
2-Ethylimidazole; C3H3N2.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	gl	mixed	20°C	4%	U			K1=4.78 B2=11.82	1977GZa (37663)	311

Medium: 0.15 M MeCN, 0.2 Na2SO4
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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Cu+	gl	NaClO4	20°C	0.20M	U				1970ZUb (39533)	312
-----	----	--------	------	-------	---	--	--	--	-----------------	-----

K(Cu+HL)=3.55
K(CuHL+HL)=2.88
K(CuL+H)=7.94

Medium: 0.2 NaClO4, 0.37 CH3CN

Cu+	gl	NaClO4	25°C	0.10M	U				1966KZb (39534)	313
-----	----	--------	------	-------	---	--	--	--	-----------------	-----

K1=8.87
K(Cu+2HL)=10.32

Medium 0.19 M CH3CN, 0.1 M NaClO4

C5H10N2OS L CAS 932-49-0 (2375)
1-(2-Hydroxyethyl)imidazolidine-2-thione;

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

Cu+	vlt	KCl	25°C	0.10M	U				1976FLa (39696)	314
-----	-----	-----	------	-------	---	--	--	--	-----------------	-----

B2=11.34
B3=13.00
B4=14.08

C5H10N2OS L (2376)
Tetrahydro-3,5-dimethyl-4H-1,3,5-oxadiazine-4-thione;

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

Cu+	vlt	KCl	25°C	0.10M	U				1976FLa (39697)	315
-----	-----	-----	------	-------	---	--	--	--	-----------------	-----

B2=11.32
B3=12.87
B4=14.15

C5H10N2OS L CAS 29061-28-7 (2621)
4,5-Dimethoxyimidazolidine-2-thione;

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

Cu+	ISE mixed	25°C	82%	U					1980TBa (39727)	316
-----	-----------	------	-----	---	--	--	--	--	-----------------	-----

Medium: 82% v/v DMFA/H2O; 0.2 M KNO3

C5H10N2S L CAS 6086-42-6 (2373)
4,4-Dimethylimidazolidine-2-thione;

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

Cu+	vlt	KCl	25°C	0.10M	U				1976FLa (40122)	317
-----	-----	-----	------	-------	---	--	--	--	-----------------	-----

B2=12.04
B3=13.65
B4=15.18

C5H10O L Pent-1-en-3-ol CAS 616-25-1 (3024)

1-Penten-3-ol; CH₃.CH₂.CH(OH)CH:CH₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sol	NaClO ₄	25°C	0.10M	U		K1=4.52	1949KAb (40142)	318

C5H10O		L					CAS 4675-87-0	(3025)	
2-Methylbut-2-en-1-ol; CH ₃ .CH:C(CH ₃)CH.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sol	NaClO ₄	25°C	0.10M	U		K1=3.55	1949KAb (40144)	319

C5H11N		L	Piperidine				CAS 110-89-4	(105)	
Perhydropyridine; cyclo(-CH ₂ .CH ₂ .CH ₂ .NH.CH ₂ .CH ₂ -) C5H11N									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	KN03	25°C	1.0M	U		K1= 8.29 B2=9.89 B(Cu(OH)2L2)=16.67	1994KNa (40445)	320
Method: Pseudopolarography with differential pulse anodic stripping voltam.									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	ISE	NaClO ₄	25°C	0.50M	C			1979OLb (41183)	321
							B(CuH ₂ L ₂)=39.18 B(Cu ₅ L ₄)=101.5		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	NaClO ₄	20°C	1.00M	U		K1=11.89	1978BKc (41184)	322

C5H11NO2S		H2L	Penicillamine				CAS 52-66-4	(350)	
DL-2-Amino-3-mercapto-3-methylbutanoic acid; (CH ₃)2C(SH)CH(NH ₂)COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	NaCl	25°C	1.00M	C	M		1997TMa (41255)	323
							B(Cu(Cys)L)=15.708 B(CuH(Cys)L)=25.887 B(Cu ₂ H(Cys)L)=37.54		
Cu+	gl	NaCl	25°C	1.00M	U		K1=12.25 B2=15.44 B(CuHL)=18.34 B(Cu ₄ L ₃)=49.15	1993HMc (41256)	324

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	R4N.X	25°C	0.10M	U		K1=19.53	1968VBc (41257)	325
Medium: NH ₄ Cl									

C5H11N3S L CAS 40778-59-4 (2374)
1-(2-Aminoethyl)imidazolidine-2-thione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	KCl	25°C	0.10M	U		B2=10.28 B3=11.66 B4=12.86	1976FLa (41392)	326

C5H12N2S L CAS 105-55-5 (2379)
1,3-Diethylthiourea; C2H5.NH.CS.NH.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	oth/un	25°C	0.10M	U		B2=14.04 B3=15.00 B4=15.87	1976FLa (41622)	327

Medium: HCl

C5H14NS HL Thiocholine CAS 625-00-3 (2594)
N,N,N-Trimethyl-2-nitriloethanethiol; (CH3)3N.CH2.CH2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	NaCl04	20°C	1.00M	U		K1=10.28 B2=14.58	1978BKc (41848)	328
Cu+	gl	mixed	20°C	4%	U	M	Keff=7.4	1976VKa (41849)	329

Medium: 4% CH3CN, 0.1 M NaCl04. Keff: Cu(CH3CN)4+L=Cu(CH3CN)3L+CH3CN

C6H4N2 L CAS 100-70-9 (498)
2-Cyanopyridine; C5H4N.CN

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	non-aq	25°C	100%	U		B2=8.7	1969PIa (42180)	330

Medium: propylene carbonate, 0.1 M Me4NCl04

Cu+	ISE	non-aq	25°C	100%	U		B2=9.0	1969PIa (42181)	331
-----	-----	--------	------	------	---	--	--------	-----------------	-----

Medium: propylene carbonate, 0.1 M Me4NCl04

C6H4N2 L CAS 100-54-9 (3055)
3-Cyanopyridine (nicotinonitrile); C5H4N.CN

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	non-aq	25°C	100%	U		B2=10.6	1969PIa (42185)	332

Medium: propylene carbonate, 0.1 M Me4NCl04

Cu+	ISE	non-aq	25°C	100%	U		B2=10.7	1969PIa (42186)	333
-----	-----	--------	------	------	---	--	---------	-----------------	-----

Medium: propylene carbonate, 0.1 M Me4NC104

C6H4N2 L CAS 100-48-1 (321)
4-Cyanopyridine; C5H4N.CN

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	non-aq	25°C	100%	U		B2=10.7 B3=13.0	1969PIa (42199)	334

Medium: propylene carbonate, 0.1 M Me4NC104

Cu+	ISE	non-aq	25°C	100%	U		B3=12.3	1969PIa (42200)	335
-----	-----	--------	------	------	---	--	---------	-----------------	-----

Medium: propylene carbonate, 0.1 M Me4NC104

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	oth/un	21°C	0.40M	U		B2=2.27	1955BKa (42227)	336

Medium:0.2-0.7(some EtOH)

C6H5NO2 HL Picolinic acid CAS 98-98-6 (391)
2-Pyridine-carboxylic acid; C5H4N.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	diox/w	25°C	50%	U		B2=6.15	1966WRb (42514)	337

Medium: 50% dioxan, 0.1 M KNO3

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO4	22°C	0.20M	U		Keff(Cu+L)=3.5	1999SBa (42799)	338

Keff at pH 6.0.

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
Cu+	EMF	NaNO3	20°C	0.50M	U		B2=14.4 K(Cu+2HL)=11.05	1973PEa (43291)	339

Cu+	vlt	oth/un	25°C	?	U		B2=14.48	1961LLa (43292)	340
-----	-----	--------	------	---	---	--	----------	-----------------	-----

0.2 phosphate buffer

C6H6O	HL	Phenol	CAS 108-95-2	(457)
Hydroxybenzene, phenol; C6H5.OH				

Cu+ sp NaCl04 22°C 0.20M U 1999SBa (43534) 341
Keff(Cu+L)=2.9

C6H7N	L	Picoline	CAS 109-06-8	(320)
2-Methylpyridine; C5H4N.CH3				

Cu+ vlt oth/un 25°C 0.10M U K1=5.40 B2=7.65 1964PAb (44605) 342
B3=8.5

C6H7N	L	beta-Picoline	CAS 108-99-6	(324)
3-Methylpyridine; C5H4N.CH3				

Cu+ vlt oth/un 25°C 0.10M U K1=5.60 B2=7.78 1964PAb (44694) 343
B3=8.60
B4=9.0

C6H7N	L	gamma-Picoline	CAS 108-89-4	(325)
4-Methylpyridine; C5H4N.CH3				

Cu+ vlt oth/un 25°C 0.10M U K1=5.65 B2=8.20 1964PAb (44816) 344
B3=8.8
B4=9.2

Cu+ ISE oth/un 20°C 0.15M U K1=4.30 B2=7.65 1962HPa (44817) 345
Platinum electrode. Medium: Na2SO4

C6H7NO L CAS 586-98-1 (3094)
2-Hydroxymethylpyridine (2-pyridylmethanol); C5H4N.CH2.OH

Cu+ vlt NaNO3 20°C 1.00M U B2=7.9 1973PEa (44966) 346

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

Cu+ vlt NaNO3 20°C 0.50M U B2=7.15 1973PEa (44984) 347

C6H8 L CAS 628-41-1 (4343)
1,4-Cyclohexadiene;

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

Cu+ ISE non-aq 30°C 100% U K1=2.53 1969HAb (45237) 348
Medium: 2-PrOH, 1.0 M LiClO4

C6H8N2 L 2-Picolylamine CAS 29722-36-9 (502)
2-(Aminomethyl)pyridine; C5H4N.CH2NH2

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

Cu+ vlt diox/w 25°C 50% U B2=10.66 1966WRb (45352) 349
Medium: 50% dioxan, 0.1 M KNO3

C6H8N2 L 3-Picolylamine CAS 3731-51-9 (6095)
3-(Aminomethyl)pyridine;

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

Cu+ vlt NaNO3 20°C 1.00M C B2=9.45 1978CPa (45378) 350
K(Cu+2HL)=6.75
B(CuLOH)=10.05

C6H8O4 L CAS 624-49-7 (8582)
Dimethyl fumarate;

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

Cu+ kin KCl 25°C 0.14M C K1=3.79 2002KJa (45522) 351

C6H9N3O2 HL Histidine CAS 71-00-1 (1)
2-Amino-3-(4'-imidazolyl)propanoic acid; H2N.CH(CH2.C3H3N2)COOH

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

Cu+ gl NaClO4 25°C 0.20M U 1970ZUb (47540) 352
K(Cu+HL)=3.65
K(CuHL+HL)=3.25
K(CuL+H)=6.60

Medium: 0.2 NaClO4, 0.076 CH3CN

C6H10 L Cyclohexene CAS 110-83-8 (3054)
Cyclohexene; C6H10

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

 Cu+ ISE non-aq 30°C 100% U K1=2.09 1969HAb (47668) 353
 Medium: 2-PrOH, 1.0 M LiClO4

 C6H10N2 L CAS 1842-63-3 (927)
 1,2,4-Trimethylimidazole; C3HN2(CH3)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	mixed	20°C	4%	U		K1=4.76 B2=11.88	1977GZa (47672)	354

Medium: 0.15 M MeCN, 0.2 Na2SO4

 C6H10N2 L CAS 5709-61-5 (928)
 1-Methyl-2-ethylimidazole; C3H2N2(CH3)(C2H5)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	mixed	20°C	4%	U		K1=4.69 B2=11.51	1977GZa (47674)	355

Medium: 0.15 M MeCN, 0.2 Na2SO4

 C6H10N4OS L (6141)
 2,4-Dimethyl-2,4,6,8-tetraazobicyclo(3,3,0)octa-3-one-7-thione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	ISE	mixed	25°C	82%	U		K1=8.56 B2=10.85	1980TBa (47884)	356

Medium: 82% v/v DMFA/H2O; 0.2 M KNO3

 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
Cu+	con	KCl	25°C	0.10M	U		B2=11.16	1976POa (48237)	357
Cu+	oth	oth/un	25°C	0.30M	U			1961JWa (48238)	358

Bn=4.37+2.9n
 K(CuHL+H)=2.44(?)
 K(CuL+H)=2.71(?)

Method: platinum electrode. Medium: K2SO4

 C6H11N3O4 HL Gly-Gly-Gly CAS 556-33-2 (415)
 Glycyl-glycyl-glycine; H2N.CH2.CO.NH.CH2.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	ISE	NaClO4	25°C	3.00M	U			19700Sa (48973)	359

Metal ion: Cu+/Cu++. K(Cu(I)+Cu(II)+2L=Cu2H-3L2+3H)=-3.35

Cu+	ISE	NaClO4	25°C	3.00M	U		K1=6.2	19700Sa (48974)	360
-----	-----	--------	------	-------	---	--	--------	-----------------	-----

C6H12O L CAS 2004-67-3 (3075)
4-Methylpent-4-en-2-ol; CH₂:C(CH₃)CH₂.CH(OH)CH₃

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

Cu+ sol KNO₃ 25°C 0.10M U K1=4.2 1949KAb (49405) 361

C6H14S L Isopropyl sulfi CAS 625-80-9 (5674)
2,2'-Thiodipropene, diisopropyl sulfide; (CH₃)₂CH-S-CH(CH₃)₂

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

Cu+ ISE non-aq 25°C 100% U K1=1.32 B2=2.29 1983MMc (51137) 362
B3=2.91
B4=3.17

Medium: MeCN. Data also for other dialkyl sulphides

C6H15NO₃ Triethanolamine CAS 102-71-6 (447)
Tris-(2-hydroxyethyl)amine; L

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

Cu+ vlt KNO₃ 30°C 2.00M U B2=4.39 1971SSe (51288) 363

Data also obtained by e.m.f. with redox electrode

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

Cu+ sp NaClO₄ 20°C 1.00M U K1=10.76 1978BKc (51352) 364

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

Cu+ gl mixed 20°C var U 1987BKc (51406) 365

K(Cu(CH₃CN)+L)=10.93

K(Cu(CH₃CN)+HL)=5.63

Medium: 1-4% v/v MeCN/H₂O, 0.2 M Na₂SO₄

Cu+ gl mixed 25°C 16% C K1=8.28 1980GMe (51407) 366

K(Cu+HL)=3.79

Medium: 16% acetonitrile/H₂O, 0.20 M Na₂SO₄.

C6H18N₄ L Trien-tetramine CAS 112-24-3 (11)
1,4,7,10-Tetraazadecane; H₂N.CH₂.CH₂.NH.CH₂.CH₂.NH.CH₂.CH₂.NH₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	NaClO4	25°C	0.15M	U		K1=<12	1999NGa (52095)	367
Cu+	gl	NaClO4	25°C	0.15M	U		K1=<12	1995GCa (52096)	368

C7H02F5		HL					CAS 602-94-8	(2954)	
2,3,4,5,6-Pentafluorobenzoic acid; C6F5.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	NaClO4	22°C	0.20M	U			1999SBa (52379)	369
							Keff(Cu+L)=2.0		
Keff at pH 3.0.									

C7H5O2Br		HL					CAS 585-76-2	(1366)	
3-Brombenzoic acid; Br.C6H4.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO4	22°C	0.20M	U			1999SBa (53107)	370
							Keff(Cu+L)=3.9		
Keff at pH 4.0.									

C7H5O2Cl		HL					CAS 118-91-2	(2519)	
2-Chlorobenzoic acid; Cl.C6H4.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO4	22°C	0.20M	U			1999SBa (53145)	371
							Keff(Cu+L)=3.7		
Keff at pH 4.0.									

C7H6N2		L					Benzimidazole CAS 51-17-2	(52)	
Benzimidazole; C7H6N2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	ISE oth/un		20°C	0.15M	U		K1=4.47 B2=9.73	1962HPa (53471)	372
Also platinum electrode. Medium: Na2SO4									

C7H6O2		HL					Benzoic Acid CAS 65-85-0	(462)	
Benzenecarboxylic acid; C6H5.COOH									
Cu+	vlt	NaClO4	22°C	0.20M	U			1999SBa (53827)	373
							Keff(Cu+L)=3.7		
Keff at pH 4.0.									

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

Cu+ vlt NaClO4 22°C 0.20M U 1999SBa (54183) 374

Keff(Cu+L)=2.8

Keff at pH 4.0.

C7H8 L CAS 121-46-0 (4403)
2,5-Norbornadiene (bicyclo[2.2.1]hepta-2,5-diene);

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

Cu+ ISE non-aq 30°C 100% U K1=4.11 1969HAb (55778) 375

Medium: 2-propanol, 1.0 M LiClO4

C7H10 L Norbornylene CAS 498-66-8 (4404)
2-Norbornene (bicyclo[2.2.1]hept-2-ene);

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

Cu+ ISE non-aq 30°C 100% U K1=4.26 1969HAb (56531) 376

Medium: 2-propanol, 1.0 M LiClO4

C7H10N2 L CAS 2706-56-1 (2748)
2-(2'-Aminoethyl)pyridine; C5H4N.CH2CH2NH2

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

Cu+ gl NaNO3 20°C 1.00M C B2=10.90 1978CPa (56592) 377

C7H10N2 L CAS 42088-91-5 (3134)
2-(Methylaminomethyl)pyridine (2-Picolylmethylamine)

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

Cu+ vlt diox/w 25°C 50% U B2=11.40 1966WRb (56611) 378

Medium: 50% dioxan, 0.1 M KNO3

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

Cu+ vlt diox/w 25°C 50% U B2=12.04 1966WRb (56656) 379

Medium: 50% dioxan, 0.1 M KNO3

C7H12 L Cycloheptene CAS 628-92-2 (4405)
Cycloheptene; C7H12

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	ISE	non-aq	30°C	100%	U		K1=3.02	1969HAb (57031)	380
Medium: 2-propanol, 1.0 M LiClO4									

C7H12N2		L					(926)		
1,2,4,5-Tetramethylimidazole; C3N2.(CH3)4									
Cu+	gl	mixed	20°C	4%	U		K1=4.87 B2=12.23	1977GZa (57034)	381
Medium: 0.15 M MeCN, 0.2 Na2SO4									

C7H12N2S		L					CAS 6601-20-3 (2378)		
1,3-Diallylthiourea; CH2:CH.CH2.NH.CS.NH.CH2.CH:CH2									
Cu+	vlt	KCl	25°C	0.10M	U		B2=13.00 B3=14.43 B4=15.58	1976FLa (57189)	382

C7H15NS		HL					CAS 59681-08-2 (1791)		
1-Mercapto-1-aminomethylcyclohexane; HS.C6H10.CH2NH2									
Cu+	gl	mixed	20°C	4%	U	M	Keff=18.6	1976VKa (58010)	383
Medium: 4% CH3CN/H2O, 0.1 M NaClO4. Keff: Cu(CH3CN)4+L=Cu(CH3CN)2L+2CH3CN									

C7H17N3		L					(101)		
1,4,7-Triazacyclodecane; cyclo(.NHCH2CH2NHCH2CH2NHCH2CH2CH2.)									
Cu+	gl	mixed	20°C	var	U		K(Cu(CH3CN)+L)=10.85 K(Cu(CH3CN)+HL)=2.80	1987BKc (58224)	384
Medium: 1-4% v/v MeCN/H2O, 0.2 M Na2SO4									

C7H17N3		L					CAS 6066-26-8 (7671)		
N-(2-Aminoethyl)-N'-2-propenyl-1,2-diaminoethane;									
Cu+	gl	NaClO4	25°C	0.15M	U		K1=11.94	1999NGa (58231)	385

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
Cu+	vlt	NaClO ₄	25°C	0.15M	U		K ₁ <14	1995GCa (58356)	386

Method: cyclic voltammetry.

C ₈ H ₆	L	Ethynylbenzene	CAS	536-74-3	(4471)
-------------------------------	---	----------------	-----	----------	--------

Phenylacetylene; C₆H₅.CCH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	mixed	?	1.6%	U			1992MKa (58732)	387

K(Cu(phen)+L)=1.5

Medium 1.56% v/v MeCN/acetone.

Cu+	sp	mixed	?	1.6%	U			1992MKa (58733)	388
-----	----	-------	---	------	---	--	--	-----------------	-----

K(CuA+L)=0.94
K(CuB+L)=1.2
K(CuC+L)=1.5
K(CuD+L)=1.6

Medium 1.56% v/v MeCN/acetone. A, B, C and D are 5-nitro-, 5-chloro-, 5-methyl and 5,6-dimethyl-1,10-phenanthroline.

C ₈ H ₈ O ₂	HL	m-Toluic acid	CAS	99-04-7	(6127)
--	----	---------------	-----	---------	--------

3-Methylbenzoic acid; CH₃.C₆H₄.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO ₄	22°C	0.20M	U			1999SBa (59482)	389

K_{eff}(Cu+L)=3.6

K_{eff} at pH 4.0.

C ₈ H ₉ N ₃ O ₃ S ₂	H ₂ L	(2881)
--	------------------	--------

Benzaldehydethiosemicarbazone-4-sulfonic acid; HO₃S.C₆H₄.CH:N.NH.CS.NH₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	ISE	KNO ₃	37°C	0.15M	C		B ₂ =19.78 B(CuHL ₂)=27.77	1981STa (60577)	390

C ₈ H ₁₁ N ₄ O ₄ S	H ₂ L	(6643)
--	------------------	--------

N-Ethyl-3,4-dihydroxybenzene sulphonamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	NaClO ₄	25°C	1.00M	U			1992AGc (61174)	391

K(Cu+H₂L=CuL+2H)=-6.90
K(CuL+H₂L=CuL₂+2H)=-8.89

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

Cu+	vlt	diox/w	25°C	50%	U		B2=12.14	1966WRb (61371)	392
-----	-----	--------	------	-----	---	--	----------	-----------------	-----

Medium: 50% dioxan, 0.1 M KNO3

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

Cu+	gl	oth/un	25°C	0.10M	U		K1=8.61 K(Cu+2HL)=11.57 K(CuL+Cu)=4.8	1966KZb (61593)	393
-----	----	--------	------	-------	---	--	---	-----------------	-----

Medium: 0.1 M NaClO4, 0.19 M CH3CN

C8H14 L CAS 931-88-4 (4472)
 cis-Cyclooctene; C8H14

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

Cu+	ISE	non-aq	30°C	100%	U		K1=3.46	1969HAb (61882)	394
-----	-----	--------	------	------	---	--	---------	-----------------	-----

Medium: 2-propanol, 0.1 M LiClO4

C8H16S4 L 12-Ane-S4 CAS 25423-56-7 (1747)
 1,4,7,10-Tetrathiacyclododecane; cyclo(-S.(CH2.CH2.S)3.CH2.CH2-)

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

Cu+	vlt	non-aq	23°C	100%	M		K1=8.5	1999TLA (62741)	395
-----	-----	--------	------	------	---	--	--------	-----------------	-----

Medium: 1,2-Dichloroethane. Method: cyclic voltammetry.

Cu+	oth	NaClO4	25°C	0.10M	U		K1=<12.8	1991BSb (62742)	396
-----	-----	--------	------	-------	---	--	----------	-----------------	-----

By cyclic voltammetry on the Cu++ complex.

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

Cu+	EMF	non-aq	25°C	100%	C		K1=2.35 B2= 3.98	1999THa (62761)	397
-----	-----	--------	------	------	---	--	---------------------	-----------------	-----

Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.

Cu+	EMF	non-aq	25°C	100%	U		K1=3.69 B2= 6.88	1998HTb (62762)	398
-----	-----	--------	------	------	---	--	---------------------	-----------------	-----

Medium: DMSO. Method: Cu(Hg)/Cu+ electrode

C8H18N2S2 L Cis-12aneN2S2 CAS 88439-31-0 (786)
 1,4-Diaza-7,10-dithia-cyclododecane; cyclo(-NH.C2H4.NH.C2H4.S.C2H4.S.C2H4-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	mixed	20°C	var	C	M	K1=13.14 K(Cu(CH3CN)+HL)=7.00	1984BKa (62931)	399

Medium: 1-2% MeCN/H2O, 0.2 M Na2SO4

 C8H18N2S2 L Trans-12aneN2S2 CAS 65113-45-3 (787)
 1,7-Diaza-4,10-dithia-cyclododecane; cyclo(-NH.C2H4.S.C2H4.NH.C2H4.S.C2H4-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	mixed	20°C	var	C	M	K1=12.33 K(Cu(CH3CN)+HL)=6.49	1984BKa (62936)	400

Medium: 1-4% MeCN/H2O, 0.2 M Na2SO4

 C8H19N L CAS 111-92-2 (849)
 Dibutylamine, 5-azanonane; (C4H9)2NH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	EMF	non-aq	25°C	100%	C	I	K1=1.87 B2= 3.35	1999THa (63022)	401

Medium: acetonitrile. method: Cu(Hg)/Cu+ electrode.
 Also data for medium: DMSO

 C8H19N3 L (5967)
 1,4,7-Triazacycloundecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	mixed	20°C	var	U		K(Cu(CH3CN)+L)=9.05 K(Cu(CH3CN)+HL)=2.55	1987BKc (63101)	402

Medium: 1-4% v/v MeCN/H2O, 0.2 M Na2SO4

 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
Cu+	vlt	NaClO4	25°C	0.20M	C	M	K(CuL+SCN)=14.94 K(CuL+Im)=13.88 K(CuL+CH3CN)=14.48	1997K0a (63111)	403

Method: polarography.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	mixed	20°C	var	U		K(Cu(CH3CN)+L)=10.33 K(Cu(CH3CN)+HL)=4.50	1987BKc (63112)	404

Medium: 1-4% v/v MeCN/H2O, 0.2 M Na2SO4

 C8H19N3S L CAS 87071-53-2 (719)
 1-Thia-4,7,10-triazacyclododecane; cyclo(-S.(C2H4.NH)3.C2H4-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	NaCl04	25°C	0.20M	C	M		1997K0a (63144)	405
							K(CuL+SCN)=13.82 K(CuL+CH3CN)=13.34		

 C8H20N2S2 L (5954)
 2,11-Dithia-5,8-diazadodecane; CH3.S.CH2.CH2.NH.CH2.CH2.NH.CH2.CH2.S.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	mixed	20°C	var	U		K1=14.33 K(Cu+HL)=8.92 K(Cu(CH3CN)+H2L)=3.16	1986KKc (63243)	406

Medium: 1-4% MeCN, 0.2 M Na2SO4

 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
Cu+	vlt	NaCl04	25°C	0.15M	U		K1=<13	1995GCa (63401)	407

Method: cyclic voltammetry.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	oth	diox/w	25°C	50%	U		B2=14.7	1961JWa (64246)	408

Method: platinum electrode. Medium: 50% dioxan, 0.3 M KNO3

 C9H8N4O4S2 H2L (2879)
 Indol-2,3-dione-3-thiosemicarbazone-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	ISE	KNO3	37°C	0.15M	C		B2=17.85 B(CuHL2)=25.14 B(CuH2L2)=30.92	1981STa (64861)	409

 C9H10N2O2S L CAS 622-97-9 (2600)
 1-Phenyl-4,5-dihydroxyimidazolidine-2-thione;

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

Cu+ ISE mixed 25°C 82% U K1=8.85 B2=10.61 1980TBa (65244) 410

Medium: 82% v/v DMFA/H2O; 0.2 M KNO3

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

Cu+ gl NaClO4 25°C 0.10M U K1=10.55 1966KZb (67315) 411

K(Cu+2HL)=11.62

Medium: 0.1 M NaClO4, 0.19 M CH3CN

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

Cu+ gl NaNO3 20°C 1.00M C K1=11.34 1978CPa (67541) 412

Cu+ vlt NaNO3 20°C 1.00M C K1=11.4 1976CFa (67542) 413

C9H18S4 L 13-Ane-S4 CAS 25423-54-5 (1746)

1,4,7,10-Tetrathiacyclotridecane; cyclo(-S.(CH2.CH2.S)3.CH2.CH2.CH2-)

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

Cu+ oth NaClO4 25°C 0.10M U K1=10.0 1991BSb (67972) 414

By cyclic voltammetry on the Cu++ complex.

C9H20S4 L TTT CAS 25676-65-7 (2256)

2,5,9,12-Tetrathiatridecane; (CH3.S.CH2.CH2.S.CH2)2.CH2

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

Cu+ sp NaClO4 25°C 0.10M U K1=13.11 1997DWa (68131) 415

Cu+ oth NaClO4 25°C 0.10M U K1=13.1 1991BSb (68132) 416

By cyclic voltammetry on the Cu++ complex.

C9H21NS3 L (6620)

Tris(methylthioethylamine; N(CH2CH2SCH3)3

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

Cu+ vlt NaClO4 25°C 0.10M M 1999ADb (68154) 417

K1eff=15.80

pH<5.

C9H21N3 L CAS 23635-83-8 (5968)

1,4,7-Triazacyclododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO4	25°C	0.20M	C	M		1997K0a (68160)	418
							K(CuL+SCN)=13.58 K(CuL+CH3CN)=12.72		

Method: polarography.

Cu+	gl	mixed	20°C	var	U			1987BKc (68161)	419
							K(Cu(CH3CN)+L)=9.29 K(Cu(CH3CN)+HL)=4.45		

Medium: 1-4% v/v MeCN/H2O, 0.2 M Na2SO4

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
Cu+	vlt	NaClO4	25°C	0.20M	C	M		1997K0a (68187)	420
							K(CuL+SCN)=14.51		

Method: polarography.

Cu+	gl	mixed	20°C	var	U			1987BKc (68188)	421
							K(Cu(CH3CN)+L)=8.46 K(Cu(CH3CN)+HL)=2.78		

Medium: 1-4% v/v MeCN/H2O, 0.2 M Na2SO4

C9H22N2S2 L (5953)

2,12-Dithia-5,9-diazatridecane; CH3.S.CH2.CH2.NH.CH2.CH2.CH2.NH.CH2.CH2.S.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	mixed	20°C	var	U		K1=14.46 K(Cu+HL)=9.35 K(Cu(CH3CN)+H2L)=3.17	1986KKc (68232)	422

Medium: 1-4% MeCN, 0.2 M Na2SO4

C9H23N3 L CAS 3030-47-5 (4605)

N,N,N',N'',N''-Pentamethyl-diethylenetriamine; (CH3)2NCH2CH2N(CH3)CH2CH2N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	NaClO4	25°C	0.15M	U		K1=<8	1999NGa (68279)	423
Cu+	vlt	NaClO4	25°C	0.20M	C	M		1997K0a (68280)	424
							K(CuL+SCN)=12.18		

Method: polarography.

Cu+	gl	mixed	25°C	10%	C			1989KKe (68281)	425
							B(CuL(CH3CN))=10.23		

B(CuL(CO))=16.51

Medium: 10% v/v CH₃CN/H₂O, 0.20 M NaNO₃.

C9H₂₄N₃O₉P₃ H6L NOTPH CAS 83843-39-3 (224)

1,4,7-Triazacyclononane-N,N',N''-tris(methylenephosphonic acid);

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

Cu+ gl KNO₃ 25°C 1.00M U 1990BSd (68316) 426

K(Cu+HL)=10.1

K(Cu+H₂L)=8.3

K(Cu+H₃L)=4.1

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

2,2'-Bipyridine; (C₅H₄N)₂

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

Cu+ sp none 23°C 0.0 C K1=4.59 B2= 9.18 1995ZGa (69540) 427

Cu+ EMF non-aq 25°C 100% C K2=4.8 1988MPa (69541) 428

Medium: acetonitrile. Method: Cu electrode.

Cu+ vlt oth/un ? ? U K1=10.68 B2=14.35 1971FAa (69542) 429

Cu+ vlt alc/w 25°C 50% U M B2=15.5 1967PAb (69543) 430

Medium: 50% MeOH, 0.1 M KNO₃. Many ternary complexes also

Cu+ EMF oth/un 25°C 0.30M U B2=13.18 1961JWa (69544) 431

Method: platinum electrode. Medium: K₂SO₄

Cu+ vlt KNO₃ 25°C 0.10M U B2=14.2 1950La (69545) 432

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

Cu+ sp oth/un 30°C ? U 1963RMa (69940) 433

K(2CuCl+H₂L=Cu₂L+2H+2Cl)=4.33

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

Cu+ ISE KNO₃ 37°C 0.15M C B2=18.50 1981STa (70623) 434

B(CuHL₂)=25.45

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
Cu+	gl	KNO ₃	20°C	0.10M	U		K(CuL+H)=4.0	1964PIa (71128)	435

Cu+	EMF	oth/un	25°C	0.30M	U		Bn=3.95+1.7n K(CuHL+H)=2.70(?) K(CuL+H)=3.96(?)	1961JWa (71129)	436
-----	-----	--------	------	-------	---	--	---	-----------------	-----

Medium: K₂SO₄

C₁₀H₁₆N₂O₈ H₄L EDTA CAS 60-00-4 (120)
1,2-Diaminoethane-N,N,N',N'-tetraethanoic acid, Sequestic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	KNO ₃	30°C	2.0M	U		K ₁ =8.5	1971SSe (73686)	437

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
Cu+	gl	NaClO ₄	25°C	0.10M	C		B(CuHL)=12.34	1982PPc (74945)	438

C₁₀H₁₇N₃O₆S H₃L Glutathione CAS 70-18-8 (333)
Glutamyl-cysteinyl-glycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	gl	NaCl	25°C	1.00M	C	M	B(CuH ₄ (Cys)L)=44.502 B(Cu ₂ H ₃ (Cys)L ₂)=58.92 B(Cu ₂ H(Cys)L)=38.29	1997TMa (75115)	439

Cu+	ISE	NaClO ₄	25°C	0.50M	C		B(CuHL)=24.9 B(CuH ₂ L ₂)=38.8	1979OLb (75116)	440
-----	-----	--------------------	------	-------	---	--	--	-----------------	-----

C₁₀H₂₀O₂S₄ L CAS 113859-51-1 (5842)
cis-3,6,10,13-Tetrathiacyclotetradecan-1,8-diol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	oth	NaClO ₄	25°C	0.10M	U		K ₁ =9.71	1991BSb (75909)	441

By cyclic voltammetry on the Cu⁺⁺ complex.

 C10H20S4 L 14-Ane-S4 CAS 24194-61-4 (175)
 1,4,8,11-Tetrathiacyclotetradecane; cyclo(-(S.CH2.CH2)2.CH2.(S.CH2.CH2)2.CH2-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	NaClO4	25°C	0.10M	U		K1=12.11	1997DWa (76155)	442
Cu+	vlt	non-aq	25°C	100%	U		K1=4.20	1995ADa (76156)	443

Medium: MeCN; 0.10 M NaClO4

Cu+	oth	NaClO4	25°C	0.10M	U		K1=12.11	1991BSb (76157)	444
-----	-----	--------	------	-------	---	--	----------	-----------------	-----

By cyclic voltammetry on the Cu++ complex.

 C10H20S5 L CAS 36378-04-2 (2257)
 1,4,7,10,13-Pentathiacyclopentadecane; cyclo(-(S.CH2.CH2)5-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	oth	NaClO4	25°C	0.10M	U		K1=13.65	1991BSb (76163)	445

By cyclic voltammetry on the Cu++ complex.

 C10H21N04 L CAS 66943-05-3 (5818)
 1-Aza-4,7,10,13-tetraoxacyclopentadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	EMF	non-aq	25°C	100%	C		K1=1.76 B2= 2.65	1999THa (76183)	446

Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.

 C10H21NS3 L (6551)
 1,4,8-Trithia-11-azacyclotetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO4	25°C	0.10M	U		K(CuL+H) < 3.0	1992BHa (76192)	447

 C10H21NS4 L (6553)
 1,4,7,10-Tetrathia-13-azacyclopentadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO4	25°C	0.10M	U		K(CuL+H)=4.17	1992BHa (76195)	448

 C10H22N2O3 L Cryptand 2,1 CAS 31249-95-3 (835)
 4,7,13-Trioxa-1,10-diazacyclopentadecane (Trioxa(2,1)cryptand);

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

 Cu+ EMF non-aq 25°C 100% C K1=3.69 1999THa (76313) 449
 Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.

Cu+ EMF non-aq 25°C 100% U K1=6.91 1998HTb (76314) 450
 B(Cu2L)=8.40
 Medium: DMSO. Method: Cu(Hg)/Cu+ electrode

 C10H22N2S2 L (6550)
 1,11-Dithia-4,8-diazacyclotetradecane;

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

Cu+	vlt	NaClO4	25°C	0.10M	U			1992BHa (76351)	451
-----	-----	--------	------	-------	---	--	--	-----------------	-----

K(CuL+H) < 5.0

 C10H22N2S2 L Cis-14aneN2S2 CAS 87939-30-8 (788)
 1,4-Diaza-8,11-dithia-cyclotetradecane; cyclo(-(HN.CH2.CH2)2.CH2(S.CH2.CH2)CH2-)

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

Cu+	vlt	NaClO4	25°C	0.10M	U			1992BHa (76358)	452
-----	-----	--------	------	-------	---	--	--	-----------------	-----

K(CuL+H)=3.9
 K(CuHL+H)=2.9

Cu+	gl	oth/un	20°C	0.20M	C			1984BKa (76359)	453
-----	----	--------	------	-------	---	--	--	-----------------	-----

K1=13.39
 K(Cu+HL)=7.73
 Medium: 2% MeCN/H2O, 0.2 M Na2SO4

 C10H22N2S2 L Trans-14aneN2S2 CAS 91269-07-7 (789)
 1,9-Diaza-5,12-dithia-cyclotetradecane;

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

Cu+	gl	oth/un	20°C	0.20M	C			1984BKa (76366)	454
-----	----	--------	------	-------	---	--	--	-----------------	-----

K1=14.20
 K(Cu+HL)=9.46
 Medium: 2% MeCN/H2O, 0.2 M Na2SO4

 C10H22N2S3 L (6554)
 1,4,7-Trithia-10,13-diazacyclopentadecane;

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

Cu+	vlt	NaClO4	25°C	0.10M	U			1992BHa (76377)	455
-----	-----	--------	------	-------	---	--	--	-----------------	-----

K(CuL+H)=5.90

 C10H22S4 L (7358)
 2,6,9,13-Tetrathiatetradecane; CH3S(CH2)3S(CH2)2S(CH2)3SCH3

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

Cu+ sp NaClO4 25°C 0.10M U K1=13.00 1997DWa (76484) 456

C10H23N3 L (5969)
1,4,7-Triazacyclotridecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	gl	mixed	20°C	var	U				1987BKc (76491)	457
								K(Cu(CH3CN)+L)=7.56 K(Cu(CH3CN)+HL)=4.43		

Medium: 1-4% v/v MeCN/H2O, 0.2 M Na2SO4

C10H23N3 L CAS 54365-83-2 (269)
1,5,9-Triazacyclotridecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	gl	mixed	20°C	var	U				1987BKc (76494)	458
								K(Cu(CH3CN)+L)=8.14 K(Cu(CH3CN)+HL)=3.76		

Medium: 1-4% v/v MeCN/H2O, 0.2 M Na2SO4

C10H24N2S2 L CAS 7606-99-6 (792)
2,13-Dithia-6,9-diazatetradecane; (CH3.S.(CH2)3.NH.(CH2)2.NH.(CH3)3.S.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	gl	mixed	20°C	var	U				1986KKc (76595)	459
								K1=13.02 K(Cu+HL)=8.25 K(Cu(CH3CN)+H2L)=3.57		

Medium: 1-4% MeCN, 0.2 M Na2SO4

C11H9N3 L CAS 2659-57-5 (5482)
2-(Phenylazo)pyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	vlt	non-aq	25°C	100%	C				1998MDb (77444)	460
Method: cyclic voltammetry. Medium: MeOH, 0.001 Bu4NClO4. Metal is Cu(MeCN)4+. Data for many related arylazopyridines and arylazoimidazoles.										

Cu+	sp	non-aq	25°C	100%	U			K1=3.00 B2=6.08	1983DCa (77445)	461
Medium: MeCN										

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

Cu+ sp KCl 25°C 0.01M U K1=6.70 1970GMc (77531) 462

C11H22N4O4 H2L (6756)
1,4-Diazacycloheptane-N,N'-bis(N-methyl-acetohydroxamic acid);
C5H10N2(CH2.CO.N(OH)CH3)2

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

Cu+ vlt KNO3 25°C 0.10M C 1993SEb (79841) 463
B(CuHL)=19.9

Method: cyclic voltammetry

C11H22S4 L 15-Ane-S4 CAS 57704-75-3 (1745)
1,4,8,12-Tetrathiacyclopentadecane; cyclo(-S.CH2.CH2.(S.(CH2)3)3-)

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

Cu+ oth NaClO4 25°C 0.10M U K1=11.79 1991BSb (79882) 464
By cyclic voltammetry on the Cu++ complex.

C11H24S4 L Et2-TTU CAS 57704-77-5 (1748)
3,6,10,13-Tetrathiapentadecane; C2H5.S.CH2.CH2.S.(CH2)3.S.CH2.CH2.S.C2H5

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

Cu+ oth NaClO4 25°C 0.10M U K1=13.34 1991BSb (79916) 465
By cyclic voltammetry on the Cu++ complex.

C11H25N3 L CAS 236111-60-7 (7672)
N-[2-(Dimethylamino)ethyl]-N,N'-dimethyl-N'-2-propenyl-1,2-diaminoethane;

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

Cu+ gl NaClO4 25°C 0.15M U K1=10.52 1999NGa (79921) 466

C11H26N2S2 L (5955)
2,14-Dithia-6,10-diazapentadecane; CH3.S.(CH2)3.NH.(CH2)3.NH.(CH2)3.S.CH3

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

Cu+ gl mixed 20°C var U K1=12.56 1986KKc (79961) 467
K(Cu+HL)=8.28
K(Cu(CH3CN)+H2L)=3.48

Medium: 1-4% MeCN, 0.2 M Na2SO4

C12H6N2Cl2 L CAS 5394-23-0 (3964)
4,7-Dichloro-1,10-phenanthroline;

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

Cu+ EMF diox/w 25°C 50% U M B2=12.5 1961JWa (80089) 468
Medium: 50% dioxan, 0.3 M KNO3. $K(\text{Cu(II)L}_2 + \text{Cu(I)} = \text{Cu(I)L}_2 + \text{Cu(II)}) = 2.28$

C12H7N2Cl L CAS 7089-68-1 (3965)

2-Chloro-1,10-phenanthroline;

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

Cu+ EMF oth/un 25°C 0.30M U B2=14.6 1961JWa (80129) 469

Medium: K2SO4

C12H7N2Cl L CAS 4199-89-7 (2751)

5-Chloro-1,10-phenanthroline;

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

Cu+ EMF diox/w 25°C 50% U M B2=12.2 1961JWa (80142) 470

Medium: 50% dioxan, 0.3 M KNO3. $K(\text{Cu(II)L}_2 + \text{Cu(I)} = \text{Cu(I)L}_2 + \text{Cu(II)}) = 1.18$

C12H7N3O2 L CAS 4199-88-6 (449)

5-Nitro-1,10-phenanthroline;

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

Cu+ EMF diox/w 25°C 50% U M 1961JWa (80170) 471

Medium: 50% dioxan, 0.3 M KNO3. $K(\text{Cu(II)L}_2 + \text{Cu(I)} = \text{Cu(I)L}_2 + \text{Cu(II)}) = 2.15$

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

1,10-Phenanthroline;

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

Cu+ sp none 23°C 0.0 C K1=3.96 B2= 8.38 1995ZGa (80420) 472

Cu+ oth oth/un 25°C 0.30M U M B2=15.82 1961JWa (80421) 473

Method: platinum electrode. Medium: K2SO4. Equilibria with Cu++

C12H9N3 L CAS 54258-41-2 (3955)

5-Amino-1,10-phenanthroline;

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

Cu+ EMF diox/w 25°C 50% U M 1961JWa (80627) 474

Medium: 50% dioxan, 0.3 M KNO3. $K(\text{Cu(II)L}_2 + \text{Cu(I)} = \text{Cu(I)L}_2 + \text{Cu(II)}) = -0.03$

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

Cu+ EMF diox/w 25°C 50% U M 1961JWa (81009) 475
 Medium: 50% dioxan, 0.3 M KNO₃. $K(\text{Cu(II)L}_2 + \text{Cu(I)} = \text{Cu(I)L}_2 + \text{Cu(II)}) = -0.77$

C12H12N2 L CAS 1762-34-1 (3956)

5,5'-Dimethyl-2,2'-bipyridyl; CH₃.C₅H₃N.C₅H₃N.CH₃

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

Cu+		EMF diox/w	25°C	50%	U	M			1961JWa (81012)	476
-----	--	------------	------	-----	---	---	--	--	-----------------	-----

Medium: 50% dioxan, 0.3 M KNO ₃ . $K(\text{Cu(II)L}_2 + \text{Cu(I)} = \text{Cu(I)L}_2 + \text{Cu(II)}) = 0.10$										
--	--	--	--	--	--	--	--	--	--	--

C12H12N2 L CAS 4411-80-7 (3957)

6,6'-Dimethyl-2,2'-bipyridyl; CH₃.C₅H₃N.C₅H₃N.CH₃

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

Cu+		EMF non-aq	25°C	100%	C			K ₂ =6.9	1988MPa (81015)	477
-----	--	------------	------	------	---	--	--	---------------------	-----------------	-----

Medium: acetonitrile. Method: Cu electrode.										
---	--	--	--	--	--	--	--	--	--	--

Cu+		EMF diox/w	25°C	50%	U			B ₂ =15.8	1961JWa (81016)	478
-----	--	------------	------	-----	---	--	--	----------------------	-----------------	-----

Medium: 50% dioxan, 0.3 M KNO ₃										
--	--	--	--	--	--	--	--	--	--	--

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

Cu+	gl	mixed	25°C	1.1%	U				1966KZb (81658)	479
-----	----	-------	------	------	---	--	--	--	-----------------	-----

$K(\text{Cu} + 2\text{H}_2\text{L}) = 12.47$

$K(\text{CuHL} + \text{Cu}) = 6.18$

$K(\text{Cu}_2\text{L} + \text{H}) = 6.47$

Medium: 1.14% MeCN, 0.1 M NaClO ₄										
--	--	--	--	--	--	--	--	--	--	--

C12H20N2S2 L CAS 244791-98-8 (7675)

2-Pyridylmethylbis(2-methylthioethyl)amine;

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

Cu+	vlt	NaClO ₄	25°C	0.10M	M				1999ADb (82597)	480
-----	-----	--------------------	------	-------	---	--	--	--	-----------------	-----

K_{1eff}=15.36

pH<5.

C12H22N4S L CAS 237424-08-7 (3685)

17-Thia-3,6,9,12-tetraazabicyclo[12.2.1]heptadeca-14,16-diene;

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

Cu+	vlt	NaClO ₄	25°C	0.15M	M			K ₁ =9.1	1999ADc (82855)	481
-----	-----	--------------------	------	-------	---	--	--	---------------------	-----------------	-----

B(CuHL)=16.2

B(CuH-1L)=-0.08

BCu2H-2L)=-2.0

C12H24S4 L 16-Ane-S4 CAS 295-91-0 (1744)
1,5,9,13-Tetrathiacyclohexadecane; cyclo(-S.(CH2.CH2.CH2.S)3.(CH2)3-)

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

Cu+ oth NaCl04 25°C 0.10M U K1=12.00 1991BSb (83691) 482
By cyclic voltammetry on the Cu++ complex.

C12H25N05 L CAS 33941-15-0 (4939)
1,4,7,10,13-Pentaoxa-16-azacyclooctadecane;

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

Cu+ EMF non-aq 25°C 100% C K1=1.25 B2= 2.17 1999THa (83702) 483
Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.

Cu+ EMF non-aq 25°C 100% U K1=2.31 B2= 5.48 1998HTb (83703) 484
Medium: DMSO. Method: Cu(Hg)/Cu+ electrode

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

Cu+ EMF non-aq 25°C 100% C K1=3.52 1999THa (83828) 485
Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.

Cu+ EMF non-aq 25°C 100% U K1=2.97 B2= 6.09 1998HTb (83829) 486
Medium: DMSO. Method: Cu(Hg)/Cu+ electrode

Cu+ EMF non-aq 25°C 100% U K1=6.69 1998HTb (83830) 487
B(Cu2L)=8.30

Medium: DMSO. Method: Cu(Hg)/Cu+ electrode

C12H26N2S2 L Cis-16aneN2S2 CAS 88439-32-1 (790)
1,5-Diaza-9,13-dithia-cyclohexadecane; cyclo(-(NH.C3H6)2.(S.C3H6)2-)

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

Cu+ gl oth/un 20°C 0.20M C K1=14.35 1984BKa (83929) 488
Medium: 2% MeCN/H2O, 0.2 M Na2SO4

C12H26N2S2 L Trans-16aneN2S2 CAS 81566-53-8 (791)
1,9-Diaza-5,13-dithia-cyclohexadecane; cyclo(-(NH.C3H6.S.C3H6)2-)

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

Cu+ gl oth/un 20°C 0.20M C K1=13.95 1984BKa (83934) 489

$$K(\text{Cu}+\text{HL})=10.17$$

Medium: 2% MeCN/H₂O, 0.2 M Na₂SO₄

C₁₂H₂₇N L CAS 102-82-9 (1341)

Tributylamine; (C₄H₉)₃N

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

Cu+	EMF	non-aq	25°C	100%	C	I	K ₁ =<0.5	1999THa (84042)	490
-----	-----	--------	------	------	---	---	----------------------	-----------------	-----

Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.

Also data for medium: DMSO

C₁₂H₂₇NS₃ L (6619)

Tris(ethylthioethyl)amine; N(CH₂CH₂SCH₂CH₃)₃

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

Cu+	vlt	NaClO ₄	25°C	0.10M	M			1999ADb (84047)	491
-----	-----	--------------------	------	-------	---	--	--	-----------------	-----

$$K_{\text{leff}}=15.53$$

pH<5.

C₁₂H₃₀N₄ L (7251)

2,5,8,11-Tetramethyl-2,5,8,11-tetraazadodecane;

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

Cu+	gl	NaClO ₄	25°C	0.15M	U		K ₁ =11.0	1999NGa (84290)	492
-----	----	--------------------	------	-------	---	--	----------------------	-----------------	-----

Cu+	vlt	NaClO ₄	25°C	0.15M	C		K ₁ =11.0	1995GCa (84291)	493
-----	-----	--------------------	------	-------	---	--	----------------------	-----------------	-----

Method: cyclic voltammetry.

C₁₃H₁₀N₂ L CAS 3002-77-5 (3400)

2-Methyl-1,10-phenanthroline;

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

Cu+	EMF	oth/un	25°C	0.30M	U		B ₂ =16.95	1961JWa (84779)	494
-----	-----	--------	------	-------	---	--	-----------------------	-----------------	-----

Medium: K₂SO₄

C₁₃H₁₀N₂ L CAS 3003-78-6 (2752)

5-Methyl-1,10-phenanthroline;

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

Cu+	EMF	diox/w	25°C	50%	U	M		1961JWa (84808)	495
-----	-----	--------	------	-----	---	---	--	-----------------	-----

Medium: 50% dioxan, 0.3 M KNO₃. K(Cu(II)L₂+Cu(I)=Cu(I)L₂+Cu(II))=0.81

C₁₃H₂₂N₂S₂ L CAS 244791-99-9 (7677)

2-Pyridylethylbis(2-methylthioethyl)amine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO4	25°C	0.10M	M			1999ADb (86317)	496
							K1eff=15.76		

pH<5.

C13H32N4 L (7403)
2,5,9,12-Tetramethyl-2,5,9,12-tetraazatridecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO4	25°C	0.15M	C		K1=10.0	1995GCa (86578)	497
								Method: cyclic voltammetry.	

C14H10 L Tolan CAS 501-65-5 (6468)
Diphenylethyne, diphenylacetylene; C6H5.CC.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	mixed	?	1.6%	U			1992MKa (86876)	498
							K(Cu(phen)+L)=0.64		

Medium 1.56% v/v MeCN/acetone.

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
Cu+	sp	mixed	20°C	80%	C		B2=14.2	2003HZa (87127)	499
								Medium: 80% CH3CN/CH2Cl2, 0.10 M Bu4NClO4.	

Cu+	sp	non-aq	25°C	100%	U	I	K1=6.6 B2=12.3	1999MAa (87128)	500
								Medium: CH3CN, 0.1 M (C4H9)4NCF3SO3. Also data for medium: 80% (v/v) CH3CN/CH2Cl/H2O, 0.1 M (C4H9)4NCF3SO3, K1=6.3, K2=5.4.	

Cu+	EMF	oth/un	25°C	0.30M	U		B2=19.1	1961JWa (87129)	501
								Medium: K2SO4	

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
Cu+	EMF	diox/w	25°C	50%	U	M		1961JWa (87145)	502
								Medium: 50% dioxan, 0.3 M KNO3. K(Cu(II)L2+Cu(I)=Cu(I)L2+Cu(II))=-0.50	

C14H13N3O2 L (6229)
3-(2-Acetophenyl)-1-phenyltriazene-N-oxide; CH3.CO.C6H4.NH.N:N(O).C6H5

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

Cu+ sp alc/w 25°C 50% U K1=4.97 B2=9.76 1985SRd (87595) 503

C14H13O2P HL CAS 3064-56-0 (7013)
2-(Diphenylphosphino)-ethanoic acid; (C6H5)2P.CH2.COOH

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

Cu+ ISE NaClO4 25°C 0.10M U I K1=6.9 B2=12.21 1979PPc (87633) 504
B3 = 15.18
B4 = 17.2

Method:Cu elec. In 50% v/v dioxan/H2O: K1=7.27; B2=12.89; B3=16.89; B4=19.37

C14H16N2 L CAS 3052-78-6 (4035)
4,4'-Diethyl-2,2'-bipyridyl; CH3.CH2.C5H3N.C5H3N.CH2.CH3

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

Cu+ EMF diox/w 25°C 50% U M 1961JWa (87840) 505
Medium: 50% dioxan, 0.3 M KNO3. K(Cu(II)L2+Cu(I))=Cu(I)L2+Cu(II))=-0.58

C14H20S4 L (7091)
2,3-Benzo-1,4,8,11-tetrathiacyclotetradecane;

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

Cu+ vlt non-aq 25°C 100% U K1=5.43 1995ADa (88401) 506
Medium: MeCN; 0.10 M NaClO4

C14H24N2S2 L CAS 76641-07-1 (7676)
2-Pyridylmethylbis(2-ethylthioethyl)amine;

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

Cu+ vlt NaClO4 25°C 0.10M M 1999ADb (89981) 507
K1eff=15.00

pH<5.

C14H24N2S2 L CAS 122-36-1 (2822)
N,N'-Dicyclohexyl-dithiooxamide; C6H11.NH.CS.CS.NH.C6H11

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

Cu+ sp none 25°C 0.0 U K1=8.78 1976AMc (89984) 508

C14H26N4S CAS 237424-09-8 (4804)
9-Thia-3,7,10,14-tetraazabicyclo[14.2.1]nonadeca-16,18-diene; L

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

Cu+ vlt NaClO4 25°C 0.15M C K1=10.7 1999ADc (90267) 509
B(CuHL)=18.7

Method: cyclic voltammetry.

C14H26S4 L (7092)
2,3-cis-Cyclohexano-1,4,8,11-tetrathiacyclotetradecane;

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

Cu+	vlt	non-aq	25°C	100%	U		K1=4.96	1995ADa (90278)	510
-----	-----	--------	------	------	---	--	---------	-----------------	-----

Medium: MeCN; 0.10 M NaClO4. For trans isomer: K1=5.43

C14H27N5S L CAS 237424-10-1 (3762)
20-Thia-3,6,9,12,15-pentaazabicyclo[15.2.1]eicosa-17,19-diene;

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

Cu+	vlt	NaClO4	25°C	0.15M	C		K1=10.9 B(CuHL)=19.5 B(Cu2H-1L)=5.9 B(Cu2H-2L)=-4.6	1999ADc (90291)	511
-----	-----	--------	------	-------	---	--	--	-----------------	-----

Method: cyclic voltammetry.

C14H28N2O4 L Cryptand 2,1,1 CAS 31250-06-3 (836)
1,10-Diaza-4,7,13,18-tetraoxabicyclo[8,5,5]eicosane (2,1,1);

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

Cu+	EMF	non-aq	25°C	100%	C		K1=5.58	1999THa (90358)	512
-----	-----	--------	------	------	---	--	---------	-----------------	-----

Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.

Cu+	EMF	non-aq	25°C	100%	U		K1=6.20	1998HTb (90359)	513
-----	-----	--------	------	------	---	--	---------	-----------------	-----

Medium: DMSO. Method: Cu(Hg)/Cu+ electrode

C14H28S4 L (7364)
cis-1,2-Bis((3-methylthiopropyl)thio)cyclohexane

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

Cu+	sp	NaClO4	25°C	0.10M	U		K1=12.98	1997Dwa (90548)	514
-----	----	--------	------	-------	---	--	----------	-----------------	-----

For trans-L, K1=13.80

C14H30N2O5 L CAS 23978-10-1 (2955)
1,10-Diaza-4,7,13,16,19-pentaoxacycloheneicosane;

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

Cu+	EMF	non-aq	25°C	100%	C		K1=3.73	1999THa (90612)	515
-----	-----	--------	------	------	---	--	---------	-----------------	-----

Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.

Cu+ EMF non-aq 25°C 100% U K1=6.73 1998HTb (90613) 516
Medium: DMSO. Method: Cu(Hg)/Cu+ electrode

C15H11N3 L CAS 1148-79-4 (488)
2,2':6'2"-Terpyridine; C5H4N.C5H3N.C5H4N

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

Cu+ EMF oth/un 25°C 0.30M U K1=9.3 1961JWa (91153) 517
Medium: K2SO4

C15H11N3O HL PAN CAS 85-85-8 (572)
1-(2-Pyridylazo)-2-naphthol; C5H4N.N:N.C10H6.OH

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

Cu+ sp KCl 25°C 0.01M U K1=6.30 1970GMc (91209) 518

C15H19N3S L CAS 244792-01-6 (7679)
Bis(2-pyridylmethyl)-2-methylthioethylamine;

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

Cu+ vlt NaClO4 25°C 0.10M M 1999ADb (92135) 519
K1eff=14.95

pH<5.

C15H26N2S2 L CAS 244792-00-5 (7678)
2-Pyridylethylbis(2-ethylthioethyl)amine;

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

Cu+ vlt NaClO4 25°C 0.10M M 1999ADb (92413) 520
K1eff=15.94

pH<5.

C15H37N5 L CAS 3803-11-2 (1798)
2,5,8,11,14-Pentamethyl-2,5,8,11,14-pentaazapentadecane;

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

Cu+ vlt NaClO4 25°C 0.15M U K1=10.9 1996Gcb (92626) 521

C16H13N2Cl L CAS 35857-75-1 (5154)
2-(4-Chlorophenyliminomethyl)quinoline;

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

Cu+ sp oth/un ? ? U 1973GRa (93161) 522
K(CuCl+2L)=8.14

 C16H14N2 L CAS 36954-40-6 (5142)
 2-(Phenyliminomethyl)quinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	sp	oth/un	?	?	U				1973GRa (93403)	523
									K(CuCl+2L)=10.38	

 C16H14N2O HL (5155)
 2-(4-Hydroxyphenyliminomethyl)quinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	sp	oth/un	?	?	U				1973GRa (93416)	524
									K(CuCl+2HL)=8.18	

 C16H16N2 L CAS 1660-93-1 (4073)
 3,5,6,8-Tetramethyl-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	EMF	diox/w	25°C	50%	U	M			1961JWa (93659)	525
									Medium: 50% dioxan, 0.3 M KNO3. K(Cu(II)L2+Cu(I)=Cu(I)L2+Cu(II))=0.30	

 C16H16N2O4 L CAS 1762-42-1 (4083)
 2,2'-Bipyridyl-4,4'-bis(carboxylic acid ethyl ester)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	EMF	diox/w	25°C	50%	U	M	B2=11.4		1961JWa (93689)	526
									Medium: 50% dioxan, 0.3 M KNO3. K(Cu(II)L2+Cu(I)=Cu(I)L2+Cu(II))=1.80	

 C16H16N2O4 H2L CAS 1762-46-5 (4084)
 Diethyl 2,2'-bipyridyl-5,5'-dicarboxylate; (CH3.CH2O.CO.C5H3N.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	EMF	diox/w	25°C	50%	U	M			1961JWa (93691)	527
									Medium: 50% dioxan, 0.3 M KNO3. K(Cu(II)L2+Cu(I)=Cu(I)L2+Cu(II))=2.17	

 C16H18N2O3 HL (5564)
 2-(2-Acetylphenylhydrazon)-5,5-dimethyl-1,3-cyclohexanedione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu+	gl	diox/w	25°C	75%	U		K1=12.20 B2=20.98		1990ASb (93773)	528

 C16H20N2 L (4075)
 5,5'-Diethyl-4,4'-dimethyl-2,2'-bipyridyl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	EMF	diox/w	25°C	50%	U	M		1961JWa (93964)	529
Medium: 50% dioxan, 0.3 M KNO ₃ . K(Cu(II)L ₂ +Cu(I)=Cu(I)L ₂ +Cu(II))=-0.67									

C16H ₂₁ N ₃ S		L					CAS 244792-02-7	(7680)	
Bis(2-pyridylmethyl)-2-ethylthioethylamine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO ₄	25°C	0.10M	M			1999ADb (94118)	530
							K _{1eff} =14.99		

pH<5.

C16H ₃₂ N ₂ O ₅		L					Cryptand 2,2,1	CAS 31364-42-8	(837)
1,10-Diaza-4,7,13,16,21-pentaoxabicyclo[8,8,5]tricosane (2,2,1);									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	EMF	non-aq	25°C	100%	C		K ₁ =2.97 B ₂ = 3.58	1999THa (95197)	531
Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.									

Cu+	EMF	non-aq	25°C	100%	U		K ₁ =5.22	1998HTb (95198)	532
Medium: DMSO. Method: Cu(Hg)/Cu+ electrode									

C17H ₁₄ N ₂ O ₂		HL					(5211)		
2-(4-Carboxyphenyliminomethyl)quinoline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	oth/un	?	?	U			1973GRa (95850)	533
							K(CuCl+2HL)=8.40		

C17H ₁₅ N ₂ Cl		L					(5213)		
4-Chloro-2-(4-tolyliminomethyl)quinoline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	oth/un	?	?	U			1973GRa (95987)	534
							K(CuCl+2L)=8.07		

C17H ₂₃ N ₃ S		L					CAS 210816-20-9	(7681)	
Bis(2-pyridylethyl)-2-methylthioethylamine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO ₄	25°C	0.10M	M			1999ADb (96414)	535
							K _{1eff} =14.63		

pH<5.

C17H29N5 L (7736)
N,N-Bis(2-ethyl-5-methylimidazol-4-ylmethyl)aminopropane;

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

Cu+ sp non-aq 25°C 100% C 2000BBd (96582) 536
K(CuL+NO2)=1.48

Medium: methanol.

C18H12N2 L Cuproin CAS 119-91-5 (2518)
2,2'-Biquinoline; C9H6N.NH6C9

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

Cu+ dis NaCl 25°C 0.10M U 1971GGb (96852) 537
K(CuCl+2L)=11.98

Cu+ EMF oth/un 25°C 0.30M U B2=16.5 1961JWa (96853) 538
Medium: K2SO4

C18H12N2 L CAS 6135-89-5 (3498)
5-Phenyl-1,10-phenanthroline;

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

Cu+ EMF diox/w 25°C 50% U M 1961JWa (96862) 539
Medium: 50% dioxan, 0.3 M KNO3. K(Cu(II)L2+Cu(I)=Cu(I)L2+Cu(II))=0.68

C18H15As L CAS 603-32-7 (2653)
Triphenylarsine; (C6H5)3As

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

Cu+ ISE non-aq 25°C 100% C H K1=2.65 B2=4.05 1978ABb (96970) 540
Medium: DMSO, 0.1 M NH4ClO4; DH(K1)=-23, DH(K2)=-32 kJ mol⁻¹

C18H15O3PS HL CAS 16704-71-5 (3365)
3-Diphenylphosphino-benzene sulfonic acid;

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

Cu+ ISE oth/un 25°C 1.0M U K1=5.76 B2=11.21 1968GBa (97107) 541
K3=4.91
K4=3.80

Medium: LiCl

C18H15P L CAS 603-35-0 (621)
Triphenylphosphine; (C6H5)3P

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	ISE	non-aq	25°C	100%	C H		K1=6.57 B2=10.44 K3=1.40	1978ABb (97134)	542
Medium: DMSO, 0.1 M NH4ClO4; DH(K1)=-47, DH(K2)=-41, DH(K3)=25 kJ mol-1									

C18H15Sb		L					CAS 603-36-1	(2654)	
Triphenylantimony; (C6H5)3Sb									
Cu+	ISE	non-aq	25°C	100%	C H		K1=1.25 B2=1.79	1978ABb (97158)	543
Medium: DMSO, 0.1 M NH4ClO4; DH(K1)=-11, DH(K2)=-25 kJ mol-1									

C18H16N2		L					(5230)		
8-Methyl-2-(2-tolyliminomethyl)quinoline;									
Cu+	sp	oth/un	?	?	U		K(CuCl+2L)=5.13	1973GRa (97160)	544

C18H17N3		L					CAS 84922-32-7	(5232)	
2-(4-Dimethylaminophenyliminomethyl)quinoline;									
Cu+	sp	oth/un	?	?	U		K(CuCl+2L)=4.94	1973GRa (97219)	545

C18H18N4		L					CAS 16858-01-8	(1528)	
Tris(2-pyridylmethyl)amine; (C5H4NCH2)3N									
Cu+	vlt	NaClO4	25°C	0.10M	M		K1eff=12.9	1999ADb (97253)	546
pH<5.									
Cu+	oth	non-aq	25°C	100%	C T HM		K(CuL+O2)=-0.47 K(CuL+CuL(O2))=0.18	1995LWb (97254)	547
Method: manometry. Medium: EtCN. DH(CuL+O2)=-34 kJ mol-1, DS(CuL+O2)=-123 J K-1 mol-1. For 5-acetyl deriv., K(CuL+O2)=-1.1, DH(CuL+O2)=-32, DS=-127.									
Cu+	kin	oth/un	25°C	0.0	U T HM		K(CuLA+CuLB=(CuL)2B+A)=2.95	1991KWa (97255)	548
-91 to 25 C. K(CuLA+CuLB=(CuL)2B+A)=8.36(-91C). A:CH3CN or C2H5CN. B:O2. DH=-49.1 kJ mol-1; DS=-109.									

C18H19N5OS L (6139)
5,7-Dimethyl-4a,7a-diphenyloctahydroimidazo(4,5-e)triazas-6-one-3-thione;

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

Cu+ ISE mixed 25°C 82% U K1=9.51 B2=11.42 1980TBa (97319) 549
Medium: 82% v/v DMFA/H2O; 0.2 M KNO3

C18H25N3S L CAS 244792-03-8 (7682)
Bis(2-pyridylethyl)-2-ethylthioethylamine;

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

Cu+ vlt NaClO4 25°C 0.10M M 1999ADb (97665) 550
K1eff=14.97
pH<5.

C18H26S4 L (7093)
2,3-Benzo-9,10-cis-cyclohexano-1,4,8,11-tetrathiacyclotetradecane;

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

Cu+ vlt non-aq 25°C 100% U K1=6.18 1995ADa (97743) 551
Medium: MeCN; 0.10 M NaClO4. For trans isomer: K1=5.48

C18H32S4 L (7094)
syn-2,3,9,10-cis,cis-Dicyclohexano-1,4,8,11-tetrathiacyclotetradecane;

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

Cu+ vlt non-aq 25°C 100% U K1=>6 1995ADa (98283) 552
Medium: MeCN; 0.10 M NaClO4. For anti isomer: K1=5.29. Also data for meso

C18H36N2O6 L Cryptand 2,2,2 CAS 23978-09-8 (514)
1,10-Diaza-4,7,13,16,21,24-hexaoxabicyclo[8.8.8]hexacosane;

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

Cu+ EMF non-aq 25°C 100% C K1=1.85 B2= 3.10 1999THa (98559) 553
Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.

Cu+ EMF non-aq 25°C 100% U K1=4.10 1998HTb (98560) 554
Medium: DMSO. Method: Cu(Hg)/Cu+ electrode

Cu+ ISE non-aq 25°C 100% U K1=1.90 1993LMa (98561) 555
Medium: MeCN, 0.1 M R4NX. Also data for MeCN-DMSO mixtures. In DMSO: K1=4.03

C18H44N6 L (7252)
2,5,8,11,14,17-Hexamethyl-2,5,8,11,14,17-hexaazaooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	NaClO4	25°C	0.15M	U		K1=10.5	1996Gcb (98954)	556

C19H14N2O		L					CAS 142942-21-0	(7661)	
2-(p-Anisyl)-1,10-phenanthroline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	non-aq	25°C	100%	U I		K1=5.3 B2=11.3	1999MAa (99067)	557
Medium: CH3CN, 0.1 M (C4H9)4NCF3SO3. Also data for medium: 80% (v/v)									
CH3CN/CH2Cl/H2O, 0.1 M (C4H9)4NCF3SO3, K1=5.5, K2=5.7.									

C19H23N3S2		L					(7112)		
2,6-Bis(2-(thiophen-2-ylmethylimino)ethyl)pyridine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	nmr	non-aq	25°C	100%	U		B2=8.88 B(Cu2L2)=13.15	1995BCa (99337)	558
Medium: CD3CN.									

C20H16N2O		L					CAS 142942-22-1	(7662)	
2-(p-Anisyl)-9-methyl-1,10-phenanthroline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	non-aq	25°C	100%	U I		K1=5.0 B2=10.7	1999MAa (99763)	559
Medium: CH3CN, 0.1 M (C4H9)4NCF3SO3. Also data for medium: 80% (v/v)									
CH3CN/CH2Cl/H2O, 0.1 M (C4H9)4NCF3SO3, K1=4.9, K2=5.5.									

C21H24N4		L					(7684)		
Tris(2-pyridylethyl)amine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	NaClO4	25°C	0.10M	M		K1eff=15.8	1999ADb (101251)	560
pH<5									

C22H16N2		L					CAS 6153-92-0	(4152)	
4,4'-Diphenyl-2,2'-bipyridyl									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	EMF	diox/w	25°C	50%	U M			1961JWa (101524)	561
Medium: 50% dioxan, 0.3 M KNO3. K(Cu(II)L2+Cu(I)=Cu(I)L2+Cu(II))=0.30									

C22H24N2S4		L					CAS 172161-13-6	(8645)	
alpha,alpha-[1,2-Ethanediy]bis(iminomethylidyne)]bis-benzeneethane(dithioic) acid,									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	vlt	non-aq	25°C	100%	C		K1=24.4	1999BGb (101907)	562
Method: cyclic voltammetry. Medium: MeCN, 0.10 M Bu4NPF6.									

C22H36N2O6		L		Bz-Cryptand	222	CAS	31250-18-7 (2269)		
5,6-Benzo-4,7,13,16,21,24-hexaoxa-1,10-diazabicyclo[8:8:8]hexacosa-5-ene;									
Cu+	EMF	non-aq	25°C	100%	C		K1=1.55 B2= 2.39	1999THa (102272)	563
Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.									
Cu+	EMF	non-aq	25°C	100%	U		K1=3.94 B(Cu2L)=5.80	1998HTb (102273)	564
Medium: DMSO. Method: Cu(Hg)/Cu+ electrode									

C23H18N2		L					(5322)		
4-Phenyl-2-(4-tolyliminomethyl)quinoline;									
Cu+	sp	oth/un	?	?	U		K(CuCl+2L)=8.17	1973GRa (102583)	565

C24H21N3		L					(5328)		
2-(4-Dimethylaminophenyliminomethyl)-4-phenylquinoline;									
Cu+	sp	oth/un	?	?	U		K(CuCl+2L)=10.37	1973GRa (102922)	566

C25H28N4O10		L					CAS 752-13-6 (2940)		
Tetraacetylriboflavine;									
Cu+	nmr	non-aq	38°C	100%	U		K1=3.7 B2=4.29	1975LHa (103675)	567
In acetone. B2 measured by ESR at 38 C, K1 by spectrophotometry at 25 C									

C26H20N2O2		L					CAS 89333-97-1 (7663)		
2,9-Di(p-anisyl)-1,10-phenanthroline;									
Cu+	sp	non-aq	25°C	100%	U I		K1=4.7 B2=10.7	1999MAa (103854)	568
Medium: CH3CN, 0.1 M (C4H9)4NCF3SO3. Also data for medium: 80% (v/v)									

CH3CN/CH2Cl/H2O, 0.1 M (C4H9)4NCF3SO3, K1=4.8, K2=6.4.

C26H24N2 L CAS 1762-39-6 (4167)

4,4'-Bis(phenylethyl)-2,2'-bipyridyl

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

Cu+ EMF diox/w 25°C 50% U M 1961JWa (103894) 569

Medium: 50% dioxan, 0.3 M KNO3. $K(\text{Cu(II)L}_2 + \text{Cu(I)} = \text{Cu(I)L}_2 + \text{Cu(II)}) = -0.10$

C26H36N2O6 L DiBzCryptand222 (746)

5,6,14,15-Dibenzo-4,7,13,16,21,24-hexaoxa-1,10-diazabicyclo[8.8.8]hexacosan-5,14-diene;

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

Cu+ EMF non-aq 25°C 100% C K1=1.09 B2= 2.47 1999THa (104131) 570

Medium: acetonitrile. Method: Cu(Hg)/Cu+ electrode.

Cu+ EMF non-aq 25°C 100% U K1=3.59 1998HTb (104132) 571

B(Cu2L)=5.10

Medium: DMSO. Method: Cu(Hg)/Cu+ electrode

C30H36N8O3 Furan-cryptand CAS 121954-37-8 (7451)

39,40,41-Trioxa-1,4,11,14,17,24,29,36-octaazapentacyclo[12.12.12.1.1.1]henLetetracontanadodecane;

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

Cu+ sp non-aq 25°C 100% U K1=7.1 B2=12.60 1996AAb (105253) 572

Medium: MeCN

tacyclo[12.12.12.1(6,9).1(19,22).1(31,34)]hentetetraconta-4,6,8....dodecaene

C31H38N6 L CAS 88917-40-2 (7711)

N,N,N',N'-Tetrakis[2-(2-pyridyl)ethyl]-1,3-diaminopropane;

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

Cu+ kin non-aq 25°C 100% C T H 2000LKa (105540) 573

$K(\text{Cu}_2\text{LA}_2 + \text{O}_2 = \text{Cu}_2\text{LO}_2 + 2\text{A}) = -0.80$

Medium: CH2Cl2. A=MeCN. DH=-84 kJ mol⁻¹, DS=-297 J K⁻¹ mol⁻¹.

At -90 C, K=8.48, at -50 C, K=4.18.

C32H22N2O6S2 H2L CAS 29294-38-0 (4174)

3,3'-Dimethylene-4,4'-diphenyl-2,2'-biquinolylidysulfonic acid;

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

Cu+ EMF KNO3 25°C 0.10M U B2=18.4 1967UHa (105565) 574

C32H22N4 L CAS 16291-44-4 (8171)
2,2'-Bis(6-(2,2'-bipyridyl))biphenyl;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+		EMF non-aq	25°C	100%	C		K1=6.9	1988MPa (105566)	575

Medium: acetonitrile. Method: Cu electrode.

C32H40N6 L CAS 98218-51-0 (7712)
N,N,N',N'-Tetrakis[2-(2-pyridyl)ethyl]-1,4-diaminobutane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+		kin non-aq	25°C	100%	C T H			2000LKa (105726)	576

K(Cu2LA2+O2=Cu2LO2+2A)=0.62
Medium: CH2Cl2. A=MeCN. DH=-84 kJ mol⁻¹, DS=-270 J K⁻¹ mol⁻¹.
At -90 C, K=9.90, at -50 C, K=5.57.

C33H39N11 L Pyr-cryptand CAS 141258-00-6 (7452)
1,4,12,15,18,26,31,39,42,43,44-Undecaazapentacyclo[13.13.13.1.1.1]tetratetetraconta
pentadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+		sp non-aq	25°C	100%	U		K1=4.77 B2= 8.60	1996AAb (105917)	577

Medium: CH3CN
.13.1(6,10).1(20,24).1(33,37)]tetratetetraconta-4-6-8-10(44),11...pentadecaene

C33H42N6 L CAS 98218-52-1 (7713)
N,N,N',N'-Tetrakis[2-(2-pyridyl)ethyl]-1,5-diaminopentane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+		kin non-aq	25°C	100%	C T H			2000LKa (105931)	578

K(Cu2LA2+O2=Cu2LO2+2A)=1.76
Medium: CH2Cl2. A=MeCN. DH=-81 kJ mol⁻¹, DS=-238 J K⁻¹ mol⁻¹.
At -90 C, K=10.70, at -50 C, K=6.54.

C34H26N4O4Fe L CAS 212954-07-9 (8318)
1,1-Bis(2,2'-bipyridin-6-ylmethoxycarbonyl)ferrocene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+		sp mixed	20°C	80%	C M		K1=10.6 B2=16.70 B(Cu2L2)=22.6 B(CuAL)=10.1	2003HZa (106003)	579

Medium: 80% CH3CN/CH2Cl2, 0.10 M Bu4NClO4.
A is 2,9-dimethyl-1,10-phenanthroline.

C36H42N8 L Xylyl-cryptand CAS 172881-87-7 (7456)

1,4,12,15,18,26,31,39-Octaazapentacyclo[13.13.13.1.1.1]tetratatetracontadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	sp	non-aq	25°C	100%	U		B(Cu ₂ L)=8.65	1996AAd (106317)	580

Medium: CH₃CN

C36H62O11 HL Monensin CAS 17090-79-8 (737)
Monensin, 1,6-dioxaspiro[4,5]decane derivative;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	con	non-aq	25°C	100%	C		K ₁ <1	1997PBb (106499)	581

Medium: acetonitrile. Additional method: potentiometry with ISE.

C38H38N8 L CAS 172696-99-0 (8685)
5,5'-(1,2-Ethanediy1)bis[N,N-bis(2-pyridinylmethyl)-2-pyridinemethanamine];

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	oth	non-aq	25°C	100%	C T HM		K(Cu ₂ L+O ₂)=-0.57 K(Cu ₂ L(O ₂)+O ₂)=2.0	1995LWb (106656)	582

Method: manometry. Medium: EtCN. DH(Cu₂L+O₂)=-35.3 kJ mol⁻¹, DS(Cu₂L+O₂)=-129 J K⁻¹ mol⁻¹. DH(Cu₂L(O₂)+O₂)=0.5, DS(Cu₂L(O₂)+O₂)=40. Data -50, -90 C

C38H38N10 L CAS 153776-68-2 (7947)
[N,N'-Bis(2'-benzimidazolyl-methyl)amino]-trans-cyclohexane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+	oth	non-aq	20°C	100%	U T H		K(Cu ₂ L+O ₂ =Cu ₂ L(O ₂))=10.95	1995LSa (106657)	583

Method: manometric. Medium:DMF. Data for 10-37 C. DH=-45.4 kJ mol⁻¹.
Also data for tetrakis(1-methyl, 1-butyl and phenylmethyl) derivatives.

REFERENCES

- 2003HZa A Harriman,R Ziessel,J-C Moutet; Phys.Chem.Chem.Phys.,5,1593 (2003)
- 2003MSa B Mountain,T Seward; Geochim.Cosmo.Acta,67,3005 (2003)
- 2002KJa P Kamau,R Jordan; Inorg.Chem.,41,884 (2002)
- 2002LBa W Liu,J Brugger,D McPhail,L Spiccia; Geochim.Cosmo.Acta,66,3615 (2002)
- 2001CBb M Cvetkovic,S Batten,K Murray; Inorg.Chim.Acta,324,131 (2001)
- 2001KJa P Kamau,R Jordan; Inorg.Chem.,40,3879 (2001)
- 2001KLB A Krezel,W Lesniak,P Mlynarz,W Bal; J.Inorg.Biochem.,84,77 (2001)
- 2001LMA W Liu,D McPhail,J Brugger; Geochim.Cosmo.Acta,65,2937 (2001)
- 2000BBd M Beretta,E Bouwman,L Casella; Inorg.Chim.Acta,310,41 (2000)
- 2000CHb M Clarke,G Helz; Environ.Sci.Technol.,34,1477 (2000)
- 2000LKa H-C Liang,K Karlin,R Dyson; Inorg.Chem.,39,5884 (2000)

- 2000SSd S Singh, R Singh, P Babbar, U Singh; *Transition Met. Chem.*, 25, 9 (2000)
- 1999ADb E Ambundo, M Deydier, D Rorabacher; *Inorg. Chem.*, 38, 4233 (1999)
- 1999ADc J Aguilar, P Diaz, A Domenech; *J. Chem. Soc., Perkin Trans. II*, 1159 (1999)
- 1999AVb R Al-Farawati, C Van den Berg; *Marine Chem.*, 63, 331 (1999)
- 1999BGB E Benoist, J Gustin, P Blanchard, M Jubault; *Transition Met. Chem.*, 24, 42 (1999)
- 1999CTa L Ciavatta, G de Tommaso, M Iuliano; *Ann. Chim. (Rome)*, 89, 837 (1999)
- 1999MAa M Meyer, A Albrecht-Gary; *Inorg. Chem.*, 38, 2279 (1999)
- 1999MSb B Mountain, T Seward; *Geochim. Cosmo. Acta*, 63, 11 (1999)
- 1999NGa N Navon, G Golub, D Meyerstein; *Inorg. Chem.*, 38, 3484 (1999)
- 1999SBa M Saphier, A Burg, D Meyerstein; *J. Chem. Soc., Dalton Trans.*, 1845 (1999)
- 1999THa A Thaler, N Heidari, H Schneider; *Inorg. Chim. Acta*, 286, 160 (1999)
- 1999TLa L Tomaszewski, G Lagger, H Girault; *Anal. Chem. (USA)*, 71, 837 (1999)
- 1998AEa J Alia, H Edwards, F Garcia-Navarro; *J. Chem. Soc., Faraday Trans.*, 94, 1249 (1998)
- 1998CIa L Ciavatta, M Iuliano; *Ann. Chim. (Rome)*, 88, 71 (1998)
- 1998HTb N Heidari, A Thaler, H Schneider; *Inorg. Chim. Acta*, 279, 186 (1998)
- 1998MDb T Misra, D Das, C Sinha; *Indian J. Chem.*, 37A, 739 (1998)
- 1998XGa Z Xiao, C Gammons, A Williams-Jones; *Geochim. Cosmo. Acta*, 62, 2949 (1998)
- 1997CIb L Ciavatta, M Iuliano; *Ann. Chim. (Rome)*, 87, 583 (1997)
- 1997Dwa B Dunn, P Wijetunge, J Vyvyan et al; *Inorg. Chem.*, 36, 4484 (1997)
- 1997Koa M Kodama; *Bull. Chem. Soc. Jpn.*, 70, 1361 (1997)
- 1997PBb Y Pointud, C Bernard, J Juillard; *J. Solution Chem.*, 26, 479 (1997)
- 1997SJa S Sjöberg; *Pure & Appl. Chem.*, 69, 1549 (1997)
- 1997TMa L-C Tran-Ho, P May, G Hefter; *J. Inorg. Biochem.*, 68, 225 (1997)
- 1996AAb R Abidi, F Arnaud-Neu, M Drew, J Nelson; *J. Chem. Soc., Perkin Trans. II*, 2747 (1996)
- 1996AAa R Abidi, F Arnaud-Neu, M Drew, J Nelson; *J. Chem. Soc., Perkin Trans. II*, 2747 (1996)
- 1996Gcb G Golub, H Cohen, P Paoletti, A Bencini; *J. Chem. Soc., Dalton Trans.*, 2055 (1996)
- 1996SMc J Solis, P May, G Hefter; *J. Chem. Soc., Faraday Trans.*, 92, 641 (1996)
- 1995Ada L Aronne, B Dunn, J Vyvyan et al; *Inorg. Chem.*, 34, 357 (1995)
- 1995BCa C Beguin, P Chautemps, A el Marzouki et al; *J. Chem. Soc., Dalton Trans.*, 1939 (1995)
- 1995GCa G Golub, H Cohen, P Paoletti, D Meyerstein; *J. Am. Chem. Soc.*, 117, 8353 (1995)
- 1995LSa X-Y Li, H-J Sun, D-F Sun; *Acta Chimica Sinica*, 53, 336 (1995)
- 1995LWb D Lee, N Wei, K Karlin, A Zuberbühler; *J. Am. Chem. Soc.*, 117, 12498 (1995)
- 1995SHb J Solis, G Hefter, P May; *Australian J. Chem.*, 48, 1283 (1995)
- 1995ZGa W Zamudio, A Garcia, R Baraona; *Transition Met. Chem.*, 20, 518 (1995)
- 1994KNa A Kumbhar, S Narasimhan, P Mathur; *Anal. Chim. Acta*, 294, 103 (1994)
- 1994KNb K Karlin, M Nasir, B Cohen et al; *J. Am. Chem. Soc.*, 116, 1324 (1994)
- 1994MGd G Mukherjee, T Ghosh; *J. Indian Chem. Soc.*, 71, 249 (1994)
- 1994THa R Thompson, G Helz; *Geochim. Cosmo. Acta*, 58, 2971 (1994)
- 1994ZMa J-Z Zhang, F Millero; *Anal. Chim. Acta*, 284, 497 (1994)
- 1993CIb L Ciavatta, M Iuliano, R Porto; *Ann. Chim. (Rome)*, 83, 39 (1993)
- 1993HMc G Hefter, P May, P Sipos; *J. Chem. Soc., Chem. Comm.*, 1704 (1993)
- 1993Kwa K Karlin, N Wei et al; *J. Am. Chem. Soc.*, 115, 9506 (1993)
- 1993LMa A Lewandowski, J Malinska; *J. Chem. Soc., Faraday Trans.*, 89, 2015 (1993)
- 1993SEb M Santos, M Esteves, M Candida et al; *Inorg. Chim. Acta*, 214, 47 (1993)

1993WSb K Wikel, M dos Santos, J Osteryoung; *Electrochim. Acta*, 38, 1555 (1993)
 1992AGc M Aplincourt, C Gerard et al; *J. Chem. Res. (S)*, 164 (1992)
 1992BHa M Bernardo, M Heeg et al; *Inorg. Chem.*, 31, 191 (1992)
 1992MKa M Munakata, S Kitagawa, I Kawada et al; *J. Chem. Soc., Dalton Trans.*, 2225 (1992)
 1991BSb M Bernardo, R Schroeder et al; *Inorg. Chem.*, 30, 1241 (1991)
 1991Kwa K Karlin, N Wei et al; *J. Am. Chem. Soc.*, 113, 5868 (1991)
 1990ASb M A-Moez, S Stefan et al; *Can. J. Chem.*, 68, 774 (1990)
 1990BSd F Belski, B Shcherbakov et al.; *Izv. Akad. Nauk USSR*, 917 (823) (1990)
 1990DKa D Dyrssen, K Kremling; *Marine Chem.*, 30, 193 (1990)
 1990SGa K Stevenson, M Grush, K Kurtz; *Inorg. Chem.*, 29, 3150 (1990)
 1990SMc V Sharma, F Millero; *J. Solution Chem.*, 19, 375 (1990)
 1989KKe E Kimura, T Koike, M Kodama, D Meyerstein; *Inorg. Chem.*, 28, 2998 (1989)
 1988LEc A Lewandowski; *J. Chem. Soc., Faraday Trans. I*, 84, 4013 (1988)
 1988LIa S Licht; *J. Electrochem. Soc.*, 135, 2971 (1988)
 1988MPa E Muller, C Piguet, G Bernardinelli; *Inorg. Chem.*, 27, 849 (1988)
 1988SBc M Shoonen, H Barnes; *Geochim. Cosmo. Acta*, 52, 649 (1988)
 1988SCa M Shoukry, B Cheesman, D Rabenstein; *Can. J. Chem.*, 66, 3184 (1988)
 1988SMA V Sharma, F Millero; *Inorg. Chem.*, 27, 3256 (1988)
 1987BKc M Briellmann, S Kaderli et al; *Helv. Chim. Acta*, 70, 680 (1987)
 1987DAa M Dachraoui; *Bull. Soc. Chim. Fr.*, II, 755 (1987)
 1987FLa J Fritz, E Luzik; *J. Solution Chem.*, 16, 79 (1987)
 1987JPa M Johnsson, I Persson, R Portanova; *Inorg. Chim. Acta*, 127, 35 (1987)
 1986AIb S Ahrland, S Ishiguro et al; *Acta Chem. Scand.*, A40, 418 (1986)
 1986BJa J Bjerrum; *Acta Chem. Scand.*, A40, 233 (1986)
 1986KGa S Krzewska, J Gliniski, H Podsiadly; *Pol. J. Chem.*, 60, 929 (1986)
 1986KKc T Kaden, S Kaderli et al; *Helv. Chim. Acta*, 69, 1216 (1986)
 1986NLa S Nelson, A Lavery, M Drew; *J. Chem. Soc., Dalton Trans.*, 911 (1986)
 1985SRd K Saran, B Ray et al; *Indian J. Chem.*, 24A, 541 (1985)
 1984BKa K Balakrishnan, T Kaden et al; *Helv. Chim. Acta*, 67, 1060 (1984)
 1984FRa J Fritz; *J. Phys. Chem.*, 88, 4358 (1984)
 1983ANA S Ahrland, K Nilsson et al; *Acta Chem. Scand.*, A37, 193 (1983)
 1983DCa D Datta, A Chakravorty; *Inorg. Chem.*, 22, 1085 (1983)
 1983GDb M Goncalves, M Dos Santos; *J. Electroanal. Chem.*, 143, 397 (1983)
 1983MMc V Maistrenko, Y Murinov et al; *Zh. Neorg. Khim.*, 28, 422(234) (1983)
 1982GCB D Gill, J Cheema; *Electrochim. Acta*, 27, 1267 (1982)
 1982PPc J Podlahova, J Podlaha; *Coll. Czech. Chem. Comm.*, 47, 1078 (1982)
 1981FRa J Fritz; *J. Phys. Chem.*, 85, 890 (1981)
 1981STa H Stunzi; *Australian J. Chem.*, 34, 2549 (1981)
 1981VRa L Varyash, V Rekharsky; *Geokhim.*, 7, 1003 (1981)
 1980ABd S Ahrland, P Blauenstein et al; *Acta Chem. Scand.*, A34, 265 (1980)
 1980APa S Ahrland, I Persson; *Acta Chem. Scand.*, A34, 645 (1980)
 1980FRa J Fritz; *J. Phys. Chem.*, 84, 2241 (1980)
 1980GMe H Gampp, M Maeder, A Zuberbuhler, T Kaden; *Talanta*, 27, 513 (1980)
 1980SFa K Sugasaka, A Fujii; *Bull. Chem. Soc. Jpn.*, 53, 2514 (1980)
 1980TBa F Tulyupa, E Baibarova, V Movchan; *Koord. Khim.*, 6, 348 (1980)
 1979OLb R Osterberg, R Ligaarden, D Persson; *J. Inorg. Biochem.*, 10, 341 (1979)
 1979PPc J Podlahova, J Podlaha; *Coll. Czech. Chem. Comm.*, 44, 321, 1346 (1979)
 1978ABb S Ahrland, T Berg et al; *Acta Chem. Scand.*, A32, 933 (1978)
 1978BKc G Bagiyani, I Koroleva, N Soroka; *Zh. Neorg. Khim.*, 23, 2422(1337) (1978)

1978CPa Y Couturier, C Petitfaux; Bull.Soc.Chim.Fr., I, 121, 453 (1978)
 1978DSa D Davis, K Stevenson, C Davis; J.Am.Chem.Soc., 100, 5344 (1978)
 1978PHa V Pestrikov, Y Hranilov; Koord.Khim., 4, 368 (1978)
 1977ATa S Ahrland, B Tagesson; Acta Chem.Scand., A31, 615 (1977)
 1977ATb S Ahrland, B Tagesson, D Tuhtar; Acta Chem.Scand., A31, 625 (1977)
 1977GAb R Gagne, J Allison, R Gall et al; J.Am.Chem.Soc., 99, 7170 (1977)
 1977GTa A Golub, B Tanirbergenov; Ukr.Khim.Zh., 43, 7 (1977)
 1977GZa M Guntensperger, A Zuberbuhler; Helv.Chim.Acta, 60, 2584 (1977)
 1976AMc L Antolini, L Menabue et al; Anal.Chim.Acta, 83, 337 (1976)
 1976CFa Y Couturier, R Fournaise, C Petitfaux; Bull.Soc.Chim.Fr., 697 (1976)
 1976FLa J Frost, M Lawson, W McPherson; Inorg.Chem., 15, 940 (1976)
 1976GDa A Golub, A Dobryanskaya et al; Zh.Neorg.Khim., 21, 2733(1504) (1976)
 1976GDb A Golub, L Dobryanskaya et al; Ukr.Khim.Zh., 42, 343 (1976)
 1976POa J Podlahova; Collec.Czech.Chem.Comm., 41, 1485 (1976)
 1976SFa K Sugasaka, A Fujii; Bull.Chem.Soc.Jpn., 49, 82 (1976)
 1976VKa V Vortish, P Kroneck, D Hemmerich; J.Am.Chem.Soc., 98, 2821 (1976)
 1975GBa A Golub, S Butsko et al; Zh.Neorg.Khim., 20, 2728(1510) (1975)
 1975LHa J Lauterwein, P Hemmerich, J-M Lhoste; Inorg.Chem., 14, 2152 (1975)
 1975NFa E Neves, D Franco; J.Inorg.Nucl.Chem., 37, 277 (1975)
 1975VKa V P Vasil'ev, B T Kunin; Zh.Neorg.Khim., 20, 1881 (1975)
 1974HNa J Hennion, J Nicole et al; Compt.Rend., 278C, 235 (1974)
 1974KHa C Kappenstein, R Hugel; J.Inorg.Nucl.Chem., 36, 1821 (1974)
 1974RZa G Rainoni, A Zuberbuhler; Chimia, 28, 67 (1974)
 1973BZb R Bek, V Zhukov et al; Izv.Sib.Otd.Akad.Nauk SSR, 52 (1973)
 1973CPa Y Couturier, C Petitfaux; Bull.Soc.Chim.Fr., 439; 445 (1973)
 1973GRa A Gershuns, I Rastrepina, V Umanskii; Invest.VUZ.Khim., 16, 1, 26 (1973)
 1973HIa H Hikita, H Ishikawa, N Esaka; Nippon Kagaku Kaishi, 13 (1973)
 1973HLa J Hurst, R Lane; J.Am.Chem.Soc., 95, 1703 (1973)
 1973PEa C Petitfaux; Ann.Chim., (France), 8, 33 (1973)
 1973SIa T Suarez, R Iwamoto, J Kleinberg; Inorg.Chim.Acta, 7, 292 (1973)
 1972CMc S Chang, J Ma, J Wang, N Li; J.Coord.Chem., 2, 31 (1972)
 1972CPe Y Couturier, C Petitfaux; Compt.Rend., 275C, 953 (1972)
 1972FDc A Foll, M le Demezet, J Courtot-Coupez; J.Electroanal.Chem., 35, 41 (1972)
 1972HFa R Hancock, N Finkelstein et al; J.Inorg.Nucl.Chem., 34, 3747 (1972)
 1972HNa J Hennion, J Nicole et al; Analisis, 1, 48 (1972)
 1972HRA L Heerman, G Rechnitz; Anal.Chem., 44, 1655 (1972)
 1972IOa Y Ishino, T Ogura, K Noda et al; Bull.Chem.Soc.Jpn., 45, 150 (1972)
 1972MIa K Miyoshi; J.Phys.Chem., 76, 3029 (1972)
 1972Snd P Senise, E Almeida Neves; J.Inorg.Nucl.Chem., 34, 1923 (1972)
 1971FAa M Falqui; Gazz.Chim.Ital., 101, 923 (1971)
 1971GGb A Gershuns, L Grineva; Zh.Anal.Khim., 26, 8, 1485 (1971)
 1971GPb E Goreleva, V Pyankov; Zh.Neorg.Khim., 16, 2467(E:1316) (1971)
 1971PKa J Pierrard, C Kappenstein et al; Rev.Chim.Minerale, 8, 11 (1971)
 1971SKa J Senne, B Kratochvil; Anal.Chem., 43, 79 (1971)
 1971Sse K Srinivasan, R Subrahmanya; J.Electroanal.Chem., 31, 233; 245; 257 (1971)
 1971TEb P Texier; J.Electroanal.Chem., 29, 343 (1971)
 1970ARA S Ahrland, J Rawsthorne; Acta Chem.Scand., 24, 157 (1970)
 1970BPe G Boos, A Popel; Zh.Neorg.Khim., 15, 1544(E:792) (1970)
 1970CTa R Combes, B Tremillon; Anal.Lett., 3, 523 (1970)
 1970GMc S Goyal, G Misra, J Tandon; Bull.Acad.Polon.Sci.Chim., 18, 425 (1970)

1970GZa A Gunther,A Zuberbuhler; *Chimia*,24,340 (1970)
 1970IJa D Inman,B Jones,S White; *J.Inorg.Nucl.Chem.*,32,927 (1970)
 19700Sa R Osterberg; *Eur.J.Biochem.*,13,493 (1970)
 1970TMb M Taqui-Khan,A Malik; *Z.Anorg.Chem.*,375,297 (1970)
 1970TZa M Taqui-Khan,S Zaidi,A Malik; *Z.Anorg.Chem.*,375,291 (1970)
 1970YHa T Yamamoto,H Haraguchi et al; *J.Phys.Chem.*,74,4369 (1970)
 1970ZUa A Zuberbuhler; *Helv.Chim.Acta*,53,473 (1970)
 1970ZUb A Zuberbuhler; *Helv.Chim.Acta*,53,669 (1970)
 1969BBa J Badoz-Lambling,D Bauer,P Texier; *Anal.Lett.*,2,411 (1969)
 1969HAb J Harvilchuck,D Aikens,R Murray; *Inorg.Chem.*,8,539 (1969)
 1969HEa H Helgeson; *Am.J.Sci.*,267,729 (1969)
 1969KHb R Kappenstein,R Hugel; *Rev.Chim.Minerale*,6,1107 (1969)
 1969LIa B Liedholm; *Acta Chem.Scand.*,23,3175 (1969)
 1969PIa I Piljac,R Iwamoto; *Inorg.Chim.Acta*,3,49 (1969)
 1969SBg T Sukhova,N Borshch,O Temkin,R Flid; *Zh.Neorg.Khim.*,14,694(E:362) (1969)
 1969STc T Sukhova,O Temkin,R Flid; *Zh.Neorg.Khim.*,14,928(E:483) (1969)
 1969YKa H Yeager,B Kratochvil; *J.Phys.Chem.*,73,1963 (1969)
 1969ZUa A Zuberbuhler; *Chimia*,23,416 (1969)
 1968GBa R George,J Bjerrum; *Acta Chem.Scand.*,22,497 (1968)
 1968GYb E Gyunner,N Yakhkind; *Zh.Neorg.Khim.*,13,2758 (1968)
 1968OFa K Ospanov,S Fedosov,Z Rozhdestvenskaya; *Zh.Anal.Khim.*,23,2,175;5,779
 (1968)
 1968STd T Sukhova,O Temkin,R Flid,T Kaliya; *Zh.Neorg.Khim.*,13,2073 (1968)
 1968VBC J Vallon,A Badinand; *Anal.Chim.Acta*,42,445 (1968)
 1967ETa A Eluard,B Tremillon; *J.Electroanal.Chem.*,13,208 (1967)
 1967FHa J Fisher,J Hall; *Anal.Chem.*,39,1550 (1967)
 1967IJa R Izatt,H Johnston,G Watt,J Christensen; *Inorg.Chem.*,6,132 (1967)
 1967MIc S Manahan,R Iwamoto; *J.Electroanal.Chem.*,13,411 (1967)
 1967MId S Manahan,R Iwamoto; *J.Electroanal.Chem.*,14,213 (1967)
 1967PAb F Pantani; *Ricerca Sci.*,37,33 (1967)
 1967PCa D Peters,R Caldwell; *Inorg.Chem.*,6,1478 (1967)
 1967UHa E Uhlemann,U Hammerschick; *Z.Anorg.Allg.Chem.*,352,53 (1967)
 1966ESa P Estrade; *Thesis,Univ.Strasbourg* (1966)
 1966GCa S Gupta,M Chatterjee; *Indian J.Chem.*,4,22 (1966)
 1966KZb T Kaden,A Zuberbuhler; *Helv.Chim.Acta*,49,2189 (1966)
 1966MAd E Manahan; *Inorg.Chem.*,5,482 (1966)
 1966SDd A Swinarski,E Danilczuk,R Gogolin; *Rocz.Chem.*,40,737 (1966)
 1966WRb J Walter,S Rosalie; *J.Inorg.Nucl.Chem.*,28,2969 (1966)
 1965BRd A Brenner; *J.Electrochem.Soc.*,112,611 (1965)
 1965MIa S Manahan,R Iwamoto; *Inorg.Chem.*,4,1409 (1965)
 1965TFb Y Treger,R Flid,L Antonova,S Spektor; *Zh.Fiz.Khim.*,39,1515 (2831) (1965)
 1964BUe E Buketov,M Ugorets,A Pashinkin; *Zh.Neorg.Khim.*,9,526 (1964)
 1964GGa M Gavrish,I Galinker; *Zh.Neorg.Khim.*,9,1289 (1964)
 1964PAb F Pantani; *Ricerca Sci.*,34 (II-A-6),417 (1964)
 1964PCa Personal Communication etc; *Chem.Soc.Spec.Publ.*,no.17 (1964)
 1964PIa L Pettit,H Irving; *J.Chem.Soc.*,5336 (1964)
 1964RPa P Rock,R Powell; *Inorg.Chem.*,3,1593 (1964)
 1963FSa W Feitknecht,P Schindler; *Pure & Appl.Chem.*,6,130 (1963)
 1963HSa P Hemmerich,C Sigwart; *Experientia*,19,488 (1963)
 1963RMa S Rahman,A Malik; *Indian J.Chem.*,1,424 (1963)

- 1962GSb A Golub,S Sazhienko,L Romanenko; Ukr.Khim.Zh.,28,561 (1962)
- 1962HPa C Hawkins,D Perrin; J.Chem.Soc.,1351 (1962)
- 1961HUA T Hurlen; Acta Chem.Scand.,15,1231 (1961)
- 1961JWa B James,R Williams; J.Chem.Soc.,2007 (1961)
- 1961LLa C Liu,C Liu; J.Am.Chem.Soc.,83,4169 (1961)
- 1960GSd A Golub,V Skopenko; Zh.Neorg.Khim.,5,1973 (1960)
- 1959BWa J Baxendale,D Westcott; J.Chem.Soc.,2347 (1959)
- 1959CZa G Czamanske; Econ.Geol.,54,57 (1959)
- 1959FSc Y Fridman,D Sarbaev; Zh.Neorg.Khim.,4,1849 (1959)
- 1958CLa P Cloke; Econ.Geol.,53,494 (1958)
- 1958DAa D Davis; Anal.Chem.,30,1729 (1958)
- 1958Hsa C Herbo,J Sigalla; J.Chim.Phys.,55,403 (1958)
- 1958SPd E Streltsova,V Petrashen; Trudy Novochoerkassk pol.Inst.,69/83,155 (1958)
- 1958SWa E Simpson,G Waing; J.Chem.Soc.,1746 (1958)
- 1957ROb H Rothbaum; J.Electrochem.Soc.,104,682 (1957)
- 1956GOa A Golub; Zh.Neorg.Khim.,1,2517 (1956)
- 1956PJb R Penneman,L Jones; J.Chim.Phys.,24,293 (1956)
- 1955BKa M Bobtelsky,S Kertes; Bull.Soc.Chim.Fr.,328 (1955)
- 1955TSa V Toropova,I Sirotina,T Lisova; Uch.Zapiski Kazanskogo U.,115,3,43 (1955)
- 1955TSb V Toropova,I Sirotina,V Rotanova; Uch.Zapiski Kazanskogo U.,115,3,53 (1955)
- 1954LWa N Li,J White,E Doody; J.Am.Chem.Soc.,76,6219 (1954)
- 1953SLa S Shchukarev,L Lilich,V Latysheva; Dokl.Akad.Nauk SSSR,91,273 (1953)
- 1953SUA S Suzuki; J.Chem.Soc.Jpn.,74,219;269 (1953)
- 1953SUB S Suzuki; Sci.Rep.Res.Inst.Tohoku Univ.,A5,16;311 (1953)
- 1953Vsa R Vestin,A Somersalo,B Mueller; Acta Chem.Scand.,7,745 (1953)
- 1952GGc J Goates,M Gordon,N Faux; J.Am.Chem.Soc.,74,835 (1952)
- 1952LAb W Latimer; "Oxidation Potentials",Prentice Hall,NY (1952)
- 1952STa A Stabrovskii; Zh.Fiz.Khim.,26,949 (1952)
- 1952YPa K Yatsimirskii,V Panova; Zh.Obshch.Khim.,22,1284 (1952)
- 1951SKa W Stricks,I Kolthoff; J.Am.Chem.Soc.,73,1723 (1951)
- 1951STa A Stabrovskii; Zh.Obshch.Khim.,21,949;1223 (1951)
- 1950KMa I Korshunov,N Malyugina; Zh.Obshch.Khim.,20,402;1399 (1950)
- 1950MDa H McConnell,N Davidson; J.Am.Chem.Soc.,72,3164;3168 (1950)
- 1950OLa E Onstott,H Laitinen; J.Am.Chem.Soc.,72,4724 (1950)
- 1950VKa M Vladimirova,I Kakovskii; Zh.Prikl.Khim.,23,580 (1950)
- 1949Kaa R Keefer,L Andrews,R Kepner; J.Am.Chem.Soc.,71,2381 (1949)
- 1949KAb R Keefer,L Andrews,R Kepner; J.Am.Chem.Soc.,71,3906 (1949)
- 1949RRa L Rogers,C Reynolds; J.Am.Chem.Soc.,71,2081 (1949)
- 1948BNa J Bjerrum,E Neilson; Acta Chem.Scand.,2,307;316 (1948)
- 1948Cha O Chaltykhan; Zh.Obshch.Khim.,18,1626 (1948)
- 1943SCa M Straumanis,A Cirulis; Z.Anorg.Chem.,251,315 (1943)
- 1941BJa J Bjerrum; Thesis,repr.1957,P.Haase&Son,Copenhagen (1941)
- 1940SFa M von Stackelberg,H von Freyhold; Z.Elektrochem., 46,120 (1940)
- 1938LAa W Latimer; "Oxidation Potentials",Prentice Hall,NY (1938)
- 1936RAa S Ravitz; J.Phys.Chem.,40,61 (1936)
- 1934BJb J Bjerrum; Kgl.Danske Vid.Sels.Medd.,1215 (1934)
- 1934CCa K Chang,Y Cha; J.Chin.Chem.Soc.,2,298 (1934)
- 1934CLa K Chang,Y Liu; J.Chin.Chem.Soc.,2,307 (1934)

1933CTa K Chang, Tso; quoted in ref.34C (1933)
1933NSb S von Naray-Szabo,Z Szabo; Z.Phys.Chem.,A166,228 (1933)
1921TRa G Trumpler; Z.Phys.Chem.,99,9 (1921)
1918NCa A Noyes,M Chow; J.Am.Chem.Soc.,40,739 (1918)
1909ALa A Allmand; J.Chem.Soc.,95,2151 (1909)
1908DOa F Donnan; Abegg's H'buch der anorg chem.Vol II,507 (1908)
1904KUa F Kunschart; Z.Anorg.Chem.,41,337;359 (1904)
1902BSa G Bodlander,O Storbeck; Z.Anorg.Chem.,31,458 (1902)
1901BOa G Bodlander; Fest.fur R.Dedekind.,Brauns153 (1901)
1893KRa F Kohlrausch,F Rose; Z.Phys.Chem.,12,234 (1893)

EXPLANATORY NOTES

DATA Flags are :-

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

EVALUATION Flags are :-

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

END

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 4999 experiments for
(no ligands specified)

Metal : Cu++

(no references specified)

(no experimental details specified)

e- HL Electron (442)
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	EMF	non-aq	25°C	100%	C	I		E0(Cu(s)/Cu++)=-710 mV	1980APa	(6) 1
Medium: DMSO, 1 M NH4ClO4. E0 referred to E0(aq)=0 for the Ag(s)/Ag+ elect.										
Cu++	EMF	none	25°C	0.00	U			K(Cu + 2e)=11.332(335.2mV)	1974GNa	(7) 2
Cu++	EMF	non-aq	25°C	100%	U			K(Cu + e=Cu(I)=5.19(0.307V)	1972FDc	(8) 3
Medium: DMSO containing 0.1 M Et4NClO4; K in M units										
Cu++	vlt	non-aq	25°C	100%	U			K(Cu + Cu(s)=2Cu+)=-0.3	1972FDc	(9) 4
Medium: DMSO containing 0.1 M Et4NClO4 or LiClO4(M units)										
Cu++	vlt	NaClO4	25°C	4.00M	U			K(Cu + Cu(s)=2Cu+)=-6.06	1972Snd	(10) 5
Cu++	EMF	NaClO4	25°C	5.00M	U			K(Cu + Cu(s)=2Cu+)=-5.95	1970ARa	(11) 6
Cu++	ISE	NaClO4	25°C	0.10M	U	I		K(Cu + Cu(s)=2Cu+)=-6.0	1970DTb	(12) 7
Data also in MeOH containing 0.1 M NaClO4(K=-3.8). Method: emf with Cu amalgam electrode										
Cu++	ISE	alc/w	25°C	100%	U			K(Cu + Cu(Hg)=2Cu(I))=-2.7	1970DTb	(13) 8
Medium: MeOH, 0.1 M NaClO4. Method: emf with Cu amalgam electrode										
Cu++	EMF	KCl	135°C	100%	U			K(Cu + Cu(s)=2Cu+)=14.3	1969APa	(14) 9
Medium: (Na,K,Al)Cl										
Cu++	oth	none	50°C	0.0	U	T		K1=-4.92	1969HEa	(15) 10
Method:Estimated data.Temp.Range 50-300C.60C: -4.57,100C: -3.20,150C: -1.84										

,200C: -0.66,250C: 0.37,300C: 1.27. K: Cu+Cu(s)=2Cu(I)

Cu++ EMF non-aq 25°C 100% U 1968BJa (16) 11
K=9.33, 276 mV

Medium: liquid HF. K: CuF2(s) + 2H + 2e = Cu(s) + 2HF

Cu++ oth none 25°C 0.0 M H 1968LCd (17) 12
K(Cu+2e=Cu(s))=11.66, 345 mV

DH =65.6 kJ mol-1

Cu++ kin oth/un 25°C 0.20M U 1968TBa (18) 13
K(Cu+Cu(s)=2Cu+)= -6.24

Medium: H2SO4

Cu++ oth none 25°C 0.0 U 1965ETa (19) 14
K(Cu+Cu(s)=2Cu+)= -5.94

Cu++ EMF oth/un 0°C var U 1961DEb (20) 15
K=29.0(1570 mV)

K: 0.5Cu2O3(s)+H+e=CuO(s)+0.5H2O. K(Cu(III)+e=Cu(II))=42.4(2300 mV) estimat.

Cu++ EMF none 0°C 0.0 U 1961DEb (21) 16
K=11.8(640 mV)

K: CuO(s)+H+e=0.5Cu2O(s)+0.5H2O

Cu++ oth NaClO4 25°C 1.13M U TIH 1961MIa (22) 17
K(Cu+Cu(s)=2Cu(I))= -6.25

DH(K)=85.3 kJ mol-1; K=-6.00(30 C), -5.76(35 C). In 1.13 M SO4,30 C: K=-6.11
By chemical analysis

Cu++ EMF non-aq 25°C 100% U T 1954PSa (23) 18
K(Cu + 2e=Cu(s))=9.43(0.279V)

Medium: formamide; K=9.69(0.280V,18 C)(M units)

Cu++ oth none 25°C 0.0 U 1952LAb (24) 19
K(Cu+2e=Cu(s))=11.38(337 mV)

From thermodynamic data

Cu++ oth oth/un 20°C var U T 1931HEa (25) 20
K(Cu(II)+Cu(s)=2Cu(I))= -6.31

Medium: H2SO4,by analysis. K=-5.84(30 C), -5.40(40 C), -5.01(50 C), -4.62(60 C)

8H12N2 L CAS 51639-58-8 (8823)

N-Ethyl-N-2-pyridylmethylamine;

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

Cu++ g1 KNO3 25°C 0.10M C M K1=8.590 B2=14.56 2002Y0a (1039) 21
B(CuH-1L)=1.330
B(CuH-2L)= -9.888

B(CuAL)=13.793
 B(CuH-1AL)=5.777
 B(CuHBL)=23.742, B(CuBL)=16.394, B(CuH-1BL)=6.408; B(CuCL)=14.334,
 B(CuH-1CL)=6.874. HA is gly-gly, H2B is gly-L-tyr, HC is gly-L-trp.

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

Arsenate;

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

Cu++ oth oth/un 25°C 0.0 U 1990SAa (1112) 22

*K(Cu3L2(s)+2H=3Cu+2HL)=-14.97

Calculated from thermodynamic data.

 Cu++ sol oth/un 20°C var U 1956CHd (1113) 23

Kso(Cu3L2)=-35.12

AsW11039----- H7L (2468)

alpha-Heteromonoarseno-polytungstate;

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

Cu++ gl NaNO3 25°C 1.00M U K1=3.46 1984COa (1169) 24

As2W17H2061----- H8L (2469)

alpha-Heteropolydiarseno-polytungstate;

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

Cu++ gl NaNO3 25°C 1.00M U K1=7.69 1984COa (1180) 25

K1=5.23 (alpha2 isomer)

B04H4- HL Borate CAS 10043-35-3 (991)

Borate; B(OH)4-

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

Cu++ gl NaNO3 25°C 0.10M C 2000MAb (1280) 26

K(Cu+H2B04)=3.55

 Cu++ oth KNO3 25°C 0.70M C K1=3.48 B2=6.13 1984BEa (1281) 27

Method: Differential pulse anodic stripping voltammetric (DPASV)

 Cu++ sol oth/un 22°C var U K1=7.13 B2=12.45 1965SHc (1282) 28

K3=2.72

B3=15.2-15.7

Ks(CuOHL)=-17.3

Ks(CuL2)=-14.5

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	sp	non-aq	25°C	100%	U			K(CuAB+L)=3.49	1993LJa	(1356) 29
Medium: 1,2-dichloroethane. HA: acetylacetone; B: N,N,N',N'-tetramethylethylenediamine.										
Cu++	sp	non-aq	25°C	100%	U			K1=9.4 B3=13.5 B4=14.1	1992BKe	(1357) 30
Medium: n-BuOH, 1.0 M LiClO4										
Cu++	sp	non-aq	25°C	100%	U			K1=6.1 B3=10.2 B4=10.7	1991DBa	(1358) 31
Medium: propan-2-ol, 1.0 M LiClO4										
Cu++	sp	non-aq	25°C	100%	U			K1=3.2 B3=7.7 B4=7.7	1990KMa	(1359) 32
Medium: CH3COOH										
Cu++	sp	alc/w	25°C	100%	U			K1=3.72 B3=6.30 B4=6.32	1989KMb	(1360) 33
Medium: MeOH, 1.0 M LiClO4										
Cu++	sp	non-aq	25°C	100%	U	M		K(CuA+L)=2.37	1987CCa	(1361) 34
A=N-rac-5,7,7,12,14,14-hexamethyl-1,4,8,11-tetraazacyclotetradeca-4,11-diene										
Medium: DMSO. Data also for DMF and MeOH, and for N-meso isomer										
Cu++	cal	non-aq	25°C	100%	C	IH		K1=3.48 K3=2.96, K4=1.27	1987IOb	(1362) 35
Medium: DMF, 0.16M Et4NClO4, DH(K1)=19.6 kJ mol-1, DH(K2)=18.5, DH(K3)=18.1, DH(K4)=16.5										
Cu++	cal	non-aq	25°C	100%	C	IH		K1=2.29 K3=2.50, K4=1.19	1987IOb	(1363) 36
Medium: DMF, 1.0 M LiClO4, DH(K1)=20.1 kJ mol-1, DH(K2)=9.9, DH(K3)=23.6, DH(K4)=0.8										
Cu++	cal	non-aq	25°C	100%	U	H		K1=1.58 B3=4.00 B4=4.29	1987IOb	(1364) 37
DH(K1)=16.5, DH(K2)=10.8, DH(K3)= 16.1 and DH(K4)=-1.0 kJ mol-1.										
DS1=86, DS2=55, DS3=82 and DS4=2J K-1 mol-1. Medium: DMF, 1.0 M NH4ClO4										

Cu++	sp	non-aq	25°C	100%	U		K1=3.35	B2=5.4	1987PGc	(1365)	38
							B3=8.8				
In DMF											
Cu++	sp	NaClO4	30°C	0.01M	U	M			1986KMa	(1366)	39
							K(Cu2A+L)=4.78				
A=N,N',N'',N'''-Tetrakis(2-aminoethyl)-1,4,8,11-tetraazacyclotetradecane											
Cu++	cal	KNO3	25°C	0.50M	U	H			1985BPb	(1367)	40
							B4=-5.0				
DH(B4)=26.8 kJ mol-1; TDS(B4)=-1.7 kJ mol-1											
Cu++	sp	alc/w	25°C	100%	U	I	K1=3.92	B2=6.22	1985PDa	(1368)	41
Medium: 100% MeOH with varying backgrounds of LiClO4											
Cu++	sp	none	25°C	0.0	U				1983LTb	(1369)	42
							K(CuA+L)=0.36				
A=C-meso-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetra-azacyclotetradecane.											
For C-rac isomer, K=0.51.											
Cu++	sp	non-aq	25°C	100%	U				1983LTb	(1370)	43
							K(CuA+L)=3.66				
In DMF. A=C-rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetra-azacyclotetradecane											
For C-rac isomer, K=3.81. In DMSO, K=3.20 and 3.32; In MeOH, K=4.54 and 4.43											
Cu++	ISE	NaClO4	25°C	3.00M	U				1982WLa	(1371)	44
							B6=8.42				
							B7=8.58				
Cu++	ISE	non-aq	25°C	100%	C	H	K1=1.55	B2=2.60	1980ABd	(1372)	45
Medium: DMSO, 1.0 M NH4ClO4. DH(K1)=8.2 kJ mol-1, DS=57 J K-1 mol-1;											
DH(B2)=14.7, DS(K2)=42											
Cu++	kin	oth/un	25°C	0.20M	U	M			1977ASa	(1373)	46
							K(CuA+Br)=0.96				
Medium: 0.2M Li-p-toluenesulfonate. A=5,5,7,12,12,14-Hexamethyl-1,4,8,11-tetraazacyclotetradecane											
Cu++	sp	oth/un	25°C	?	U		K1=5.0	B2=7.50	1977GPb	(1374)	47
							K3=0.52				
							K4=0.09				
Cu++	sp	oth/un	25°C	2.0M	U	IH	K1=-0.43		1977KFb	(1375)	48
In 2.0 M LiClO4;											
Cu++	sp	NaClO4	25°C	2.0M	C	I	K1=0.37		1977KFb	(1376)	49
Medium: 2.0 M LiClO4. In 4.0 M LiClO4, K1=0.60.											
Cu++	sp	oth/un	25°C	5.00M	C		K1=5.0	B2=2.5	1977KSb	(1377)	50
							B3=0.52				

$$B4=0.09$$

Cu++	sp	NaClO4	25°C	0.30M	U	I	K1=-0.77	1976LMb	(1378)	51
Cu++	sp	NaClO4	25°C	5.00M	U	M	K(Cu(en)2+L)=-0.16	1975RPa	(1379)	52
Cu++	cal	NaClO4	25°C	3.0M	U	H		1974BRa	(1380)	53
Medium: LiClO4. DH(K1)=12.6 kJ mol-1, DS=31.4 J K-1 mol-1										
Cu++	kin	NaClO4	25°C	1.0M	U		K1=-0.24	1973HHb	(1381)	54
Cu++	cal	non-aq	25°C	100%	U	HM	K(Cu(en)2+L)=1.91 K(Cu(meen)2+L)=2.68	1972BPc	(1382)	55
Medium: MeOH. DH(Cu(en)2+L)=12.0 kJ mol-1, DS=76.6 J K-1 mol-1; DH(Cu(meen)2+L)=6.7, DS=73.6. meen=N-methylethylenediamine										
Cu++	vlt	non-aq	25°C	100%	U		K1=3.4 B2=4.3	1972FDc	(1383)	56
Medium: DMSO, 0.1 M Et4NClO4										
Cu++	kin	oth/un	25°C	dil	U		K3K4=-1.80 B4=-4.55	1972SDc	(1384)	57
Cu++	kin	oth/un	20°C	dil	U		K(CuCl3+L)=-1.48	1972SDc	(1385)	58
Cu++	sp	none	?	0.0	U		K1=0.23	1971ACa	(1386)	59
Cu++	sp	alc/w	?	100%	U	I	K1=3.6	1971ACa	(1387)	60
Medium: MeOH. K1=4.3(EtOH), 5.3(PrOH), 6.3(i-PrOH), 7.3(BuOH)										
Cu++	sp	NaClO4	25°C	3.0M	U		K1=-0.55	1970MMj	(1388)	61
Medium: LiClO4										
Cu++	sp	NaClO4	25°C	3.0M	U		K1=-1	1969MMf	(1389)	62
Medium: LiClO4										
Cu++	sp	NaClO4	25°C	3.0M	U		K1=-0.55 K1in=-1.5 K1out=-0.60	1968MMf	(1390)	63
Medium: LiClO4										
Cu++	cal	NaClO4	40°C	2.0M	U	T H	K1=-0.04	1966KLb	(1391)	64
K1=-0.07(25 C); DH(K1)=3.8(25 C) kJ mol-1, DS=11.5 J K-1 mol-1. DH=4.2(40C)										
Cu++	oth	none		0.0	U		K1=0.55	1964BSd	(1392)	65
Method: refractometry										

Cu++ sp alc/w ? 90% U K1=1.00 1963BHb (1393) 66
Medium: 90% EtOH/H2O, 1 M LiClO4

Cu++ sp non-aq ? 100% U K1eff=2.60 1963MYa (1394) 67
B2eff=6.42

In CH3CO2H containing Cu(CH3CO2)2 and LiBr.

Cu++ sp NaClO4 ? 0.60M U K1=0.68 1962WKa (1395) 68
Medium: HClO4.

Cu++ sp none ? 0.0 U K1=2 1962WKa (1396) 69

Cu++ sp NaClO4 25°C 2.0M U I K1=-0.55 B2=-1.84 1961MAf (1397) 70
I=1 M NaClO4: K1=-0.64; I=LiBr var: K3=-1.51, K4=-2.18

Cu++ sp NaClO4 0°C 0.60M U K1=0.7 1961WKa (1398) 71

Cu++ sp none 25°C 0.0 U K1=<-0.7 1960H0c (1399) 72

Cu++ sp NaClO4 25°C 2.30M U T H K1=0.55 1960LRa (1400) 73
B(Cu2Br)=0.36
Medium: 0.3M H+, 2M NaClO4. K1=0.49(12 C), 0.62(40 C). DH(K1)=8.0 kJ mol-1.
B(Cu2Br)=0.24(12 C), 0.44(40 C). DH(Cu2Br)=13

Cu++ sp NaClO4 22°C 1.0M U K1=0.32 1952FAa (1401) 74

Cu++ sol NaClO4 25°C 1.0M U K1=<-0.4 B2=<-1.0 1951NLb (1402) 75
Kso(Cu(OH)1.5Br0.5)=-16.70
Kso=-17.145(20 C, I=0 corr)

Cu++ sp none 25°C 0.0 U K1=-0.03 1950NAa (1403) 76

Cu++ sp oth/un 18°C var U K1=-1.20 1936J0a (1404) 77
K2.K3=-3.20

Medium : HBr.

Cu++ ISE oth/un 18°C var U K1=5.68 B2=7.24 1934RSa (1405) 78
K3=0.68
K4=0.37?

BrO3- HL Bromate (6017)
Bromate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	1.0M	U		B2=<0.31 Ks(CuOH1.5L0.5)=-16.13	1963LLa (2391)	79

At I=0: Kso(Cu(OH)1.5L0.5)=-16.53

Cu++ kin non-aq 190°C 100% U T K1=0.97 1961DLa (2392) 80
 Medium: liquid (K,Na)NO3. K1=0.5 (210 C), m units

CN- HL Cyanide CAS 74-90-8 (230)
 Cyanide;

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

Cu++	sp	non-aq	25°C	100%	U				1993LJa	(2467) 81
------	----	--------	------	------	---	--	--	--	---------	-----------

K(CuAB+L)=3.20

Medium: 1,2-dichloroethane. HA: acetylacetone; B: N,N,N',N'-tetramethyl-ethylenediamine.

Cu++	sp	oth/un	25°C	0.02M	U	M			1984HDa	(2468) 82
------	----	--------	------	-------	---	---	--	--	---------	-----------

K(CuA+L)=4.5

K(CuAL+L)=2.65

A=1,4,8,11,-Tetra-azacyclotetradecane (Cyclam). Data also for 1,5,9,13-tetraazacyclopentadecane (K=4.60) and N,N',N''N'''-tetramethylcyclam (K=5.2)

Cu++	sp	NaCl	25°C	0.0	U	TIHM			1978MMe	(2469) 83
------	----	------	------	-----	---	------	--	--	---------	-----------

K(CuH-1A+L)=3.16

Medium: NaCl or NaNO3. K=3.09(I=0.05), 3.08(I=0.1), 3.01(I=0.16), 2.87(I=0.5) at 25 C. A=CH2(CH2.HN.C(CH3)2.C(CH3)(:NOH))2. At 10 C: K=3.44; 35 C: 2.91

Cu++	sp	NaCl	20°C	0.10M	U	T H			1978MMe	(2470) 84
------	----	------	------	-------	---	-----	--	--	---------	-----------

K(CuH-2A+L)=4.59

Medium: NaCl or NaNO3. At 1 C, K=5.62.

A=CH3.C(:NOH).C(CH3)2.NH.CH2.CH2.NH.C(CH3)2.C(N:OH).CH3

Cu++	sp	oth/un	22°C	0.0	U	M			1965CCa	(2471) 85
------	----	--------	------	-----	---	---	--	--	---------	-----------

K(CuA+L)=2.4-2.95

Medium: 0 corr. A=cyclic tetramine

Cu++	oth	alc/w	-45°C	60%	U				1965PBa	(2472) 86
------	-----	-------	-------	-----	---	--	--	--	---------	-----------

B4=26.7

Medium: 60% w/w MeOH/H2O

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

Carbonate;

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

Cu++	sp	oth/un	25°C	0.72M	C	TIH		K1=4.92	1989SBc	(2963) 87
------	----	--------	------	-------	---	-----	--	---------	---------	-----------

Medium: seawater, S=35. K= [CuCO3]/[Cu][CO3(total)].

Data for 5-35 C. DH(K1)=10.4 kJ mol-1. At 15 C, K1=4.86.

Cu++	gl	NaCl04	25°C	0.70M	C	I		K1=5.73 B2=9.3	1985BMb	(2964) 88
------	----	--------	------	-------	---	---	--	----------------	---------	-----------

K(Cu+HL)=1

Also used: Cu ISE and spectrophotometry

Cu++ sol NaClO4 25°C 0.72M C K1=6.20 1985SKc (2965) 89
 $K(\text{Cu}+\text{HCO}_3)=2.36$
 $B(\text{CuH}-1\text{CO}_3)=-3.13$

Data from solubility of malachite ($\text{Cu}_2(\text{OH})_2\text{CO}_3$) in perchlorate solutions.

Cu++ sol oth/un 25°C 0.72M M TI 1984SKb (2966) 90
 $K(\text{Cu}_2(\text{OH})_2\text{L}(\text{s})=2\text{Cu}+2\text{OH}+\text{L})=-32$

Also using pH and pM electrodes. Malachite solubility study

Cu++ gl NaCl 25°C 0.69M U K1=6.33 1983ZKa (2967) 91
 $K(\text{Cu}+\text{HCO}_3)=2.77$

Cu++ ix KNO3 25°C 0.01M U K1=6.8 1979BKb (2968) 92

Cu++ ISE KNO3 25°C 0.05M C 1979SGf (2969) 93
 $K_{\text{so}}(\text{CuOH}(\text{CO}_3)0.5)=-14.42$

Method: Cu ion selective electrode.
 $\text{CuOH}(\text{CO}_3)0.5$ (malachite) = $\text{Cu}+\text{OH}+0.5\text{CO}_3$

Cu++ vlt KNO3 25°C 0.10M U K1=5.7 1975EAa (2970) 94

Cu++ ISE none 25°C 0.0 U K1=6.8 1971STd (2971) 95
 $K(\text{Cu}+\text{HCO}_3=\text{CuCO}_3+\text{H})=-3.51$

Cu++ vlt KNO3 ? 1.80M U B2=9.8 1969FFa (2972) 96
 $B_3=10.5$

In 1 M KNO3, using anion exchange; $K(\text{Cu}+2\text{HL})=5.9$

Cu++ sol oth/un 25°C 0.0 U K1=6.73 B2=9.83 1968SRe (2973) 97
 $*K_{\text{pso}}(\text{malachite})=-6.75$

$K_{\text{pso}}: 0.5\text{Cu}_2(\text{OH})_2\text{L}+2\text{H}=\text{Cu}+0.5\text{CO}_2(\text{g})+1.5\text{H}_2\text{O}$

Cu++ gl NaClO4 25°C 0.0 U I 1968SRe (2974) 98
 $K_{\text{s}}(\text{Cu}_2(\text{OH})_2\text{L})=-33.16$
 $K_{\text{s}}(\text{Cu}_3(\text{OH})_2\text{L}_2)=-44.88$

Other solubilities also reported

Cu++ vlt KNO3 18°C 1.70M U B2=8.6 1959FBa (2975) 99

Cu++ sol none 25°C 0.0 U K1=6.77 B2=10.01 1958SIa (2976) 100
 $B(\text{CuL}(\text{OH})_2)=-15.$
 $K_{\text{so}}(\text{azurite})=-45.96$
 $K_{\text{so}}(\text{malachite})=-33.78$

Also by glass electrode. I=0 corr. $K_{\text{so}}(\text{azurite}): \text{Cu}_3(\text{OH})_2\text{L}_2(\text{s})=3\text{Cu}+2\text{OH}+2\text{L}.$
 $K_{\text{so}}(\text{malachite}): \text{Cu}_2(\text{OH})_2\text{L}(\text{s})=2\text{Cu}+2\text{OH}+\text{L}$

Cu++ sol none 25°C 0.0 U K1=6.34 1957SCa (2977) 101
 $K_{\text{so}}(\text{Cu}_2\text{L}(\text{OH})_2(\text{s}))=-31.90$

Cu++ vlt KNO3 25°C 1.0M U M 1950MEb (2978) 102

By solubility: $K_s(K_2Cu(HL)_4(s) + HL = 2K + Cu(HL)_5) = -1.98$,
By polarography: $K_s(Cu(OH)_2(s) + 3L = CuL_3 + 2OH) = -7.2$

Cu++ oth alc/w 25°C 61% C K1=20.80 1996CHF (3776) 111
Kso(CuCl2.2H2O)=1.96

Cu++ sp non-aq 25°C 100% U I K1=4 B2=7.0 1994DMb (3777) 112
B3=8.6
B4=9.6

Cu++ sp non-aq 25°C 100% U K(CuAB+L)=3.60 1993LJa (3778) 113

Cu++ sp non-aq 25°C 100% U K1=7.6 B2=11.1 1992BKe (3779) 114
B3=12.8
B4=13.4

Cu++ sp non-aq 25°C 100% U K1=5.7 B2=8.6 1991DBa (3780) 115
B3=10.2
B4=10.6

Cu++ sol none 25°C 0.0 C K1=0.0 B2=-0.3 1989IPa (3781) 116
B3<-1.8
B4=-3.8

Cu++ sp non-aq 25°C 100% C K1=6.5 B2=11.2 1989ISa (3782) 117
B3=15.9
B4=18.4

Cu++ sp non-aq 25°C 100% C H K1=6.06 B2=10.4 1989ISa (3783) 118
B3=14.6
B4=16.9

Cu++ sp non-aq 25°C 100% C H K1=5.87 B2=9.8 1989ISa (3784) 119
B3=13.6
B4=15.6

Cu++ sp alc/w 25°C 100% U K1=2.45 B2=4.20 1989Kmb (3785) 120

B3=5.36

B4=5.65

Medium: MeOH, 1.0 M LiClO₄-----
Cu++ sp non-aq 25°C 100% U IH K1=3.14 B2=4.7 1989SIa (3786) 121

B3=6.44

B4=7.0

In 0.1 mole fr. 2,2,2-trifluoroethanol-DMSO, 0.4M Et₄NClO₄. Also 0.2-0.95mf
By calorimetry, DH(K1)=7.9 kJ mol⁻¹; DH(B2)=17.3; DH(B3)=32.4; DH(B4)=30.2-----
Cu++ ISE non-aq 25°C 100% U B2=10.5 1988SGa (3787) 122Medium: DMSO, 0.1 M Et₄NCl-----
Cu++ sp non-aq 25°C 100% U 1988SSa (3788) 123

K4=3.39

Medium: 1,2-dichloroethane. K4: NBu₄(CuCl₃)+NBu₄Cl=(NBu₄)₂(CuCl₄)-----
Cu++ sp non-aq 25°C 100% U M 1987CCa (3789) 124

K(CuA+L)=2.65

A=N-rac-5,7,7,12,14,14-hexamethyl-1,4,8,11-tetraazacyclotetradeca-4,11-diene
Medium: DMSO. Data also for DMF and MeOH, and for N-meso isomer-----
Cu++ sp non-aq 25°C 100% U K1=4.71 1986GPa (3790) 125

Medium: N,N-dimethylformamide

Cu++ sp NaClO₄ 30°C 0.01M U M 1986KMa (3791) 126K(Cu₂A+L)=5.14

A=N,N',N'',N'''-Tetrakis(2-aminoethyl)-1,4,8,11-tetraazacyclotetradecane

Cu++ oth NaCl 25°C 5.0M C K1=0.37 B2= 0.17 1986RAa (3792) 127

K3=-0.34

K4=-1.10

Re-evaluation of solubility data in 1983RFa by use of non-linear
regression. Medium: 0.1-5.0 M NaCl/ NaClO₄ (I=5.0 M).-----
Cu++ sp NaClO₄ 25°C 1.00M U T K1=0.07 1985ABb (3793) 128

At 15 C: K1=0.09; 45 C: 0.15; 70 C: 0.29; 90 C: 0.68

Cu++ EMF non-aq 300°C 100% U K2=5.38 1985BBd (3794) 129

K3=3.34

K4=0.97

In fused KCl-AlCl₃; constants the average of three data sets.-----
Cu++ cal non-aq 25°C 100% U H K1=9.69 B2=17.64 1985IIa (3795) 130

K3=4.94

K4=2.85

DH(K1)=-11.7, DH(K2)=-5.0, DH(K3)=-4.4 and DH(K4)=-34.3 kJ mol⁻¹.DS(K1)=147, DS(K2)=135, DS(K3)=80 and DS(K4)=-61 J K⁻¹ mol⁻¹ in CH₃CN-----
Cu++ con non-aq 25°C U T K1=2.74 B2= 4.87 1984ISf (3796) 131

In DMSO. For 40 C K1=2.85; B2=5.09; for 50 C K1=2.88, B2=5.15

Cu++ con non-aq 25°C U T K1=2.39 B2= 4.00 1984ISf (3797) 132
In DMFA. For 40 C K1=2.45; B2=4.16; for 50 C K1=2.47, B2=4.18

Cu++ sp NaClO4 25°C 1.00M U K1=0.70 1983BWa (3798) 133

Cu++ vlt oth/un 20°C 0.70M C K1=<0.95 1983GDb (3799) 134
Method: polarography. Medium: 0.70 M (NaClO4+NaCl).

Cu++ sp none 25°C 0.0 U 1983LTb (3800) 135
K(CuA+L)=0.18

A=C-meso-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetra-azacyclotetradecane.
For C-rac isomer, K=0.26.

Cu++ sp non-aq 25°C 100% U 1983LTb (3801) 136
K(CuA+L)=4.11

In DMF. A=C-rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetra-azacyclotetradecane
For C-rac isomer, K=4.04. In DMSO, K=4.08 and 3.95; In MeOH, K=4.58 and 4.46

Cu++ sol NaCl 25°C 5.00M U H K1=0.40 B2=0.46 1983RFa (3802) 137
K3=-0.046
K4=-1.60

Determined by the effects of chloride ion on the solubility of copper(II)
iodate in 1.0-5.0 M NaCl/NaClO4(I=5.0 M)

Cu++ cal NaClO4 25°C 5.00M C H 1982APa (3803) 138
DH(K1)=-12.3 kJ mol⁻¹, DH(B2)=-23.0, DH(B3)=-11

Cu++ ISE alc/w 25°C 100% U K1=5.08 B2=8.48 1982DKa (3804) 139
K3=3.23

Cu++ sp non-aq 25°C 100% U I K1=12.0 B2=22.7 1982EMa (3805) 140
B3=28.9
B4=34.1

Medium: propylene carbonate, 1.0 M Et4N(ClO4,Cl)

Cu++ sp non-aq 25°C 100% U I K1=5.01 B2=5.89 1982LPa (3806) 141
Medium: DMSO, 0.2 M M(ClO4)2

Cu++ dis NaClO4 25°C 3.00M U 1982WLa (3807) 142
B4=6.59
B5=6.62

Method: potentiometry

Cu++ sp NaClO4 25°C 3.00M U K1=-0.28 B2=-0.24 1981AHa (3808) 143
B3=-1.96
B4=-2.44

Cu++ con non-aq 25°C 100% U K1=5.22 B2=8.12 1980LPc (3809) 144

Medium: Dimethyl sulfoxide.

Cu++ kin oth/un 25°C 0.20M U 1977ASa (3810) 145

K(CuA+Cl)=1.15

Medium: 0.2M Li-p-toluenesulfonate. A=5,5,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradecane

Cu++ sp NaClO4 25°C 5.00M U K1=0.18 B2=-0.22 1977BSa (3811) 146

K3=-0.9

K4=-1.4

Cu++ sp oth/un 25°C 2.0M U IH K1=-0.14 1977KF a (3812) 147

In 2.0 M LiClO4;

Cu++ sp NaClO4 25°C 2.0M C IH K1=0.72 1977KF b (3813) 148

Medium: 2.0 M LiClO4. DH(K1)=13.6 kJ mol⁻¹, DS(K1)=44 J K⁻¹ mol⁻¹.

In 4.0 M LiClO4, K1=0.92.

Cu++ sp NaClO4 25°C 3.0M C K1=-0.004 B2=-0.40 1977SJf (3814) 149

Determined for mixtures of 3M NaClO4, 3 M NaCl.

Cu++ dis NaNO3 RT 1M U K1=1.06 B2= 1.56 1977SKg (3815) 150

K3=0.01

K4=-0.29

Extraction into benzene from HNO3 with trioctylamine

Cu++ sp NaClO4 25°C 1.00M U K1=0.36 B2=0.22 1976CWd (3816) 151

Cu++ sp NaClO4 25°C 1.0M C I K1=1.05 1976KF b (3817) 152

Values for 0.5-7.0 M NaClO4. At I=0, K1=3.0. Also data for 0.5-4.0 M LiClO4 (K1=0.54 at I=1.0 M), and 0.5-8.0 M HClO4 (K1=1.45 at I=2.0 M).

Cu++ sp NaClO4 25°C 5.0M U K1=0.60 B2=0.67 1976KSc (3818) 153

B3=0.29

B4=-0.64

Cu++ sp NaCl 25°C 0.10M U I K1=0.1 1975MSa (3819) 154

Cu++ sp NaClO4 25°C 5.00M U M 1975RPa (3820) 155

K(Cu(en)2+L)=-0.29

Cu++ ISE non-aq 25°C 100% U I K1=9.1 B2=17.0 1974BMa (3821) 156

B3=24.0

B4=30.3

Medium: LiCl in tributylphosphate, saturated with H2O; AgCl/Cl-electrode

Cu++ cal NaClO4 25°C 3.0M U H 1974BRa (3822) 157

K1=-0.37 (Cu(H2O)6L formed)

K1'=0.34 (Cu(H2O)5L formed)

Medium: LiClO4;DH(K1)=9.2 kJ mol⁻¹, DS(K1)=25 J K⁻¹ mol⁻¹. DH(K1')=12.1,

DS=33

Cu++ cal alc/w 25°C 5% U IH K1=-0.01 1974BRb (3823) 158
Medium: 5% v/v MeOH/H2O. DH(K1)=12.1 kJ mol⁻¹, DS=41.8. Data to 75% MeOH and
also in EtOH/H2O mixtures

Cu++ ix NaClO4 20°C 0.69M U K1=0.93 B2=0.79 1974MId (3824) 159
B3=0.46
B4=0.01

Medium: HClO4

Cu++ sol none 25°C 0.0 U 1974MSd (3825) 160
Ks(Cu2(OH)1.4Cl0.6)=-16.1

Cu++ sp oth/un 25°C 9.00M U K1=1.03 B2=1.60 19740Va (3826) 161
B3=1.77
B4=2.21

Medium: H2SO4

Cu++ EMF non-aq 25°C 100% U K1=7.30 B2=14.34 1973BKd (3827) 162
B3=19.75
B4=24.2

Medium: TBP, HCl

Cu++ kin NaClO4 25°C 1.0M U K1=0.15 1973HHb (3828) 163

Cu++ sp none 25°C 0.0 U K1=0.2 1973LIa (3829) 164

Cu++ sp NaClO4 25°C 5.0M U K1=0.06 B2=0.67 1973SCc (3830) 165
B3=0.20
B4=-0.77

Cu++ sp non-aq 25°C 100% U K1=4.4 B2=7.40 1973SIa (3831) 166
K3=4.2(1.6?)
K4=2.0

Medium: DMSO, 0.1 M Et4NClO4. Cu amalgam electrode also used

Cu++ sp non-aq 20°C 100% U K1=6.29 B2=10.81 1973SSh (3832) 167
Medium: acetone

Cu++ oth non-aq 25°C 100% U H 1972BPc (3833) 168
K(Cu(en)2+L)=2.14
K(Cu(meen)2+L)=2.66

Medium: MeOH. DH(en)=12.1 kJ mol⁻¹, DS=81.2 J K⁻¹ m⁻¹. DH(meen)=9.2, DS=81.6
Data also for 2 other diamines

Cu++ vlt non-aq 25°C 100% U K1=4.5 B2=7.5 1972FDc (3834) 169
B3=9.1

Medium: DMSO, 0.1 M Et4NClO4

Cu++ ISE non-aq 25°C 100% U K1=12.2 B2=20.80 1972SCa (3835) 170
K3=6.6

Medium: propene carbonate, 0.1 M (C3H7)4NC104

Cu++ kin oth/un 25°C var U 1972SDc (3836) 171
B3=-2.79

Medium: (H,Li)Cl. Temperature: 10-25 C

Cu++ sp none ? 0.0 U K1=0.00 1971ACa (3837) 172

Cu++ sp alc/w ? 100% U I K1=3.30 1971ACa (3838) 173
Medium: MeOH. K1=4.00 (EtOH); 5.00 (PrOH); 6.00 (iso-PrOH); 7.00 (BuOH)

Cu++ sp KCl rt var U B2=-0.66 1971KGa (3839) 174
K(CuL2+2H+2L=H2CuL4)=-2.86

Medium: HCl

Cu++ sp oth/un 25°C var U T 1971MKf (3840) 175
K1in=-0.52
K1out=-0.30

n5 C: K1in=-0.59, K1out=-0.49; 35 C: K1in=-0.48, K1out=-0.30; 45 C: -0.35,
-0.28. At I-0(corr): K1in=-0.07, K1out=0.24

Cu++ sp NaCl04 0°C 3.50M U I K1=0.15 1971WBa (3841) 176
Medium: HCl04. K1=1.90(I=7)

Cu++ sp NaCl04 25°C 3.0M U K1=-0.06 1970MMj (3842) 177
Medium: LiCl04

Cu++ kin oth/un 90°C 0.20M U 1970MTc (3843) 178
K4=-0.28

Medium: HCl

Cu++ EMF non-aq 25°C 100% U K1=8.0 B2=15.90 1970SFa (3844) 179
K3=7.1
K4=3.7

Medium: MeCN. Py polarography: B3=24.3, B4=28.1

Cu++ sp alc/w ? 100% U K1=6.0 1969AKa (3845) 180
Medium: EtOH, LiCl

Cu++ oth none 25°C 0.0 U T K1=0.53 B2=-0.06 1969HEa (3846) 181
B3=-1.48
B4=-3.54

Evaluated from literature data. At 100 C: values: 1.54, 1.15, 0.04, -1.63;
150 C: 2.57, 2.36, 1.52, 0.18

Cu++ sp NaCl04 25°C 3.0M U K1=-0.4 1969MMf (3847) 182
Medium: LiCl04

Cu++	sp	NaClO4	25°C	3.0M	U	K1=-0.06 K1in=-0.35 K1out=-0.38	1968MMf	(3848)	183
Medium: LiClO4									
Cu++	oth	oth/un	23°C	var	U	K2=-1 K3=-1	1968SCc	(3849)	184
Method:electrical migration or transference number. Medium:LiCl var									
Cu++	sol	oth/un	25°C	0.0	U	Ks(CuOH1.4Cl0.6)=-16.10(fresh) Ks(CuOH1.5Cl0.5)=-17.52(aged)	1968SMd	(3850)	185
Cu++	vlt	alc/w	25°C	100%	U I	K1=4.2 B2=6.5	1967MIc	(3851)	186
Medium: MeOH, 0.1 M LiClO4. In i-BuOH: B2=13.5, B3=16.3. In acetone: B3=25.1 Also values corrected for LiClO4 pairs									
Cu++	oth	none	0°C	0.0	U	K1=0.4	1966HPa	(3852)	187
Method: freezing point									
Cu++	cal	NaClO4	40°C	2.0M	U T H	K1=0.15 K1=0.09(25 C). DH(K1)=6.60(25 C),8.28(40 C) kJ mol-1; DS=23.7 J K-1 mol-1	1966KLb	(3853)	188
Cu++	oth	oth/un	25°C	0.0	U	K1=0.3	1966MBb	(3854)	189
Cu++	nmr	oth/un	?	var	M	K1=-0.11 B2=-0.81	1966VKa	(3855)	190
Cu++	EMF	non-aq	25°C	100%	U	K1=9.7 B2=7.9 K3=7.1 K4=3.7	1965MIa	(3856)	191
Medium:MeCN, 0.1 M Et4NClO4									
Cu++	ix	NaClO4	30°C	1.0M	U	K1=1.18 B2=0.87 B3=0.79 B4=0.88	1962DCa	(3857)	192
Cu++	oth	KNO3	-3°C	sat	U	K1=0.43	1962FCa	(3858)	193
Method: freezing point									
Cu++	ix	NaCl	25°C	10.0M	U	K(H+CuCl4)=0.9 K(H+HCuCl4)=0.18	1962MIa	(3859)	194
Medium: LiCl									
Cu++	ix	NaClO4	20°C	0.69M	U	K1=0.98 B2=0.69 K3=-0.14 K4=-0.55 B4=ca.0	1962MSc	(3860)	195
Cu++	gl	none	25°C	0.0	U T		1960BBa	(3861)	196

Kso(Cu(OH)1.5L0.5)=-17.35
K=5.35

Kso=-16.65(50 C), -16.3(60 C), -16.1(75 C). K: 2Cu(OH)1.5L0.5(s)+OH=2CuO(s)+L+H2O. K=4.9(50-65 C), 5.1(75 C)

Cu++ sp NaCl04 25°C 2.30M U T H K1=0.74 1960LRa (3862) 197
B(Cu2L)?=0.72
K1=0.59(12 C), 0.87(40 C); B(Cu2L)?=0.53(12 C), 0.89(40 C)
DH(K1)=17 kJ mol-1, DH(Cu2L?)=22

Cu++ oth oth/un 0°C sat U I K1=0.17 1959KEb (3863) 198
Method: freezing point, medium: KCl03 sat. In KCl04 sat. K1=0.66.
I=0 corr.: K1=0.95

Cu++ gl none 25°C 0.0 U 1958BBa (3864) 199
Kso(Cu(OH)1.5L0.5)=-17.38

Cu++ ix NaNO3 ? 1.50M U K1=-0.40 1958TRa (3865) 200

Cu++ sp non-aq 25°C 100% U K1=4.10 B2=7.18 1956GAa (3866) 201
K3=1.57
K4=0.12
B4=8.89

Medium: acetone

Cu++ sp oth/un 22°C var U 1953KIa (3867) 202
B(Cu2L4)=2.15

Cu++ sp none 25°C 0.0 U K1=0.08 1953NAb (3868) 203

Cu++ sol none 25°C 0.0 U K1=0.40 1951MOa (3869) 204

Cu++ sol NaCl04 25°C 1.0M U K1=<-0.40 B2=<0.15 1951NLb (3870) 205
Kso(Cu(OH)1.5L0.5)=-17.16

Cu++ sp NaCl04 25°C 1.0M U IH K1=0.11 B2=-0.53 1950MDa (3871) 206
Medium: HCl04. DH(K1)=2.5 kJ mol-1, DS=10 J K-1 mol-1. K1=0.14(46.9 C)

Cu++ sp none 25°C 0.0 U K1=0.05 1950NAa (3872) 207

Cu++ gl none 25°C 0.0 U 1949NTa (3873) 208
Kso(Cu(OH)1.5L0.5)=-17.265

Cu++ sp none 22°C 0.0 U K1=0 B2=-0.7 1946BJb (3874) 209
K3=-1.5
K4=-2.3

Cu++ ISE oth/un rt var U K1=2.15 B2=2.9 1939BAb (3875) 210
K3=0.7

Cu++ ISE oth/un 18°C var U K1=2.80 B2=4.40 1934RSa (3876) 211
 K3=0.49
 K4=0.73

ClO2- HL Chlorite CAS 13898-47-0 (6143)
 Chlorite;

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

Cu++ sp NaClO4 25°C 1.0M C K1=0.03 1991FGc (6007) 212
 Method: UV spectrophotometry.

ClO3- HL Chlorate CAS 7790-93-4 (971)
 Chlorate;

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

Cu++ nmr KCl 20°C 0.20M U 1983KRc (6015) 213
 B(CuH-1L)=0.87
 B(CuH-2L)=-8.79
 B(CuH-1L2)=3.22
 B(CuH-3L2)=-5.69

 Cu++ cal oth/un 25°C 1.00M U H 1975ARa (6016) 214
 DH(K1)=-6.51 kJ mol-1. DS = -28.4 J K-1 mol-1. Medium: 1.0 M NaClO3

 Cu++ kin NaClO4 25°C 1.0M U K1=-0.34 1973HHb (6017) 215

Cu++ gl oth/un 25°C 0.0 U I 1963LLa (6018) 216
 Kso(Cu(OH)1.5L0.5)=-15.89

Also solubility. In 1 M NaClO4: K1=<-0.15, B2=<1.12, Kso=-15.69

ClO4- HL Perchlorate CAS 7001-90-3 (287)
 Perchlorate;

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

Cu++ con mixed 25°C 20% C K1=1.24 2003SIa (6111) 217
 Medium: 20% w/w propylene carbonate/ethylene carbonate.

 Cu++ con non-aq 25°C 100% U K1=1.66 1981LGa (6112) 218
 Medium: DMSO; K1 in DMSO/benzene (mole fraction 0.3)=1.94

 Cu++ con alc/w 25°C 100% U K1=2.29 1974WPc (6113) 219
 Medium: MeOH, 0 corr

 Cu++ con non-aq 25°C 100% U T K1=1.9 1973DFa (6114) 220
 Medium: MeCN. K1=1.4(-30 C), 1.5(-15 C)

 Cu++ ISE none 25°C 0.0 U T 1968HRb (6115) 221

Kso(Cu(py)4L2=Cupy4+2L)=-4.52
 Kso=-4.73(15 C), -4.26(35 C). Method: Cl04 ISE

 Cu++ con non-aq 25°C 100% U M 1961BHb (6116) 222
 K(Cu(bpy)2+L)=3

Medium: nitrobnzene. K=3.5 by spectrophotometry

 Cu++ gl none 25°C 0.0 U 1949NTa (6117) 223
 Kso(Cu(OH)1.71L0.29)=ca.-17

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

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

 Cu++ gl none 25°C 0 U K1=3.27 1994BOa (6450) 224
 Kso(CuL.2Cu(OH)2)=-48.6

 Cu++ sol none 25°C 0.0 U 1951PCa (6451) 225
 Kso=-5.44

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

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

 Cu++ sp NaCl04 30°C 0.01M U M 1986KMa (6583) 226
 K(Cu2A+L)=3.93

A=N,N',N'',N'''-Tetrakis(2-aminoethyl)-1,4,8,11-tetraazacyclotetradecane

 Cu++ ISE R4N.X 25°C 0.05M U I K1=1.46 1983SBa (6584) 227
 Medium: 0.05 M Et4NF. In MeOH, 0.05 Et4NF, K1=4.52

 Cu++ nmr oth/un 25°C 2.20M U K1=0.76 1982SZa (6585) 228

 Cu++ ISE NaCl04 25°C 1.00M U I K1=1.4 1981KBb (6586) 229

 Cu++ ISE NaCl04 25°C 3.00M U K1=1.06 1976KBa (6587) 230

 Cu++ cal oth/un 25°C 0.50M U H K1=0.81 1974ARc (6588) 231
 DH(K1)=14.9 kJ mol-1, DS=65 J K-1 mol-1

 Cu++ ISE NaNO3 25°C 0.08M C I K1=0.87 1974GCa (6589) 232
 When I=0.05 M: K1=0.93, K2=0.85

 Cu++ ISE NaCl04 25°C 1.0M U K1=0.84 1972BHc (6590) 233

 Cu++ ISE oth/un 25°C 1.0M U K1=0.64 1970UTa (6591) 234

 Cu++ vlt NaCl04 30°C 1.0M U K1=0.61 1969BOb (6592) 235

Cu++ EMF NaClO4 20°C 1.0M U K1=0.93 1969VAa (6593) 236
B3=1.6

Electrode: quinhydrone electrode

Cu++ vlt NaClO4 25°C 1.0M U K1=0.83 1963MHa (6594) 237

Cu++ EMF NaClO4 25°C 0.50M U T H K1=0.70 1958CPa (6595) 238
K(Cu+HF=CuF+H)=-2.21

DH(K1)=3.8 kJ mol⁻¹, DS=25 J K⁻¹ mol⁻¹; DH(*K1)=-11, DS=-79

15 C: K1=0.72, *K1=-2.13; 35 C: K1=0.75, *K1=-2.25. At I=0 corr K1=1.23

Cu++ EMF NaClO4 20°C 1.00M U K1=0.95 1956ARa (6596) 239

Cu++ EMF NaClO4 25°C 0.50M U T H K1=0.70 1955PAa (6597) 240
K1=0.72(15 C), K1=0.75(35 C), DH(K1)=3.8kJ mol⁻¹, DS=25 J K⁻¹ mol⁻¹

At I=0 corr: DS(K1)=46

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

alpha-Heteromonogermanium-polytungstate;

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

Cu++ gl NaNO3 25°C 1.00M U K1=5.98 1984COa (7461) 241

HPO3-- H2L Phosphite CAS 13598-36-2 (6305)

Phosphite;

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

Cu++ sol NaNO3 25°C 3.50M U B2=4.57 1964NAb (7497) 242

Kso=-6.72

Ks2=-2.15

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

Water

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

Cu++ sol non-aq 25°C 100% U 1968GGg (7554) 243

Ks(CuCl2(s)+L)=1.72

Ks(CuCl2(s)+2L)=2.89

Medium: dioxan

Cu++ sol non-aq 25°C 100% U I 1967GGb (7555) 244

Ks(CuSO4(s)+4L)=-7.9

Ks(CuSO4(s)+6L)=-10.85

Medium: acetone. In dioxan: -7.75(4L); -10.65(6L)

Cu++ vlt non-aq ? 100% U K1=1.75 B2=3.25 1964NIa (7556) 245

K3=1.00
K4=0.75
Medium: acetone, LiClO₄. In acetone, 0.1 M Et₄NClO₄: K₁=1.75, K₂=1.25,
K₃=0.80, K₄=0.65

Cu++ oth alc/w 27°C ? U I M 1963FPa (7557) 246
K(CuL₄S₂+L=CuL₅S+S)=1.41
K(CuL₅S+L=CuL₆+S)=-0.26

Medium: EtOH(S)/H₂O mixture. For S=acetone in acetone/H₂O : K=2.51, -0.57

Cu++ vlt non-aq 25°C 100% U I K₁=2.85 B₂=4.81 1962LIa (7558) 247
K₃=1.14
K₄=1.02
K₅=0.52
K₆ to K₉=ca.0.5

Method: current-voltage studies. Medium: MeNO₂, 0.1 M Et₄NClO₄. In EtOH:
K₁=-0.23, K₂=-0.51, K₃=-0.86, K₄=-0.93, K₅=-1.14, K₆=-1.17. Data also by IR

Cu++ sp alc/w 25°C 100% U 1954JOa (7559) 248
K_{av}=-0.72

Medium: EtOH, NO₃

Cu++ sp alc/w 25°C 100% U 1954JOa (7560) 249
K(Cu(en)₃+L)=-0.74

Medium: EtOH, Cl

H₂P₂O₂- HL Hypophosphite CAS 6303-21-5 (6304)
Hypophosphite;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	kin	NaClO ₄	35°C	0.20M	U		1972SGb (7632) 250		
							K(Cu+H ₃ L=CuH ₂ L+H)=0.56		

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	non-aq	25°C	100%	U		1993LJa (7660) 251		
							K(CuAB+L)=3.32		

Medium: 1,2-dichloroethane. HA: acetylacetone; B: N,N,N',N'-tetramethyl-ethylenediamine.

Cu++ sp non-aq 25°C 100% U M 1987CCa (7661) 252
K(CuA+L)=2.19

A=N-rac-5,7,7,12,14,14-hexamethyl-1,4,8,11-tetraazacyclotetradeca-4,11-diene
Medium: DMSO. Data also for DMF and MeOH, and for N-meso isomer

Cu++ sp NaClO₄ 30°C 0.01M U M 1986KMa (7662) 253

<p>A=N,N',N'',N'''-Tetrakis(2-aminoethyl)-1,4,8,11-tetraazacyclotetradecane</p>									

Cu++	sp	none	25°C	0.0	U			1983LTb	(7663) 254
<p>K(CuA+L)=0.48</p>									
<p>A=C-meso-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetra-azacyclotetradecane.</p>									
<p>For C-rac isomer, K=0.81.</p>									

Cu++	sp	non-aq	25°C	100%	U			1983LTb	(7664) 255
<p>K(CuA+L)=2.97</p>									
<p>In DMF. A=C-rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetra-azacyclotetradecane</p>									
<p>For C-rac isomer, K=3.18. In DMSO, K=2.08 and 2.34; In MeOH, K=4.26 and 4.32</p>									

Cu++	sp	NaClO ₄	25°C	5.00M	U	M		1975RPa	(7665) 256
<p>K(Cu(en)₂+L)=-0.15</p>									

Cu++	cal	non-aq	25°C	100%	U	H		1972BFa	(7666) 257
<p>K(Cu(en)₂+I)=1.73</p>									
<p>K(CuA₂+I)=2.83</p>									
<p>Medium: MeOH. DH(Cu(en)₂+L)=11.9 kJ mol⁻¹, DS=72.8 J K⁻¹ mol⁻¹.</p>									
<p>DH(CuA₂+L)=6.6, DS=76. A=trieth. Data for three other diamines</p>									

Cu++	cal	alc/w	25°C	100%	U	H		1972BPc	(7667) 258
<p>K(Cu(meen)₂+L)=2.62</p>									
<p>Medium: MeOH. A=N-methylethylenediamine. DH(K)=4.23 kJ mol⁻¹, DS=64.0</p>									

Cu++	sp	oth/un	18°C	1.0M	U	M		1956Y0a	(7668) 259
<p>K(Cu(en)₂+L)=2.00</p>									
<p>*****</p>									
I03-		HL		Iodate				CAS 7782-68-5	(1257)
<p>Iodate;</p>									

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

Cu++	sol	none	25°C	0	M	I		1989IPb	(8440) 260
<p>Kso=-7.15</p>									
<p>Extrapolated from 6 M NaClO₄. Kso (6 M)=-6.226</p>									

Cu++	sol	NaClO ₄	25°C	1.0M	U	T H		1973GGa	(8441) 261
<p>Kso(Cu₃L₆(H</p>									

Cu++	sol	none	25°C	0.0	U					1962LLa	(8444)	264
Kso(Cu(OH)1.5L0.5)=-17.56												
Cu++	sol	NaClO4	rt	1.0M	U					1959RAa	(8445)	265
Kso(CuL2)=-6.12												
Cu++	sol	none	25°C	0.0	U				K1=0.82	1951LWa	(8446)	266
Kso(CuL2)=-7.12												
Cu++	sol	none	25°C	0.0	U				K1=0.82	1951MOa	(8447)	267
Kso(CuL2)=-7.13												
Cu++	sol	none	25°C	0.0	U					1948KEa	(8448)	268
Kso(CuL2)=-7.135												
Cu++	ISE	oth/un	25°C	var	U					1914AUa	(8449)	269
Kso(CuL2)=-6.88?												
Cu++	ISE	oth/un	25°C	var	U					1913SPa	(8450)	270
Kso(CuL2)=-6.84												

IO4-			HL		Periodate					CAS 13444-71-8	(6063)	
Periodate;												
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values		Reference	ExptNo
Cu++	gl	none	25°C	0.0	U					1964PCa	(8596)	271
Kso(Cu(OH)1.5(HL)0.5)=-21.29												
Kso(Cu(OH)1.6(HL)0.4)=-22.02												
Kso(CuNa0.5(OH)2(HL)0.5)=-26.6												

MoO4--			H2L		Molybdate					(443)		
Molybdate;												
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values		Reference	ExptNo
Cu++	sol	oth/un	25°C	dil	U					1980GSb	(8695)	272
Ks(CuMoO4)=-6.55												
ISE also used												

Mo12O42Ce-----			H8L							(2923)		
Cerium-12-molybdate;												
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values		Reference	ExptNo
Cu++	gl	oth/un	20°C	0.10M	U				K1=4.47 B2=8.13	1982TBa	(8766)	

Mo12042U----- H8L (2922)

Uranium-12-molybdate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	oth/un	20°C	0.10M	U			K1=5.18 B2=9.08	1982TBa	(8769) 274

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	sp	R4N.X	25°C	2.0M	C T H			K1=4.35 B2= 7.85 B3=10.94 B4=12.82	2001TRa	(8901) 275

Medium: 2.0 m NH4NO3. Extrapolated from data for 30-150 C.
DH(K1)=-17.2 kJ mol⁻¹, DH(B2)=-41.6, DH(B3)=-74.7, DH(B4)=-88.4.

Cu++	gl	R4N.X	25°C	0.10M	U				1995KBb	(8902) 276
								K(CuA+L)=3.74 K(CuAL+L)=0.71		

Medium: 0.1 M NH4NO3. H3A=NTA

Cu++	sp	NaClO4	25°C	0.20M	U				1991CCb	(8903) 277
								K(CuA+L=CuAL)=1.95		

A is rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradecane

Cu++	gl	oth/un	25°C	2.0M	U TI			K1=4.219 B2= 7.97 K3=2.961	1990ISb	(8904) 278
------	----	--------	------	------	------	--	--	-------------------------------	---------	------------

Medium:NH4NO3 also for T=98 C K1=2.980;K2=2.420; K3=1.742;K4=1.069
For I=5.0 M , T=25 C K1=4.640; K2=3.808, K3=3.201; K4=2.439;

Cu++	cal	oth/un	35°C	1.00M	U TI				1990VBa	(8905) 279
------	-----	--------	------	-------	------	--	--	--	---------	------------

DH(K1)=-20.9; DH(B2)=-43.6; DH(B3)=-65.3; DH(B4)=-90.6 kJ mol⁻¹;
DS(K1)=9.3; DS(B2)=-0.2; DS(B3)=-18.4; DS(B4)=-62.2 J K⁻¹ mol⁻¹

Cu++	gl	KNO3	25°C	0.20M	M M				1988SKd	(8906) 280
------	----	------	------	-------	-----	--	--	--	---------	------------

K(Cu(dien)+L)=3.59
K(H+L)=9.12

Cu++	gl	R4N.X	25°C	1.0M	C M			K1=4.101 B2= 7.59 B3=10.31 B4=12.423 B(CuAL2)=16.67 K(CuA+2L)=6.86	1985CTb	(8907) 281
------	----	-------	------	------	-----	--	--	--	---------	------------

Medium: 1.0 M NH4NO3. H2A is salicylic acid. K(CuL2+A)=9.08.

Cu++	gl	R4N.X	25°C	2.0M	C			K1=4.18 B2=7.70 B3=10.46 B4=12.52	1984NDa	(8908) 282
------	----	-------	------	------	---	--	--	---	---------	------------

Cu++	gl	NaNO3	25°C	0.10M	A	M		1982SSa	(8909)	283
							K(CuA+L)=3.60			
A=uridine-5'-triphosphate										
Cu++	sp	KCl	23°C	1.00M	C			1980BAa	(8910)	284
							K5=-0.379			
							K(CuL4+OH=CuL4OH)=0.97			
Cu++	ISE	KNO3	25°C	0.10M	U			1980NWa	(8911)	285
							B4=12.53			
Cu++	ISE	KNO3	25°C	0.10M	U			1975NWa	(8912)	286
							B4=12.49			
Cu++	vlt	oth/un	30°C	var	U			1971SSe	(8913)	287
							B4=13.15			
Cu++	gl	R4N.X	30°C	2.0M	U		K1=4.14 K3=2.87 K4=2.15	B2=7.66	1970BLc	(8914) 288
Medium: NH4NO3										
Cu++	gl	R4N.X	30°C	2.0M	U		K1=4.149 K3=2.890 K4=2.135	B2=7.65	1970BSb	(8915) 289
Medium: NH4NO3										
Cu++	gl	NaClO4	25°C	1.0M	U		B2=7.1 B3=10.2 B4=12.1		1970GHb	(8916) 290
Solubility also used. B(Cu(OH)L)=10.7, B(Cu(OH)L3)=14.4, B(Cu(OH)2L2)=16.3										
Cu++	sp	oth/un	25°C	var	U			1970Rba	(8917)	291
							K(Cu(en)2+L)=-0.4			
							K(Cu(en)2+CuL4=2Cu(en)2L2)=0.9			
Cu++	gl	R4N.X	25°C	1.0M	U		K1=4.14 B3=10.48 B4=12.52	B2=7.61	1969ESb	(8918) 292
Medium: NH4NO3										
Cu++	vlt	KNO3	30°C	0.50M	U			1967FHa	(8919)	293
							B4=12.3			
							B(Cu(OH)L3)=14.9			
							B(Cu(OH)2L2)=15.7			
							B(Cu(OH)3L)=16.3			
Cu++	gl	NaNO3	22°C	2.0M	U		K1=4.09 B3=10.55	B2=7.54	1967HLa	(8920) 294

B4=12.63

Cu++ vlt oth/un ? ? U 1967RSb (8921) 295

B4=12.95

Cu++ gl R4N.X 20°C 1.0M U M K1=4.15 B2=7.65 1966FLb (8922) 296

B3=10.54

B4=12.67

Also by distribution. Medium: NH4NO3. Also data for Cu-NH3-py complexes

Cu++ vlt R4N.X 30°C 2.0M U B2=11.66 1966GCa (8923) 297

B4=14.38

Medium: NH4NO3

Cu++ sp R4N.X 25°C 1.0M U K1=4.16 B2=7.47 1965MBb (8924) 298

K3=3.38

K4=2.20

B4=13.05

Medium: NH4ClO4

Cu++ oth none 40°C 0.0 U T 1961MLa (8925) 299

B4=9.98

B5=11.00

By partial pressure of NH3. I=0 corr. B4=9.58(60 C), B5=9.56(60 C)

Cu++ cal R4N.X 25°C 2.0M U H 1959SCe (8926) 300

In NH4NO3. DH(K1)=-22.72 kJ mol⁻¹; DH(K2)=-23.47; DH(K3)=-22.93; DH(K4)=-22.59; DH(K5)=-11.30; DS1=4.6; DS2=-10.5; DS3=-20.1; DS4=-33.9; DS5=-46.

Cu++ gl R4N.X 30°C 2.0M U K1=4.13 B2=7.66 1959SRa (8927) 301

K3=2.87

K4=2.15

Medium: NH4NO3

Cu++ gl R4N.X 25°C 2.0M U T H K1=4.27 B2=7.86 1958PAa (8928) 302

K3=3.00

K4=2.19

B4=13.05

Medium: NH4NO3. DH(K1)=-24.7 kJ mol⁻¹, DS=-2.1; DH(K2)=-23.4, DS=-10.0; DH(K3)=-25.1, DS=-26.8; DH(K4)=-10.5, DS=5.0; DH(B4)=-83.7; Data for 10-40 C

Cu++ cal R4N.X 27°C 2.0M U H 1957MIb (8929) 303

In NH4NO3. T=26.8C. DH(K1)=-23.4 kJ mol⁻¹; DH(K2)=-23.0; DH(K3)=-23.0; DH(K4)=-22.5; DH(K5)=-20.9; DS1=1.3; DS2=-9.6; DS3=-21.3; DS4=-34.3; DS5=-79.5

Cu++ cal R4N.X 27°C 2.0M U H 1957YMb (8930) 304

In NH4NO3. T=26.8C. DH(K1)=-23.4 kJ mol⁻¹; DH(K2)=-23.0; DH(K3)=-23.4; DH(K4)=-22.2; DH(K5)=-21.3; DS1=1.3; DS2=-9.6; DS3=-22.6; DS4=-33.1; DS5=-81.2.

Cu++ gl R4N.X 25°C 1.0M U H 1955PBa (8931) 305

B4=12.63

K5=-0.55

Also by spectrophotometry. Medium: NH_4NO_3 . $\text{DH}(\text{B}_4)=-83.7 \text{ kJ mol}^{-1}$, $\text{DS}=-39$
K5 by Cu/Hg electrode. $\text{DH}(\text{K}_5)=-13.4$, $\text{DS}=-55.6$

Cu++	sp	oth/un	rt	var	U		1954BBa	(8932)	306
------	----	--------	----	-----	---	--	---------	--------	-----

K6=ca.-2.5

Cu++	gl	R4N.X	25°C	1.0M	U	K1=4.27	B2=7.82	1954LLa	(8933)	307
------	----	-------	------	------	---	---------	---------	---------	--------	-----

K3=2.90

K4=2.18

Medium: NH_4NO_3 .

Cu++	ISE	oth/un	25°C	var	U		1953LUa	(8934)	308
------	-----	--------	------	-----	---	--	---------	--------	-----

B4=14.14

Cu++	gl	R4N.X	25°C	2.10M	U T H	B2=7.865	1953SPc	(8935)	309
------	----	-------	------	-------	-------	----------	---------	--------	-----

B4=13.05

Medium: NH_4NO_3 . Also data for 10-40°C. $\text{DH}(\text{B}_2)=-50.2 \text{ kJ mol}^{-1}$; $\text{DH}(\text{B}_4)=-98.7$;
 $\text{DS}(\text{B}_2)=-18.0$; $\text{DS}(\text{B}_4)=-82.4$.

Cu++	cal	oth/un	?	var	U	H	1953YGa	(8936)	310
------	-----	--------	---	-----	---	---	---------	--------	-----

$\text{DH}(\text{B}_4)>-79 \text{ kJ mol}^{-1}$, $\text{DH}(\text{K}_5)<-46$.

Cu++	cal	oth/un	rt	dil	U	H	1952FYa	(8937)	311
------	-----	--------	----	-----	---	---	---------	--------	-----

$\text{DH}(\text{B}_4)=-88.3 \text{ kJ mol}^{-1}$; $\text{DS}=-67.8 \text{ J K}^{-1} \text{ mol}^{-1}$

Cu++	ISE	oth/un	18°C	var	U		1951STa	(8938)	312
------	-----	--------	------	-----	---	--	---------	--------	-----

B4=14.31

Cu++	gl	none	25°C	0.0	U	K1=4.01	1944NAa	(8939)	313
------	----	------	------	-----	---	---------	---------	--------	-----

Cu++	gl	R4N.X	30°C	2.0M	U	I	K1=4.15	B2=7.65	1941BJa	(8940)	314
------	----	-------	------	------	---	---	---------	---------	---------	--------	-----

K3=2.89

K4=2.13

B4=12.67

Also by spectrophotometry. Medium: NH_4NO_3 . At $I=0$ corr.: $\text{K}_1=3.99$, $\text{K}_2=3.34$,
 $\text{K}_3=2.73$, $\text{K}_4=1.96$, $\text{B}_4=12.03$. $\text{DH}(\text{B}_4)=-82.4 \text{ kJ mol}^{-1}$, $\text{DH}(\text{K}_5)=-13.8$

Cu++	vlt	R4N.X	rt	2.0M	U		1940SFa	(8941)	315
------	-----	-------	----	------	---	--	---------	--------	-----

B4=13.5

Medium: NH_4NO_3 .

Cu++	EMF	R4N.X	18°C	2.0M	U		1934BJb	(8942)	316
------	-----	-------	------	------	---	--	---------	--------	-----

B4=13.34

K5=-0.45

Method: Cu/Hg electrode. Medium: NH_4NO_3 .

Cu++	sp	none	25°C	0.0	U	T	1932BJa	(8943)	317
------	----	------	------	-----	---	---	---------	--------	-----

K5=-0.60

I=0 corr. K5=-0.49(15 C)

Cu++ sp oth/un rt var U 1932R0a (8944) 318
K5=-0.52

Cu++ cal oth/un 13°C var U H 1931BJa (8945) 319
DH(B4)=-82.4 kJ mol⁻¹; DH(K5)=ca.-14.6.

Cu++ oth R4N.X 18°C 2.0M U K1=4.31 B2=7.98 1931BJa (8946) 320
K3=3.04
K4=2.30
(K5=-0.46)

By partial pressure of NH₃. Medium: NH₄NO₃. I=0 estimated: K1=4.25, K2=3.61,
K3=2.98, K4=2.24, K5=-0.52

Cu++ ISE oth/un ? var U 1930KNa (8947) 321
B4=15.74

Cu++ sp oth/un 16°C var U 1928J0a (8948) 322
B4=9.3

NH₃ L Hydroxylamine; CAS 5470-11-1 (1808)
Hydroxylamine; NH₂.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	EMF	alc/w	20°C	50%	U		K1=3.08 B2=3.58	1978ITa (9245)	323
Cu++	gl	NaClO ₄	25°C	0.10M	U		K1=2.8 K(Cu(bpy)+L)=2.2	1968EFa (9246)	324

Cu++ gl NaNO₃ 20°C 0.50M U K1=2.4 B2=4.10 1963SZa (9247) 325

NO L Nitric oxide CAS 10102-43-9 (850)
Nitric oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	oth	alc/w	25°C	100%	U	TI M		1963MFC (9288)	326

K(CuCl₂+NO(g)=CuCl₂L)=1.19
Method: Chemical analysis. Medium: MeOH. K=2.05(16.3 C). In EtOH K=2.0(26 C)
1.7(30 C). Plus other equilibria

Cu++ sp alc/w 20°C 100% U M 1961FRa (9289) 327
K(CuCl₂+L)=0.96
K(CuCl₂L=Cu(I)Cl₂+L+)=-1.81
K(CuBr₂L=Cu(I)Br₂+L+)=-2.02

Cu++ sol alc/w 25°C 100% U T H 1958GLa (9290) 328
Kp(Cu+NO(g))=0.35

.....

.....

.....

At $I=1.0$ M: $K_1=1.20$, $K_2=0.22$, $K_3=-0.78$

.....

.....

.....

.....

.....

Medium: MeOH/H₂O, 2M LiClO₄. K₁=-0.30, K_{1in}=-1.00(0%). 0.29, -0.40(60%). 0.59, -0.10(79%). 0.77, 0.09(86.5%)

Cu++ sp alc/w 25°C 65% U IH K1=0.40 1974MSe (9470) 341
K1in=-0.30

Medium: EtOH/H2O, 2 M LiClO4. K1=-0.04, K1in=-0.70(41.5%). 0.18, -0.52(57.5%)
0.48, -0.06(74%). 0.93, 0.22(85%)

Cu++ sp diox/w 25°C 30% U IH K1=0.79 1974MSe (9471) 342
K1in=-0.80

Medium: Dioxan/H2O, 2 M LiClO4. K1=0.11, -0.96(10%). 0.41, -0.89(20%).
0.98, -0.44(51.5%). 0.92, -0.42(61%). 1.03, -0.28(67%). 1.08, 0.02(73%)

Cu++ ISE oth/un 25°C 0.50M U I K1=-0.13 1973FRa (9472) 343

Method: amalgam electrode. Medium: LiClO3. K1=-0.01, B2=-0.62(I=1).
K1=-0.06, B2=-0.62, B3=-0.85(I=2). K1=-0.02, B2=-0.47, B3=-0.82(I=3) Cont'd

Cu++ ISE oth/un 25°C 4.0M U I K1=0.11 B2=-0.38 1973FRa (9473) 344
B3=-0.52
B4=-1.2

Method: amalgam electrode. Medium: LiClO3. K1=0.54, B2=-0.39, B3=-1.2(I=0)

Cu++ kin NaClO4 25°C 1.0M U K1=-0.13 1973HHb (9474) 345

Cu++ sp NaNO3 25°C var U T K1=-1.2 1972DCa (9475) 346
Method: Raman spectra

Cu++ sp NaClO4 25°C 3.0M U I K1=-0.22 1970MMj (9476) 347
Medium: LiClO4

Cu++ sp non-aq ? 100% U K3K4=4.23 1963TCa (9477) 348

Medium: Me2CO

Cu++ sol R4N.X 18°C 2.0M U 1957BJa (9478) 349
Medium: NH4NO3. Kso(Cu(OH)1.5L0.5)=-15.68

Cu++ gl oth/un 25°C 0.0 U 1949NTa (9479) 350
Kso(Cu(OH)1.5L0.5)=-16.373

N2H4 L Hydrazine CAS 302-01-2 (2117)

Hydrazine; H2N.NH2

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

Cu++ gl R4N.X 25°C 0.10M U M 1995KBb (10054) 351
K(CuA+L)=3.51

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

Cu++ gl oth/un 25°C dil U K1=4.85 B2=8.93 1972AGc (10055) 352
K3=3.26
K4=2.85
k5=1.7

Cu++	gl	NaClO4	25°C	0.10M	U		K1=4.2		1968EFa (10056)	353

Cu++	gl	NaClO4	25°C	0.10M	U	M			1968EFa (10057)	354
K(Cu(bpy)2+L)=3.5										

Cu++	gl	NaClO4	30°C	1.0M	U		K1=6.67		1967BSb (10058)	355

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

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

Cu++	sp	KN03	25°C	1.00M	U	M			1995ONa (10120)	356
K(CuA+L)=0.60										
K(CuB+L)=1.098										
K(CuC+L)=1.098										
A=1,4,8,11-tetraaza-1,4,8,11-tetraethylcyclooctatetradecane, B=1,4,8,11-tetraaza-1,4-dimethyl-8,11-diethyl analogue, C=8,11-dipropyl analogue										

Cu++	gl	NaClO4	25°C	1.0M	C		K1=2.38	B2=4.01	1993AGa (10121)	357
K3=1.32										
K4=2.13										
Constants calculated by a Leden's graphical method. By matrix method(4x4). K1=2.39, K2=1.69, K3=1.08, K4=2.34										

Cu++	sp	non-aq	25°C	100%	U				1993LJa (10122)	358
K(CuAB+L)=3.55										
Medium: 1,2-dichloroethane. HA: acetylacetone; B: N,N,N',N'-tetramethyl-ethylenediamine.										

Cu++	sp	none	4°C	0.0	U	M			1991CAa (10123)	359
K(CuA+L at site A)=ca.3.0										
K(CuA+L at site B)=ca.2.3										
K(CuA+L at site C)<<2.3										
A=ascorbate oxidase										

Cu++	sp	non-aq	25°C	100%	U	M			1987CCa (10124)	360
K(CuA+L)=2.95										
A=N-rac-5,7,7,12,14,14-hexamethyl-1,4,8,11-tetraazacyclotetradeca-4,11-diene										
Medium: DMSO. Data also for DMF and MeOH, and for N-meso isomer										

Cu++	sp	oth/un	25°C	0.02M	U	M			1984HDa (10125)	361
K(CuA+L)=2.1										
A=1,4,8,11-Tetra-azacyclotetradecane (Cyclam). Data also for A=1,5,9,13-tetraazacyclopentadecane (K=1.39) and N,N',N'',N'''-tetramethylcyclam (K=1.79)										

Cu++	sp	none	25°C	0.0	U				1983LTb (10126)	362
K(CuA+L)=0.60										
A=C-meso-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetra-azacyclotetradecane.										

For C-rac isomer, $K=0.93$.

Cu++ sp non-aq 25°C 100% U 1983LTb (10127) 363

$K(\text{CuA}+\text{L})=3.99$

In DMF. A=C-rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetra-azacyclotetradecane
For C-rac isomer, $K=4.04$. In DMSO, $K=3.32$ and 3.41 ; In MeOH, $K=4.65$ and 4.60

Cu++ sp KCl 25°C 0.10M U B2=2.90 1980NOB (10128) 364
B3=3.02

Cu++ sp NaCl04 25°C 1.00M U K1=0.66 1977GAa (10129) 365

Cu++ sp NaCl04 25°C 5.00M U M 1975RPa (10130) 366
 $K(\text{Cu}(\text{en})_2+\text{L})=-0.23$

Cu++ cal alc/w 25°C 100% U HM 1972BFa (10131) 367

$K(\text{Cu}(\text{en})_2+\text{L})=2.48$

$K(\text{Cu}(\text{trien})_2+\text{L})=2.79$

Method:DH(Cu(en)₂+L)=14.56 kJ mol⁻¹, DS=96.1. DH(Cu(trien)₂+L)=12.9, DS=96.5
Data also for other diamines

Cu++ sp NaCl04 25°C 4.0M U K1=2.56 B2=4.48 1972NSa (10132) 368
B3=6.11
B4=7.82

By solubility $K_{\text{so}}=-7.81$

Cu++ vlt NaCl04 25°C 4.0M U 1972SND (10133) 369
B4=7.81

Cu++ sp oth/un 20°C 0.0 U K1=2.86 1971NEb (10134) 370

Cu++ sol oth/un 25°C 0.0 U K1=2.86 B2=4.53 1971SNa (10135) 371
B3=6.23
B4=6.65

Medium: 0 corr. $K_{\text{so}}=-7.75$

Cu++ gl NaCl04 25°C 3.0M U I K1=2.75 1967MRa (10136) 372
 $K1=2.04(I=1.0)$

Cu++ sp oth/un ? dil U K1=2.43 1960ENa (10137) 373

Cu++ sp NaCl04 20°C 0.20M U I K1=2.37 1957SOa (10138) 374
 $K1=2.44(I=0.1)$, $2.56(I=0.05)$

Cu++ cal oth/un 25°C 0.0 U H 1956GWc (10139) 375
DH($K_{\text{so}}(\text{CuL}_2(\text{s}))=15.0$ kJ mol⁻¹

Cu++ sol oth/un rt dil U 1943SCa (10140) 376
 $K_{\text{so}}(\text{CuL}_2(\text{s}))=-9.2$

OCN- HL Cyanate CAS 661-20-1 (6165)
Cyanate, Fulminate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	oth/un		var	U		K1=2.70 K3=1.43 K4=1.31	1967L0b (10287)	377

Cu++	sp	alc/w		100%	U		B(CuL1.5)=5.1(?)	1967QVa (10288)	378
------	----	-------	--	------	---	--	------------------	-----------------	-----

OH- HL Hydroxide (57)
Hydroxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl04	25°C	0.10M	U		*K1=-6.29 *B2=-13.10	2001PSb (10483)	379

Cu++	gl	NaNO3	25°C	0.10M	C		*K1=-6.29 *B2=-13.10	2000MSa (10484)	380
------	----	-------	------	-------	---	--	-------------------------	-----------------	-----

Cu++	sol	NaNO3	25°C	0	C		*Ks(Cu(OH)2+2H=Cu+2H2O)=9.3	1999HEb (10485)	381
------	-----	-------	------	---	---	--	-----------------------------	-----------------	-----

Calculated from data for 0.002 M NaNO3, pH 6.0-9.0.

Cu++	gl	NaCl04	30°C	0.20M	U		*K1=-6.29 *B2=-13.10	1999PGa (10486)	382
------	----	--------	------	-------	---	--	-------------------------	-----------------	-----

Cu++	gl	NaNO3	30°C	0.20M	U		*K1=-6.29 *B2=-13.10	1999PPa (10487)	383
------	----	-------	------	-------	---	--	-------------------------	-----------------	-----

Cu++	gl	alc/w	25°C	50%	C		*K1=-5.94 *B2=-12.00	1998MCb (10488)	384
------	----	-------	------	-----	---	--	-------------------------	-----------------	-----

Cu++	gl	NaNO3	25°C	0.10M	U		*K1=-6.29 *B2=-13.10	1998MSe (10489)	385
------	----	-------	------	-------	---	--	-------------------------	-----------------	-----

Cu++	gl	NaCl04	25°C	0.10M	C	TIH	K(2Cu+H2O=Cu2OH+H)=-6.08 K(2Cu+2H2O=Cu2(OH)2+2H)=-10.72	1997RSb (10490)	386
------	----	--------	------	-------	---	-----	--	-----------------	-----

Data for 10 - 45 C, I=0 - 1 M. DH(Cu2OH)=46.1 kJ mol⁻¹, DS=35.
DH(Cu2(OH)2)=68.1, DS=27.

Cu++	sp	KNO3	25°C	1.00M	U		1996FSa (10491)	387
						$K(\text{Cu}(\text{OH})_3 + \text{OH}) = 0.90$		
Cu++	gl	NaClO4	30°C	0.10M	C	$K_1 = 7.96$	1995STa (10492)	388
Cu++	vlt	NaNO3	20°C	3.00M	U T		1994NVa (10493)	389
						$B(\text{Cu}(\text{OH})_4) = 15.5$		
						$B(\text{Cu}(\text{OH})_4) = 14.1$ (50 C), $B = 13.7$ (70 C)		
Cu++	gl	NaNO3	25°C	0.10M	U		1992CJa (10494)	390
						$K(2\text{CuA} = \text{Cu}_2\text{A}_2(\text{OH})_2 + 2\text{H}) = -10.350$		
						$K(2\text{CuB} = \text{Cu}_2\text{B}_2(\text{OH})_2 + 2\text{H}) = -10.774$		
						A=2,2'-bipyrimidine; B=2,2'-bipyridyl.		
Cu++	gl	KNO3	25°C	0.10M	M		19920Ma (10495)	391
						* $K_1 = -7.223$		
						* $B(3,4) = -21.05$		
Cu++	sol	none	25°C	0.0	M TI		1992ZJb (10496)	392
						Method: solubility of CuO in sodium phosphate solutions at 19-262 C.		
						$K(\text{Cu}(\text{OH})_3 + \text{H}_2\text{O} = \text{Cu}(\text{OH})_4 + \text{H}) = -13.62$, $K(\text{CuO}(\text{s}) + 2\text{H}_2\text{O} = \text{Cu}(\text{OH})_3 + \text{H}) = -18.04$		
Cu++	vlt	NaClO4	20°C	0.70M	C	$K_1 = 6.3$	B2=10.00 1991CSa (10497)	393
						Method: differential pulse polarography.		
Cu++	gl	alc/w	30°C	50%	C		1991MCb (10498)	394
						* $K_1 = -5.94$		
						* $B_2 = -12.00$		
						Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.		
Cu++	gl	NaNO3	37°C	0.10M	U		1991MGB (10499)	395
						* $K_1 = -6.29$		
						* $B_2 = -13.05$		
Cu++	gl	diox/w	30°C	50%	U		1990MCb (10500)	396
						* $K_1 = -6.82$		
						* $B_2 = -13.60$		
						Medium: 50% v/v dioxane/H2O, 0.2 M NaNO3.		
Cu++	gl	alc/w	30°C	50%	C		1988MCb (10501)	397
						* $K_1 = -5.94$		
						* $B_2 = -12.00$		
						Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.		
Cu++	gl	diox/w	30°C	50%	C		1987MSd (10502)	398
						* $K_1 = -5.92$		
						* $B_2 = -12.00$		
						Medium: 50% v/v dioxane/H2O, 0.2 M NaNO3.		

Cu++ oth none 25°C 0.0 C T 1986VAa (10503) 399
 $K(\text{CuO(s)} + \text{H}_2\text{O} = \text{Cu(OH)}_2) = -8.6$
 Method: extrapolated from solubility data for CuO (tenorite) at 200-450 C.

Cu++ gl NaNO3 37°C 0.15M C 1985RDb (10504) 400
 $*K_1 = -7.59$
 $*B(2,2) = -10.23$
 $*B(3,4) = -20.7$
 Alternative model: $*K_1 = -7.66$, $*B(2,2) = -10.26$, $*B(1,2) = -13.9$.

Cu++ ISE NaNO3 25°C 0.10M U I 1984GLb (10505) 401
 $*K_1 = -7.1$
 $*B_2 = -16.0$

Cu++ gl NaClO4 25°C 3.00M C 1984NEa (10506) 402
 $*B(2,1) = -5.75$

Cu++ gl NaClO4 25°C 3.0M U T 1982BBb (10507) 403
 $*B(2,1) = -6.02$
 $*B(2,2) = -10.93$
 $*K_1 = -7.4$
 50C, $*B(1,2) = -5.65$

Cu++ sp oth/un 200°C u U 1981BPd (10508) 404
 $*K_1 = 0.008$

Cu++ gl NaNO3 30°C 0.50M U $K_1 = 7.04$ $B_2 = 14.92$ 1980NAd (10509) 405
 $K_3 = 5.34$

Cu++ ISE NaClO4 25°C 0.05M C I 1980PKb (10510) 406
 $*K_1 = -8.1$
 $*B_2 = -16.4$
 Method: Cu ion selective electrode. In 0.70 m NaClO4, $*K_1 = -8.1$, $*B_2 = -16.7$.

Cu++ gl KNO3 25°C 0.10M U 1979SDb (10511) 407
 $*K_1 = -7.71$
 $*B(2,2) = -10.99$
 $*B(3,4) = -21.62$

Cu++ ISE KNO3 25°C 0.05M C 1979SGf (10512) 408
 $*K_{\text{so}}(\text{Cu(OH)}_2) = 9.58$
 Method: Cu ion selective electrode.

Cu++ ISE KNO3 25°C 0.05M C 1979SGf (10513) 409
 $*K_1 = -7.52$
 $*K_{\text{so}}(\text{Cu(OH)}_2) = 9.58$
 $K_{\text{so}}(\text{Cu}_2(\text{OH})_2\text{CO}_3) = -28.84$
 Method: Cu ion selective electrode.

Cu++ gl KNO3 25°C 0.10M U 1978WNb (10514) 410

Cu++	ISE	NaCl	25°C	dil	C		1977VMa (10515)	411
							*B2=-13.7	
Method: Cu ion selective electrode. Medium: 0.001 M NaCl.								
Cu++	gl	NaNO3	25°C	0.50M	C		1977VNa (10516)	412
							*K1=-6.82	
							*B(2,2)=-10.60	
Cu++	gl	NaClO4	25°C	0.10M	U	H	1976ACb (10517)	413
							*K1=-7.72	
							*B(2,2)=-10.75	
							*B(3,4)=-21.38	
							K(2CuOH=Cu2(OH)2)=4.69	
DH(*K1)=35 kJ mol ⁻¹ , DH(*B(2,2))=77.0, DH(*B(3,4))=109, DH(2CuOH=Cu2(OH)2)=6.3								
Cu++	sol	R4N.X	25°C	2.00M	C		1976IBa (10518)	414
							Kso(Gerhardtite)=-15.75	
Medium: 2 mol dm ⁻³ Me4NN03. Kso for (Cu)(OH)1.5(NO3)0.5; Kso=-16.12 in 2 M diethylammonium nitrate								
Cu++	kin	NaClO4	25°C	0.50M	U		1975LRa (10519)	415
							K4=0.90	
Cu++	ISE	KN03	25°C	0.10M	U		1973PBa (10520)	416
							Kso(Cu(OH)2(s)=Cu+2OH)=-18.3	
Cu++	gl	diox/w	25°C	10%	U	I	19720Ka (10521)	417
							*K1=-7.44	
							*B(2,1)=-6.22	
							*B(2,2)=-11.35	
							*B(3,2)=-10.12	
K(Cu(OH)2(s)+2H=Cu+2H2O)=8.0. Medium: 10% dioxan/H2O, 3 M LiClO4								
In 50% dioxan, *K1=-7.74, *B(2,1)=-6.40, K=8.4								
Cu++	gl	NaClO4	25°C	3.00M	U		19720Ka (10522)	418
							*K1=-7.54	
							*B(2,1)=-6.22	
							*B(2,2)=-11.12	
							*B(3,2)=-10.36	
K(Cu(OH)2(s)+2H=Cu+2H2O)=8.3. Medium: LiClO4								
Cu++	cal	NaClO4	25°C	3.00M	U	H	1970ARb (10523)	419
							*B(2,2)=-10.26	
DH(*B(2,2))=66.1 kJ mol ⁻¹								
Cu++	kin	NaClO4	35°C	0.20M	U	T	1970BSf (10524)	420
							*K1=-2.1	
*K1=-2.0(40 C), -1.9(45 C)								

Cu++	gl	KNO3	37°C	0.15M	U		1970CHc (10525)	421
						*K1=-7.6 *B(2,2)=-10.5		
Cu++	sol	NaClO4	25°C	1.00M	U	B2=13.0 B3=14.7 B4=15.8 Kso(Cu(OH)2(s)=Cu+2OH)=-19.1	1970GHb (10526)	422
Cu++	gl	NaClO4	25°C	3.00M	U		1970KAb (10527)	423
						*K1=-7.22 *B(2,2)=-10.75		
Cu++	oth	none	25°C	0.0	U		1969DPb (10528)	424
						K(Cu(OH)2(s)=Cu(OH)2)-4.6		
Method:Estimated data.Also DG for many reactions								
Cu++	oth	none	60°C	0.0	U T		1969HEa (10529)	425
						*Kso=6.63		
Method:Estimated data. *Kso=5.56(100 C), 4.50(150 C). 3.72(200 C), 3.09(250 C), 2.59(300 C) (tenorite)								
Cu++	cal	NaClO4	25°C	3.00M	U H		1968APa (10530)	426
						DH(*B(2,2))=66.0 kJ mol ⁻¹ , DS=18.4 J K ⁻¹ mol ⁻¹		
Cu++	gl	diox/w	25°C	55%	U		19680Ha (10531)	427
						*K1=-7.60 *B(2,2)=-10.95		
Medium: 55% dioxan, 3 M LiClO4								
Cu++	sol	none	25°C	0.0	M	K1=6.0 B2=13.18 K3=1.24 K4=0.14 Kso=-19.89	1968SMd (10532)	428
Cu++	gl	KNO3	?	0.10M	U I	K1=5.4 B2=12.9 B(2,2)=16.8 B(3,4)=33.5	1967MSb (10533)	429
K1=6.1, B2=13.2, B(2,2)=17.1, B(3,4)=34.1(I=0.01); K1=5.7, B2=13.1, B(2,2)=16.9, B(3,4)=33.7(I=0.05). B(2,2)=16.4(I=0.5)								
Cu++	gl	none	25°C	0.00	U	K1=6.4 B2=13.3 B(2,2)=17.2 B(3,4)=34.4	1967MSb (10534)	430
Cu++	sol	NaClO4	25°C	0.20M	U		1965SAc (10535)	431
						*Kso(Cu(OH)2)=8.92 *Kso(CuO)=7.89		

Cu++	sol	none	25°C	0.0	M		1965SAc (10536)	432	
							*Kso(Cu(OH)2)=8.68 Kso(Cu(OH)2)=-19.32 *Kso(CuO)=7.65 Kso(CuO)=-20.35		
Cu++	gl	none	25°C	0.0	M		1964ACa (10537)	433	
							*K1=-7.34 *B(2,2)=-10.57		
Cu++	gl	none	25°C	0.0	M		1964GAb (10538)	434	
							Kso(Cu(OH)2(s))=-19.32 Kso(Cu(OH)2(H2O)3(s))=-18.7		
Cu++	gl	NaCl04	20°C	0.10M	U		1964WEb (10539)	435	
							*B(2,2)=-10.78		
Cu++	gl	R4N.X	25°C	1.0M	U		K1=2.41 B2=4.10 1962RBb (10540)	436	
Cu++	gl	none	25°C	0.0	U T		1960BBa (10541)	437	
							Kso=-19.7 (CuO,tenorite) Kso: K(CuO(s)+H2O=Cu+2OH); Kso=-19.1(50 C), -18.55(75 C)		
Cu++	gl	none	20°C	0.0	U		1960PEc (10542)	438	
							*B(2,2)=-3833/T + 2.497 *B(2,2)=-10.53 *B(2,2): K(2Cu+2H2O=Cu2(OH)2+2H); temperature:288-315 K		
Cu++	con	oth/un	25°C	dil	U		1959YGa (10543)	439	
							K(Cu(en)2+OH)=4.42		
Cu++	gl	none	25°C	0.0	U		1958ACa (10544)	440	
							*K1=-7.34		
Cu++	gl	none	25°C	0.0	U		1958BBa (10545)	441	
							Kso=-19.9 (CuO,tenorite) Kso: K(CuO(s)+H2O=Cu+2OH)		
Cu++	dis	KNO3	25°C	1.0M	U M		1957LHa (10546)	442	
							*B(2,2)=-11.5 B(2,2)=24.7 *B(2,2): K(2Cu(py)2+H2O=Cu2(py)4(OH)2+2H)		
Cu++	gl	NaCl04	25°C	3.0M	U		1956BEa (10547)	443	
							*B(2,2)=-10.6 *B(2,2): K(2Cu+2H2O=Cu2(OH)2+2H)		
Cu++	sol	none	25°C	0.0	U		1956SPb (10548)	444	
							Kso=-19.82		

Cu++	gl	none	75°C	0.0	U		1954D0a (10549) 445
						Kso(CuO)=-19.9	
<hr/>							
Cu++	cal	oth/un	?	2.0M	U	H	1953SLa (10550) 446
							DH(*Kso(Cu(OH)2(s)+2H=Cu+2H2O))=-55.9 kJ mol-1(HClO4), -50.8(HCl), -55.7(HBr)
<hr/>							
Cu++	gl	KCl	30°C	0.10M	U		1952CCa (10551) 447
						*K1=-6.8	
<hr/>							
Cu++	EMF	none	18°C	0.0	U		1950AFa (10552) 448
						Kso(CuO)=-19.88	
<hr/>							
Cu++	gl	none	25°C	0.0	U		1949NTa (10553) 449
						Kso(CuO)=-19.66	
						Kso(Cu(OH)2)=-18.585	
<hr/>							
Cu++	gl	none	20°C	0.0	U		1947GSa (10554) 450
						Kso(CuO)=-18.3	
<hr/>							
Cu++	sol	oth/un	?	1.0M	U		1944FEa (10555) 451
						Ks(Cu(OH)2+H2O+2OH)=-3.81	
						K(Cu(OH)2(s)+2OH)=-2.72	
						Kso=-20.00	
						B4=16.12	
<hr/>							
Cu++	gl	none	18°C	0.0	U		1943PEa (10556) 452
						*K1=-7.97	
						*B(2,2)=-10.89	
						*B(2,1)=-6.82	
<hr/>							
Cu++	gl	oth/un	25°C	var	U	I	1939HAa (10557) 453
							*B(2,2)=-10.86
							*B(2,2): K(2Cu+2H2O=Cu2(OH)2+2H). At I=0 *B(2,2)=-10.5 to -10.9
<hr/>							
Cu++	gl	none	25°C	0.0	U		K1=6.47 19380Ga (10558) 454
<hr/>							
Cu++	gl	none	25°C	0.0	U		19380Ka (10559) 455
						Kso(CuO(s))=-18.2	
<hr/>							
Cu++	gl	oth/un	15°C	var	U		1937CBa (10560) 456
						*K1=-7.9	
<hr/>							
Cu++	gl	none	25°C	0.0	U		1937QUa (10561) 457
						*B2=-13.68	
<hr/>							
Cu++	sol	none	25°C	0.0	U		1936MJa (10562) 458
						K(CuO(s)+H2O+OH=Cu(OH)3)=-4.99	
						Ks(Cu(OH)2+H2O+2OH)=-4.09	
						K4=0.90	
						*K4=-13.10	

Cu++	gl	oth/un	18°C	0.02M	U		K1=7.53 *K1=-6.53	1935BJa (10563)	459
Cu++	kin	oth/un	100°C	dil	U	T	K1=6.60	1933JEa (10564)	460
By distribution, 20 C: K1=7.22									
Cu++	EMF	oth/un	18°C	var	U		Kso(CuO)=-20	1925BRa (10565)	461
Cu++	ISE	oth/un	19°C	dil	U		Kso(Cu(OH)2(s))=-12.77	1924JGa (10566)	462
Cu++	sol	oth/un	18°C	var	U		Ks(Cu(OH)2(s)+2OH+H2O)=-4.08 K(Cu(OH)2(s)+2OH)=-2.78	1923MUa (10567)	463
Cu++	kin	oth/un	100°C	dil	U		K1=7.77 *K1=-4.60	1913KUa (10568)	464
Cu++	ISE	oth/un	17°C	var	U		Kso=-19.0	1909ALa (10569)	465
Kso: K(CuO(s)+H2O=Cu+2OH); method:emf with Cu electrode									

P04---				H3L	Phosphate		CAS 7664-38-2	(176)	
Phosphate;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.03M	C		K(Cu+2HL)=9.4	2000BAa (12949)	466
Cu++	gl	NaNO3	25°C	0.10M	M		K(Cu+HL)=3.33	1996SSa (12950)	467
Cu++	gl	NaNO3	25°C	0.10M	C	M	K1=3.33 K(Cu(bpy)+L)=3.42 K(Cu(phen)+L)=3.46	1996ZSa (12951)	468
Cu++	EMF	NaClO4	25°C	3.0M	C	I	K(Cu+H2PO4)=0.66 K(Cu+2H2PO4)=1.02 K(Cu+2H2PO4=CuH2(P04)2+2H)=7.4 K(Cu+2HPO4=CuH3(P04)2+H)=-2.71	1993CIc (12952)	469
At I=0, SIT extrapolation: K(Cu+H2PO4)=1.14, K(Cu+2H2PO4)=1.94, K(Cu+2H2PO4=CuH2(P04)2+2H)=7.4, K(Cu+HPO4+H2PO4=CuH2(P04)2+2H)=5.35									
Cu++	gl	KCl	25°C	0.10M	C	M	K(CuH3A+H2L)=2.0 K(CuH3A+HL)=6.45	1992MMb (12953)	470

$$K(\text{CuHA}+\text{HL})=3.3$$

A=1,4,7,13,16,19-Hexaaza-10,22-dioxacyclotetracosane

$$K(\text{CuO}(s) + \text{PO}_4 = \text{Cu}(\text{OH})_2\text{PO}_4) = -4.64$$
$$K(\text{CuO(s)} + \text{HPO}_4 = \text{Cu(OH)}_2\text{HPO}_4) = -5.29, \quad K(\text{CuO(s)} + \text{HPO}_4 = \text{Cu(OH)}_3\text{H}_2\text{PO}_4) = -4.86$$
$$K(\text{Cu}(\text{dien})+\text{HL})=3.12$$
$$K(\text{Cu}(\text{trien})+\text{L})=1.91$$
$$K(\text{Cu}+\text{HP04})=3.2$$
$$\begin{aligned} K(\text{Cu}+\text{HL}) &= 4.7 \\ K(\text{Cu}+2\text{HL}) &= 6.6 \\ K(\text{Cu}+3\text{HL}) &= 7.5 \end{aligned}$$

K1=2.41 B2=4.28

$$\begin{aligned} K(\text{Cu} + \text{H}_2\text{L}) &= 1.2 \\ K(\text{Cu} + \text{HL}) &= 3.3 \\ K(\text{CuH}_2\text{L} + \text{HL}) &= 3.7 \\ K(2\text{CuHL} = (\text{CuHL})_2) &= 2.5 \end{aligned}$$
$$K(\text{Cu} + 2\text{H}_2\text{L}) = 2.70$$
$$K(\text{Cu} + 2\text{H}_2\text{PO}_4) = 2.64$$
$$K(\text{Cu}+\text{H}_2\text{L})=1.7$$
$$K(\text{Cu}+\text{HL})=3.2$$
$$K_{so}(\text{Cu}_3\text{L}_2) = -36.9$$

 Cu++ ISE oth/un 25°C var U 1945MEa (12966) 483
 K(Cu+2H2L)=1.49

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

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

Cu++ gl NaNO3 25°C 1.00M U K1=6.03 1984COa (13393) 484

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

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

Cu++ gl KNO3 35°C 0.20M C K1=8.69 B2=13.72 1994YVa (13478) 485
 B(CuHL)=13.58

Cu++ gl R4N.X 25°C 0.50M C K1=3.48 B2= 4.65 1979DHa (13479) 486
 K(Cu+HL=CuL+H)=-4.98
 K(Cu+2HL=CuL2+2H)=-12.26
 K(CuL+HL=CuL2+H)=-7.3

Medium: 0.50 M Me4NCl. Kso(Cu2P207.4H2O)=-16.2.

Cu++ gl R4N.X 25°C 0.20M U K1=7.91 B2=12.12 1979MFa (13480) 487
 K(Cu+HP207)=4.71
 K(CuHP207+HP207)=3.82

Medium: 0.20 M Me4NBr.

 Cu++ kin R4N.X 30°C 0.10M U K1=9.85 1978KHa (13481) 488
 Medium: 0.10 M NH4NO3

 Cu++ ix R4N.X 21°C 0.80M U M 1974WYa (13482) 489
 K(Cu(NH3)4+L)=2.84

 Cu++ ISE NaClO4 25°C 0.10M U K1=5.56 B2=9.46 1973RMa (13483) 490

Cu++ gl NaClO4 25°C 1.0M U K1=7.6 B2=12.45 1968BCb (13484) 491
 B(CuHL)=11.81
 B(CuHL2)=17.3
 B(CuH2L)=14.71
 B(CuH2L2)=22.0

Cu/Hg electrode also used. B(CuH3L2)=25.7, B(CuH4L2)=28.4, B(CuH5L2)=30.1

 Cu++ gl NaNO3 25°C 0.10M U K1=7.3 1963JWa (13485) 492
 K(CuL+H)=5.4

 Cu++ EMF oth/un 25°C 1.00M U K1=9.07 B2=13.65 1963SSf (13486) 493
 K(CuHL+H)=3.31

K(CuL+H)=5.23
K(H3L2+H)=3.21
K(CuH2L2+H)=4.40

Medium: Me4NN03, Cu/Hg electrode. K(CuHL2+H)=5.78, K(CuL2+H)=6.76

Cu++ sol oth/un 25°C var U K1=8.17 B2=8.99 1958PTa (13487) 494
Medium: Na4L

Cu++ ISE oth/un 25°C var U B2=10.1 1958VRb (13488) 495

Cu++ ISE oth/un 25°C ? U B2=10.89 1956ULa (13489) 496

Cu++ sol oth/un 25°C var U K1=6.70 B2=9.00 1956YVa (13490) 497
Kso(Cu2L)=-15.08

Cu++ cal oth/un 25°C var U H 1956YVb (13491) 498
DH(B2)=-2.8 kJ mol-1, DS=163 J K-1 mol-1

Cu++ ISE oth/un 25°C var U K1=5.20 B2=10.30 1954ULa (13492) 499

Cu++ ISE oth/un 25°C var U B2=11.87 1953LUa (13493) 500

Cu++ sp KNO3 25°C 1.00M U I K2=3.77 1953WAa (13494) 501
By glass electrode K2=3.85. In 1 M NaNO3, by solubility, B2=12.65

Cu++ sp R4N.X 25°C 1.00M U M 1953WMa (13495) 502
B(CuL(NH3)2)=14.22

Medium: NH4NO3

Cu++ ISE oth/un 18°C var U B2=9.51 1951STa (13496) 503

Cu++ vlt oth/un 25°C var U 1950LOa (13497) 504
K(Cu+HL)=6.4
K(CuHL+HL)=3.6

Cu++ sol oth/un 25°C var U 1950LOa (13498) 505
B(CuL(OH))=15.7

Cu++ vlt KCl 20°C 0.80M U K1=13.2 1949ERa (13499) 506

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

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

Cu++ gl NaNO3 25°C 1.00M U K1=8.95 1984COa (13701) 507
K1=6.74 (alpha2 isomer)

P3O10----- H5L CAS 10380-08-2 (1001)
Triphosphosphate; from (HO)2PO.O.PO(OH).O.PO(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO ₃	35°C	0.20M	C		K ₁ =7.94 B(CuHL)=12.63	1994YVa (13767)	508
Cu++	gl	KNO ₃	25°C	0.10M	U	H M	K ₁ =8.09 B(CuHL)=13.51 B(CuH ₂ L)=16.75	1989ACa (13768)	509
Ternary data with spermine.									
Cu++	kin	oth/un	30°C	0.10M	U		K ₁ =9.93	1978KH a (13769)	510
Cu++	ix	R4N.X	21°C	0.80M	U	M	K(Cu(NH ₃) ₄ +L)=2.72	1974WYa (13770)	511
Cu++	gl	KNO ₃	25°C	0.10M	U T H		K ₁ =8.20 K(Cu+HL)=5.20	1973TRa (13771)	512
At 2 C: K ₁ =8.10, K(Cu+HL)=5.03; 35 C: K ₁ =8.85, K=5.31 DH(K ₁)=-34.3, DH(Cu+HL)=-11.7 kJ mol ⁻¹ (25C)									
Cu++	gl	KNO ₃	45°C	0.10M	U		K ₁ =7.42 K(Cu+HL)=4.88 K(CuL+HL)=3.2 K(CuL ₂ +H)=8.76	1971TRa (13772)	513
Cu++	EMF	oth/un	0°C	?	U		B ₂ =11.71	1969GMd (13773)	514
Cu++	gl	R4N.X	20°C	0.10M	U	H	K ₁ =9.3 K(Cu+HL)=6.1 K(CuL+H)=5.6	1965ANa (13774)	515
Medium: Me ₄ NNO ₃ . By calorimetry: DH(K ₁)=20.5 kJ mol ⁻¹ , DS=238 J K ⁻¹ mol ⁻¹									
Cu++	gl	KCl	25°C	0.10M	U		K ₁ =8.73 K(Cu+HL)=4.34 K(CuL+H)=3.67	1964EM b (13775)	516
Cu++	gl	NaNO ₃	25°C	0.10M	U		K ₁ =7.3 K(CuL+H)=5.2	1963JWa (13776)	517
Cu++	gl	R4N.X	25°C	1.00M	U		K ₁ =8.70 B(CuL(OH))=12.67 K(CuHL+H)=3.33 K(CuL+H)=5.72 K(CuH ₃ L ₂ +H)=3.60	1962SLa (13777)	518
Medium: Me ₄ NNHO ₃ , also by Cu/Hg electrode. K(CuH ₂ L ₂ +H)=-4.88, KCuHL ₂ +H)=6.59									
Cu++	oth	oth/un	?	0.25M	U		K ₁ eff=5.66 pH 5	1956KOa (13778)	519
Method: chemical analysis. K ₁ eff=5.71 (pH 5.5), 6.06 (pH 6)									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ix	NaClO4	25°C	0.30M	U		K1=1.8 B2=3.6	1990Kwa (13928)	520
Cu++	ISE	NaClO4	25°C	0.40M	C		K1=1.6	1986KUc (13929)	521
Cu++	vlt	R4N.X	25°C	1.00M	U		K1=1.58 B2=2.18	1969Wka (13930)	522
Medium: Me4NNO3									
Cu++	EMF	R4N.X	25°C	0.6?M	U		K1=1.44	1958INa (13931)	523
Medium: Me4NNO3. Method: Cu/Hg electrode									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ix	NaClO4	25°C	0.30M	U		K1=2.8	1990Kwa (13979)	524
Data also by spectrophotometry. B1=2.66 at 230 nm, 2.59 at 240, 2.57 at 250.									
Cu++	ISE	NaClO4	25°C	0.30M	C		K1=2.7	1986KUc (13980)	525
Cu++	vlt	R4N.X	25°C	1.00M	U		K1=3.04 B2=4.28	1969Wka (13981)	526
Medium: Me4NNO3									
Cu++	EMF	R4N.X	30°C	1.00M	U		K1=3.18 B2=4.64	1955GGa (13982)	527
Medium: Me4NNO3, Cu/Hg electrode									

P4013----- H6L Tetrphosphate (1102)
Tetrphosphate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	kin	oth/un	30°C	0.10M	U		K1=9.12	1978KHa (14030)	528
Cu++	ix	R4N.X	21°C	0.80M	U	M	K(Cu(NH3)4+L)=2.48	1974WYa (14031)	529
Cu++	ix	oth/un	21°C	1.00M	U		K(Cu(NH3)4+L=Cu(NH3)3L)=2.48	1974WYa (14032)	530
Medium: Me4NNO3									
Cu++	ISE	R4N.X	25°C	1.0M	U		K1=9.44 B2=10.60	1966WMa (14033)	531
K(CuL+OH)=3.86									
K(CuHL+H)=3.45									
K(CuL+H)=5.56									

K(CuH3L2+H)=3.55

Cu/Hg electrode. Medium: Me4NNO3. K(CuH2L2+H)=4.52, K(CuHL2+H)=7.28,
K(CuL2+H)=8.40

P6012----- H6L CAS 25268-83-1 (6590)
Dodecaoxohexaphosphate(III); anion of (PO.OH)6

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

Cu++ sp KCl 25°C 0.50M U I K1=5.16 1990NTa (14053) 532
Data also at I=1.0 M KCl: B1=4.76; 1.5 4.50

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

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

Cu++ ix NaCl04 25°C 0.15M U K1=4.3 1990Kwa (14064) 533
Data also by spectrophotometry. B1=4.19 at 230 nm, 4.09 at 240, 4.01 at 250.

Cu++ ISE NaCl04 25°C 0.10M C K1=4.5 B2=7.1 1986KUc (14065) 534

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

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

Cu++ ix NaCl04 25°C 0.15M U K1=5.6 1990Kwa (14076) 535
Data also by spectrophotometry. B1=5.44 at 230 nm, 5.27 at 240, 5.13 at 250.

Cu++ ISE NaCl04 25°C 0.10M C K1=5.6 B2=8.1 1986KUc (14077) 536

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

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

Cu++ vlt oth/un 25°C 0.72M C 1999AVb (14173) 537

K(Cu+HL)=12.9

K(Cu+2HL)=19.4

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

Cu++ vlt NaCl04 24°C 0.50M C I B2=19.5 1999CRb (14174) 538
Ligand is S5--. Method: polarography. Also data for 0.55 M NaCl.

Cu++ vlt oth/un 25°C 0.70M C I 1996LRb (14175) 539

K(Cu+HS+OH=CuS)=11.20

K(2Cu+3HS+3OH=Cu2S3)=38.29

Method: by voltammetry at Hg/HgS electrode

Cu++ sol oth/un 25°C var M M 1994THa (14176) 540

K(2,3,4)=-5.51
K(1,9,10)=-5.36

Constants at I=0. K(2,3,4)=K(2CuS(s)+2HS+4S(0)=Cu₂S₃S₄+H₂S);
K(1,9,10)=K(CuS(s)+3HS+16.5S(0)=CuS₉S₁₀+1.5H₂S); Covellite-solubilities

Cu++ vlt NaCl 25°C ? U 1994ZMa (14177) 541

K₁eff=7.0
K₂eff=6.0

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

Cu++ oth none ? 0 U 1990DKa (14178) 542

*K_s(CuS+H=Cu+HS)=-22.3
*K_s(CuS+HS=CuHS₂)=-5.91

From recalculation of literature data.

Cu++ oth none 25°C 0.0 C 1989DYa (14179) 543

K_{Cu+HS=CuS+H}=12.5
*K_{so}(CuS)=-22.5
K_{so}(CuS)=-9.7

Calculated from literature data, based on K(H+S)=17.0.
CuS is covellite.

Cu++ sol NaCl 25°C 0.20M M I 1989SHb (14180) 544

K(CuS(s)+H=Cu+HS)=-21.39

Solubility study of covellite(CuS)

Cu++ oth none 25°C 0 U 1988LIa (14181) 545

K_{so}(CuS)=-40.3
*K_{so}(CuS)=-22.9

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

Cu++ oth none 25°C 0 U 1988SBc (14182) 546

K_{so}(CuS,covellite)=-40.76

Method: recal. from literature data using K(H+S=HS)=18.57 and K(H+HS)=6.99

Cu++ sol NaCl 25°C 1.0M U I 1988SHA (14183) 547

K_s(CuS+3HS)=-4.04
K_s(CuS+2HS)=-4.97
K_s(CuS+S₅=CuS(S₅))=-2.631

Solubility study of covellite(CuS)
K(2CuS(s)+H+3S₄+S₅=2CuS₄S₅+HS)=6.46; K(2CuS(s)+H+S₄+3S₅=2Cu(S₅)₂+HS)=6.01

Cu++ dis oth/un 25°C 0.69M U 1985DYa (14184) 548

K(Cu+2H₂S=CuHS₂+3H)=2.29
K(Cu+2H₂S=Cu(HS)₂+2H)=8.53

Cu++ oth none 50°C 0.0 M T 1969HEa (14185) 549

Estimated from literature data. K_{so}=-33.91(50 C); -30.66(100 C);

-28.21(150 C); -26.28(200 C); -24.73(250 c); -23.56(300 C)

Cu++ oth none 25°C 0.0 U 1964PCa (14186) 550
K(CuL(s)+2H=Cu+H2S(g))=-14.19

From thermodynamic data

Cu++ sol oth/un 25°C 0.0 U 1963CLa (14187) 551
Ks'=-1.30
Ks"=-6.44

Ks': 2CuS(covellite)+S3+3S4=2Cu(I)(S4)2+S. Ks": 2CuS(s)+3S4+S5=2CuS(I)4S5+S.
S3=S3--, S4=S4--, S5=S5--

Cu++ oth oth/un rt var U 1962MKa (14188) 552
Kso(CuL)=-38 to -41

Method: diffusion

Cu++ oth none 25°C 0.0 U T 1959CZa (14189) 553
Kso(CuL)=-35.40

From thermodynamic data. Kso=-30.18(100 C), -25.82(200 C), -20.98(400 C),
-18.34(600 C)

Cu++ oth none 25°C 0.0 U 1952GGc (14190) 554
Kso(CuL)=-35.10

From thermodynamic data

Cu++ oth none 25°C 0.0 U 1952LAb (14191) 555
Kso(CuL)=-36.10

From thermodynamic data

Cu++ oth none 25°C 0.0 U 1940KAa (14192) 556
Kso(CuL)=-37.49

From thermodynamic data

Cu++ oth none 25°C 0.0 U 1936RAa (14193) 557
Kso(CuL)=-37.46

From thermodynamic data

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

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

Cu++ sp non-aq 25°C 100% U 1993LJa (14516) 558
K(CuAB+L)=3.42

Medium: 1,2-dichloroethane. HA: acetylacetone; B: N,N,N',N'-tetramethyl-
ethylenediamine.

Cu++ dis NaCl04 25°C 1.00M C T K1=1.7 B2=2.8 1988MOB (14517) 559
B3=3.1

Cu++	sp	alc/w	25°C	100%	C	IH	K1=1.90	1987LYa (14518)	560

Cu++	sp	mixed	25°C	0.2M	C		K1=1.811	1987LYa (14519)	561
Medium: Dioxan/H2O, NaNO3. At I=2.96, logK=2.04. pH =1.5-1.6									

Cu++	sp	oth/un	25°C	0.02M	U	M	K1=2.33 K(CuA+L)=1.8	1984HDa (14520)	562
A=1,4,8,11-Tetra-azacyclotetradecane (Cyclam). Data also for 1,5,9,13-tetra azapentadecane (K=1.88) and N,N',N'',N'''-tetramethylcyclam (K=2.2)									

Cu++	sp	non-aq	0°C	100%	U	IH		1982CMb (14521)	563
							B4=15.15		
Medium: n-BuOH, 0.05 M Bu4NClO4, In EtOH B2=9, MeOH B2=8, n-PrOH B4=13.76, n-pentyl alcohol B4=16.23									

Cu++	oth	NaClO4	25°C	1.0M	C	H	K1=1.728 B2= 2.72	1976KKg (14522)	564
Method: recalculation from published data. DH(K1)=-12.9 kJ mol-1, DH(B2)=-25.9.									

Cu++	cal	NaClO4	25°C	1.0M	U	H T	K1=1.74 B2=2.74	1974KUa (14523)	565
DH(K1)=-12.64 kJ mol-1, DS=-9.2 kJ mol-1, DH(K2)=-13.10, DS=-25									

Cu++	vlt	non-aq	25°C	100%	U		B2=7.6	1974MAa (14524)	566
Medium: acetonitrile, 0.1 M Et4NClO4									

Cu++	kin	NaClO4	25°C	1.0M	U	T	K1=1.76	1973HHb (14525)	567

Cu++	cal	alc/w	25°C	100%	U	H		1972BFa (14526)	568
							K(Cuen2+L)=2.07		
Medium: MeOH. DH(K1)=7.45 kJ mol-1, DS=64.4 J K-1 mol-1. For Cu(trien)2+L, K1=3.22, DH(K1)=2.93, DS=71.1									

Cu++	cal	alc/w	25°C	100%	U	HM		1972BFa (14527)	569
							K(CuA2+L)=2.80		
Medium: MeOH. DH(K1)=2.38 kJ mol-1, DS(K1)=61.5. A=methylethylenediamine									

Cu++	vlt	non-aq	25°C	100%	U	T	K1=3.2 B2=5.3	1972FDc (14528)	570
Medium: DMSO, 0.1 M Et4NClO4									

Cu++	sp	NaClO4	25°C	3.0M	U		K1=1.91	1970MMj (14529)	571
medium:LiClO4									

Cu++	sp	oth/un	30°C	0.0	U		K1=2.39	1968DDa (14530)	572

Cu++	cal	oth/un	25°C	0.0	U	H	K1=2.33	1967NTa (14531)	573
Medium: 0 corr. DH(K1)=-12.5 kJ mol-1, DS=2.5 J K-1 mol-1									

Cu++	sp	none	25°C	0.0	U		K1=2.33	1962WIa (14532)	574

Cu++	sp	KNO3	25°C	0.50M	U	TI	K1=1.74 B2=2.54	1959TTb (14533)	575

$$K_4 = 0.30$$

Cu++ sp KNO3 25°C 0.50M U TI K1=1.74 B2=2.54 1959TTb (14534) 576

$$K_3 = 0.15$$
$$K_4 = 0.30$$

Cu++ sp none 25°C 0.0 U K1=2.30 B2=3.65 1959TTb (14535) 577

Cu++ sp oth/un 18°C 0.70M U 19530Ga (14537) 579

B3=5.19

B4=6.52

S03--	H2L	Sulfite	CAS 7782-99-2	(801)
-------	-----	---------	---------------	-------

Sulfite;

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

Cu++ sp oth/un 21°C 0.40M C K1=4.26 1988CHd (15411) 580

Method: stopped-flow spectrophotometry. Media: NaNO₃, NaCl, NaClO₄ or Na₂SO₄. pH 3.6-4.4.

Cu++	sp	oth/un	18°C	1.0M	U	M	1956Y0a	(15412)	581
------	----	--------	------	------	---	---	---------	---------	-----

$$K(\text{Cu(en)}_2 + \text{L}) = 1.40$$
$$K(\text{Cu}(\text{Ala})_2 + \text{L}) = 2.38$$

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

Sulfate;

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

Cu++ sp NaCl04 25°C 0.0 C TIH K1=2.32 2005MBa (15629) 582

Method: UV-visible spectrometry. Data for 0-0.08 m NaClO4 and 25-200 C. At 25 C, DH(K1)=6.38 kJ mol⁻¹, DS(K1)=66.2 J K⁻¹ mol⁻¹.

Cu++ nmr oth/un 25°C 1.0M C I K1=3.74 2002ZLa (15630) 583

Method: nmr relaxation. Medium: Na2SO4. K1=3.21 (I=2.0), 3.08 (I=3.0).

At $I=0$, $K_1=4.02$. In $MgSO_4$, $K_1=3.26$ ($I=3$), 3.14 ($I=3.5$), 3.06 ($I=4$).

Cu++ con none 20°C 0.0 C I K1=2.40 2000Tma (15631) 584

Also data for 0.06-0.69 mole fraction MeOH/H₂O.

Cu++ con none 25°C 0.0 C K1=2.27 1994NHa (15632) 585
Also data for 0.042 - 0.28 mole fraction EtOH/H2O.

Cu++ sp NaClO4 25°C 0.11M U I K1=1.299 1990GLa (15633) 586
In different EtOH, i=PrOH or dioxan/H2O mixtures at various I

Cu++ sp oth/un 100°C 3.6M C T K1=2.49 1990SKh (15634) 587
Medium: 1.2 m Na2SO4. At 150 C, K1=2.75; at 200 C, K1=3.03.

Cu++ sp oth/un 50°C 0.0 C T K1=2.46 1990SMe (15635) 588
Medium: 0-0.5 m Na2SO4. At 100 C, K1=2.92; at 200 C, K1=4.04.

Cu++ sp none 25°C 0.0 C K1=2.19 1990WAa (15636) 589

Cu++ con none 25°C 0.0 C K1=2.35 1989MBb (15637) 590

Cu++ con none 25°C 0.0 C I K1=2.20 1986SDa (15638) 591
Kout(CuSO4)=2.20
Value derived from data for 0.001-0.05 self medium.

Cu++ sp NaClO4 25°C 0.00 M I K1=2.08 1985LYa (15639) 592

Cu++ con none 25°C 0.0 C K1=2.31 1985SGd (15640) 593

Cu++ EMF none 25°C 0.0 C T K1=3.00 1984PGb (15641) 594
Method: Pt/quinhydrone electroode. Data for 5-35 C.
DH(K1)=9.6 kJ mol⁻¹, DS(K1)=89 J K⁻¹ mol⁻¹. At 15 C, K1=2.94

Cu++ con none 25°C 0.0 C T H K1=2.418 1983ADc (15642) 595
Data for 10-50 C. At 10 C, K1=2.426; at 50 C, K1=2.409.

Cu++ sp none 25°C 0.0 C T H K1=2.32 1982DKb (15643) 596
Data for 10 and 40 C. DH(K1)=7.7 kJ mol⁻¹, DS(K1)=67.8 J K⁻¹ mol⁻¹.

Cu++ cal KNO3 35°C 2.0M U H 1981ARc (15644) 597
DH(K1)=-+2.1 kJ mol⁻¹, DS=28 K J mol⁻¹

Cu++ oth none 25°C 0.0 C K1=2.29 1981YYa (15645) 598
Calculated from published UV-spectrometry data.

Cu++ cal oth/un 25°C 2.00M U H K1=0.64 1979GCa (15646) 599
DH1=6.65 kJ mol⁻¹

Cu++ sp NaClO4 25°C 5.00M U H 1977AHa (15647) 600
K1out=0.63
DH=0 kJ mol⁻¹, DS=12 J K⁻¹ mol⁻¹

Cu++ sp oth/un 25°C 2.0M U IH K1=0.60 1977KFa (15648) 601
In 2.0 M LiClO4;

Cu++ sp NaClO4 25°C 2.0M C IH K1=4.0 1977KFb (15649) 602
 Medium: 2.0 M LiClO4. DH(K1)=1.59 kJ mol⁻¹, DS(K1)=8.4 J K⁻¹ mol⁻¹.
 In 4.0 M LiClO4, K1=3.3.

 Cu++ con none 25°C 0.0 C T K1=2.80 1977STd (15650) 603
 At 15 C, K1=2.73; at 40 C, K1=2.90.

 Cu++ con none 25°C 0.0 U K1=2.67 1975TAa (15651) 604

 Cu++ sp none 25°C 0.0 C K1=2.18 1975YYa (15652) 605

 Cu++ cal NaClO4 25°C 3.0M U H K1=0.66 1974BRa (15653) 606
 Medium:LiClO4. DH(K1)=4.8 kJ mol⁻¹, DS(K1)=29 J K⁻¹ mol⁻¹

 Cu++ cal none 25°C 0.0 U H 1973HPa (15654) 607
 DH(K1)=10.2 kJ mol⁻¹

 Cu++ cal none 25°C 0.0 U H 1973POa (15655) 608
 DH(K1)=9.2 to 9.6 kJ mol⁻¹

 Cu++ ISE NaClO4 25°C 0.10M U K1=2.22 1973RMa (15656) 609

 Cu++ sol oth/un rt dil U 1972LRa (15657) 610
 Ks(Cu+1.5(OH)+0.25L)=-17.19

Brochantite (Cu(OH)1.5L0.25) formed

 Cu++ oth none 25°C 0.0 C H K1=2.398 B2= 1.70 1972PIa (15658) 611
 Calculated from published osmotic coefficients and freezing point (0 C)
 data. From heats of dilution, DH(K1)=-6.69 kJ mol⁻¹, DH(K2)=0.

 Cu++ con oth/un 25°C 0.0 U K1=2.40 1971HPa (15659) 612

 Cu++ sp NaClO4 25°C 0.0 U I K1=2.25 1971KVa (15660) 613
 K1=0.81(I=1); 0.73(I=3); 0.90(I=5)

 Cu++ sp none 25°C 0.0 U K1=2.25 1971MKf (15661) 614

 Cu++ cal NaClO4 25°C 3.0M C H K1=0.67 1970BRe (15662) 615
 Medium: LiClO4. DH(K1)=5.0 kJ mol⁻¹, DS(K1)=29 J K⁻¹ mol⁻¹.

 Cu++ oth oth/un 25°C 0.0 U K1=2.28 1970HPd (15663) 616
 Method:ultrasonic absorption

 Cu++ cal none 25°C 0.0 C H 1970LAe (15664) 617
 DH(K1)=7.2 kJ mol⁻¹, DS(K1)=69.5 J K⁻¹ mol⁻¹.
 Method: heat of dilution measurements.

 Cu++ sp NaClO4 25°C 3.0M U K1=0.70 1970MMj (15665) 618
 Medium:LiClO4

Cu++	sp	NaClO4	20°C	1.0M	U		K1=0.64	1970SWa (15666)	619
<hr/>									
Cu++	cal	NaClO4	25°C	2.0M	U	H	K1=0.59	1969BGa (15667)	620
DH(K1)=7.3 kJ mol ⁻¹ , DS(K1)=35.5 J K ⁻¹ mol ⁻¹									
<hr/>									
Cu++	cal	none	25°C	0.0	U	H	K1=2.26	1969IEa (15668)	621
DH(K1)=5.1 kJ mol ⁻¹ , DS(K1)=61.0 J K ⁻¹ mol ⁻¹									
<hr/>									
Cu++	con	mixed	25°C	20%	U	I	K1=2.61	1969SMd (15669)	622
Medium: THF. 0% THF: K1=2.12, 50%: 3.21									
<hr/>									
Cu++	nmr	oth/un	20°C	5.0M	U		K1=-0.01	1969Vsa (15670)	623
Method:N.M.R.									
<hr/>									
Cu++	oth	oth/un	25°C	0.0	U		K1=2.32	1968HPd (15671)	624
K(CuH2OL=CuL+H2O)=-0.6									
Method:ultrasonic absorption. Medium:0 corr. By spec: K1=2.35									
<hr/>									
Cu++	sp	NaClO4	25°C	0.10M	C	I	K1=2.352	1968HPd (15672)	625
Derived from data for I=0.062-0.103 M NaClO4.									
<hr/>									
Cu++	sp	NaClO4	25°C	3.0M	U		K1=0.70	1968MMF (15673)	626
Klin=-0.5									
K1out=0.67									
Medium: LiClO4									
<hr/>									
Cu++	ISE	oth/un	35°C	0.0	U		K1=2.17	1968PRd (15674)	627
<hr/>									
Cu++	con	oth/un	25°C	0.0	U		K1=2.28	1968YMa (15675)	628
<hr/>									
Cu++	con	none	25°C	0.0	U	M		1968YMa (15676)	629
K(Cu(en)2+L)=2.27									
<hr/>									
Cu++	oth	non-aq	260°C	100%	U		K1=0.43	1966Iwa (15677)	630
Method:freezing point. Medium: molten LiNO3. m units									
<hr/>									
Cu++	sp	NaClO4	25°C	.091M	U	I	K1=1.38	1965MAe (15678)	631
K1=1.64(I=0.041), 2.3(I=0 corr)									
<hr/>									
Cu++	oth	oth/un	25°C	0.0	U		K1=1.93	1965POa (15679)	632
K(Cu(H2O)2L=Cu(H2O)L)=-0.18									
<hr/>									
Cu++	vlt	NaClO4	25°C	1.0M	U	M	K1=<0.5	1965TSb (15680)	633
B2=1.5									
B(CuAL)=1.6									
B(CuAL2)=1.85									
B(CuA)=1.30									
B(CuA2)=2.04									
HA=CH3CO2H									
<hr/>									
Cu++	con	none	25°C	0.0	U	I	K1=2.25	1965YKa (15681)	634

Also dioxan/H₂O mixtures. K₁=3.17(25%), 3.04(20%), 2.75(15 %), 2.62(10%)
2.39(5%)

Cu++	con	oth/un	25°C	0.0	U	K ₁ =2.32	1962AYa (15682)	635
Cu++	con	oth/un	25°C	0.0	U	K ₁ =2.37	1961PFa (15683)	636
Cu++	gl	oth/un	25°C	0.0	U T		1960BBa (15684)	637
K _{so} (Cu(OH)1.5L0.25)=-17.15 K _{so} =-16.6(50 C), -15.15(75 C). K(4Cu(OH)1.5L0.25(s)+20H=4CuO(s)+L+4H ₂ O)=11.6 (25 C), 10.0(50 C), 9.9(65 C), 9.3(75 C)								
Cu++	oth	KN03	-3°C	sat	U	K ₁ =0.72 B ₂ =1.50	1959RRc (15685)	638
Method: freezing point								
Cu++	gl	oth/un	25°C	0.0	U		1958BBa (15686)	639
K _{so} (Cu(OH)1.5L0.25)=-17.15								
Cu++	oth	KN03	0°C	sat	U I	K ₁ =0.72	1958KEa (15687)	640
Method: freezing point. K ₁ =1.29(KCl03 sat), 1.69(KCl04 sat)								
Cu++	sol	oth/un	25°C	0.0	U		1958SIa (15688)	641
K _{so} (Cu ₃ (OH)4L)=-47.2 K _{so} (Cu(OH)1.5L0.25)=-17.20 K _{so} (Cu(OH)1.5L0.25(H ₂ O))=-16.7								
Cu++	sp	oth/un	25°C	0.0	U	K ₁ =2.2	1957DOa (15689)	642
K ₁ =2.10 to 2.46 depending on interionic distance								
Cu++	sp	oth/un	25°C	0.0	U	K ₁ =2.33	1956BDa (15690)	643
Cu++	oth	oth/un	0°C	0.0	U	K ₁ =2.33	1956KEb (15691)	644
Method: freezing point								
Cu++	oth	oth/un	0°C	0.0	U	K ₁ =2.3	1955BPb (15692)	645
Method: freezing point. K ₁ =2.18 to 2.48								
Cu++	sol	oth/un	75°C	0.0	U		1954DOa (15693)	646
K _{so} (Cu(OH)1.5L0.25)=-17.38								
Cu++	sp	oth/un	?	0.0	U	K ₁ =2.10	1954NKb (15694)	647
Cu++	sp	NaCl04	25°C	3.0M	U	K ₁ =0.38	1953NAb (15695)	648
Cu++	sol	NaCl04	20°C	1.0M	U	K ₁ =<1.04 B ₂ =0.5 B ₃ < 2.18 K _{so} (Cu(OH)1.5L0.25)=-16.86	1951NLb (15696)	649
Cu++	EMF	NaCl04	20°C	1.0M	U M	K ₁ =0.95 B ₃ =1.90	1950FRa (15697)	650

B(CuLA)=2.28

Method: quinhydrone electrode. HA=ethanoic acid

Cu++ gl oth/un 25°C 0.0 U K1=2.15 1950NAa (15698) 651

Cu++ sp oth/un 25°C 0.04M C K1=1.466 1949NAa (15699) 652

Medium: Li2SO4. Data for I=0.04-6.76 M. At I=0, K1=2.099;
at I=0.48 M, K1=0.792.

Cu++ sp NaClO4 25°C 0.21M C I K1=1.084 1949NAb (15700) 653

Data for I=0.209-3.20 M NaClO4. At I=0, K1=2.099. Also data for 0.705-2.65
M LiClO4 and in Na2SO4 (I=0.384-2.924) and K2SO4 (I=0.218-1.58 M).

Cu++ gl oth/un 25°C 0.0 U K1=2.10 1949NTa (15701) 654

Kso(Cu(OH)1.5L0.25)=17.115

Cu++ EMF NaClO4 20°C 1.0M U K1=1.03 B2=1.13 1948FRa (15702) 655

K3=1.17

Method: Cu/Hg electrode. By spec. K1 > 0.72

Cu++ con oth/un 18°C 0.0 U K1=2.30 1938DAa (15703) 656

Cu++ con oth/un 18°C 0.0 U K1=2.37 19380Ga (15704) 657

Cu++ con oth/un 18°C 0.0 U K1=2.35 1927DAb (15705) 658

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

Thiosulfate;

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

Cu++ kin NaClO4 25°C 0.20M U B2=4.56 1992REa (16698) 659

Cu++ sp NaClO4 25°C 3.0M U H 1971BAd (16699) 660

Kin(Cu(en)2+L)=0.1

Kout(Cu(en)2+L)=0.23

K(Cu(en)2+L)=0.47

DH(Kin)=6.3 kJ mol⁻¹, DS=23 J K⁻¹ mol⁻¹; DH(Kout)=3.3, DS=15

Cu++ oth oth/un 25°C 0.0 U 1970HPc (16700) 661

K(Cu(en)2+L)=2.28

Method: ultrasonic absorption

Cu++ sp oth/un 25°C 0.0 U 1968HPd (16701) 662

K(Cu(en)2+L)=2.34

Kout(Cu+L=Cu(H2O)L)=2.22

K(Cu(H2O)L=CuL)=-0.6

By ultrasound absorption, K1=2.32

Cu++ sp oth/un 25°C 0.0 U M 1967MAe (16702) 663

K(Cu(en)2+L)=2.2 to 2.5

Cu++ sp oth/un 18°C 1.0M U M 1956Y0a (16703) 664
K(Cu(en)2+L)=2.28

Cu++ ISE oth/un 25°C var U B2=12.29 1953LUa (16704) 665

S2O8-- H2L Peroxodisulfate (7860)
Peroxodisulfate;

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

Cu++ cal KNO3 35°C 2.0M U H K1=1.38 1981ARc (16919) 666
DH(K1)=-+1.2 kJ mol-1, DS=31 K J mol-1

Se-- H2L Selenide (6335)
Selenide;

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

Cu++ oth none 25°C 0.0 U 1964BUe (16931) 667
Kso=-48.1

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

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

Cu++ sol oth/un 25°C dil C 1993SPb (17015) 668
Kso(CuSeO3)=-10.82
Method: [Cu] determined by ion selective electrode. Medium: dil HNO3.

Cu++ con oth/un 18°C dil U 1968RVa (17016) 669
Kso=-7.49

Cu++ sol oth/un 20°C 0.0 U 1965LAb (17017) 670
Kso=-7.78

Cu++ sol oth/un 20°C var U 1956CHe (17018) 671
Kso(CuL)=-7.68

SiW11O39----- H8L (2464)
alpha-Heterosilicon-polytungstate;

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

Cu++ gl NaNO3 25°C 1.00M U K1=8.06 1984C0a (17227) 672
K(beta1 isomer)=7.47
K(beta2 isomer)=7.31
K(beta3 isomer)=7.73

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
Cu++	gl	diox/w	25°C	70%	M			K1=3.32	1990BSb (17518)	673
Medium: 70% v/v DMSO/H2O, 0.1 M NaNO3										
Cu++	oth	NaClO4	25°C	2.0M	U			K1=1.57	1990FTa (17519)	674
Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.										
Cu++	gl	diox/w	25°C	30%	C	I		K1=2.20	1989LCb (17520)	675
Medium: 30% dioxan/H2O, 0.1 M NaNO3. In 0%, K1=1.65; 10%, K1=1.79; 50%, K1=2.79										
Cu++	gl	NaNO3	25°C	0.10M	C	I M		K1=1.58 K(Cu(phen)+L)=1.55	1988LTc (17521)	676
Data also for 50% v/v EtOH/H2O, and 50% v/v Dioxan/H2O mixtures										
Cu++	gl	KNO3	25°C	0.20M	M	M		K1=1.64 K(Cu(dien)+L)=1.53	1988SKd (17522)	677
K(H+L)=3.67										
Cu++	gl	alc/w	25°C	50%	C	I M		K1=2.24 K(Cu(phen)+L)=2.31	1985BSd (17523)	678
Medium: 50% v/v EtOH/H2O. In 50% dioxan: K1=2.79, K(Cu(phen)+L)=2.82										
Cu++	gl	KNO3	25°C	0.10M	C	I M		K1=1.65 K(Cu(phen)+L)=1.61	1985SMf (17524)	679
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.										
Cu++	gl	KNO3	25°C	0.10M	C	M		K1=1.65 K(Cu(phen)+L)=1.61	1984DHa (17525)	680
Cu++	sp	NaClO4	25°C	2.0M	C			K1=1.59 B2= 2.48 B3=2.92 B4=3.58	1976GFa (17526)	681
Cu++	sp	KNO3	RT	3.0M	C			K1=1.70 B2= 2.01 B3=2.28	1975ADa (17527)	682
Cu++	vlt	oth/un	25°C	1.00M	U			K1=1.11 B2=1.51 B3=1.85	1973TRc (17528)	683
Cu++	gl	oth/un	25°C	1.00M	U			K1=1.08 B2=1.47 B3=1.97	1973TRc (17529)	684

Cu++	gl	NaClO4	25°C	5.00M	U		K1=1.83	B2=2.60	1971BAb (17530)	685
							B3=3.00			
							B4=3.30			
							K(Cu+L+HL)=2.40			

Cu++	vlt	NaClO4	25°C	5.00M	U		K1=1.79	B2=2.70	1971BAb (17531)	686
							B3=3.18			
							B4=3.57			

Cu++	gl	NaNO3	30°C	0.40M	U		K1=1.38		1970BTa (17532)	687
------	----	-------	------	-------	---	--	---------	--	-----------------	-----

Cu++	sp	NaClO4	25°C	2.00M	U		K1=1.65	B2=2.55	1970GFa (17533)	688
							B3=3.32			

Cu++	vlt	NaClO4	25°C	2.00M	U		K1=1.40	B2=2.30	1968FPa (17534)	689
							B3=2.18			
							B4=1.90			

Cu++	gl	diox/w	25°C	50%	U	M	K1=2.80		1968GPd (17535)	690
							K(Cu(bpy)+L)=2.84			

Medium: 0.1(NaClO4), 50% dioxan

Cu++	sp	NaClO4	30°C	0.10M	U		K1=2.04		1968RSc (17536)	691
------	----	--------	------	-------	---	--	---------	--	-----------------	-----

Cu++	sp	oth/un	28°C	0.50M	U		K1=2.0		1965DSa (17537)	692
------	----	--------	------	-------	---	--	--------	--	-----------------	-----

Cu++	gl	NaClO4	25°C	3.0M	U		K1=1.53	B2=2.42	1964PCa (17538)	693
							B3=2.68			

Cu++	sp	oth/un	25°C	?	U		K1=2.02		1957BDb (17539)	694
------	----	--------	------	---	---	--	---------	--	-----------------	-----

Cu++	vlt	NaClO4	25°C	2.0M	U		K1=1.57	B2=2.22	1957HBa (17540)	695
							B3=2.05			
							B4=2.45			

Cu++	sol	none	25°C	0.0	U		K1=1.98		1951LWa (17541)	696
------	-----	------	------	-----	---	--	---------	--	-----------------	-----

 CH2O3Cl3P H2L CAS 5994-41-2 (1970)
 Trichloromethylphosphonic acid; Cl3C.PO3H2

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

Cu++	gl	KN03	25°C	0.10M	U		K1=2.17		1979WNa (17665)	697
------	----	------	------	-------	---	--	---------	--	-----------------	-----

 CH3NO HL Formaldoxime CAS 62479-75-2 (4206)
 Formaldoxime; CH2:N.OH

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

Cu++	oth	oth/un	20°C	0.10M	U		K1=7.5		1971BJa (17667)	698
------	-----	--------	------	-------	---	--	--------	--	-----------------	-----

Paper electrophoresis, acetate-veronal buffer

CH3O3Cl2P H2L CAS 13113-88-7 (1972)

Dichloromethylphosphonic acid; Cl2CH.PO3H2

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

Cu++ gl KNO3 25°C 0.10M U K1=2.49 1979WNa (17687) 699
K(Cu+L=Cu(OH)L+H)=-4.7

CH3O5P H3L Phosphonoformic CAS 4428-95-9 (5654)

Phosphonoformic Acid; O:P(OH)2.CO2H

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

Cu++ gl NaNO3 25°C 0.10M C M K1=7.78 1994SCa (17691) 700

K(Cu+HL)=3.69

K(CuL+H)=3.48

K(Cu(bpy)+L)=7.94

K(Cu(bpy)+HL)=3.97

K(Cu(bpy)L+H)=3.60; K(Cu(phen)+L)=7.99, K(Cu(phen)+HL)=4.02,

K(Cu(phen)L+H)=3.60

CH4N2O L Urea CAS 57-13-6 (2018)

Carbamide, Urea; (H2N)2CO

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

Cu++ EMF NaClO4 25°C 2.0M U I K1=-0.49 1965SKb (17709) 701
K1=-0.55(I=0.5), -0.72(I=0.2)

Cu++ EMF oth/un ? 0.20M U I K1=-0.7 1965SKd (17710) 702
K1=-0.55(I=0.5), -0.49(I=2)

CH4N2S L Thiourea CAS 62-56-6 (51)

Thiocarbamide, Thiourea; (H2N)2CS

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

Cu++ sp NaClO4 25°C 0.46M U K1=0.362 1996DSa (17730) 703

Cu++ vlt NaClO4 30°C 1.00M U T H K1=1.45 B2=2.54 1980BVa (17731) 704

B3=2.65

B4=3.76

DH(K1)=-12.0 kJ mol⁻¹, DS=-11.7 J K⁻¹ mol⁻¹; DH(B2)=-30.6, DS=-52.1,

DH(B3)=-23.9, DS=-28; DH(B4)=-43.1, DS=-67

Cu++ gl NaClO4 25°C 1.00M U K1=10.2 B2=13.0 1980KPa (17732) 705

B3=15.9

B4=18.1

 Cu++ ISE mixed 25°C 82% U K1=8.79 B2=11.28 1979MTc (17733) 706
 B3=13.73
 B4=15.70

Medium: 82% formamide

 Cu++ kin oth/un 25°C 0.20M U 1977ASa (17734) 707
 K(CuA+L)=0.34

Medium: 0.2M Li-p-toluenesulfonate. A=5,5,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradecane

 Cu++ vlt oth/un ? 0.10M U 1967RSb (17735) 708
 B4=14.67

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ISE	alc/w	25°C	100%	C		K(Cu+H-1L)=10 K(Cu+2H-1L=CuH-2L2)=ca 18	1988LMa (17868)	709

Cu++ sol oth/un 25°C ? U M 1968GGb (17869) 710
 K(CuCl2+L)=1.46
 K(CuCl2+2L)=2.44

 CH4O3BrP H2L CAS 7582-40-3 (1974)
 Bromomethylphosphonic acid; Br.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KN03	25°C	0.10M	U		K1=2.95 K(Cu+L=Cu(OH)L+H)=-3.91	1979WNa (17914)	711

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KN03	25°C	0.10M	U		K1=2.89 K(Cu+L=Cu(OH)L+H)=-3.73	1979WNa (17919)	712

Cu++ EMF NaNO3 25°C 0.10M U K1=2.90 1970TNa (17920) 713

CH4O3IP H2L CAS 13298-02-7 (1976)
 Iodomethylphosphonic acid; I.CH2.PO3H2

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

Cu++ gl KNO3 25°C 0.10M U K1=3.04 1979WNa (17932) 714
 $K(\text{Cu}+\text{L}=\text{Cu}(\text{OH})\text{L}+\text{H})=-3.72$

CH5N L Methylamine CAS 74-89-5 (155)

Methylamine; CH3.NH2

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

Cu++ gl NaNO3 25°C 0.10M M M K1=6.82 B2=11.56 2002SKa (17988) 715
 $B(\text{CuAL})=15.92$
 $B(\text{CuAL}_2)=20.57$

A is picolylamine

 Cu++ sp NaClO4 25°C 0.20M U 1991CCb (17989) 716
 $K(\text{CuA}+\text{L}=\text{CuAL})=2.60$

A is rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradecane

 Cu++ sp NaClO4 23°C 1.00M U 1980AIa (17990) 717
 $K_5=-0.8$
 $K(\text{CuL}_4+\text{OH})=1.2$

 Cu++ sol R4N.X 25°C 2.00M U K1=4.11 B2=7.51 1976IBa (17991) 718
 $K_3=2.70$
 $K_4=1.87$

 Cu++ vlt KNO3 30°C 2.00M U B2=16.24 1971SSe (17992) 719

 Cu++ vlt KNO3 30°C 2.00M U 1971SSe (17993) 720
 $B(\text{CuL}_2(\text{OH})_2)=15.83$

 Cu++ gl R4N.X 25°C 0.50M U 1950BLa (17994) 721
 $K_4=1$

 Cu++ sp R4N.X 15°C sat. U 1933ATa (17995) 722
 $B_4=7.8$

CH5NO3S HL CAS 13881-91-9 (7101)

Aminomethanesulfonic acid; H2NCH2SO3H

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

Cu++ gl NaCl 25°C 0.15M C 1995LMc (18041) 723
 $B(\text{CuLHis})=15.85$

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

Cu++ gl KNO3 30°C 0.10M U K1=4.00 B2=6.94 1971AGa (18048) 724

By spectrophotometry K1=4.20, B2=7.10

CH5N3S L CAS 79-19-6 (372)

Thiosemicarbazide; H2N.CS.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	con	KNO3	25°C	1.00M	U		K1=5.53 B2=10.42	1979E0a (18057)	725
Cu++	sp	KNO3	25°C	0.50M	U		K1=3.30 B2=7.87	1979LGa (18058)	726
Cu++	sp	KNO3	30°C	0.10M	U		K1=6.11 B2=11.59	1971AGa (18059)	727

CH5N3Se L CAS 21198-79-8 (371)

Selenosemicarbazide; H2N.CSe.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	KNO3	30°C	0.10M	U		K1=5.54 B2=10.82	1971AGa (18084)	728

CH5O3P H2L CAS 13590-71-1 (1752)

Methylphosphonic acid; CH3.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C	I R	K1=3.50	2001PRa (18104)	729

IUPAC Recommended value

Cu++	gl	mixed	25°C	30%	M		K1=4.466	1993BCg (18105)	730
------	----	-------	------	-----	---	--	----------	-----------------	-----

Medium: 0.1 M NaNO3 in 30% Dioxane/H2O (v/v)

Cu++	gl	NaNO3	25°C	0.10M	M		K1=3.492 K(Cu(bpy)+L)=3.506	1993CBb (18106)	731
------	----	-------	------	-------	---	--	--------------------------------	-----------------	-----

Cu++	gl	NaNO3	25°C	0.10M	C	I	K1=3.49 In 30% (50%) v/v 1,4-dioxan/H2O, K1=4.47 (5.13).	1993CGa (18107)	732
------	----	-------	------	-------	---	---	---	-----------------	-----

Cu++	gl	NaNO3	25°C	0.10M	M		K1=3.49	1992SCa (18108)	733
------	----	-------	------	-------	---	--	---------	-----------------	-----

Cu++	gl	KCl	25°C	0.10M	U		K1=3.40 K(Cu+L=CuL(OH)+H)=-3.43	1986NIa (18109)	734
------	----	-----	------	-------	---	--	------------------------------------	-----------------	-----

Cu++	gl	KNO3	25°C	0.10M	U		K1=3.52 K(Cu+L=Cu(OH)L+H)=-3.4	1979WNa (18110)	735
------	----	------	------	-------	---	--	-----------------------------------	-----------------	-----

CH5O4P H2L CAS 2617-47-2 (1977)

Hydroxymethylphosphonic acid; HO.CH2.PO3H2

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

CH504P H2L CAS 86703-09-5 (1751)

Methylphosphoric acid; $\text{CH}_3\text{OP}(\text{O})(\text{OH})_2$

Cu++ gl NaNO3 25°C 0.10M M K1=2.94 1996SSa (18156) 737

$$K(\text{Cu}(\text{bpy})+\text{L})=2.98$$
$$K(\text{Cu}(\text{phen})+\text{L})=2.97$$
$$B(\text{CuH-1L}) = -3.25$$

CH6N03P H2L AMPA CAS 1066-51-3 (1981)

Aminomethylphosphonic acid; $\text{H}_2\text{N}.\text{CH}_2.\text{PO}_3\text{H}_2$

$$K(\text{Cu}+\text{HL})=2.6$$
$$\begin{aligned} K(\text{Cu}+\text{HL}) &= 2.67 \\ K(\text{CuL}+\text{H}) &= 4.66 \end{aligned}$$
$$\begin{aligned} B(\text{CuHL}) &= 12.56 \\ B(\text{CuHL}_2) &= 20.20 \\ B(\text{CuH}_2\text{L}_2) &= 24.8 \\ B(\text{CuH}-1\text{L}) &= -0.4 \end{aligned}$$
$$B(\text{CuHL}) = 13.25$$

$$B(\text{CuH}_2\text{L}_2) = 26.77$$
$$\begin{aligned} B(\text{CuHL}) &= 12.56 \\ B(\text{CuHL}_2) &= 20.27 \\ B(\text{CuH}_2\text{L}_2) &= 24.96 \end{aligned}$$

Cu++ gl NaCl04 25°C 0.50M U K1=7.77 B2=14.09 1971GDa (18196) 746

Cu++ g1 KNO3 25°C 0.10M U K1=7.95 B2=14.6 1971WNb (18197) 747
B(CuHL)=12.56
B(CuH2L2)=25.5
B(CuHL2)=20.4

CH6N4O L Carbohydrazide CAS 497-18-7 (3537)
Carbohydrazide; H2N.NH.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.10M	U			K1=13.29 K(Cu+HL)=6.78 K(Cu+2HL)=12.88 K(2Cu+L)=18.54 K(2Cu+HL)=11.57	B2=23.98 1967KLa (18257)	750

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	M	M	K1=5.66 K(Cu+HL)=2.4 K(CuL+H)=3.3 K(Cu(bpy)+HL)=2.5 K(Cu(bpy)+L)=6.08 K(Cu(bpy)L+H)=3.0, K(Cu(phen)+HL)=2.5, K(Cu(phen)+L)=6.11 K(Cu(phen)L+H)=3.0.	1998SSb (18302)	751

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.10M	C			K1=14.32 B(CuH2L)=23.97 B(CuHL)=20.18 B(CuHL2)=27.10	B2=19.06 1997BDa	(18314) 752

CH7010P3 H4L CAS 103134-29-8 (3538)
Methyltriphosphoric acid; CH3.O.P(O)(OH).O.P(O)(OH).O.P(O)(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl04	20°C	0.10M	U		K1=6.17 K(CuL+H)=3.93	1964SBb (18317)	753

C2H02Cl3 HL Trichloroacetic CAS 76-03-9 (1205)
Trichloroethanoic acid; Cl3C.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	NaCl04	25°C	1.00M	U	I	K1=0.17	1978TPa (18324)	754
Cu++	sp	non-aq	25°C	100%	U		K1=3.23	1970SSf (18325)	755

C2H02F3 HL Trifluoroacetic CAS 76-05-1 (1360)
Trifluoroethanoic acid; F3C.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	cal	non-aq	25°C	100%	U	H	K1=2.84 B2=3.95	1980LPd (18344)	756
DH=7.85 kJ mol-1.									
Cu++	con	non-aq	25°C	100%	U		K1=1.95	1979PPb (18345)	757
Medium: DMSO									

C2H202Cl2 HL CAS 79-43-6 (1282)
Dichloroethanoic acid; Cl2CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	diox/w	25°C	70%	M		K1=2.32	1990BSb (18384)	758
Medium: 70% v/v DMSO/H2O, 0.1 M NaNO3									
Cu++	sp	NaCl04	25°C	1.00M	U	I	K1=0.74	1978TPa (18385)	759
Cu++	sp	alc/w	25°C	100%	U		K1=3.22	1970SSf (18386)	760
Cu++	gl	NaCl04	20°C	1.00M	U		K1=0.7	1969PJc (18387)	761

C2H202F2 HL Difluoroacetic CAS 381-73-7 (6782)
Difluoroethanoic acid; F2HC.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	diox/w	25°C	70%	M		K1=2.33	1990BSb (18405)	762
Medium: 70% v/v DMSO/H2O, 0.1 M NaNO3									

C2H2O3 HL Glyoxylic acid CAS 298-12-4 (1142)
 Glyoxylic acid; OHC.COOH

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

Cu++	gl	KNO3	30°C	0.10M	C	M	K1=2.15 B(CuAL)=11.56 K(CuAL+H)=4.93 K(CuAL+OH)=6.58	1978MAd (18412)	763
------	----	------	------	-------	---	---	---	-----------------	-----

A=DL-O-phosphoserine

Cu++	gl	KCl	25°C	0.10M	U		K1=7.3 B2=14.70	1975SDa (18413)	764
------	----	-----	------	-------	---	--	-----------------	-----------------	-----

C2H2O4 H2L Oxalic acid CAS 144-62-7 (24)
 Ethanedioic acid; (COOH)2

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

Cu++	gl	NaNO3	25°C	0.10M	C	M	K1=4.60 B2= 8.70 B(CuLA)=8.93	1998KRa (18544)	765
------	----	-------	------	-------	---	---	----------------------------------	-----------------	-----

HA: inosine.

Cu++	gl	KNO3	35°C	0.10M	C	M	K1=5.90 K(CuL+A)=6.24	1997PSb (18545)	766
------	----	------	------	-------	---	---	--------------------------	-----------------	-----

H2A is thiamine orthophosphoric acid.

Cu++	vlt	oth/un	25°C	0.1M	U		K1=4.5	1995FFa (18546)	767
------	-----	--------	------	------	---	--	--------	-----------------	-----

Cu++	gl	KNO3	30°C	0.10M	U		K1=4.82	1994RSa (18547)	768
------	----	------	------	-------	---	--	---------	-----------------	-----

Cu++	gl	KNO3	25°C	0.10M	M	M	K1=6.400	1993AEa (18548)	769
------	----	------	------	-------	---	---	----------	-----------------	-----

Cu++	gl	KNO3	25°C	0.10M	C	M	K1=4.04 K(Cu(AMP)+L)=5.21 K(Cu(ADP)+L)=5.76 K(Cu(ATP)+L)=6.46 B(CuL(AMP))=8.41	1993AEb (18549)	770
------	----	------	------	-------	---	---	--	-----------------	-----

B(CuL(ADP))=11.81, B(CuL(ATP))=12.86.

Cu++	gl	non-aq	25°C	100%	C		K(CuA+L=CuAL)=7.394 K(CuA+H+L=CuAHL)=12.397 K(2CuA+L=Cu2A2L)=10.621	1991CFa (18550)	771
------	----	--------	------	------	---	--	---	-----------------	-----

In DMSO, 0.1 M Bu4NC104. A=2,2':6',2"-terpyridyl.

Cu++	vlt	KNO3	30°C	0.10M	C	M	K1=4.70 B2= 8.82	1991STb (18551)	772
------	-----	------	------	-------	---	---	------------------	-----------------	-----

Method: polarography. Medium pH 9.5.

Ternary complexes with 2-amino-3-hydroxypyridine

Cu++	vlt	KNO3	30°C	0.10M	C	M	K1=4.70 B2= 8.82	1991STb (18552)	773
------	-----	------	------	-------	---	---	------------------	-----------------	-----

$$B(\text{CuAL})=13.5$$

Method: polarography, medium pH 9.5. HA is 2-amino-3-hydroxypyridine.

Cu++	gl	NaClO4	25°C	0.20M	U	M	K1=4.84	B2=8.44	1990UBb (18553)	774
------	----	--------	------	-------	---	---	---------	---------	-----------------	-----

Ternary complexes with amino acids

Cu++	ISE	NaClO4	25°C	0.10M	C		K1=5.65		1989COb (18554)	775
------	-----	--------	------	-------	---	--	---------	--	-----------------	-----

Cu++	gl	KNO3	30°C	0.10M	U	M	K1=4.82	B2=8.04	1989SRd (18555)	776
------	----	------	------	-------	---	---	---------	---------	-----------------	-----

$K(\text{CuL+A})=6.63$
 $B(\text{CuLA})=11.45$
 $K(\text{CuL+C})=7.13$
 $B(\text{CuCL})=11.95$

HA=4-amino-5-mercapto-1,2,4-triazole, HC=4-amino-5-mercapto-3-methyltriazole

Cu++	vlt	NaClO4	30°C	1.0M	C		K1=5.64	B2= 8.53	1988GMb (18556)	777
------	-----	--------	------	------	---	--	---------	----------	-----------------	-----

Method: polarography. Medium pH 5.0.

Cu++	gl	KNO3	25°C	0.10M	U	M	K1=4.28	B2=8.25	1988NSb (18557)	778
------	----	------	------	-------	---	---	---------	---------	-----------------	-----

$B(\text{CuLA})=8.54$

H2A=malonic acid

Cu++	vlt	NaNO3	25°C	1.00M	U		B2=9.11		1987GAa (18558)	779
------	-----	-------	------	-------	---	--	---------	--	-----------------	-----

Cu++	vlt	KNO3	25°C	0.50M	U		K1=5.43	B2=9.21	1987GAb (18559)	780
------	-----	------	------	-------	---	--	---------	---------	-----------------	-----

Cu++	cal	KNO3	25°C	1.0M	U	HM			1987LGA (18560)	781
------	-----	------	------	------	---	----	--	--	-----------------	-----

$\text{DH}(K1)=-5.37 \text{ kJ mol}^{-1}$, $\text{DH}(K2)=-5.71$. $\text{DH}(\text{CuLA})=-84.7$, $\text{DH}(\text{CuA2+L}=\text{CuLA+A})=-5.37$
 $\text{DH}(\text{CuLA+L}=\text{CuL2+A})=-5.71$. A=1,2-diaminoethane

Cu++	vlt	NaNO3	25°C	1.00M	U		K1=6.00	B2=9.13	1985KIa (18561)	782
------	-----	-------	------	-------	---	--	---------	---------	-----------------	-----

By linear sweep voltammetry

Cu++	gl	KNO3	35°C	0.10M	C	M	K1=6.16		1985RRc (18562)	783
------	----	------	------	-------	---	---	---------	--	-----------------	-----

$B(\text{CuL}(\text{cytidine}))=9.93$

Cu++	gl	KNO3	35°C	0.10M	C		K1=6.16		1985RRh (18563)	784
------	----	------	------	-------	---	--	---------	--	-----------------	-----

Cu++	vlt	KNO3	20°C	1.0M	U		K1=5.5	B2=9.2	1984KMc (18564)	785
------	-----	------	------	------	---	--	--------	--------	-----------------	-----

By cyclic voltammetry on Hg.

Cu++	gl	KNO3	25°C	0.10M	U	M	K1=4.28	B2=8.25	1984VSa (18565)	786
------	----	------	------	-------	---	---	---------	---------	-----------------	-----

$B((\text{CuLA}))=7.94$
 $K(\text{CuA+L})=4.45$
 $K(\text{CuL+A})=3.66$

H2A=phthalic acid

Cu++	gl	NaClO4	30°C	0.10M	C	M	K2=3.96		1984ZXa (18566)	787
------	----	--------	------	-------	---	---	---------	--	-----------------	-----

$B(\text{CuLA})=8.24$

A=2-hydroxybenzylamine

Cu++ vlt KNO3 30°C 0.30M C K1=5.9 B2= 9.70 1983APb (18567) 788
 Method: polarography. Medium pH 8.0.

Cu++ vlt KNO3 30°C 0.30M C M 1983APb (18568) 789

B(CuL(gly))=13.20
 K(CuL+gly)=7.30
 K(Cu(gly)+L)=4.90
 B(CuL(ala))=12.90

Method: polarography. Medium pH 8.0. K(CuL+ala)=7.00, K(Cu(ala)+L)=4.80,
 B(CuL(val))=13.00, K(CuL+val)=7.10, K(Cu(val)+L)=4.80.

Cu++ vlt KNO3 30°C 0.30M C M 1983APb (18569) 790

B(CuLA)=12.20
 K(CuL+A)=6.30
 K(CuA+L)=5.00

Method: polarography. Medium pH 8.5. HA is beta-alanine.

Cu++ vlt NaClO4 25°C 1.00M U M K1=6.61 B2=9.54 1981PLa (18570) 791

B(CuL(malonate))=8.80
 B(CuL(malonate)2)=9.70

Cu++ gl NaClO4 25°C 0.10M C K1=4.85 B2= 8.88 1980ACb (18571) 792

Cu++ gl KNO3 25°C 0.10M U M K1=4.85 B2=8.90 1980GMb (18572) 793

B(CuLA)=14.20

A=histamine

Cu++ vlt oth/un 25°C 1.0M C M K1=5.70 B2= 9.54 1980LEa (18573) 794

B(Cu(en)L)=15.44

Method: re-analysis of published polarographic data.
 Medium not stated.

Cu++ vlt KNO3 30°C 1.00M C M K1=5.70 B2=9.30 1980SGc (18574) 795

Cu++ vlt KNO3 30°C 1.00M U M K1=5.7 B2=9.3 1980SSe (18575) 796

B(CuL(Asp))=13.0

Cu++ gl KNO3 25°C 2.5M M K1=6.16 1979FLc (18576) 797

Cu++ vlt NaClO4 30°C 1.50M C K1=5.70 B2= 9.50 1979PZa (18577) 798

Method: polarography. Medium pH 6.6

Cu++ vlt KNO3 24°C 1.50M U M K1=5.70 B2=9.98 1978KNb (18578) 799

B(CuL(malate))=7.99
 B(CuL(tartrate))=7.99

Cu++ sol oth/un 20°C 2.10M U M K1=4.12 1978KUa (18579) 800

Kso(CuL(glycolate))=-5.74
 Kso(CuL(lactate))=-5.85

Cu++	gl	KNO3	25°C	0.10M	U		K1=6.67	B2=10.50	1977BPa (18580)	801
------	----	------	------	-------	---	--	---------	----------	-----------------	-----

Cu++	oth	oth/un	30°C	35%	C		K1=7.6		1976YGa (18581)	802
------	-----	--------	------	-----	---	--	--------	--	-----------------	-----

K(Cu+HL)=2.4

Method: paper electrophoresis.

Cu++	vlt	KNO3	28°C	1.50M	U	M	K1=5.70	B2=9.98	1975KNa (18582)	803
------	-----	------	------	-------	---	---	---------	---------	-----------------	-----

B(CuLA)=9.00
B(CuLB)=7.82
B(CuLC)=7.99

H2A=malonic acid; H2B=succinic acid; H2C=maleic acid

Cu++	cal	NaNO3	25°C	1.00M	U	H	K1=5.53	B2=9.54	1974ARd (18583)	804
------	-----	-------	------	-------	---	---	---------	---------	-----------------	-----

Cu++	gl	NaClO4	25°C	0.10M	U	M			1974SCa (18584)	805
------	----	--------	------	-------	---	---	--	--	-----------------	-----

B(Cu(en)L)=14.49
K(CuL+en)=9.65
K(Cu(en)+L)=4.05

en: 1,2-diaminoethane

Cu++	gl	NaClO4	25°C	0.10M	U	M			1974SCa (18585)	806
------	----	--------	------	-------	---	---	--	--	-----------------	-----

B(Cu(pn)L)=14.31
K(CuL+pn)=9.47
K(Cu(pn)+L)=4.49

pn: 1,3-diaminopropane

Cu++	sp	R4N.X	25°C	1.50M	U				1973BFd (18586)	807
------	----	-------	------	-------	---	--	--	--	-----------------	-----

K(CuA+CuL2=(CuL)2A)=3.40

Medium : NH4NO3. H4A=EDTA

Cu++	gl	KNO3	25°C	0.10M	U		K2=4.00		1969CMd (18587)	808
------	----	------	------	-------	---	--	---------	--	-----------------	-----

Cu++	dis	NaClO4	20°C	0.10M	U		K1=4.49	B2=8.41	1969MBe (18588)	809
------	-----	--------	------	-------	---	--	---------	---------	-----------------	-----

Cu++	dis	NaClO4	25°C	1.00M	U		B2=9.82		1969SLb (18589)	810
------	-----	--------	------	-------	---	--	---------	--	-----------------	-----

Cu++	ISE	NaClO4	25°C	1.0M	U		K1=5.53	B2=9.54	1965CVa (18590)	811
------	-----	--------	------	------	---	--	---------	---------	-----------------	-----

Cu++	sol	KNO3	25°C	2.0M	U	M	B2=9.70		1963FVa (18591)	812
------	-----	------	------	------	---	---	---------	--	-----------------	-----

B(Cu(en)L)=15.44

Cu++	dis	NaClO4	20°C	0.10M	U		B2=10.46		1963STc (18592)	813
------	-----	--------	------	-------	---	--	----------	--	-----------------	-----

Medium: KClO4

Cu++	vlt	NaNO3	25°C	1.0M	U	I	B2=9.27		1962MRa (18593)	814
------	-----	-------	------	------	---	---	---------	--	-----------------	-----

In 1 M NaNO3, heavy water: B2=9.51

Cu++	gl	oth/un	25°C	0.10M	U	I	K1=4.85	B2=9.21	1960MNa (18594)	815
------	----	--------	------	-------	---	---	---------	---------	-----------------	-----

K(Cu+HL)=2.49

Polarography also used. I=0: K1=6.23, K2=4.04, K=3.18

Cu++ gl oth/un 25°C 0.10M U I K1=4.84 B2=8.4 1960MNa (18595) 816
K(Cu+HL)=2.49

At I=0, K1=6.19, K2=4.04, K=3.18. By polarography, I=0.2 to 0.6, B2=9.40

Cu++ gl oth/un 25°C 0.10M U K1=6.3 1958GHc (18596) 817

Cu++ sp oth/un ? ? U 1956KIa (18597) 818
K(CuL2+Cu(en)2=2CuL(en))=1.10

Cu++ vlt oth/un 20°C 0.30M U B2=10.3 1950MEb (18598) 819

Cu++ ISE oth/un 18°C 0.06M U B2=8.3 1936BJa (18599) 820

Cu++ ISE oth/un 20°C 0.10M U B2=8.5 1929RIa (18600) 821

Cu++ sol oth/un 25°C 0.40M U K2=3.6 1905SAb (18601) 822

C2H3N L Cyanomethane CAS 75-05-8 (1399)
Acetonitrile; CH3.CN

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

Cu++ sp non-aq 25°C 100% C K1=1.19 B2= 1.86 2001IKa (19171) 823
B3=2.12

Reactions: Bn: Cu(L)6+nH2O=Cu(L)6-n(H2O)n+nL. Medium: 0-0.9 M H2O in AN.

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

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

Cu++ kin oth/un 18°C 0.20M U K1=0.44 1949PEa (19199) 824
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

Cu++ gl KNO3 25°C 0.10M C K1=9.14 2002BMa (19217) 825

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

Cu++ gl KNO3 25°C 0.50M U K1=1.52 B2=2.67 1982GLa (19248) 826
B3=3.49

B4=3.97

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
Cu++	sp	NaClO4	20°C	2.00M	U	M	K1=1.82 B2=3.04 K(Cu(bpy)+L)=1.92	1983J0a (19269)	827
Cu++	gl	NaClO4	20°C	2.00M	U		K1=1.84 B2=3.04	1981J0a (19270)	828
Spectrophotometry also used.									
Cu++	sp	alc/w	25°C	100%	U		K1=3.12	1970SSg (19271)	829
Medium: EtOH									
Cu++	gl	diox/w	25°C	0.10M	U		K1=2.48	1969GPb (19272)	830
0.1 M NaClO4 in 50% dioxane/H2O									

Cu++ sol oth/un 25°C ->0 U K1=1.59 1951LWa (19273) 831

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	diox/w	25°C	70%	M		K1=3.01	1990BSb (19318)	832
Medium: 70% v/v DMSO/H2O, 0.1 M NaNO3									
Cu++	sp	NaClO4	25°C	1.00M	U	I	K1=1.02	1978TPa (19319)	833
Cu++	gl	NaNO3	30°C	0.40M	U		K1=1.07	1970BTa (19320)	834
Cu++	vlt	NaClO4	18°C	2.00M	U		K1=1.20 B2=1.30 B3=1.48	1970FBa (19321)	835
Cu++	sp	NaClO4	10°C	2.00M	U		K1=1.26 B2=1.58 B3=2.92	1970GFa (19322)	836
Cu++	sp	alc/w	25°C	100%	U		K1=3.12	1970SSg (19323)	837
Cu++	gl	diox/w	25°C	0.10M	U		K1=2.53	1969GPb (19324)	838
0.1 M NaClO4 in 50% dioxane/H2O									
Cu++	EMF	NaClO4	20°C	1.00M	U		K1=0.7	1969PJc (19325)	839
Cu++	gl	diox/w	25°C	50%	U		K1=2.53	1969SGa (19326)	840
Medium: 50% dioxan, 0.1 M NaClO4									
Cu++	gl	diox/w	25°C	50%	U		K1=2.57	1968EGb (19327)	841

Medium: 50% dioxan, 0.1 M NaClO4

Cu++ sp NaClO4 30°C 0.10M U K1=1.64 1968RSc (19328) 842
K1=2.00, alternative method of calculation

Cu++ gl NaClO4 25°C 3.0M U K1=1.025 B2=1.43 1964PCa (19329) 843

Cu++ sol oth/un 25°C ->0 U K1=1.61 1951LWa (19330) 844

Cu++ ISE NaClO4 20°C 1.0M U K1=0.91 B2=1.09 1948FRa (19331) 845
K3=0.36

Cu++ ISE oth/un 20°C 0.03M U K1=1.50 1934FRa (19332) 846

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

Cu++ gl diox/w 25°C 0.10M U K1=2.40 1969GPb (19400) 847
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

Cu++ gl NaClO4 20°C 2.00M U K1=2.10 B2=3.70 1981JOa (19412) 848
Spectrophotometry also used.

Cu++ gl diox/w 25°C 0.10M U K1=2.51 1969GPb (19413) 849
0.1 M NaClO4 in 50% dioxane/H2O

C2H4NF3 L CAS 753-90-2 (6297)
Trifluoroethylamine; CF3.CH2.NH2

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

Cu++ sp NaClO4 30°C 0.50M U K1=1.19 1978GGb (19433) 850

C2H4N2O4 H2L CAS 1687-60-1 (2969)
Oxalldihydroxamic acid; (CO.NH.OH)2

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

Cu++ gl KNO3 25°C 0.10M C B2=18.22 2000SFa (19444) 851
B(CuH-1L2)=10.22
B(CuH-2L2)=0.37
B(Cu2L2)=26.17
B(Cu2H-1L2)=22.75

C2H4N2S2 L Rubeanic acid CAS 79-40-3 (2782)
Dithiooxamide; H2N.CS.CS.NH2

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

Cu++ sp none 25°C 0.0 U K1=8.40 1976AMc (19449) 852

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

Cu++ gl KNO3 25°C 0.10M C K1=8.80 2002BMa (19466) 853

Cu++ gl KNO3 25°C 0.10M U I 1997DBa (19467) 854

K(Cu+HL)=2.55

K(Cu+2HL)=5.21

Data also for I=0.5 and 1.0 M

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

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

Cu++ gl mixed 25°C 0.3M U I K1=5.32 B2= 7.82 1998ISb (19654) 855
In 100% H2O K1=1.77

Medium: 0.3 M NaClO4 in 0.9 mol parts DMSO in H2O; for 0.4 mol p. K1=3.32;
Also for 0.3 M NaClO4 in 0.4 mol parts of acetone in H2O K1=3.88; K2=1.99

Cu++ gl NaClO4 25°C 1.0M C M K1=1.59 B2= 2.09 1994FGa (19655) 856
K(CuA+L)=0.7

K(CuB+L)=1.50

H2A=malonic acid, H2B=succinic acid

Cu++ gl mixed 25°C 0.5M U K1=2.91 B2= 4.98 1991FKb (19656) 857
B3=6.15

for 100%H2O K1=1.35

for 100%H2O B1=2.49

Medium: 0.5 M KNO3 in 0.5 mol parts isopropanol in H2O

Also data for 0.1 mol part isopropanol: K1=1.84; B2=2.98

Cu++ gl mixed 25°C 0.5M U K1=5.57 1991FKb (19657) 858

Medium: 0.5 M KNO3 in 0.5 mol parts isopropanol in H2O

Also data for 0.1 mol part isopropanol: K1=4.93

Cu++ cal NaClO4 25°C 1.0M C T K1=1.50 B2= 2.30 1991VKa (19658) 859
DH1=5.71 kJ/mol

DH(M+2L)=9.70 kJ/mol

Also for I=3 K1=1.68; B2=2.46; DH1=4.87; DH(M+2L)=8.35

Cu++	EMF	NaClO4	20°C	1.00M	C		K1=1.69 K3=0.37 K4=-0.18	B2=2.72	1991VRa (19659)	860
Cu++	gl	diox/w	25°C	70%	M		K1=3.90		1990BSb (19660)	861
Medium: 70% v/v DMSO/H2O, 0.1 M NaNO3										
Cu++	oth	NaClO4	25°C	2.0M	U		K1=1.93		1990FTa (19661)	862
Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.										
Cu++	ISE	NaClO4	25°C	1.00M	U		K1=1.43	B2=2.25	1990VKb (19662)	863
Cu++	gl	diox/w	25°C	30%	C	I	K1=2.61		1989LCb (19663)	864
Medium: 30% dioxan/H2O, 0.1 M NaNO3. In 0%, K1=1.85; 10%, K1=2.05; 50%, K1=3.31.										
Cu++	gl	NaNO3	25°C	0.10M	C	I M	K1=1.73 K(Cu(phen)+L)=1.73		1988LTc (19664)	865
Data also for 50% v/v EtOH/H2O, and 50% v/v Dioxan/H2O mixtures										
Cu++	gl	KNO3	25°C	0.20M	M	M	K1=2.61 K(Cu(dien)+L)=2.40		1988SKd (19665)	866
K(H+L)=4.59										
Cu++	gl	alc/w	25°C	50%	C	I M	K1=2.70 K(Cu(phen)+L)=2.70		1985BSd (19666)	867
Medium: 50% v/v EtOH/H2O. In 50% dioxan/H2O, K1=3.31, K(Cu(phen)+L)=3.35										
Cu++	gl	KNO3	25°C	0.10M	C	I M	K1=1.85 K(Cu(phen)+L)=1.84		1985SMf (19667)	868
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.										
Cu++	gl	KNO3	25°C	0.10M	C	M	K1=1.85 K(Cu(phen)+L)=1.84		1984DHa (19668)	869
Cu++	gl	KCl	25°C	0.10M	U		K1=1.75	B2=2.43	1983LTa (19669)	870
Cu++	gl	NaNO3	25°C	0.10M	C		K1=1.81		1981BKb (19670)	871
Cu++	sp	KNO3	25°C	0.0	C	IH	K1=2.195		1981EBa (19671)	872
Data for 25, 40 and 55 C. Values calculated from data for 0.06-0.10 M KNO3 At 55 C, K1=2.519. At 25 C, DH(K1)=12.6 kJ mol ⁻¹ , DS(K1)=84 J K ⁻¹ mol ⁻¹ .										
Cu++	gl	NaClO4	25°C	0.10M	C	M	K1=1.78 B3=3.3 B(CuL(bpy))=10.18	B2= 2.80	1980ACb (19672)	873

B(CuL2(bpy))=11.5
B(CuL(bpy)2)=15.78

B(CuL2(bpy)2)=18.0

Cu++ ISE KNO3 25°C 1.00M U B2=2.58 1980Nwa (19673) 874

Cu++ sp non-aq 25°C 100% U I M 1980Sua (19674) 875
K(dimer)=4.2

Medium: C6H5Cl. K: Cu(CH3COO)2L2+Cu(CH3COO)2L2. L=3-chloropyridine,
Mol.fr. of L=0.0956. also data for mol.fr. of 1.0 (K=2.23) and 0.523 (K=3.0)

Cu++ ISE KNO3 25°C 0.10M C TIH K1=1.54 1979EFb (19675) 876

Method: Cu ion selective electrode. Data for 0.205 M KNO3 and 15-45 C.
At I=0, K1=2.18, DH(K1)=5.02 kJ mol⁻¹, DS(K1)=59 J K⁻¹ mol⁻¹.

Cu++ gl NaClO4 25°C 0.15M U T M K1=1.78 B2= 2.60 1978ABe (19676) 877
B3=3.2

B(Cu(py)L)=4.20

B(Cu(py)L2)=5.52

B(Cu(py)2L)=6.34

B(Cu(py)2L2)=7.50, B(Cu(py)2L3)=7.76, B(Cu(py)3L2)=9.0, B(Cu(py)3L3)=9.93.
At 37 C, K1=1.81, B2=2.64, B3=3.3, B(Cu(py)L)=4.17, B(Cu(py)L2)=5.39

Cu++ sp NaClO4 25°C 2.0M C K1=1.91 B2= 2.46 1976GFa (19677) 878

Cu++ ISE KNO3 25°C 1.00M U B2=2.58 1975Nwa (19678) 879

Cu++ cal NaNO3 25°C 1.00M U H K1=1.33 B2=2.31 1974ARd (19679) 880

Cu++ kin NaClO4 25°C 1.00M U K1=1.72 1973HHb (19680) 881

Cu++ sp oth/un ? 100% U M 1972S0b (19681) 882

K(Cu2L4+2HCl=2CuClL+2HL)=4.7

K(Cu2L4+4HCl=2CuCl2+4HL)=15.2

Medium : glacial ethanoic acid.

Cu++ sp oth/un ? 100% U M 1972S0c (19682) 883

K(Cu2L4+2HA=2CuLA+2HL)=3.5

K(Cu2L4+4HA=2CuA2+4HL)=10.4

K(Cu2L4+2LiL)=0.89

K(Cu2L4+4LiL=2Li2CuL4)=-0.4

Medium : galcial ethanoic acid. HA=HClO4.

Cu++ gl NaNO3 30°C 0.40M U K1=1.76 1970BTa (19683) 884

Cu++ sp NaClO4 25°C 2.00M U K1=2.11 B2=2.86 1970GFa (19684) 885

Cu++ sp non-aq 25°C 100% U K1=3.37 1970SSg (19685) 886

Cu++ gl diox/w 25°C 0.10M U K1=3.36 1969GPb (19686) 887

0.1 M NaClO4 in 50% dioxane/H2O

Cu++	vlt	oth/un	25°C	0.30M	U	M		1969KTc (19687)	888
K(CuA+L)=1.06 A=2,2'-ethylenedioxybis[ethyliminodi(acetate)]									
Cu++	dis	NaClO4	20°C	0.10M	U		K1=2.38	1969MBe (19688)	889
Cu++	ISE	NaClO4	25°C	3.00M	U		K1=1.74 B2=2.79	1969WAa (19689)	890
Cu++	gl	diox/w	25°C	50%	U	M	K1=3.36	1968EGb (19690)	891
Medium: 50% dioxan, 0.1 NaClO4									
Cu++	vlt	NaClO4	25°C	2.00M	U		K1=1.70 B2=2.65 B3=2.60 B4=2.54	1968FPa (19691)	892
Cu++	gl	diox/w	25°C	50%	U	M		1968GPd (19692)	893
K(Cu(bpy)+L)=3.51									
Cu++	sp	NaClO4	30°C	0.10M	U		K1=2.05	1968RSc (19693)	894
K1=2.66 by alternative method of calculation									
Cu++	sp	oth/un	35°C	1.65M	U	I	K1=1.28	1967ADd (19694)	895
K1=1.92(I=0), 1.51(I=0.05)									
Cu++	oth	oth/un	?	?	U		B2=3.54	1967MBa (19695)	896
Method: paper electrophoresis									
Cu++	EMF	NaClO4	25°C	3.0M	U	I	K1=1.87 B2=3.12 B3=3.58 B4=3.33	1966GEa (19696)	897
Method: quinhydrone electrode. I=1: K1=1.71, B2=2.71									
Cu++	vlt	NaClO4	25°C	1.0M	U	M	K1=1.30 B2=2.04 B(CuL(SO4))=1.6 B(CuL(SO4)2)=1.8	1965TSb (19697)	898
Cu++	gl	oth/un	25°C	0.0	U		K1=2.23 B2=3.63	1964AMa (19698)	899
Cu++	gl	non-aq	25°C	100%	U		K2=7.90	1964KLa (19699)	900
Medium: ethanoic acid									
Cu++	ix	oth/un	20°C	?	U		K1=>1.65 K2=1.1 K3=0.4	1964LUa (19700)	901
Cu++	gl	NaNO3	25°C	4.0M	U		K1=2.52 B2=3.33	1963SWb (19701)	902
Cu++	gl	NaClO4	20°C	0.10M	U		K1=1.89 B2=3.09	1962KPa (19702)	903

Cu++ vlt oth/un 15°C 0.20M U T K1=1.61 B2=2.28 1960TKb (19703) 904
K1=1.72(25 C), K2=0.25(25 C); K1=1.84(35 C), K2=0.07(35 C)

Cu++ gl oth/un 25°C 0.10M U K1=1.8 1960YYa (19704) 905

Cu++ sp oth/un 25°C ? U K1=2.19 1957BDb (19705) 906

Cu++ oth oth/un ? 0.0 U K1=2.24 1956YFa (19706) 907

Cu++ gl NaNO3 24°C 2.0M U B2=2.78 1955GLd (19707) 908

Cu++ gl oth/un 30°C 0.0 U K1=2.40 B2=3.30 1953SAb (19708) 909

Cu++ ix NaClO4 20°C 1.0M U K1=1.65 B2=2.65 1951FRa (19709) 910
K3=0.36

Cu++ sol oth/un 25°C ->0 U K1=2.24 1951LWa (19710) 911

Cu++ EMF NaClO4 20°C 1.0M U K1=1.67 B2=2.65 1948FRa (19711) 912
K3=0.42
K4=-0.19

By spectrophotometry K1=1.62, K2=0.98

Cu++ gl none 18°C 0.0 U K1=2.16 B2=3.20 1945PEa (19712) 913

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

Cu++ gl NaClO4 30°C 0.10M U K1=10.01 B2=18.66 1988NDa (20275) 914

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

Cu++ gl NaClO4 25°C 0.50M C K1=2.32 B2= 3.73 1995PLa (20431) 915

B(CuH-1L)=-3.89

Cu++ ISE KNO3 25°C 0.70M U K1=2.32 1986HAe (20432) 916

Cu++ sol oth/un 20°C 2.10M U M 1978KUa (20433) 917

B(CuL(oxalate))=5.74

Cu++ sp NaClO4 25°C 2.0M C K1=2.46 1976GFa (20434) 918

Cu++ sol oth/un 25°C 0.0 U T H K1=3.10 1975DNa (20435) 919

DH=24.52 kJ mol⁻¹ and DS=141.59 J mol⁻¹ K⁻¹.

Data also at 30, 35, 40 and 45 C. Medium: glycolate buffer, pH 3.8

Cu++ gl NaNO3 25°C 0.10M C M K1=8.10 B2=14.78 2004SSa (20961) 936
 B(CuH-1L)=0.67
 B(CuH-2L)=-10.13
 B(CuLA)=13.50
 B(CuHLA)=17.80

B(CuH-1LA)=6.09. HA is 6-aminopenicillanic acid.

Cu++ gl KNO3 25°C 0.10M M K1=8.27 B2=14.96 2003DFa (20962) 937
 B(CuHL)=13.47

Cu++ gl alc/w 25°C 40% C K1=9.43 B2=16.94 2003DKa (20963) 938
 B(CuHL)=12.13

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

Cu++ gl NaNO3 25°C 0.10M M M K1=8.19 B2=14.96 2002SKa (20964) 939
 B(CuAL)=17.42

A is picolylamine

Cu++ ISE KNO3 25°C 0.10M C I K1=8.18 2001FSa (20965) 940

Also values for 8-44% MeOH/H2O, 10-50% EtOH/H2O, 12-33% DMSO/H2O, 19-48% DMF/H2O and 10-20% dioxane/H2O.

Cu++ gl oth/un 25°C 0.10M M M K1=8.12 B2=15.00 2000MOa (20966) 941
 B(CuLA)=18.78

Medium: NaOH. A: 2,2'-Dipicolylamine.

Cu++ gl KNO3 25°C 0.10M C M K1=8.17 1999AAa (20967) 942
 K(CuL+A)=3.78
 B(CuLA)=11.95
 K(CuL+B)=3.66
 B(CuLB)=11.83

K(CuL+C)=3.69, B(CuLC)=11.86, K(CuL+D)=3.50, B(CuLD)=11.67.

HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.

Cu++ gl diox/w 25°C 50% M M K1=8.64 B2=16.60 1999HEa (20968) 943
 K(CuA+L)=4.13

Medium: 50% v/v dioxane/H2O, 0.1 M NaNO3. H2A: tetracycline.

Cu++ gl NaNO3 25°C 0.10M C T M K1=7.85 B2=14.60 1999KAa (20969) 944
 K(CuA+L)=5.80

Data for 25-55C. H2A=dipicolinic acid. DH(K1)=-27.42 kJ mol⁻¹, DS(K1)=59.28 J K⁻¹ mol⁻¹, DH(CuAL)=-29.47 kJ mol⁻¹, DS(CuAL)=12.89 J K⁻¹ mol⁻¹.

Cu++ gl alc/w 37°C 40% C M K1=7.97 B2=14.88 1998AAa (20970) 945
 B(CuLA)=13.07
 K(CuL+A)=5.10
 K(CuA+L)=7.42
 B(CuLC)=12.93

HC:2[o-hydroxyphenylazo]-2-cyanomethyl benzimidazole. 40% EtOH/H2O, I=0.15

H2A:5-[o-hydroxyphenylazo] barbituric acid. K(CuL+C)=4.96, K(CuC+L)=7.41.

Cu++ gl NaNO3 37°C 0.10M U M K1=8.12 1994MGc (20984) 959
Data for ternary complexes with 6-aminopenicillanic acid

Cu++ gl NaClO4 30°C 0.20M M 1994PBb (20985) 960

K(Cu+HA+L)=15.93
B(Cu(his)L)=17.92
B(Cu2(his)L)=19.94

HA is histidine.

Cu++ gl NaClO4 30°C 0.20M M K1=7.92 B2=14.39 1994PBc (20986) 961

Cu++ gl NaClO4 25°C 0.20M C K1=8.40 1993BAb (20987) 962

Cu++ gl NaClO4 25°C 0.20M U T M K1=8.11 B2=14.78 1993PPa (20988) 963
K(CuA+L)=7.80

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Cu++ gl alc/w 30°C 40% M K1=8.70 B2=15.73 1993RRd (20989) 964
Medium: 40% v/v EtOH/H2O, 0.10 M KNO3.

Cu++ gl KCl 25°C 0.10M U M K1=8.19 1992GMA (20990) 965
B(CuL(phen))=16.99

Cu++ vlt NaClO4 25°C 1.0M C B2=15.23 1992RBA (20991) 966
K(Cu+HL)=1.77
K(Cu+2HL)=2.71

Method: polarography.

Cu++ cal NaNO3 25°C 0.5M U M 1992SPc (20992) 967
DH1=-24.82 kJ/mol

DH(CuL+en)=-55.5 kJ mol⁻¹

Cu++ gl KNO3 35°C 0.20M C M K1=8.00 1992YKa (20993) 968
B(Cu(edda)L)=19.06
K(Cu(edda)+L)=4.56

Cu++ gl KCl 25°C 0.15M C TIH R K1=8.20 B2=15.07 1991KSA (20994) 969
0.5 M, K1=8.11, B2=14.80; 1.0 M, K1=8.31, B2=15.23.
DH(K1)=-25.6, DH(B2)=-54.3 kJ mol⁻¹. IUPAC evaluation

Cu++ gl KCl 25°C 0.10M U K1=8.2 B2=15.63 1991NSa (20995) 970

Cu++ vlt NaClO4 25°C 0.40M C K1=8.26 B2=15.42 1991YNb (20996) 971
B3=17.34
K(Cu+OH+L)=14.59
K(Cu+OH+2L)=17.31
K(Cu+2OH+L)=15.86

Method: polarography. K(Cu+2OH+2L)=18.85, K(Cu+3OH+L)=17.85.

Cu++ gl KNO3 25°C 0.10M C K1=8.11 B2=14.96 1990BPa (20997) 972

B(CuL(L-His))=17.66
B(CuHL(L-His))=21.65
B(CuL(D-His))=17.66
B(CuHL(D-His))=21.65

Cu++ gl KNO3 37°C 0.15M C M K1=7.99 B2=14.68 1990KKc (20999) 974
B(CuL(imidazole))=11.70
B(CuL(imidazole)2)=14.54

Cu++ gl KN03 37°C 0.15M U M K1=7.99 B2=14.68 1990KKc (21000) 975
B(CuAL)=11.70
B(CuA2L)=14.54

Cu++ g1 NaCl 25°C 5.00M C I M K1=8.72 B2=15.75 1990TRa (21001) 976
B(CuHL)=11.40
B(CuH-1L)=0.91
B(CuH-2L)=-9.64
B(CuH-1L2)=3.82

Cu++ gl NaClO₄ 25°C 0.20M U M K1=7.92 B2=14.39 1990UBb (21002) 977
K(CuLA)=12.49
K(CuLC)=12.09

Cu++	g1	KN03	30°C	0.10M	U	M	K1=8.32	B2=14.86	1989SRd (21004)	979
							K(CuA+L)=7.36			
							B(CuLA)=14.78			
							K(CuC+L)=7.37			
							B(CuCL)=15.30			

Cu++ gl NaClO4 21°C 0.10M M K1=8.91 B2=15.31 1989WLa (21005) 980
B(CuHL)=11.59

Cu++ gl alc/w 30°C 40% M M K1=9.80 B2=12.95 1988ARb (21006) 981
K(CuA+L)=8.54
B(CuAL)=18.04

Cu++ gl NaClO4 25°C 0.10M C M K1=8.16 B2=14.97 1988CLA (21007) 982
B(CuL(acetylglycinate))=10.52

Cu++ cal NaClO4 25°C 0.10M C H 1988LGa (21008) 983
 DH(K1)=-28.0 kJ mol⁻¹, DH(K2)=-28.3 kJ mol⁻¹. For HA=N-acetyl glycine,
 DH(B(CuAL))=-25.6 kJ mol⁻¹, DS(B(CuAL))=116 J K⁻¹ mol⁻¹.

Cu++ nmr none 27°C 0.0 U H K1=8.02 B2=15.2 1987GFb (21009) 984
 B3=15.43
 K(Cu+HL)=1.22
 K(CuL+HL)=0.94
 K(CuL2+HL)=-0.56
 K(CuL2+OH)=1.46, K(CuL2+2OH)=1.56.

Cu++ gl diox/w 30°C 50% C K1=9.42 B2=17.05 1987MSd (21010) 985
 Medium: 50% v/v dioxane/H2O, 0.2 M NaNO3.

Cu++ gl KNO3 35°C 0.20M C M T K1=8.00 B2=14.86 1987PMa (21011) 986

Cu++ gl alc/w 30°C 50% U T M K1=8.82 1987RSb (21012) 987
 K(CuL+A)=9.35
 K(CuL+C)=8.23
 Medium: 50% EtOH/H2O, 0.1 M KNO3. HA=N-methylantranilic acid, HC=N-phenyl-antranilic acid

Cu++ sp oth/un 20°C 0.50M U 1987SEb (21013) 988
 B(CuL(tartrate))=19.65
 Medium: Na2SO4.

Cu++ gl KNO3 30°C 0.10M U HM K1=8.27 1986DRa (21014) 989
 K(CuA+L)=7.49
 HA=picolinic acid N-oxide. DH(K1)=-25.5 kJ mol⁻¹, DS=94.1 J K⁻¹ mol⁻¹
 DH(CuA+L)=-33.0, DS=23.8

Cu++ gl KNO3 30°C 0.10M U H K1=8.27 1986DRb (21015) 990
 Data for 30-50 C. DH(K1)=-22.5 kJ mol⁻¹, D(K1)=-94.1 J K⁻¹ mol⁻¹.

Cu++ ISE KNO3 25°C 0.10M U M K1=8.23 1986DVa (21016) 991
 K(CuL+salicylate)=9.48
 Amalgam (Cu(Hg)) mercury drop electrode.

Cu++ gl diox/w 30°C 50% U I M 1986EBa (21017) 992
 K(CuA+L)=8.05
 K(CuC+L)=9.42
 A=2,2'-dipyridylamine, C=2,2'-dipyridylketone

Cu++ gl KCl 25°C 0.50M C M 1986LEa (21018) 993
 B(CuLA)=18.244
 A = ethylenediamine-N-acetate

Cu++ gl NaCl 37°C 0.15M U K1=7.870 B2=14.451 1985CFb (21019) 994
 B(CuH-1L2)=3.30

Cu++ gl KNO3 35°C 0.10M C M K1=8.61 1985RRc (21020) 995
B(CuL(cytidine))=13.85

Cu++ gl KNO3 35°C 0.10M C K1=8.61 1985RRh (21021) 996

Cu++ vlt NaClO4 25°C 1.0M C B2=15.23 1985RSe (21022) 997
K(Cu+HL)=1.77
K(Cu+2HL)=2.71

Method: polarography.

Cu++ gl alc/w 25°C 50% U T HM 1985SRc (21023) 998
K(CuA+L)=5.10

A=2-(N,N-diethylaminomethyl)benzimidazole. At 35 C: K=4.73; 45 C: K=4.38.
DH= -65.6 kJ mol⁻¹, DS=-122 J K⁻¹ mol⁻¹

Cu++ gl NaClO4 37°C 0.15M C M K1=7.990 B2=14.731 1984BBa (21024) 999
B(CuHL)=10.483
B(CuHL2)=18.813
B(CuH2L2)=21.875
B(CuH-1L2)=3.041

B(ML(His))=16.938

Cu++ gl diox/w 30°C 50% U M K1=8.73 B2=17.16 1984EBa (21025)1000
B(CuLA)=8.93

A=5-nitro-1,10-phenanthroline

Cu++ ISE KNO3 25°C 0.10M U K1=8.15 B2=15.03 1984HKa (21026)1001

Cu++ gl KNO3 25°C 0.10M C 1984NKa (21027)1002
K(CuH-1A+L+H)=11.68

A = glycylglycine-N,N-diethanoate (DGDA)

Cu++ ISE KNO3 25°C 0.10M C M K1=8.31 B2=15.15 1984PDb (21028)1003
K(Cu(nta)+L)=5.38

Method: Cu ion selective electrode.

Cu++ gl NaClO4 30°C 0.10M C K1=7.92 B2=14.27 1984ZXa (21029)1004

Cu++ gl KNO3 25°C 0.10M C M 1983ADa (21030)1005
B(CuHL)=18.03
B(CuHL(DOPA))=24.62

Cu++ vlt KNO3 30°C 0.30M C K1=8.3 B2=15.20 1983APb (21031)1006
Method: polarography. Medium pH 8.0.

Cu++ gl NaClO4 25°C 1.00M C K1=8.39 B2=15.32 1983BJa (21032)1007
B3=16.96
B(CuHL)=10.62

Cu++ oth NaClO4 35°C 0.10M C K1=8.22 B2=14.96 1983PYa (21033)1008

Method: paper electrophoresis.

Cu++ gl KNO3 30°C 0.10M C T HM K1=8.23 B2=15.17 1983RKa (21034)1009
B(CuAL)=7.13

HA is thiazolidine-4-carboxylic acid. DH(K1)=-24.9 kJ mol⁻¹, DS(K1)=73
J K⁻¹ mol⁻¹; DH(K2)=-27.2, DS(K2)=43; DH(CuAL)=-13.6, DS(CuAL)=92.

Cu++ sp NaCl 20°C 0.15M U M 1983Vda (21035)1010
K(CuA+L)=6.85

H2A=orotic acid (C5H4N2O4), 2,4-(1H,3H)-pyrimidinedione-6-carboxylic acid

Cu++ oth NaNO3 25°C 0.10M C K1=8.18 B2=15.08 1982CSc (21036)1011
B(CuHL)=10.45

Method: recalculation of literature data.

Cu++ gl KNO3 37°C 0.10M C I K1=7.98 B2=14.70 1982DRa (21037)1012
Data for 0.10-1.0 M KNO3. At I=0.0 M, K1=8.37, B2=15.26

Cu++ gl NaNO3 37°C 0.15M U M 1982ESa (21038)1013
B(CuLA)=11.860
B(CuLAB)=20.083
B(CuHLAB)=29.860
B(CuH2LAB)=37.230

A= Imidazole and B= Pyridoxamine.

Cu++ sp diox/w 30°C 50% U M K1=8.73 B2=17.17 1982PPb (21039)1014

Cu++ gl KNO3 25°C 0.10M U I M K1=8.14 B2=14.96 1981DAa (21040)1015
B(CuLA)=17.05
B(CuH-1LA)=5.66

A=histamine. Also data for 0-60% v/v 1-propanol

Cu++ gl KNO3 25°C 0.10M U I K1=8.14 B2=14.96 1981DAc (21041)1016
In 10% propan-1-ol: K1=8.28, B2=15.23; 20%: 8.44, 15.50; 35%: 8.62, 15.83
K1=8.77 and B2=16.14 in 45% propan-1-ol.

Cu++ gl KNO3 25°C 0.20M U M K1=8.16 B2=14.98 1981M0d (21042)1017
K(CuA+L)=7.65

A is bis(2-imidazolyl)methane

Cu++ gl oth/un 30°C 0.10M U M B2=15.15 1981REb (21043)1018
K3=3.30
B(CuAL)=15.71
B(CuAL2)=19.01
B(CuA2L)=19.78

Medium not stated. HA is threonine. K(H+L)=9.60.

Cu++ gl KNO3 30°C 0.25M M M K1=8.26 B2=15.17 1981RKb (21044)1019
K(Cu(mal)L)=12.33

Additional method: polarography.

 Cu++ gl NaNO3 30°C 0.20M C M K1=8.19 B2=15.04 1981RSd (21045)1020
 K(Cu(asp)+L)=6.80
 B(Cu(asp)L)=15.62

H2asp is aspartic acid.

 Cu++ gl NaNO3 30°C 0.20M C M 1981RSe (21046)1021
 B(Cu(ida)L)=16.20
 K(Cu(ida)+L)=5.60

 Cu++ cal oth/un 25°C 0.10M C IH 1980BAb (21047)1022
 Medium: 0.025 M CuSO4, 0.02 M glycine. DH(B2)=-54.52 kJ mol⁻¹, DS(B2)=
 105.2 J K⁻¹ mol⁻¹. Also data for 10-50% w/w t-BuOH/H2O and glycerol/H2O..

 Cu++ ISE KNO3 25°C 0.10M U B2=15.28 1980Nwa (21048)1023

 Cu++ sp KNO3 30°C 0.25M U M 1980Rka (21049)1024
 B(CuL(oxalate))=12.86

 Cu++ ISE diox/w 25°C 20% U K1=8.55 B2=15.64 1980YTa (21050)1025

 Cu++ gl NaClO4 37°C 0.15M C K1=8.00 B2=14.65 1979ARb (21051)1026
 B(CuL(EDTA))=21.25
 B(CuHL(EDTA))=30.00

 Cu++ EMF mixed 30°C 80% U 1979EHa (21052)1027
 B(CuH-1L)=0.42
 B(CuH-2L)=-0.77

Medium: 80% Dimethylsulfoxide / 0.1M NaNO3.

 Cu++ gl KNO3 25°C 2.5M M K1=8.38 1979FLc (21053)1028

 Cu++ gl KNO3 25°C 0.20M C HM T K1=8.16 B2=14.98 1979MBb (21054)1029
 K(Cu(bpy)+L)=7.74
 DH(K1)=-28 kJ mol⁻¹, DH(K2)=-29, DH(Cu(bpy)+L)=-33

 Cu++ gl KNO3 25°C 0.20M C M K1=8.16 B2=14.98 1979MBe (21055)1030
 Also many ternary complexes

 Cu++ gl NaClO4 25°C 0.10M C I K1=8.15 B2=15.02 1979MMh (21056)1031
 At I=0.50 M, K1=8.05, B2=14.85. At I=1.0 M, K1=8.02, B2=14.86.

 Cu++ gl KNO3 25°C 0.10M C M 1979YSa (21057)1032
 B(Cu(His)L)=17.40

 Cu++ gl diox/w 25°C 70% C I K1=10.65 B2=19.76 1979ZRa (21058)1033
 Data available for various media concentrations: 10 to 70% Dioxan (V/V).

 Cu++ gl R4N.X 25°C 0.10M C K1=8.29 B2=15.24 1979ZRa (21059)1034

Cu++	gl	NaNO3	25°C	0.10M	U	T	K1=8.07	B2=14.88	1978FMb (21060)1035

Cu++	gl	NaNO3	20°C	0.10M	U		K1=8.15	B2=15.03	1978LEb (21061)1036

Cu++	ISE	diox/w	25°C	10%	U		K1=8.12	B2=14.71	1978WIa (21062)1037

Cu++	gl	KNO3	25°C	0.10M	C	M T	K1=8.14	B2=14.96	1977D0a (21063)1038
							B(CuL(Sar))=14.94		
							B(CuL(Thr))=15.17		

Cu++	gl	oth/un	30°C	?	U	M			1977J0a (21064)1039
							K(CuA+L)=6.18		
H2A=iminodiethanoic acid									

Cu++	gl	KCl	25°C	0.20M	C	M			1977NGa (21065)1040
							B(CuH-1LA)=5.29		
							B(CuH-1LB)=5.43		
							B(CuH-1LC)=5.26		
							K(CuH-1L2+A=CuH-1LA+L)=0.83		
							K(CuH-1L2+B=CuH-1LB+L)=0.80, K(CuH-1L2+C=CuH-1LC+L)=1.13		
HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine									

Cu++	ISE		30°C	0.0	U	I			1976BFa (21066)1041
							K3=0.23		
							B(CuHL)=10.52		
							B(CuHL2)=18.48		
							In D20, K3=0.28, B3=15.43		

Cu++	gl	KCl	25°C	0.20M	C	HM	K1=8.07	B2=14.84	1976GSd (21067)1042
							B(CuL(en))=17.69		
							B(CuL(pn))=16.91		
By calorimetry: DH(K1)=-25.6 kJ mol ⁻¹ , DH(B2)=-53.9, DH(CuL(en))=-79.5, DH(CuL(pn))=-77.0. Other data also									

Cu++	gl	KCl	25°C	0.20M	C				1976NGd (21068)1043
							K(CuH-1A2+L=CuH-1AL+A)=5.29		
							K(CuH-1C2+L=CuH-1CL+C)=5.43		
							K(CuH-1D2+L=CuH-1DL+D)=5.26		
HA is glycylglycine; Hc is glycyl-DL-alpha-alanine; HD is DL-alanyl-DL-alanine.									

Cu++	gl	KCl	25°C	0.20M	C	H	K1=8.07	B2=14.84	1976SGa (21069)1044
By calorimetry: DH(K1)=-25.6 kJ mol ⁻¹ , DS(K1)=70 J K ⁻¹ mol ⁻¹ ; DH(B2)=-53.9, DS(B2)=103.									

Cu++	gl	KNO3	25°C	0.10M	C	T	K1=8.21	B2=15.09	1975IPb (21070)1045

Cu++	gl	NaClO4	30°C	0.20M	U		K1=8.11	B2=14.78	1975JBb (21071)1046

Cu++	ISE	KNO3	25°C	0.10M	U	T	B2=15.28		1975Nwa (21072)1047

Cu++ gl NaNO3 25°C 0.10M M T K1=8.130 B2=14.970 1975SSd (21073)1048

Data for I=0.02-2.0 M NaClO4. H2A=asparagine.

pn: 1,3-diaminopropane

en: 1,2-diaminoethane

H4A=EDTA

HA=norvaline. $B(\text{CuL}(\text{Thr}))=15.24$, $B(\text{CuL}(\text{Phe}))=15.30$.

Cu++ gl KNO₃ 25°C 0.10M U T M 1972IVc (21083)1058
K(CuA+L)=5.92
H₂A=methyliminodiethanoic acid. 15 C, K=6.14; 50 C, K=5.66; 70 C, K=5.13.

Cu++ cal none 25°C 0.00 U M 1972YIa (21084)1059
B(CuL(Sar))=15.59
B(CuL(Ala))=15.81

$$B(\text{CuLA})=15.89$$

HA=aminoisobutanoic acid

Cu++ cal KCl 25°C 0.05M U H T K1=8.18 B2=15.05 1971GNa (21085)1060
DH(K1)=-28.5 kJ mol⁻¹, DS=59 J K⁻¹ mol⁻¹, DH(B2)=-26, DS=46

Cu++ gl NaClO4 25°C 0.20M U K1=8.79 B2=16.13 1970CBd (21086)1061

Cu++ gl NaClO4 25°C 0.50M U I T K1=8.05 B2=14.84 1970FRa (21087)1062
Medium: LiClO4. Other media: 0.5 LiClO4, 54.3% methanol: K1=8.82, K2=7.36;
0.5 LiClO4, 48.1% dioxan: K1=9.19, K2=7.65

Cu++ gl NaClO4 25°C 0.10M U M T K1=8.27 B2=15.19 1970GSa (21088)1063
B(CuL(bpy))=15.92

Cu++ gl KNO3 37°C 0.15M U T K1=8.02 B2=14.72 1969CPc (21089)1064
K(Cu+HL)=1.22
K(CuL+HL)=0.94

Cu++ gl KNO3 25°C 0.10M U T K1=8.23 B2=15.19 1969GEb (21090)1065

Cu++ sp NaClO4 25°C 0.50M U T K1=8.16 B2=15.07 1969PPb (21091)1066

Cu++ gl KNO3 25°C 0.10M U T K1=8.20 1969YHa (21092)1067

Cu++ gl KNO3 ? 0.20M U T 1968GSb (21093)1068
K3=1.34

Cu++ gl KCl 25°C 0.50M U M T K1=8.12 B2=14.87 1968LBa (21094)1069
B3=15.3

Ternary complexes with NTA, solochrome violet R, glycollic acid,
salicylaldehyde, 5-sulfosalicylic acid

Cu++ cal NaClO4 25°C 0.10M U H 1967BBd (21095)1070
DH(K1)=-28.3 kJ mol⁻¹, DS=69.4 J K⁻¹ mol⁻¹; DH(K2)=-28.8, DS=36.4

Cu++ gl KNO3 20°C 0.10M U T H T K1=8.313 B2=15.363 1967GNa (21096)1071
K1=8.23(25 C), 8.17(30 C); B2=15.19(25 C), 15.06(30 C).
DH(K1)=-24.7 kJ mol⁻¹, DS=75.2 J K⁻¹ mol⁻¹; DH(K2)=-27.2, DS=46

Cu++ gl NaClO4 25°C 0.10M U M T K1=8.27 B2=15.19 1967SGa (21097)1072
K(Cu(bpy)+L)=7.88

Cu++ cal KNO3 20°C 0.10M U H 1967SSl (21098)1073
DH(B2)=-53.5 kJ mol⁻¹, DS=105.3 J K⁻¹ mol⁻¹

Cu++ gl oth/un 40°C 0.0 U T H T K1=8.42 B2=15.27 1966AGa (21099)1074
K1=8.85(10 C), 8.58(25 C); K2=7.36(10 C), 7.09(25 C).
DH(K1)=-24.4 kJ mol⁻¹, DS=82.3 J K⁻¹ mol⁻¹; DH(K2)=-28.5, DS=39.7

Cu++ cal oth/un 25°C 0.0 U T H T 1966AGa (21100)1075
Medium:0 corr. 10-40 C. DH(K1)=-30.4 kJ mol⁻¹(10 C), -25.99(25 C), 24.03(40 C)
DS=61.9 J K⁻¹ mol⁻¹(10 C), 76.91(25 C), 84.43(40 C)

Cu++ cal oth/un 25°C 0.0 U T H T 1966AGa (21101)1076
Medium:0 corr. 10-40 C. DH(K2)=-28.9 kJ mol⁻¹(10 C), -29.26(25 C), 30.63(40 C)
DS=38.5 J K⁻¹ mol⁻¹(10 C), 38.0(25 C), 33.0(40 C)

Cu++ gl KCl 25°C 0.50M U T K1=8.11 B2=14.43 1966LHc (21102)1077

Cu++ gl R4N.X 25°C 1.0M U M T K1=8.29 B2=15.30 1965BMa (21103)1078
B(Cu(NH3)L)=12.50
B(Cu(NH3)2L)= 14.85

Medium: NH4ClO4

Cu++ sp NaClO4 25°C 1.0M U T K1=8.33 B2=15.20 1965MBb (21104)1079

Cu++ gl KCl 40°C 0.20M U T H K1=8.25 B2=14.89 1965SMb (21105)1080
K1=8.54(15 C), 8.46(25 C); K2=7.0(15 C), 6.83(25 C).
DH(K1)=-20.1 kJ mol⁻¹, DS=92.0 J K⁻¹ mol⁻¹; DH(K2)=-28.4 2, DS=46

Cu++ gl oth/un 20°C 0.0 U T H T K1=8.59 B2=15.83 1964ICa (21106)1081
At 30 C: K1=8.47, K2=7.04; DH(K1)=-25.1 kJ mol⁻¹, DS1=79.4 J K⁻¹ mol⁻¹;
DH(K2)=-26.8, DS=46.0

Cu++ oth KNO3 20°C 0.10M U K1=8.6 B2=15.80 1964J0a (21107)1082
K3=0.15

Method: paper electrophoresis

Cu++ vlt diox/w 25°C 50% U I B2=16.3 1963GTb (21108)1083
Medium: 50% dioxan. B2=14.6(0%), 15.6(20%), 16.0(35%)

Cu++ gl NaClO4 25°C 0.15M U I R K1=8.18 B2=15.02 1963MPb (21109)1084
At I=1: K1=8.33, B2=15.20

Cu++ oth oth/un 25°C 0.30M U T B2=15.2 1961JWa (21110)1085
K3=0.47

Method: platinum electrode. Medium: K2SO4

Cu++ gl NaClO4 20°C 0.01M U K1=8.34 B2=15.39 1960ASb (21111)1086

Cu++ gl KCl 0°C 0.09M U T H T K1=8.61 B2=15.95 1957MMa (21112)1087
30 C: K1=8.04, K2=6.39; 48.8 C: K1=7.73, K2=6.49. DH(K1)=-29 kJ mol⁻¹,
DS=59 J K⁻¹ mol⁻¹

Cu++ ix oth/un 22°C ? U T K1=8.1 B2=15.0 1957WFa (21113)1088

Cu++ gl oth/un 20°C .001M U K1=8.60 B2=15.54 1956CDa (21114)1089
By polarography: B2=15.20

Cu++	gl	oth/un	25°C	0.15M	U	T	H	B2=13.10	1956LWa	(21115)	1090
B2=14.83(30 C), 14.22(40 C). DH(B2)=-88 kJ mol ⁻¹ , DS=-4 J K ⁻¹ mol ⁻¹											
Cu++	gl	oth/un	32°C	0.05M	U			K1=8.13	B2=14.98	1956SRb	(21116)1091
Cu++	gl	KN03	25°C	0.10M	U			K1=8.07	B2=14.97	1955MMa	(21117)1092
By polarography: K1=8.0, K2=7.3											
Cu++	gl	NaCl04	25°C	0.10M	U	T		K1=8.38	B2=15.25	1954BCb	(21118)1093
Cu++	gl	KCl	20°C	0.10M	U	T		K1=8.12	B2=15.03	1954IRa	(21119)1094
Cu++	oth	oth/un	25°C	0.06M	U			B2=15.1	1954LDa	(21120)	1095
METHOD:E,pol MEDIUM:KH2PO4											
Cu++	gl	oth/un	20°C	0.01M	U			K1=8.5	B2=15.4	1953ALa	(21121)1096
Cu++	gl	oth/un	25°C	->0	U	T		K1=8.62	B2=15.59	1951M0a	(21122)1097
Cu++	gl	oth/un	25°C	0.01M	U			K1=8.51	B2=15.42	1950MMa	(21123)1098
Cu++	vlt	oth/un	25°C	0.05M	U			B2=15.1	1949LAd	(21124)	1099
Medium: KH2PO4											
Cu++	sol	oth/un	25°C	->0	U	T		K1=8.29	B2=15.90	1948KEa	(21125)1100
Cu++	vlt	KN03	25°C	1.0M	U	I	T	B2=15.28	1946KEa	(21126)	1101
B3=16.25											
At I=0.1 M B2=15.13											
Cu++	gl	KN03	20°C	0.50M	U			K1=8.22	B2=15.19	1945FLa	(21127)1102
K3<1											
Cu++	ISE	oth/un	20°C	0.03M	U			B3=16.4	1934FRa	(21128)	1103

C2H5NO2 HL Acetohydroxamic CAS 546-88-3 (2766)											
Acetohydroxamic acid, N-Hydroxyacetamide; CH3.CO.NHOH											
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo	
Cu++	gl	KCl	25°C	0.20M	C	M		B(Cu(en)L)=17.65 B(Cu(bpy)L)=16.90 B(Cu(gly)L)=14.92 B(Cu(dien)L)=19.70	2000FEa	(21779)	1104
K(Cu(terpyridine)+L)=4.21, B(CuH-1(en)L)=7.49, B(CuH-1(bpy)L)=7.31.											
Cu++	gl	KCl	25°C	0.20M	C	I		K1=7.89	B2=14.06	1998FKa	(21780)1105

B(CuH-1L2)=4.44
 K(Cu+HL=CuL+H)=-1.38
 In 50% m/m MeOH/H2O, 0.2 M KCl: K1=9.00, B2=15.89, K(Cu+HL=CuL+H)=-0.93.
 In 50% m/m DMSO/H2O, 0.2 M KCl: K1=9.12, B2=16.48, K(Cu+HL=CuL+H)=-1.38.

 Cu++ gl KCl 25°C 0.20M C M K1=7.89 B2=14.06 1993FBa (21781)1106
 B(CuH-1L2)=4.44
 B(CuAL)=14.93

HA: alanine

 Cu++ gl NaCl 31°C 0.15M U I K1=8.13 B2=14.74 1992SKa (21782)1107
 Also data for 25 and 50% v/v EtOH/H2O.

 Cu++ gl KNO3 25°C 0.10M C M K1=8.15 B2=14.57 1991DAc (21783)1108
 K(Cu(ida)+L)=6.20
 K(Cu(bpy)+L)=8.10
 K(CuA+L)=8.05
 K(Cu(phen)+L)=8.25

K(CuB+L)=8.62, K(CuC+L)=7.94. A: 2,2'-dipyridylamine;
 B: 5-nitro-1,10-phenanthroline; C: 5-methyl-1,10-phenanthroline.

 Cu++ gl KNO3 25°C 0.10M C M K1=8.15 B2=14.57 1989DAb (21784)1109
 B(Cu(ida)L)=16.77
 B(Cu(mida)L)=17.12
 B(Cu(NTA)L)=17.65
 B(Cu(bpy)L)=16.10

B(Cu(phen)L)=17.35, B(CuAL)=15.55 where H3A is N-(2-carboxyphenyl)-
 iminodiethanoic acid

C2H5NO3 HL CAS 2921-14-4 (1892)
 Aminoxyethanoic acid; H2N.O.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	U		K1=5.02	1985WTa	(21823)1110

Cu++	gl	KNO3	30°C	0.20M	M		K1=6.79 B2=11.90	1984JMa	(21824)1111
------	----	------	------	-------	---	--	------------------	---------	-------------

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
Cu++	gl	NaClO4	25°C	0.01M	U T H		K1=11.24 B2=19.65	1979SBa	(21839)1112

Cu++	gl	NaClO4	25°C	0.01M	U		K1=11.24 B2=19.65	1975SSb	(21840)1113
------	----	--------	------	-------	---	--	-------------------	---------	-------------

Cu++	sp	oth/un	20°C	?	U		B2=22.78	1960KAa	(21841)1114
------	----	--------	------	---	---	--	----------	---------	-------------

C2H5N5 L (6902)

5-Aminomethyl-1H-tetrazole; NH₂CH₂.CHN₄

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaNO ₃	20°C	0.10M	U			K1=5.70 B2=14.96	1978LEb (21857)	1115

C ₂ H ₅ O ₅ P		H ₂ L						CAS 590-54-5	(1764)	
Acetylphosphoric acid; CH ₃ .CO.O.PO ₃ H ₂										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO ₃	37°C	0.15M	M	M		K1=7.14 B2=10.99	1979SPb (21867)	1116
								K(Cu+HL)=3.83		
								B(Cu ₂ L)=9.0		

Data for ternary complexes with Gly and His

C ₂ H ₆ N ₂ O		L		Glycinamide				CAS 598-41-4	(60)	
2-Aminoethanoic acid amide; H ₂ N.CH ₂ .CO.NH ₂										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaNO ₃	25°C	0.10M	M	M		K1=4.7	2002SKa (21924)	1117
								B(CuAL)=14.07		
								B(CuH-1L)=-1.58		
								B(CuAH-1L)=6.77		

A is picolylamine

Cu++	gl	KNO ₃	25°C	0.10M	C	M		K1=5.353 B2=9.30	1993SSb (21925)	1118
								B(CuH-1L)=-1.482		
								B(CuH-1L ₂)=2.601		
								B(CuH-2L)=-5.50		
								B(Cu(phen)L)=14.24		
B(CuH-1(phen)L)=6.70, B(Cu(bpy)L)=13.17, B(CuH-1(bpy)L)=5.46, B(Cu(en)L)=15.212, B(CuH-1(en)L)=7.618										

Cu++	gl	KCl	25°C	0.50M	C			K1=5.50 B2=9.86	1982BZa (21926)	1119
								K(CuH-1L+H)=7.40		
								K(CuH-2L+2H)=16.50		
								K(CuH-1L ₂ +H)=8.09		
								K(CuL ₂ H-2+H)=10.23		

Cu++	gl	NaClO ₄	37°C	0.15M	U	M			1982NAa (21927)	1120
								B(CuHLA)=20.1		
								B(CuLA)=15.30		
								B(CuH-1LA)=8.14		
B(CuLB)=11.89, B(CuH-1LB)=4.89. A=2,3-diaminopropanoic acid, B=3-aminobutanoic										

Cu++	gl	NaClO ₄	37°C	0.15M	U	M			1982NAa (21928)	1121
								B(CuHLA)=21.82		
								B(CuLA)=15.58		

							B(CuH-1LA)=8.10	
A=2,4-diaminobutanoic acid								

Cu++	gl	NaClO4	37°C	0.15M	U	M	1982NAa (21929)1122	
							B(CuHLA)=22.11	
							B(CuLA)=14.95	
							B(CuH-1LA)=6.65	
A=ornithine. B=2-aminobutanoic acid, B(CuLB)=12.64, B(CuH-1LB)=5.71								

Cu++	gl	NaClO4	25°C	1.00M	U		K1=5.53	B2=10.00 1981NMa (21930)1123
							B(CuH-1L2)=2.72	
							B(CuH-2L2)=-5.75	

Cu++	gl	NaClO4	37°C	0.15M	U		K1=5.53	1980NSc (21931)1124
							B(CuH-1L2)=3.18	

Cu++	gl	NaClO4	25°C	0.10M	U		K1=5.29	B2=9.45 1975DBa (21932)1125
							B(CuH-1L)=-1.63	
							B(CuH-1L2)=2.54	
							B(CuL2H-2)=-5.58	

Cu++	gl	KNO3	25°C	0.10M	U		K1=5.41	B2=9.63 1972BBc (21933)1126

Cu++	gl	KNO3	25°C	0.10M	U		K1=5.22	B2=9.58 1971YMa (21934)1127
							K(CuH-1L+H)=6.79	
							K(CuH-1L2+H)=6.95	
							K(CuH-2L2+H)=8.17	

Cu++	gl	NaClO4	25°C	0.10M	U	M	K1=5.40	1968SIa (21935)1128
							K(CuA+bpy)=5.01	
							B(CuA(bpy))=13.0	
							K(CuH-1L(bpy)+H)=7.71	

Cu++	gl	NaClO4	25°C	0.10M	U	M	K1=5.40	1968SIa (21936)1129
							K(CuH-1L+H)=7.01	
							K(CuH-1LOH+H)=8.07	
							K(Cu(bpy)+L)=5.01	
							K(CuH-1(bpy)L+H)=7.71	
K(Cu(bpy)2+CuL2=2Cu(bpy)L)=2.8								

Cu++	gl	oth/un	25°C	0.15M	U		K1=5.51	B2=9.72 1957LDa (21937)1130

Cu++	gl	oth/un	25°C	0.01M	U		K1=5.16	B2=9.56 1956DRb (21938)1131

C2H6N2O							HL Acetamidoxime CAS 22059-22-9 (818)	
Acetamidoxime; CH3.C(:N.OH).NH2								

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

Cu++	gl	KNO3	25°C	0.10M	C		1986HKa (21958)1132	

B(CuH-1L)=-3.14
B(CuH-2L2)=-7.66

C2H6N2O2 HL CAS 5549-80-4 (833)
2-Amino-N-hydroxyacetamide, Glycine hydroxamic acid; H2N.CH2.CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.50M	C		K1=10.682 B2=19.77 B(CuH-1L2)=10.064 B(Cu4L5)=61.763	1986LEb (21978)	1133
Cu++	gl	NaCl04	25°C	0.10M	C		K1=10.83 B2=19.89 B(CuH-1L2)=9.95 B(Cu2H-1L2)=20.91	1984PCa (21979)	1134
Cu++	vlt	oth/un	20°C	.001M	U		K1?=19.07	1956CDa (21980)	1135

C2H6N4O L Guanylurea CAS 141-83-3 (2970)
Guanylurea; H2N.C(:NH).NH.CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	KCl	30°C	0.10M	U		K1=4.10 B2=7.21	1960DUa (22016)	1136
C2H6O		L		Ethanol			CAS 64-17-5 (1913)		
Ethanol; CH3.CH2.OH									
Cu++	sol	oth/un	25°C	?	U	M	K(CuCl2+L)=1.35 K(CuCl2+2L)=2.31	1968GGb (22022)	1137

Cu++ sp oth/un 27°C ? U K1=0.26 B2=-4.15 1963FPa (22023)1138

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
Cu++	vlt	oth/un	25°C	0.17M	U		B3=20.13	1961KPa (22048)	1139

Medium: phosphate buffer

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

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

 Cu++ cal non-aq 25°C 100% C H K1=3.0 B2=5.1 1989ISa (22085)1140
 B3=7.3
 B4=8.9

Medium: CH3CN, 0.2 M Et4NClO4. DH(K1)=-14.4 kJ mol⁻¹, DH(B2)=-34,
 DH(B3)=-42, DH(B4)=-65

C2H6S2 L CAS 624-92-0 (152)
 Dimethyl disulfide; CH3.S.S.CH3

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

Cu++	sp	alc/w	34°C	50%	C		K1=0.49	1980SSa (22201)	1141
------	----	-------	------	-----	---	--	---------	-----------------	------

Medium: 50% EtOH

C2H7N L Dimethylamine CAS 124-40-3 (802)
 Dimethylamine; CH3.NH.CH3

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

Cu++	sp	NaClO4	25°C	0.20M	U			1991CCb (22216)	1142
------	----	--------	------	-------	---	--	--	-----------------	------

K(CuA+L=CuAL)=2.69

A is rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradecane

Cu++	sp	alc/w	26°C	100%	U		K1=3.21 B2=5.66 K3=1.60	1971SAi (22217)	1143
------	----	-------	------	------	---	--	-------------------------	-----------------	------

Medium: MeOH, 0.5 M L.HNO3

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

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

Cu++	sp	NaClO4	25°C	0.20M	U			1991CCb (22250)	1144
------	----	--------	------	-------	---	--	--	-----------------	------

K(CuA+L=CuAL)=2.62

A is rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradecane

Cu++	vlt	NaClO4	20°C	0.70M	C		B2=10.5	1991CSa (22251)	1145
------	-----	--------	------	-------	---	--	---------	-----------------	------

Method: differential pulse polarography.

Cu++	vlt	KNO3	30°C	0.50M	U			1967FHa (22252)	1146
------	-----	------	------	-------	---	--	--	-----------------	------

B4=11.5
 B(CuL2(OH)2)=15.9

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

Cu++	vlt	NaClO4	20°C	0.70M	C	M	K1=6.3 B2=10.50	1991CSa (22319)	1147
------	-----	--------	------	-------	---	---	-----------------	-----------------	------

K(Cu+L+OH)=17.1
K(Cu+L+2OH)=19.0

Method: differential pulse polarography.

Cu++	nmr	KNO3	25°C	1.00M	U		K1=4.4	B2=8.4	1990CIId (22320)	1148
							B(CuH-1L2)=1.5			
							B(CuH-2L2)=-8.1			
Cu++	sp	KNO3	25°C	1.00M	U		K1=4.63	B2=8.23	1989CGa (22321)	1149
							B(CuH-1L2)=0.90			
							B(CuH-2L2)=-8.06			
Cu++	sp	NaNO3	25°C	1.50M	U	M	K1=4.26	B2=8.06	1989SVb (22322)	1150
							B3=10.82			
							B(CuL(sulfosalicylate))=12.19			
Cu++	gl	KNO3	25°C	1.0M	U	M	K1=4.63	B2= 8.40	1986CTa (22323)	1151
							B(CuH-1L2)=1.49			
							B(CuH-2L2)=-8.77			
							B(CuAL)=13.5			

H2A is salicylic acid

Cu++	nmr	NaNO3	25°C	1.00M	U		K1=4.4	B2=8.4	1986TCa (22324)	1152
							B(CuH-1L2)=1.5			
							B(CuH-2L2)=-8.1			
Cu++	sp	R4N.X	25°C	2.00M	C	I	K1=4.90	B2=8.85	1983DBa (22325)	1153
							K3=2.85			
							K4=1.03			
Cu++	sp	KNO3	20°C	0.30M	U		K1=4.30	B2=7.94	1983TMa (22326)	1154
							K3=3.17			
For 64%(mol) MeOH solution the corresponding data are: 4.92; 3.91; 2.95										
Cu++	sp	NaNO3	25°C	1.00M	U	M	K1=4.30		1982SZb (22327)	1155
							B3=11.17			
							B4=13.32			
Cu++	gl	oth/un	25°C	0.10M	U		K1=4.50	B2=8.55	1981HAa (22328)	1156
							K3=3.33			

Medium: 0.1 M HOCH2CH2NH2.HNO3

Cu++	vlt	KNO3	25°C	?	C				1980AAb (22329)	1157
							B3eff=19.41			
Cu++	sp	mixed	25°C	0.35M	U		K1=4.75	B2= 8.43	1979APa (22330)	1158
							K3=3.39			
							K2=3.61 in 100% H2O			
							K1=4.30 in 100% H2O			
							K3=3.12 in 100% H2O			

Medium: 35 mol % glycerine in H2O

Also data for 10 mol%:K1=4.47;K2=3.73; K3=3.23

Cu++	sp	mixed	25°C	0.35M	U	K1=4.60	B2= 8.29	1979APa (22331)	1159
						K3=3.49			
						K2=3.61	in 100% H2O		
						K1=4.30	in 100% H2O		
						K3=3.12	in 100% H2O		

Medium: 35 mol % ethyleneglycole in H2O

Also data for 10 mol%:K1=4.46;K2=3.60; K3=3.21

Cu++	vlt	KN03	30°C	2.0M	U			1971SSe (22332)	1160
						B(CuL3OH)=17.96			
						B=17.7	(shift of half-wave)		

Alternative method e.m.f with redox electrode

Cu++	gl	oth/un	20°C	dil	U			1968DPa (22333)	1161
						K(CuH-1L+H)=7.0			
						B(CuH-2L+H)=9.50			

Cu++	vlt	KN03	30°C	0.50M	U			1967FHa (22334)	1162
						B(CuL(OH)2)=17.4			
						B(CuL2(OH)2)=19.6			

Cu++	gl	oth/un	25°C	0.43M	U	K1=4.73	B2=8.52	1966SKe (22335)	1163
						K3=2.87			

Medium: 0.43 M L.HN03

Cu++	gl	oth/un	25°C	0.10M	U	K1=5.7	B2=9.80	1965DOb (22336)	1164
						K3=3.2			
						K4=2.0			

Cu++	gl	oth/un	30°C	->0	U	B2=6.68		1964PCa (22337)	1165
------	----	--------	------	-----	---	---------	--	-----------------	------

Cu++	vlt	KN03	30°C	0.50M	U			1963STb (22338)	1166
						B(CuL(OH))=16.67			
						B(CuL(OH)2)=19.60			

Cu++	vlt	KN03	30°C	0.50M	U			1962FHa (22339)	1167
						K(Cu+2L+2OH)=19.9			

Cu++	vlt	KN03	25°C	0.10M	U			1959MPa (22340)	1168
						B4=15.44			

Cu++	vlt	KN03	25°C	0.50M	U			1955FKa (22341)	1169
						B4=16.48			

C2H7NO3S HL Taurine CAS 107-35-7 (2214)
2-Aminoethane sulfonic acid; H2N.CH2.CH2.SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C	M		19990Fa (22430)	1170
							B(Cu(Gly-GlyH-1)L)=4.28 K(Cu(Gly-GlyH-1)+L)=2.95 B(Cu(Gly-AspH-1)L)=4.53 K(Cu(Gly-AspH-1)+L)=2.68		

Cu++	gl	alc/w	25°C	50%	C	M	K1=4.67 K(Cu(bpy)+L)=5.24 K(Cu(phen)+L)=3.08	1978Mca (22431)	1171
------	----	-------	------	-----	---	---	--	-----------------	------

Cu++	gl	oth/un	20°C	0.01M	U		B2=8	1950ALa (22432)	1172

C2H7NS			HL				CAS 60-23-1	(588)	
2-Aminoethanethiol; H2N.CH2.CH2.SH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl04	25°C	0.10M	U	T H		1983BVa (22459)	1173
							K(CuL+H)=5.9		

Cu++	vlt	oth/un	25°C	0.17M	U		B2=16.24	1961KPa (22460)	1174
Medium: phosphate buffer									

Cu++	vlt	oth/un	25°C	0.26M	U		B2=16.74	1961KPb (22461)	1175
Medium: 0.264 M phosphate buffer									

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
Cu++	gl	NaCl04	25°C	1.00M	C		K1=8.787 B2=16.824 B(CuH-1L2)=10.247	1986SOb (22504)	1176

C2H7N5			L	Biguanide			CAS 56-03-1	(2967)	
Biguanide; H2N.C(:NH)NH.C(:NH)NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	cal	KCl	25°C	0.10M	C	H		1978FMc (22516)	1177
DH(K1)=-71.1 kJ mol ⁻¹ , DS=14 J K ⁻¹ mol ⁻¹ ; DH(K2)=-83.6, DS=108									
Cu++	gl	KCl	20°C	0.10M	U		K1=11.90 B2=21.87	1964PCa (22517)	1178
Cu++	sp	KCl	30°C	0.50M	U		B2=18.31	1959RRa (22518)	1179
Cu++	gl	oth/un	32°C	0.05M	U		K1=10.10 B2=18.35	1956SRb (22519)	1180

C2H7O3P H2L CAS 71778-99-9 (1978)
 Ethylphosphonic acid; CH3.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	mixed	25°C	30%	M		K1=4.61	1993BCg (22554)	1181
Medium: 0.1 M NaNO3 in 30% Dioxane/H2O (v/v); both K1 are only estimates For 0.1 M NaNO3 in 50% Dioxane/H2O (v/v) K1=5.29									

Cu++	gl	NaNO3	25°C	0.10M	M		K1=3.610 K(Cu(bpy)+L)=3.620	1993CBb (22555)	1182
------	----	-------	------	-------	---	--	--------------------------------	-----------------	------

Cu++	gl	NaNO3	25°C	0.10M	C	I	K1=3.61	1993CGa (22556)	1183
In 30% (50%) v/v 1,4-dioxan/H2O, K1=4.61 (5.29).									

Cu++	gl	NaNO3	25°C	0.10M	M		K1=3.61	1992SCa (22557)	1184
------	----	-------	------	-------	---	--	---------	-----------------	------

Cu++	gl	KNO3	25°C	0.10M	U		K1=3.59 K(Cu+L=Cu(OH)L+H)=-2.97	1979WNa (22558)	1185
------	----	------	------	-------	---	--	------------------------------------	-----------------	------

C2H8NO2P H2L (6427)
 1-Aminoethylphosphonous acid; CH3.CH(NH2).PO2H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		K1=4.87 B2=8.91 B(CuH-1L2)=0.64	1991KJa (22580)	1186

C2H8NO2P HL (7266)
 Aminomethyl(methylphosphinic acid); H2NCH2PO(OH)CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C		K1=4.60	1996RLa (22582)	1187

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
Cu++	gl	KNO3	25°C	0.10M	C		K1=8.29 B2=14.94 B(CuHL)=12.29	2001LCa (22594)	1188

Cu++	gl	KCl	25°C	0.20M	C		K1=8.26 B2=14.66 B(CuHL)=12.92	1998KMa (22595)	1189
------	----	-----	------	-------	---	--	--------------------------------------	-----------------	------

Cu++	gl	KCl	25°C	0.20M	C		K1=8.29 B2=14.94 B(CuHL)=12.29	1994JKa (22596)	1190
------	----	-----	------	-------	---	--	--------------------------------------	-----------------	------

Cu++	gl	KCl	25°C	0.20M	C		K1=8.29 B2=14.94	1991KJa (22597)	1191
------	----	-----	------	-------	---	--	---------------------	-----------------	------

B(CuHL)=12.29

Cu++	gl	KCl	25°C	0.20M	C	K1=8.29	B2=14.94	1987KBb (22598)	1192
						B(CuHL)=12.29			

Cu++	gl	KNO3	25°C	0.10M	U	K1=8.50	B2=15.40	1979WNb (22599)	1193
						B(CuHL)=12.82			
						B(CuHL2)=21.0			
						B(CuH2L2)=25.9			
						B(CuH-1L)=-0.1			

Cu++	gl	KNO3	25°C	0.20M	C	K1=8.35	B2=15.11	1978MAb (22600)	1194
						K(Cu+HL)=2.55			
						K(CuL+HL)=1.36			

Cu++	gl	KNO3	25°C	0.10M	U	K1=8.24	B2=15.32	1972WNb (22601)	1195
						B(CuHL)=13.11			
						B(CuH2L2)=15.32			
						B(CuHL2)=21.05			

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

Cu++	gl	KCl	25°C	0.20M	C	K1=8.53	B2=14.96	1987KBb (22619)	1196
						B(CuHL)=13.62			

Cu++	gl	KNO3	25°C	0.10M	U	K1=8.50	B2=14.3	1979WNb (22620)	1197
						B(CuHL)=13.75			
						B(CuHL2)=21.4			
						B(CuH2L2)=27.1			
						B(CuH-1L)=1.04			

Cu++	gl	KNO3	25°C	0.20M	C	K1=8.34	B2=14.69	1978MAb (22621)	1198
						K(Cu+HL)=2.67			
						K(CuL+HL)=1.73			

C2H8NO3P H2L CAS 35404-71-8 (1987)

Methylaminomethylphosphonic acid; CH3.NH.CH2.PO3H2

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

Cu++	gl	KNO3	25°C	0.10M	U	K1=8.29	B2=14.59	1979WNb (22637)	1199
						B(CuHL)=13.33			
						B(CuHL2)=20.98			
						B(CuH2L2)=25.9			
						B(CuH-1L)=0.09			

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
Cu++	gl	KCl	20°C	0.10M	U		K1=6.79 K(Cu+HL)=4.04	1987BPb (22645)	1200
Cu++	gl	KNO ₃	25°C	0.20M	C		K(Cu+HL)=2.54	1978MAb (22646)	1201
Cu++	gl	KNO ₃	25°C	0.20M	C		K(Cu+HL)=2.54	1978MAc (22647)	1202
Cu++	gl	KNO ₃	25°C	0.10M	U		K1=6.45 B2=12.4 B(CuHL)=12.49 B(CuH ₂ L ₂)=24.7 B(CuHL ₂)=18.8	1972WNa (22648)	1203
Cu++	gl	KCl	25°C	0.15M	U		K1=6.39 B2=12.39 K(Cu+HL)=1.94 K(CuHL+L)=6.32	19600Sa (22649)	1204

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
Cu++	gl	KNO ₃	25°C	0.10M	M	M	K1=10.47 B2=19.67 B3=27.03 B(CuH-1L)=4.06 B(Cu(atp)L)=16.13 B(CuH(atp)L)=21.11 B(CuH-1(atp)L)=5.98, B(CuH-2(atp)L)=-3.58.	2003SFa (22793)	1205
Cu++	vlt	KNO ₃	25°C	0.10M	C		B2=20.10	2001CKb (22794)	1206
Method: cyclic voltammetry. Medium: pH 10.									
Cu++	gl	NaNO ₃	25°C	0.10M	C	M	K1=10.44 K(Cu+H ₂ B ₄ O ₄ +L)=12.10	2000MAb (22795)	1207
Cu++	gl	alc/w	25°C	50%	C		K1=10.84	1998MCb (22796)	1208
Cu++	gl	KNO ₃	20°C	0.10M	C		K1=10.78 B2=19.88	1997LBc (22797)	1209
Cu++	gl	alc/w	25°C	?	U	H	K1=12.02 B2=22.71	1997RFa (22798)	1210
Medium: 0.9 mol parts MeOH in H ₂ O; DH(K ₁)=-50 kJ mol ⁻¹ ; DH(K ₂)=-51. Data also for other MeOH%. For 100% H ₂ O: K ₁ =10.62; K ₂ =9.18; DH(K ₁)=-53, DH(K ₂)=-54									
Cu++	gl	alc/w	30°C	40%	C	M	K1=10.72 K(CuA+L)=9.95	1997RRd (22799)	1211

Medium: 40% v/v EtOH/H₂O, 0.10 M KNO₃.
HA is 2-(phenylhydrazono)butanoic acid

Cu++ gl diox/w 25°C 50% C M K1=10.09 B2=18.68 1996CBa (22800)1212
K(CuL+gly-gly)=6.01
*K(CuL(gly-gly))=-7.97
K(CuL+gly-ala)=5.95
*K(CuL(gly-ala))=-8.26

Medium: 50% v/v dioxane/H₂O, 0.20 M NaClO₄.
K(CuL+gly-leu)=6.34, *K(CuL(gly-leu))=-8.20

Cu++ gl alc/w 25°C 0.10M U I K1=12.38 B2=23.50 1994MFa (22801)1213
Medium: 0.9 mol parts EtOH in H₂O. Data also for EtOH/H₂O 0-0.9 mol parts).
In 100% H₂O: K1 =10.52, K2 = 9.26. Data also for acetone/H₂O mixtures

Cu++ gl KNO₃ 30°C 0.10M U K1=10.52 1994RSa (22802)1214

Cu++ gl KNO₃ 35°C 0.20M C M K1=10.32 B2=19.12 1994YVa (22803)1215
B(Cu(P3010)L)=17.13

Cu++ sp NaNO₃ 25°C 0.10M U I K1=11.1 B2=20.9 1993GBb (22804)1216
Medium: 0.55 ppm Acetone in H₂O

Cu++ gl mixed 25°C 98% U K1=10.66 B2=20.03 1993MLb (22805)1217
Medium: 0.98 molar fraction of DMSO in H₂O

Cu++ gl alc/w 30°C 40% M K1=10.68 B2=19.84 1993RRd (22806)1218
Medium: 40% v/v EtOH/H₂O, 0.10 M KNO₃.

Cu++ gl KNO₃ 25°C 0.10M M M 19920Ma (22807)1219
B(CuLA)=15.577

A=2-amino-4-oxopteridine-6-carboxylate

Cu++ gl KNO₃ 35°C 0.20M C M K1=10.32 1992YKa (22808)1220
B(Cu(edda)L)=20.97
K(Cu(edda)+L)=6.47

Cu++ gl mixed 25°C 80% C K1=11.02 B2=20.72 1991LMa (22809)1221
Medium: 80% w/w DMSO/H₂O, 0.1 M KClO₄

Cu++ cal KNO₃ 25°C 1.50M U HM 1989KCa (22810)1222
DH(M(IDA)+L)=-29.1 kJ mol⁻¹

Cu++ cal oth/un 25°C dil C H K1=10.56 B2=19.60 19890Fa (22811)1223
Medium: NH₄Cl/NH₃ buffer, pH 10. DH(K1)=-54.56 kJ mol⁻¹,
DH(B2)=-107.8.

Cu++ gl NaClO₄ 25°C 0.20M M K1=10.499 B2=19.522 1989PBa (22812)1224
B(CuLA)=18.26

A = pyridine-2,6-dicarboxylic acid


```

-----
Cu++      gl  KNO3   35°C 0.10M U   M   K1=10.22      1989RSb (22813)1225
                                         K(Cu(thiodipropoate)+L)=9.46
-----
Cu++      gl  KNO3   30°C 0.10M U   M   K1=10.52  B2=19.54  1989SRd (22814)1226
                                         K(CuA+L)=9.39
                                         B(CuAL)=16.81
                                         K(CuC+L)=9.41
                                         B(CuCL)=17.34
HA=4-amino-5-mercapto-1,2,4-triazole, HC=4-amino-5-mercapto-3-methyltriazole
-----
Cu++      gl  KNO3   25°C 0.10M C   M                               1988K0a (22815)1227
                                         B(CuAL)=17.86
                                         B(CuHAL)=25.25
A=2,4-Pteridinediol
-----
Cu++      gl  KNO3   25°C 0.10M U   M   K1=10.31  B2=18.91  1988NSb (22816)1228
                                         B(CuLA)=15.30
H2A=malonic acid
-----
Cu++      vlt KNO3   30°C 0.10M U           K1=10.07  B2=19.47  1988YZa (22817)1229
-----
Cu++      gl  NaClO4 25°C 3.00M C  IH   K1=11.38  B2=21.35  1987IOc (22818)1230
Medium: LiClO4. DH(K1)=-67.1 kJ mol-1, DS=-9 J K-1 mol-1; DH(K2)=-71.0,
DS=-47
-----
Cu++      cal KNO3   25°C 1.0M U   H                               1987LGa (22819)1231
DH(K1)=-60.4 kJ mol-1, DH(K2)=-59.2. DH(CuLA)=-84.7, DH(CuL2+A=CuLA+L)=-5.37
DH(CuLA+A)=CuA2+L)=-5.71. H2A=oxalic acid
-----
Cu++      gl  diox/w 30°C 50% U   I M                               1986EBa (22820)1232
                                         K(CuA+L)=9.86
                                         K(CuC+L)=10.60
A=2,2'-dipyridylamine, C=2,2'-dipyridylketone
-----
Cu++      EMF KCl    25°C 0.10M U           K1=9.68      1985SNa (22821)1233
                                         K1=9.46 by spectrophotometry
-----
Cu++      gl  diox/w 30°C 50% U   M   K1=10.59  B2=20.62  1984EBa (22822)1234
                                         B(CuLA)=10.39
A=5-nitro-1,10-phenanthroline
-----
Cu++      gl  NaClO4 25°C 3.00M U   H   K1=11.38  B2=21.35  1984IOa (22823)1235
DH(K1)=-67.7 kJ mol-1, DH(K2)=-71.0, DS(K1)=-9.1 J K-1 mol-1, DS(K2)=-47.3
Alternative method: calorimetry.
-----
Cu++      gl  diox/w 25°C 35% U   H   K1=11.70  B2=22.00  1984IOa (22824)1236
DH(K1)=-68.6 kJ mol-1, DH(K2)=-70.2, DS(K1)=-6.0 J K-1 mol-1, DS(K2)=-38.3
Alternative method: calorimetry.
-----

```

Cu++ gl diox/w 25°C 55% U H K1=12.05 B2=22.76 1984IOa (22825)1237
DH(K1)=-66.7 kJ mol⁻¹, DH(K2)=-68.8, DS(K1)= 7.1 J K⁻¹ mol⁻¹, DS(K2)=-25.8
Alternative method: calorimetry.

Cu++ gl R4N.X 25°C 2.0M C K1=10.84 B2=20.08 1984NDa (22826)1238

Cu++ gl KNO3 25°C 0.10M C M 19840Ya (22827)1239

B(CuL(Ala))=17.949

B(CuL(Val))=17.726

B(CuL(Phe))=17.746

B(CuL(Trp))=18.078

B(CuL(Tyr))=18.462; B(CuHL(Tyr))=27.772; B(CuLA)=17.580; B(CuLB)=18.585;

B(CuHLB)=28.655. HA=O-Me-tyrosine, H2B=5-Hydroxytryptophan.

Cu++ gl KNO3 25°C 0.50M C TIH R K1=10.60 B2=19.75 1984PAa (22828)1240
IUPAC evaluation. DH(K1)=-52.5, DH(K2)=-52.9 kJ mol⁻¹

Cu++ gl KNO3 25°C 0.10M U M K1=10.31 B2=18.91 1984VSa (22829)1241

B(CuLA)=9.98

K(CuA+L)=6.49

K(CuL+A)=-0.33

H2A=phthalic acid

Cu++ gl NaClO4 30°C 0.10M C K1=10.44 B2=19.36 1984ZXa (22830)1242

Cu++ vlt KNO3 30°C 0.30M C K1=10.75 B2=20.50 1983APb (22831)1243
Method: polarography. Medium pH 8.0.

Cu++ vlt KNO3 30°C 0.30M C M 1983APb (22832)1244

B(CuL(gly))=18.75

K(Cu(gly)+L)=10.45

K(CuL+gly)=8.00

B(CuL(ala))=18.45

Method: polarography. Medium pH 8.0. K(Cu(ala)+L)=10.35, K(CuL+ala)=7.70,

B(CuL(val))=18.57, K(Cu(val)+L)=10.47, K(CuL+val)=7.82.

Cu++ vlt KNO3 30°C 0.30M C M 1983APb (22833)1245

B(CuLA)=17.80

K(CuA+L)=10.60

K(CuL+A)=7.05

Method: polarography. Medium pH 8.5. HA is beta-alanine.

Cu++ gl KNO3 25°C 0.10M C I K1=10.512 B2=19.55 1983AZa (22834)1246

Cu++ vlt KNO3 25°C 1.0M C M K1=12.90 B2=18.12 1983GJb (22835)1247

B(PbAL)=15.78

B(PbBL)=15.86

Method: polarography. H2A is malonic acid; H2B is phthalic acid.

Cu++ gl KNO3 30°C 0.10M C T HM K1=10.67 B2=19.83 1983RKa (22836)1248

B(CuAL)=9.86

HA is thiazolidine-4-carboxylic acid. DH(K1)=-56.2 kJ mol⁻¹, DS(K1)=19 J K⁻¹ mol⁻¹; DH(K2)=-48.6, DS(K2)=15; DH(CuAL)=-51.7, DS(CuAL)=18

Cu++ gl KNO3 25°C 0.20M U K1=10.56 B2=19.67 1982AKa (22837)1249

Cu++ vlt NaClO4 25°C 1.5M C K1=12.0 B2=20.30 1982DDb (22838)1250
Method: polarography. Medium: pH 5.6.

Cu++ vlt KNO3 25°C 1.0M C K1=12.93 B2=18.15 1982GVa (22839)1251
Method: polarography. From potentiometric measurements K(H+L)=9.48
Medium: pH 8.0.

Cu++ gl NaCl 37°C 0.15M U K1=10.14 B2=18.84 1982HFa (22840)1252
K(Cu+2L=CuL2OH+H)=7.4

Cu++ gl KNO3 25°C 0.10M U M K1=10.65 1982KJa (22841)1253
K(Cu2(CDTA)+2L)=13.65

Cu++ gl NaNO3 30°C 0.50M M K1=11.07 B2=20.74 1982MA d (22842)1254
B(CuH-1L)=4.76

Cu++ sp diox/w 30°C 50% U M K1=10.59 B2=20.62 1982PPb (22843)1255

Cu++ ISE non-aq 25°C 100% U K1=12.39 B2=25.05 1981ATa (22844)1256
Medium: DMF, 0.1 M NaClO4

Cu++ gl KNO3 25°C 0.20M U M K1=10.60 B2=19.71 1981M0d (22845)1257
K(CuA+L)=9.59

A is bis(2-imidazolyl)methane

Cu++ vlt none 25°C 0.0 U 1981RKa (22846)1258
B(CuL(Gly))=18.04
B(CuL(Ala))=17.78
B(CuL(Ser))=17.33
B(CuL(B-Ala))=17.12

Spectrophotometry also used.

Cu++ gl NaNO3 30°C 0.20M C M K1=10.52 B2=19.65 1981RSd (22847)1259
K(Cu(asp)+L)=9.51
B(Cu(asp)L)=18.33

H2asp is aspartic acid.

Cu++ gl NaNO3 30°C 0.20M C M 1981RSe (22848)1260
B(Cu(ida)L)=18.65
K(Cu(ida)+L)=8.14

Cu++ gl KNO3 25°C 0.20M U K1=10.55 B2=19.67 1980AVc (22849)1261

Cu++ vlt oth/un 25°C 1.0M C K1=11.95 B2=20.19 1980LEa (22850)1262

Method: re-analysis of published polarographic data.
Medium not stated.

Cu++	vlt	KNO3	25°C	0.10M	U	B2=19.53	1980LZa (22851)	1263
Cu++	ISE	KNO3	25°C	0.10M	U	B2=19.40	1980Nwa (22852)	1264
Cu++	gl	NaNO3	20°C	2.0M	U	K1=9.95 B(CuHL)=14.55 K(Cu+HL)=4.30 B(CuHL2)=24.79 K(Cu+HL+L)=14.54	1980SPa (22853)	1265
B(CuH2L2)=28.81, K(Cu+2HL)=8.31								
Cu++	gl	KNO3	25°C	2.5M	M	K1=10.72	1979FLc (22854)	1266
Cu++	gl	KNO3	25°C	0.20M	C HM	K1=10.60 B2=19.71 K(Cu(bpy)+L)=9.41	1979MBb (22855)	1267
DH(K1)=-57 kJ mol ⁻¹ , DH(K2)=-50.2, DH(Cu(bpy)+L)=-46.4								
Cu++	gl	NaNO3	25°C	0.10M	U	K1=10.53 B2=19.16	1978FMb (22856)	1268
Cu++	ISE	diox/w	25°C	10%	U	K1=10.56 B2=19.55	1978WIa (22857)	1269
Cu++	gl	KNO3	25°C	0.10M	U	K1=10.523 B2=19.505	1977BPa (22858)	1270
Cu++	gl	KCl	25°C	0.20M	C HM	K1=10.57 B2=19.68 B(CuL(gly))=17.69 B(CuL(pn))=18.83	1976GSd (22859)	1271
By calorimetry: DH(K1)=-53.4 kJ mol ⁻¹ , DH(B2)=-104.1, DH(CuL(gly))=-79.5, DH(CuL(pn))=-102.9. Other data also								
Cu++	gl	KCl	25°C	0.20M	C H	K1=10.57 B2=19.68	1976SGa (22860)	1272
By calorimetry: DH(K1)=-53.4 kJ mol ⁻¹ , DS(K1)=23 J K ⁻¹ mol ⁻¹ ; DH(B2)=-104.1, DS(B2)=27.								
Cu++	gl	KCl	25°C	0.20M	C HM	B(Cu(gly)L)=17.69 K(CuL+gly)=7.12 K(Cu(gly)+L)=9.62	1976SGa (22861)	1273
By calorimetry: DH(Cu(gly)L)=-79.5 kJ mol ⁻¹ , DS(Cu(gly)L)=72 J K ⁻¹ mol ⁻¹ ; DH(CuL+gly)=-26.1, DH(Cu(gly)+L)=-53.9.								
Cu++	cal	non-aq	25°C	100%	U H	K1=15.6 B2=28.40 K3=1.25	1976WVa (22862)	1274
Medium: DMSO. DH(K1)=-89.1 kJ mol ⁻¹ , DH(K2)=-73.2 and DH(K3)=-7.1								
Cu++	ISE	KNO3	25°C	0.10M	U	B2=19.40	1975Nwa (22863)	1275
Cu++	vlt	alc/w	25°C	40%	U	K1=11.95 B2=19.51	1974MIa (22864)	1276

Medium: 40% w/w EtOH/H₂O; data for other EtOH/H₂O ratios also given

Cu++	gl	NaClO ₄	30°C	0.15M	U	M	K ₁ =10.69	1974PBb (22865)	1277
							B(CuL(bpy))=9.58		

Cu++	sp	oth/un	25°C	var	U			1973Y0a (22866)	1278
							K(Cu+CuL ₂ =2CuL)=1.42		

pH=5.7. By ESR in 50% MeOH, K=1.61. DH=-2.1 kJ mol⁻¹, DS=20 J K⁻¹ mol⁻¹

Cu++	gl	KNO ₃	25°C	0.50M	U		K ₁ =10.56	B ₂ =19.69	1972BFb (22867)	1279
------	----	------------------	------	-------	---	--	-----------------------	-----------------------	-----------------	------

Cu++	sp	R4N.X	25°C	1.50M	U			1972BFd (22868)	1280
							K(CuL ₂ +CuA=Cu ₂ AL ₂)=2.60		

Medium: NH₄NO₃. H₄A=EDTA

Cu++	vlt	KNO ₃	25°C	0.50M	U		B ₂ =20.3	1972HJa (22869)	1281
------	-----	------------------	------	-------	---	--	----------------------	-----------------	------

Cu++	gl	oth/un	25°C	dil	U		K ₁ =10.50	B ₂ =19.52	1972NBa (22870)	1282
------	----	--------	------	-----	---	--	-----------------------	-----------------------	-----------------	------

Cu++	gl	NaClO ₄	25°C	0.10M	U		K ₁ =10.44	B ₂ =19.60	1971GSb (22871)	1283
------	----	--------------------	------	-------	---	--	-----------------------	-----------------------	-----------------	------

Cu++	gl	NaClO ₄	25°C	0.10M	U	M	K ₁ =10.40	B ₂ =19.36	1971HBb (22872)	1284
							K(Cu+L=CuLOH+H)=2.7			

Cu++	vlt	KNO ₃	30°C	2.00M	U		B ₂ =20.33	1971SSe (22873)	1285
------	-----	------------------	------	-------	---	--	-----------------------	-----------------	------

Cu++	gl	KNO ₃	25°C	0.10M	U		K ₂ =9.31	1970DNa (22874)	1286
------	----	------------------	------	-------	---	--	----------------------	-----------------	------

Cu++	vlt	oth/un	?	0.0	U		K ₁ =10.64	B ₂ =19.74	1970FAa (22875)	1287
------	-----	--------	---	-----	---	--	-----------------------	-----------------------	-----------------	------

Cu++	gl	NaClO ₄	25°C	0.50M	U	I	K ₁ =10.61	B ₂ =19.90	1970FRa (22876)	1288
------	----	--------------------	------	-------	---	---	-----------------------	-----------------------	-----------------	------

Medium: LiClO₄. Also 0.5 LiClO₄, 54.3% methanol: K₁=10.82, K₂=9.46;
0.5 LiClO₄, 48.1% dioxan: K₁=11.24, K₂=9.88

Cu++	gl	NaClO ₄	25°C	0.10M	U	M	K ₁ =10.44	B ₂ =19.60	1970GSa (22877)	1289
							B(CuL(bpy))=17.15			

Cu++	sp	mixed	25°C	0.19M	U	M		1970Rba (22878)	1290
							K(CuL ₂ +A)=-0.77		
							K(CuL ₂ +B)=-1.23		

A=butylamine, B=pyridine

Cu++	gl	oth/un	25°C	0.10M	U	M	K ₁ =10.44	B ₂ =19.60	1969HGb (22879)	1291
							B(CuLA)=23.04			

H₂A=catechol

Cu++	nmr	oth/un	20°C	0.5M	U		K ₁ =11.0	B ₂ =19.60	1969VSa (22880)	1292
------	-----	--------	------	------	---	--	----------------------	-----------------------	-----------------	------

Method: nmr

Cu++	gl	diox/w	30°C	50%	U		K ₁ =11.06	B ₂ =20.50	1968HOa (22881)	1293
------	----	--------	------	-----	---	--	-----------------------	-----------------------	-----------------	------

Constants corrected to zero ionic strength

 Cu++ gl NaClO4 25°C 0.30M C H K1=10.45 B2=19.38 1967Hwa (22882)1294
 By calorimetry DH(K1)=-52.0 kJ mol⁻¹, DH(K2)=-51.3

Cu++ gl oth/un 25°C 0.0 U M 1967NKc (22883)1295

B(CuLA)=19.75
 K(CuL2+CuA2=2CuLA)=0.31
 B(CuLB)=17.87
 K(CuL2+2CuA2=2CuLA)=1.83

A=1,2-propanediamine, B=NN'-diethylethylenediamine. B(CuLC)=18.58,
 K(CuL2+CuC2=2CuLC)=0.98. C=1,3-propanediamine

Cu++ gl KNO3 37°C 0.15M U M K1=10.175 B2=18.94 1967PSc (22884)1296

K(CuA+L)=8.15
 K(Cu(Ser)+L)=9.31
 K(CuB+L)=9.16

A=histamine, H2A=salicylic acid. Ternary complexes with 1,2-diaminopropane,
 pentane-2,4-dione and EDTA

Cu++ gl oth/un 20°C 0.0 U K1=10.66 B2=19.99 1966PSc (22885)1297

 Cu++ gl NaClO4 25°C var U 1963NMc (22886)1298
 K1=10.48+0.646I-0.254I^(1.5)+0.052I⁽²⁾
 K2=9.07+0.626I+0.122I^(1.5)-0.2020I⁽²⁾

Cu++ vlt oth/un 25°C 0.17M U B2=8.48? 1961KPa (22887)1299
 Medium: phosphate buffer

Cu++ gl oth/un 10°C ->0 U T K1=10.01 B2=19.58 1959MBa (22888)1300
 20 C: K1=10.67, K2=9.23; 30 C: K1=10.36, K2=8.93; 40 C: K1=10.06, K2=8.66

Cu++ gl none var 0.0 U T H 1959MBa (22889)1301
 10-40 C: DH(K1)=-53.6 kJ mol⁻¹, DG=-59.7, DS=21 J K⁻¹ mol⁻¹; DH(K2)=-51.5,
 DG=-50.58, DS=0

Cu++ ISE KNO3 25°C 1.0M U K1=10.75 B2=20.03 1958PBa (22890)1302

 Cu++ gl oth/un 30°C 0.10M U K1=11.12 B2=20.73 1957BEa (22891)1303

Cu++ gl KNO3 25°C 0.10M U K1=10.5 1957Mca (22892)1304

 Cu++ gl oth/un 25°C 1.40M U K1=10.72 B2=20.03 1957PBa (22893)1305
 K3=1.0

Cu++ sp oth/un 25°C ? U 1957VIa (22894)1306
 K(CuL2+OH)=0.477

Cu++ oth oth/un 25°C 1.0M U H 1956RAa (22895)1307
 DS(Cu(NH3)4+2L=CuL2+4NH3)=61 J K⁻¹ mol⁻¹

Cu++	gl	oth/un	25°C	0.15M	U	H		1955CHa (22896)1308
0-49 C. DH(K1)=-49.7 kJ mol ⁻¹ , DS=37.6 J K ⁻¹ mol ⁻¹ ; DH(K2)=-47.2, DS=16.7								
Cu++	gl	oth/un	0°C	0.15M	U	T	K1=11.45 B2=21.28	1955CHb (22897)1309
49.1 C: K1=10.01, K2=8.46								
Cu++	sp	KN03	25°C	0.50M	U			1955JRa (22898)1310
K(CuL2+OH)=0.73								
Cu++	cal	KN03	25°C	1.0M	U	H		1955PBa (22899)1311
DH(K1)=-54.3 kJ mol ⁻¹ , DS=22.6 J K ⁻¹ mol ⁻¹ ; DH(B2)=-106.2, DS=26.3								
Cu++	cal	KN03	0°C	0.50M	U	H		1954BMa (22900)1312
DH(B2)=-102.8 kJ mol ⁻¹ , DS=29.3 J K ⁻¹ mol ⁻¹								
Cu++	cal	KCl	25°C	0.10M	U	H		1954DSa (22901)1313
DH(B2)=-105.3 kJ mol ⁻¹ , DS=29.7 J K ⁻¹ mol ⁻¹								
Cu++	gl	diox/w	30°C	75%	U		K1=11	1954UFa (22902)1314
Cu++	gl	oth/un	0°C	->0	U	T	K1=11.26 B2=21.04	1953MCa (22903)1315
30 C: K1=10.36, K2=8.93								
Cu++	gl	KN03	25°C	2.15M	U	H	K1=11.02 B2=20.61	1953SPb (22904)1316
DH(K1)=-61 kJ mol ⁻¹ , DH(B2)=-119								
Cu++	gl	KN03	0°C	0.50M	U	T	K1=11.43 B2=21.38	1952BMa (22905)1317
25 C: K1=10.76, K2=9.37								
Cu++	gl	KN03	0°C	0.50M	U	H		1952BMb (22906)1318
0-25 C. DH(K1)=-35.9 kJ mol ⁻¹ , DS=87.8 J K ⁻¹ mol ⁻¹ ; DH(K2)=-35.9, DS=58.5								
Cu++	vlt	KN03	25°C	0.10M	U		B2=19.72	1949LAd (22907)1319
Cu++	gl	KN03	25°C	1.0M	U		K1=10.72 B2=20.03	1948BNa (22908)1320
By spectrophotometry K3=-0.90								
Cu++	gl	KN03	30°C	0.50M	U		K1=10.55 B2=19.60	1945CMa (22909)1321

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
Cu++	gl	KN03	25°C	0.10M	C		K1=12.0	1997DBb (23300)1322
							K(CuL+H)=5.4	
							K(CuHL+H)=3.0	
Cu++	gl	KN03	25°C	0.10M	U		K1=11.9	1995DSa (23301)1323

B(CuHL)=17.4
B(CuH2L)=20
B(Cu(OH)2)=15.1
B(Cu(OH)3)=16

Cu++ vlt NaClO4 25°C 0.40M C 1989N0c (23302)1324

K(Cu+H3L)=3.7
K(Cu+H2L)=6.0
K(Cu+HL)=10.9
K(Cu+2H3L)=6.2

Method: polarography. Medium pH=4.6-6.4. K(Cu+H2L+H3L)=7.3,
K(Cu+2H2L)=9.4, K(Cu+H2L+HL)=14.1.

Cu++ cal oth/un 25°C 0.10M U H 1989VKb (23303)1325

DH(K1)=-8.4 kJ mol⁻¹, DS=230 J K⁻¹ mol⁻¹, DH(Cu+HL)=4.9, DS=178,
DH(Cu+H2L)=4.3, DS=112

Cu++ nmr oth/un 25°C ? U 1987ASa (23304)1326

K1=11.81
K(Cu+HL)=6.08
K(Cu+H2L)=3.41
K(Cu+H3L)=1.87
B(Cu2L)=16.94

Cu++ gl KNO3 25°C 0.10M U 1980ZRc (23305)1327

K1=6.38
K(Cu+HL)=4.45
K(Cu+H2L)=2.84

Cu++ sp oth/un 20°C dil U 1971CAf (23306)1328

K1=18.71
K(Cu+HL)=10.64
K(Cu+H2L)=4.90

Cu++ ISE R4N.X 25°C 0.10M U 1971WFa (23307)1329

K1=11.84
K(Cu+HL)=7.47
K(Cu+H2L)=4.80

Medium: (CH3)4NClO4

Cu++ gl KCl 25°C 0.10M U 1967KLa (23308)1330

K1=12.48
K(Cu+HL)=6.26
K(2Cu+H-1L)=25.03
K(2Cu+L)=16.86
K(2Cu+HL)=9.55

C2H8O7P2 H5L CAS 76267-75-9 (4226)

2-Hydroxyethylidenediphosphonic acid; HO.CH2.CH(PO3H2)2

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

Cu++ vlt NaClO4 ? 1.00M U 1973VNa (23408)1331

B2=15.67
K(Cu+H2L)=8.69
K(Cu+2H2L)=12.03

C2H9N06P2 H4L (6773)
(Aminoethylene)diphosphonic acid, 1-Aminoethane-1,1-di(phosphonic acid);
H2N.C(CH3)(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.10M	C			K1=10.40	1980Kwa	(23418)1332

C2H9N06P2 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
Cu++	gl	KCl	25°C	0.20M	C			K1=12.90 B2=16.86	1997BKb	(23434)

$B(\text{CuHL})=17.75$
 $B(\text{CuH}_2\text{L})=21.50$
 $B(\text{CuH}-1\text{L})=2.16$
 $B(\text{CuH}_4\text{L}_2)=41.9$
 $B(\text{CuH}_3\text{L}_2)=37.92$, $B(\text{CuH}_2\text{L}_2)=32.52$, $B(\text{CuHL}_2)=26.73$.

Cu++	gl	KN03	25°C	0.1M C	K1=12.84	1985MMa (23435)1334
					B(CuHL)=17.44	
					B(CuH2L)=20.90	

Cu++ gl KNO3 25°C 1.00M U K1=12.53 1982Bgb (23436)1335
K(Cu+HL)=6.26
K(Cu+H2L)=4.44

Cu++ gl KCl 25°C 0.10M U K1=12.96 1979ZPa (23437)1336
By spectrophotometry: K1=12.57

C2H9N2O3P H2L (6483)
1,2-Diaminoethanephosphonic acid; H2N.CH(PO3H2)CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	U			K1=12.21 B2=22.17	1990BJc	(23465)

B(CuHL)=17.44
B(CuHL2)=28.08
B(CuH2L2)=33.48

C2H16N5O4Co HL (231)
Pentaammineoxalatocobalt(III); Co(NH3)5(HC2O4)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	NaCl04	28°C	0.30M	U		K1=2.67	1974Nda	(23468)1338

C3H2N2O3 H2L (7432)

2-Cyano-2-(hydroxyimino)ethanoic acid; NC.C(:NOH)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C			B2=12.38 B(CuHL2)=17.14 B(Cu2H-1L2)=12.59 B(Cu2H-2L2)=3.09 B(Cu2H-3L2)=-7.01	1998SDa (23483)	1339

C3H3NO L Isoxazole CAS 288-14-2 (384)
Isoxazole; cyclo(-O.N:CH.CH:CH-) C3H3NO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	U			K1=-0.32 B2= 0.30	1978KLa (23493)	1340

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
Cu++	gl	NaClO4	25°C	2.0M	U			K1=0.93 B2= 1.29	1981MFa (23504)	1341

Cu++ gl NaClO4 25°C 3.0M U K1=0.87 B2=1.00 1964PCa (23505)1342

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
Cu++	gl	KNO3	25°C	0.50M	U			K1=0.53 B2=1.80	1978KLa (23514)	1343

C3H3N3O2 HL (7390)
2-Cyano-2-(hydroxyimino)acetamide; CNC.C(NO.H).CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C			K1=3.74 B(Cu2H-2L2)=-1.06 B(CuH-2L2)=-6.64	1997SDb (23531)	1344

C3H3O3Cl3 HL CAS 599-01-9 (2978)
3,3,3-Trichlorolactic acid; Cl3C.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	sol	oth/un	25°C	->0	U			K1=1.60	1951LWa (23535)	1345

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
Cu++	cal	NaNO3	25°C	1.0M	U	H		K1=0.25	1981ARd (23547)	1346
DH(K1)=-24.2 kJ mol ⁻¹ , DH(K2)=-20.5										
Cu++	gl	KNO3	25°C	0.50M	U			K1=2.38 B3=5.68 B4=6.60	1978LNa (23548)	1347
Cu++	gl	NaNO3	25°C	0.20M	U	I		K1=2.35 K3=1.43 K4=0.95	1970MHb (23549)	1348

I=0.08: K1=2.34; I=1.0: K1=2.41

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
Cu++	gl	KCl	25°C	0.10M	C			B(Cu2L)=11.70	2003GRb (23653)	1349
Cu++	oth	mixed	25°C	50%	U			K(2Cu(HL)A+OH)=8.90	2001ABb (23654)	1350
Method: capillary electrophoresis. Medium: 50% DMSO/H2O. K: 2Cu(HL)A+OH=ACuLCuA+H2O+HL. A=2-[2-(2-pyridyl)ethylimino-1-ethyl]pyridine.										
Cu++	gl	NaClO4	25°C	0.10M	U			K1=4.31	2001PSb (23655)	1351
Cu++	gl	KNO3	35°C	0.10M	C	M		K1=4.25 B(CuAL)=5.10	1999DSb (23656)	1352

A is thiamine hydrochloride.

Cu++	gl	NaClO4	37°C	0.15M	U	M		B(CuAL)=11.62 B(CuAL2)=14.75 K(CuA+L)=3.61 K(CuL+A)=7.41	1999NNa (23657)	1353
------	----	--------	------	-------	---	---	--	---	-----------------	------

K(CuL2+A)=7.20. HA is nicotinic acid.

Cu++	gl	NaClO4	30°C	0.20M	U			K1=4.12	1999PGa (23658)	1354
Cu++	gl	NaNO3	30°C	0.20M	U			K1=4.20	1999PPa (23659)	1355
Cu++	gl	NaNO3	25°C	0.50M	M			K1=4.31	1998KSa (23660)	1356
Cu++	gl	NaNO3	25°C	0.10M	U	M		K1=4.33	1998MSe (23661)	1357

Cu++ gl NaNO3 37°C 0.10M U K1=4.21 1997MGa (23662)1358

Cu++ gl NaClO4 37°C 0.15M U M 1997NAb (23663)1359

B(CuAL)=12.38
B(CuAL2)=16.00
K(CuA+L)=3.78
K(CuL+A)=8.17

H2A is cysteic acid. K(CuA+2L)=7.40.

Cu++ gl KNO3 35°C 0.10M C M K1=4.25 1997PSb (23664)1360

K(CuL+A)=8.88

H2A is thiamine orthophosphoric acid.

Cu++ gl KCl 25°C 0.10M C IH R K1=4.20 B2=7.71 1997SJa (23665)1361

K3=2.95
K4=2.25
K5=0.6
K6=0.1

IUPAC evaluation. DH(K1)=-31.8 kJ mol⁻¹(I=0.16).

I=0: K1=4.18, K2=3.49, K3=2.94, K4=2.24. I=3.0: 4.66, 3.97, 3.30, 2.66

Cu++ gl NaNO3 25°C 0.10M M M K1=4.15 B2= 7.62 1997SKc (23666)1362

B(CuAL)=10.27
B(CuH-1AL)=5.08
B3=10.35

HA is glycyl-DL-leucine.

Cu++ gl NaClO4 25°C 0.10M C M K1=4.34 1994MGb (23667)1363

K(Cu(succinate)+L)=3.80
K(Cu(malate)+L)=3.75
K(Cu(tartrate)+L)=3.74

Cu++ gl NaNO3 37°C 0.10M U K1=4.21 1994MGc (23668)1364

Data for ternary complexes with 6-aminopenicillanic acid

Cu++ gl NaClO4 37°C 0.15M U M 1994NAd (23669)1365

B(CuAL)=13.22
B(CuAL2)=17.37
K(CuL+A)=9.01
K(CuA+L)=3.76

K(CuAL+L)=4.15, K(CuL2+A)=9.82, K(CuA+2L)=7.91. H2A is aspartic acid.

Cu++ gl NaClO4 37°C 0.15M U M 1994NAd (23670)1366

B(CuAL)=13.72
B(CuAL2)=17.22
K(CuL+A)=9.51
K(CuA+L)=3.24

K(CuAL+L)=3.50, K(CuL2+A)=9.67, K(CuA+2L)=6.74. H2A is iminodiethanoic acid.

Cu++ gl KCl 25°C 0.10M U M K1=4.23 B2=7.71 1993ABa (23671)1367
K3=2.80
K4=1.89
K(CuL+CH3COO)=1.42

Cu++ gl NaNO3 25°C 0.10M M M K1=4.22 1993JCa (23672)1368
K(CuA+L)=4.11
HA=N,N-bis(2-hydroxyethyl)glycine (bicine)

Cu++ gl NaClO4 37°C 0.15M U M 1993NKb (23673)1369
B(Cu(trp)L)=12.53
B(Cu(trp)L2)=16.29
K(Cu(trp)+L)=4.30
K(CuL+trp)=8.32
K(Cu(trp)L+L)=3.76, K(Cu(trp)+2L)=8.06; B(Cu(glu)L)=12.42, B(Cu(glu)L2)=
16.24, K(Cu(glu)+L)=3.90, K(CuL+glu)=8.21, K(Cu(glu)+2L)=7.72.

Cu++ gl NaClO4 37°C 0.15M U M 1993NKb (23674)1370
K(Cu(glu)+L)=3.82
B(Cu(met)L)=12.25
B(Cu(met)L2)=15.98
K(Cu(met)+L)=4.24
K(CuL+met)=8.04, K(Cu(met)L+L)=3.73, K(Cu(met)+2L)=7.97.

Cu++ gl KNO3 25°C 0.10M M M K1=4.223 B2=7.675 19920Ma (23675)1371
B3=10.484
B4=12.44
B(CuH-1L)=-3.27
B(CuH-2L)=-11.29
B(CuH-1L2)=-0.23

Cu++ gl KNO3 35°C 0.20M C M K1=4.11 B2= 7.44 1992YKa (23676)1372
B(Cu(edda)L)=17.86
K(Cu(edda)+L)=3.36
B(Cu(edda)L2)=18.81

Cu++ gl NaClO4 25°C 0.20M U M K1=4.18 B2= 7.66 1991UBa (23677)1373
K(Cu(ida)L)=13.96
K(CuAL)=13.11
H2A is pyridine-2,6-dicarboxylic acid.

Cu++ gl KNO3 37°C 0.15M C M K1=4.04 B2= 7.46 1990KKc (23678)1374
B3=10.19
B4=12.37
Data for ternary complexes with gly, val and ala.

Cu++ gl KNO3 37°C 0.15M U K1=4.04 B2= 7.46 1990KKc (23679)1375
B3=10.19
B4=12.37

Cu++ gl KNO3 25°C 0.10M C M 1989IOd (23680)1376

K(CuA+L)=4.61
K(CuAL+L)=3.32

HA=ethanoic acid.

Cu++ gl KNO3 35°C 0.20M U M K1=4.11 B2=7.44 1989PVa (23681)1377

K(CuL2+Val)=7.26
K(CuL2+Phe)=6.98
K(CuL2+Trp)=7.43
K(CuL2+Met)=6.93

K(CuL2+ethionine)=6.71, K(CuL2+His)=8.38

Cu++ gl NaClO4 37°C 0.15M U M 1988NSa (23682)1378

B(CuL(Asn))=12.45
B(CuL2(Asn))=15.61
K(Cu(Asn)+L)=4.56
K(CuL+Asn)=8.24

Cu++ gl KNO3 25°C 0.20M M M K1=3.86 1988SKd (23683)1379

K(Cu(dien)+L)=3.24

K(H+L)=6.82

Cu++ gl NaNO3 37°C 0.15M U K1=4.015 B2=7.550 1983ERa (23684)1380

B3=10.079
B(CuH-2L2)=-8.487
B(Cu2L8)=29.666

Cu++ gl NaNO3 37°C 0.10M U M 1983ERa (23685)1381

B(CuL(Gly))=11.86
B(CuL3(Gly))=18.080
B(CuL(Gly)2)=16.865

Cu++ gl KNO3 25°C 0.50M U K1=4.30 B2=7.85 1983LWa (23686)1382

B3=10.78
B4=12.95
B5=13.60

Cu++ gl NaNO3 25°C 0.10M A M 1982SSa (23687)1383

K(Cu(ATP)+L)=3.53

Cu++ gl NaNO3 25°C 0.10M A M K1=4.21 1982SSa (23688)1384

K(Cu(ATP)+L)=3.53
K(CuA+L)=3.84

A=uridine-5'-triphosphate

Cu++ gl NaClO4 37°C 0.15M U M K1=4.21 B2=7.55 1980NSb (23689)1385

B3=10.73
B4=12.91
B(CuLA)=12.72
B(CuL(His))=13.89

Cu++	gl	NaClO4	37°C	0.15M	U	M	1980NSc (23690)	1386	B(CuL(Gly))=11.97 B(CuL2(Gly))=15.91
Cu++	gl	NaClO4	37°C	0.15M	C		K1=4.042 B2= 7.39 1979KBf (23691)	1387	B3=10.117 B4=12.163
Cu++	gl	NaClO4	25°C	3.00M	C	I M	1977SJd (23692)	1388	K(CuCl+L)=4.75 K(CuCl+2L)=8.37 K(CuCl+3L)=12.26 K(CuCl2+L)=4.46 K(CuCl2+2L)=8.44 Data from media consisting of mixtures of 3.0M NaClO4+3.0M NaCl
Cu++	gl	NaClO4	25°C	0.50M	C	TIH	K1=4.228 B2=7.778 1974LVa (23693)	1389	B3=10.721 B4=13.936
Cu++	gl	NaClO4	25°C	3.00M	U	M	1973SJa (23694)	1390	K(Cu+HL=CuL+H)=-3.26 K(Cu+2HL=CuL2+2H)=-7.22 K(Cu+3HL=CuL3+3H)=-11.82 K(CuL+H2O=CuLOH+H)=-7.18 K(2CuL+2H2O=Cu2L2(OH)2L2+2H)=-11.37
Cu++	gl	NaClO4	25°C	3.00M	U	I	1972SJa (23695)	1391	K(Cu+HL=CuL+H)=-3.25 K(Cu+2HL=CuL2+2H)=-7.18 K(Cu+3HL=CuL3+3H)=-11.79 K(Cu+4HL=CuL4+4H)=-17.0 K(Cu+5HL=CuL5+5H)=-23.96; K(Cu+6HL=CuL6+6H)=-30.17
Cu++	gl	NaCl	25°C	3.00M	U	I	1972SJa (23696)	1392	K(Cu+HL=CuL+H)=-3.24 K(Cu+2HL=CuL2+2H)=-7.21 K(Cu+3HL=CuL3+3H)=-11.85 K(Cu+4HL=CuL4+4H)=-17.17 K(Cu+5HL=CuL5+5H)=-23.89; K(Cu+6HL=CuL6+6H)=-30.46
Cu++	gl	NaClO4	25°C	3.00M	U		K1=4.66 B2=8.64 1971SJa (23697)	1393	K3=3.30 K4=2.66 K(2Cu+3L=Cu2(OH)2L3+2H)=2.51
Cu++	EMF	KNO3	25°C	0.50M	U	M	1969ZKa (23698)	1394	K(CuH2A+L)=4.6

$K(\text{CuHA}+\text{L})=3.5$
 $K(\text{Cu2A}+\text{L})=4.1$
 $K(\text{Cu2AL}+\text{L})=3.3$
 $K(\text{Cu2A}(\text{OH})+\text{L})=3.6$. $\text{H2A}=\text{N,N}'\text{-bis(dimethylaminoethyl)oxamide}$

Cu++ gl NaClO4 25°C 0.10M U M K1=4.20 1968ISa (23699)1395
 $K(\text{Cu}(\text{NTA})+\text{L})=4.35$
 $K(\text{Cu}(\text{NTA})\text{L}+\text{L})=-0.65$
 $K(\text{Cu}(\text{EDTA})+\text{L})=2.79$

Cu++ gl KNO3 25°C 0.16M U T HM K1=4.31 B2=7.84 1966SKc (23700)1396
 $K3=2.92$
 $K4=2.14$
 $\text{DH}(K1)=-30.1 \text{ kJ mol}^{-1}$, $\text{DS}=-17.6 \text{ J K}^{-1} \text{ mol}^{-1}$, $\text{DH}(K2)=-22.6$, $\text{DS}=-7.5$; $\text{DH}(K3)=-19.2$, $\text{DS}=-9$; $\text{DH}(K4)=-12$, $\text{DS}=-2$. Ternary complexes with Gly-Gly. 10-50 C

Cu++ gl KNO3 25°C 0.20M U K1=4.15 B2=7.67 1963CCb (23701)1397

Cu++ gl NaClO4 20°C 0.15M U K1=4.26 B2=7.87 1962HPa (23702)1398
 $B3=10.73$
 $B4=12.98$

Cu++ EMF oth/un 25°C 0.30M U K1=4.33 B2=7.60 1961JWa (23703)1399
 $K3=2.7$
 $K4=1.9$
 Method: platinum electrode. Medium: K2SO4

Cu++ gl oth/un 25°C 0.16M U K1=4.20 B2=7.62 1958KKc (23704)1400
 $K3=2.88$
 $K4=2.05$

Cu++ gl oth/un 25°C 0.16M U K1=4.33 B2=7.87 1957NGa (23705)1401
 $K3=2.82$
 $K4=2.03$

Cu++ gl KCl 0°C .135M U T K1=4.72 B2=8.62 1955MAb (23706)1402
 $K3=3.28$
 $K4=2.3$
 25 C: $K1=4.20$, $K2=3.47$, $K3=2.84$, $K4=2.0$

Cu++ gl NaNO3 4°C 0.16M U T K1=4.60 B2=8.41 1954EFa (23707)1403
 $K3=3.09$
 $K4=2.30$
 22.5 C: $K1=4.36$, $K2=3.57$, $K3=2.85$, $K4=2.00$

Cu++ vlt KNO3 25°C 0.15M U B4=12.6 1954LWa (23708)1404

 C3H4N2O2 HL Hydantoin CAS 461-72-3 (389)
 2,4-Imidazolidinedione;


```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++       gl  KNO3    25°C 0.50M U   H   K1=4.73   B2= 8.36  1979BEc (23940)1405
                                     B3=11.76
By calorimetry: DH(K1)=-18.8 kJ mol-1, DS(K1)=27 J K-1 mol-1;
DH(B2)=-35, DS(B2)=41; DH(B3)=-57.
*****
C3H4N2S          L          CAS 95-50-4 (821)
2-Aminothiazole; C3H2NS.NH2
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++       gl  KNO3    25°C 0.50M U           K1=2.60   B2=4.23  1982GKa (23952)1406
-----
Cu++       gl  KNO3    25°C 0.10M U T H   K1=2.42           1978BBd (23953)1407
Data for 30, 35 and 40 C. DH(K1)=-18 kJ mol-1, DS(K1)=-15 J K-1 mol-1.
*****
C3H4N5Cl        L   DEIA          CAS 3397-62-4 (7747)
Desethyldeisopropylatrazine;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++       vlt alc/w  24°C   5%  C           K1eff=12.7
1994G0a (23975)1408
Medium: 5% MeOH/H2O containing Britton-Robinson buffer, pH 6.
Method: DPP with ligand (EDTA) exchange.
*****
C3H4O2          HL   Malondialdehyde (4232)
Malondialdehyde; (O:)CH.CH2.CHO
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++       EMF KCl     25°C 0.10M U           K1=3.57           19720Sa (23978)1409
*****
C3H4O2Br2       HL           CAS 600-05-5 (2681)
2,3-Dibromopropanoic acid; BrCH2.CH(Br).COOH
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++       sp  NaClO4  25°C 2.00M C           K1=0.75           1981TRa (24001)1410
*****
C3H4O2Cl2       HL           CAS 75-99-0 (2680)
2,2-Dichloropropanoic acid; CH3.C(Cl)2.COOH
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++       sp  NaClO4  25°C 2.00M C           K1=0.81           1981TRa (24002)1411
*****
C3H4O2Cl2       HL           CAS 565-64-0 (1316)
-----

```

2,3-Dichloropropanoic acid; ClCH₂.CH(Cl).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO ₄	20°C	2.00M	U		K1=1.2 B2=2.2	1981J0a (24004)	1412

Spectrophotometry also used.

Cu++	sp	NaClO ₄	25°C	2.00M	C		K1=0.95	1981TRa (24005)	1413
------	----	--------------------	------	-------	---	--	---------	-----------------	------

C₃H₄O₃ HL Pyruvic acid CAS 127-17-3 (1152)
2-Oxopropoic acid; CH₃.CO.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	vlt	NaClO ₄	30°C	0.20M	C		K1=1.20	1989GMc (24019)	1414

Method: polarography. Medium pH 2.5.

Cu++	vlt	NaClO ₄	30°C	1.0M	C	M	B2=3.72 B3=4.68 B(Cu(ox)L)=6.23 K(Cu(ox)L+ox)=3.07 K(Cu(ox)L+L)=1.51	1988GMb (24020)	1415
------	-----	--------------------	------	------	---	---	--	-----------------	------

Method: polarography. Medium pH 5.0.

Cu++	kin	KCl	25°C	0.10M	U		K(Cu+HL)=0.5	1985MLc (24021)	1416
------	-----	-----	------	-------	---	--	--------------	-----------------	------

For the enol form, K(Cu+HL)=3.4

Cu++	gl	NaClO ₄	25°C	0.11M	U	TIH	K1=1.64	1984GMc (24022)	1417
------	----	--------------------	------	-------	---	-----	---------	-----------------	------

Data for 30-50 C. Data for 0.03-0.11 M NaClO₄. At I=0.0 M, K1=2.14
DH(K1)=19.9 kJ mol⁻¹, DS(K1)=97.6 J K⁻¹ mol⁻¹.

Cu++	gl	NaClO ₄	25°C	2.00M	U		K1=1.35 B2=2.05	1980MKb (24023)	1418
------	----	--------------------	------	-------	---	--	-----------------	-----------------	------

Cu++	cal	NaNO ₃	25°C	1.00M	C	H	K1=1.59 B2=2.395	1974ARd (24024)	1419
------	-----	-------------------	------	-------	---	---	------------------	-----------------	------

Cu++	sp	NaClO ₄	30°C	0.10M	U		K1=2.11	1969RRa (24025)	1420
------	----	--------------------	------	-------	---	--	---------	-----------------	------

Cu++	gl	oth/un	25°C	->0	U		K1=2.2 B2=4.9	1958GHc (24026)	1421
------	----	--------	------	-----	---	--	---------------	-----------------	------

C₃H₄O₄ H₂L Malonic acid CAS 141-82-2 (79)
Propanedioic acid; CH₂(COOH)₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO ₃	25°C	0.10M	C	M	K1=4.82 B2= 8.19 B(CuLA)=9.68	1998KRa (24208)	1422

HA: inosine.

Cu++	gl	KNO ₃	35°C	0.10M	C	M	K1=5.05	1997PSb (24209)	1423
------	----	------------------	------	-------	---	---	---------	-----------------	------

$$K(\text{CuL}+\text{A})=6.01$$

H2A is thiamine orthophosphoric acid.

Cu++ vlt oth/un 25°C 0.1M U K1=5.0 1995FFa (24210)1424

Cu++ gl NaClO4 25°C 1.0M C M K1=4.485 B2= 7.52 1994FGa (24211)1425
 $K(\text{Cu}+\text{HL})=1.08$
 $K(\text{CuL}+\text{A})=0.6$

HA=ethanoic acid

Cu++ gl KNO3 35°C 0.20M C M K1=4.78 1994YVa (24212)1426
 $B(\text{Cu}(\text{P207})\text{L})=11.68$
 $B(\text{Cu}(\text{P3010})\text{L})=10.61$

Cu++ gl KNO3 25°C 0.10M M M K1=4.788 1993AEa (24213)1427

Cu++ gl NaClO4 25°C 0.20M U M K1=5.13 B2=8.81 1990UBb (24214)1428
 Ternary complexes with amino acids

Cu++ ISE NaClO4 25°C 0.10M C K1=4.94 1989COb (24215)1429

Cu++ gl NaClO4 25°C 0.10M U M K1=4.10 1987NDa (24216)1430
 $K(\text{CuA}+\text{B}+\text{L})=13.83$

H2A=iminodiethanoic acid, H2B=oxydiethanoic acid

Cu++ gl diox/w 30°C 50% U I M 1986EBa (24217)1431
 $K(\text{CuA}+\text{L})=8.81$
 $K(\text{CuC}+\text{L})=9.05$

A=2,2'-dipyridylamine, C=2,2'-dipyridylketone

Cu++ gl NaClO4 30°C 0.10M M I K1=5.10 B2= 8.47 1985ARc (24218)1432
 Also data for 20-80% dioxane/H2O. For 40% dioxane/H2O, K1=7.41, K2=5.31.

Cu++ gl diox/w 30°C 50% U M K1=8.25 B2=11.88 1984EBa (24219)1433
 $B(\text{CuLA})=9.54$

A=5-nitro-1,10-phenanthroline

Cu++ gl NaClO4 30°C 0.10M C K1=5.26 1984ZXa (24220)1434

Cu++ gl KNO3 25°C 0.10M C M 1983ADa (24221)1435
 $B(\text{CuHL})=13.3$
 $B(\text{CuHL}(\text{DOPA}))=21.34$

H3A=DOPA

Cu++ vlt KNO3 25°C 1.0M C K1=5.30 B2= 7.33 1983GJb (24222)1436
 Method: polarography.

Cu++ gl KNO3 37°C 0.10M C I M K1=5.38 B2= 8.37 1982DRa (24223)1437
 $B(\text{CuHL})=7.5$

$B(\text{Cu}(\text{gly})\text{L})=12.27$. Data for 0.10-1.0 M KNO3. At I=0.0 M, K1=6.11,

B2=9.05, B(CuHL)=8.1, B(Cu(gly)L)=12.97

Cu++ vlt KNO3 25°C 1.0M C M K1=5.30 B2= 7.33 1982GVa (24224)1438
B(Cu(en)L)=15.77

Method: polarography. From potentiometric measurements K(H+L)=5.44
Medium: pH 8.0

Cu++ sp diox/w 30°C 50% U M K1=8.25 B2=11.88 1982PPb (24225)1439

Cu++ gl KNO3 25°C 0.10M U I M K1=4.97 B2=7.7 1981DAc (24226)1440
B(CuL(Gly))=12.05

In 10% PrOH, (K1=5.35, B2=8.43, B(MLGly)=12.48). 20% (5.65, 9.04, 12.75),
35% (6.02, 9.74, 13.30) and 45% (6.24, 10.17, 13.63)

Cu++ gl KNO3 25°C 0.20M U M K1=4.81 B2= 7.47 1981M0d (24227)1441
K(CuA+L)=4.27

A is bis(2-imidazolyl)methane

Cu++ vlt NaClO4 25°C 1.00M U K1=5.04 B2=7.49 1981PLa (24228)1442
B3=7.77

Cu++ gl KNO3 30°C 0.25M M K1=5.10 B2= 7.65 1981RKb (24229)1443
Additional method: polarography.

Cu++ gl NaNO3 30°C 0.20M C M K1=4.97 B2= 7.75 1981RSd (24230)1444
K(Cu(asp)+L)=3.28
B(Cu(asp)L)=12.10

H2asp is aspartic acid.

Cu++ gl NaNO3 30°C 0.20M C M K1=4.97 B2= 7.75 1981RSe (24231)1445
B(Cu(ida)L)=12.73
K(Cu(ida)+L)=2.22

Cu++ gl NaClO4 30°C 0.03M C I K1=5.50 B2= 8.35 1981SJd (24232)1446
Data for 0.03-0.11 M NaClO4. At I=0.11 M, K1=5.10, K2=3.37.
Data for 20-80% v/v dioxane/H2O. At 40% and I=0.03 M, K1=8.12, K2=4.91

Cu++ gl KNO3 25°C 0.10M U M K1=5.06 B2=7.85 1980GMB (24233)1447
B(CuHL)=7.29
B(CuLA)=14.13
B(CuLA2)=17.9
B(CuHLA)=17.95

A=histamine

Cu++ gl NaClO4 35°C 0.10M U K1=5.11 B2=8.11 1980MPb (24234)1448

Cu++ gl NaClO4 30°C 0.10M U K1=4.86 B2=8.12 1980NSd (24235)1449

Cu++ gl KNO3 30°C 1.00M U K1=5.00 B2=7.35 1980SGd (24236)1450

Cu++ gl KNO3 25°C 0.20M C HM K1=4.81 B2=7.47 1979MBb (24237)1451
 K(Cu(bpy)+L)=5.12
 DH(K1)=-4.6 kJ mol⁻¹, DH(K2)=-10, DH(Cu(bpy)+L)=-7.5

Cu++ gl KNO3 25°C 0.20M C M K1=4.81 B2= 7.47 1979MBe (24238)1452
 Also many ternary complexes

Cu++ gl NaClO4 30°C 0.10M U I M K1=5.10 B2=8.48 1979SJa (24239)1453
 K(Cu+HL+HA)=10.05
 K(Cu+HL+HB)=8.78
 In 20% dioxan: K1=6.07, K2=4.31, K(Cu+HL+HA)=12.16 and K(Cu+HL+HB)=9.75
 H2A= 5-Sulphosalicylic acid and H2B= 3,5-Dinitrosalicylic acid

Cu++ gl diox/w 30°C 40% U I M K1=7.41 B2=12.72 1979SJa (24240)1454
 K(Cu+HL+HA)=14.82
 K(Cu+HL+HB)=12.60
 In 20% dioxan: K(Cu+HL+HA)=19.28 and K(Cu+HL+HB)=18.22. 60% dioxan: K1=9.33,
 K2=6.64. H2A= 5-Sulphosalicylic acid and H2B= 3,5-Dinitrosalicylic acid

Cu++ gl NaClO4 25°C 0.10M C H K1=5.04 1978GCa (24241)1455
 By calorimetry, DH1=5.9 kJ mol⁻¹, DS1=117 J K⁻¹ mol⁻¹

Cu++ gl diox/w 25°C 50% C I K1=8.11 B2=12.58 1978RZa (24242)1456
 K3=2.2
 Data available for 10 to 50% v/v dioxan/H2O

Cu++ gl alc/w 25°C 25% C I M K1=5.68 B2=9.16 1976DOc (24243)1457
 Medium: 25% PrOH/H2O. B(CuL(isopropylmalonate))=9.99. In 50%:K1=6.45,K2=3.85

Cu++ vlt KNO3 28°C 1.50M U K1=4.88 B2=7.10 1975KNa (24244)1458

Cu++ vlt NaClO4 25°C 1.00M U 1975TQa (24245)1459
 K(Cu+HL)=1.90
 K(Cu+2HL)=2.66

Cu++ gl NaClO4 25°C 0.10M U M 1974SCa (24246)1460
 B(Cu(en)L)=14.78
 K(CuL+en)=9.68
 K(Cu(en)+L)=4.34

en: 1,2-diaminoethane

Cu++ gl NaClO4 25°C 0.10M U M 1974SCa (24247)1461
 B(Cu(pn)L)=13.62
 K(CuL+pn)=8.52
 K(Cu(pn)+L)=3.80

pn: 1,3-diaminopropane

Cu++ gl KNO3 25°C 0.10M C M K1=4.97 B2= 7.67 19730Da (24248)1462
 B(Cu(bpy)L)=13.49
 K(Cu(bpy)+L)=5.31

Cu++	sol	KCl	25°C	0.10M	U	T	K1=5.09		1970GNc (24249)	1463
							K(Cu+HL)=0.90			
30 C: K1=5.14, K(Cu+HL)=0.98; 40 C: K1=5.28, K(Cu+HL)=1.13										
Cu++	gl	NaCl04	25°C	0.10M	U	M	K1=5.10		1970GSa (24250)	1464
							B(CuL(py))=13.37			
Cu++	gl	NaCl04	25°C	0.10M	U		K1=5.04	B2=7.58	19700Va (24251)	1465
Cu++	gl	NaCl04	25°C	1.00M	U	M	K1=4.63	B2=7.66	1969MBb (24252)	1466
							B(CuA(py))=7.26			
Cu++	gl	KNO3	25°C	0.10M	U		K1=5.02	B2=7.94	1969PJb (24253)	1467
Cu++	gl	NaCl04	25°C	0.10M	U		K1=5.04	B2=7.58	19680Va (24254)	1468
							K(Cu+HL)=2.15			
Cu++	gl	NaCl04	30°C	0.20M	U		K1=4.42	B2=7.20	1967AMa (24255)	1469
Cu++	gl	NaCl04	20°C	0.10M	U		K1=5.55		1963CAa (24256)	1470
							K(Cu+HL)=2.76			
Cu++	gl	oth/un	25°C	0.10M	U		K1=5.0		1960YYa (24257)	1471
Cu++	vlt	oth/un	25°C	1.0M	U		B2=7.43		1956GNa (24258)	1472
Cu++	vlt	oth/un	25°C	0.10M	U		K1=5.81	B2=7.73	1956GNa (24259)	1473
Cu++	sp	oth/un	20°C	0.40M	U		B2=4.51		1953BBb (24260)	1474
Cu++	con	oth/un	25°C	->0	U		K1=5.80		1951PJb (24261)	1475
Cu++	EMF	oth/un	25°C	0.04M	U		K1=5.55		1949SDa (24262)	1476
Cu++	ISE	oth/un	25°C	0.02M	U		K1=5.86		1935BJa (24263)	1477
Cu++	con	oth/un	25°C	->0	U		K1=5.60	B2=8.15	1935DAa (24264)	1478
Cu++	con	none	25°C	0.0	U		K1=5.60		1932MDa (24265)	1479
Cu++	con	oth/un	25°C	0.01M	U		K1=5.29		1931IRb (24266)	1480
Cu++	ISE	oth/un	20°C	0.30M	U		B2=7.5		1930RIa (24267)	1481
Cu++	con	oth/un	25°C	.001M	U		K1=5.29		1929RFa (24268)	1482

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
Cu++	gl	NaClO4	20°C	0.10M	U		K1=5.34 K(Cu+HL)=3.62 K(CuH-1L+H)=4.03	1963CAa (24606)	1483

C3H5NO3 H2L (7332)
2-Hydroxyiminopropanoic acid; CH3.C(:NOH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C	I	B2=18.84 B(CuH2L2)=31.76 B(CuHL2)=29.00 B(Cu2L2)=27.15 B(Cu2H-1L2)=21.64	19950Sa (24662)	1484

B(Cu2H-2L2)=11.67. At I=0.2 M: B(CuHL)=16.16, B2=18.68, B(Cu2L2)=27.78 etc.

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
Cu++	gl	NaCl	25°C	0.10M	U		K1=9.85	1990BCa (24666)	1485

C3H5N3O L CAS 140-87-4 (2976)
Cyanoacetohydrazide; NC.CH2.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	oth/un	20°C	0.10M	U		K1=8.4 B2=15.60	1968ZOa (24673)	1486
Cu++	gl	oth/un	20°C	0.01M	U		K1=8.5 B2=15.6	1956ARd (24674)	1487

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
Cu++	gl	KNO3	25°C	0.50M	U		K1=1.63 B2=2.80	1982GLa (24679)	1488

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
Cu++	gl	KNO3	25°C	0.50M	U		K1=1.13 B2=1.36	1982GLa (24685)	1489

C3H5OCl L CAS 5976-47-6 (2977)
2-Chloroallyl alcohol; CH2:C(Cl).CH2.OH

Cu++ sp NaClO4 25°C 2.00M U K1=1.9 B2=3.2 1974JOa (24722)1501

Cu++ gl diox/w 25°C 0.10M U K1=3.13 1969GPb (24723)1502
0.1 M NaClO4 in 50% dioxane/H2O

Cu++ gl diox/w 25°C 50% U K1=3.13 1969SGa (24724)1503
Medium: 50% dioxan, 1.0 NaClO4

C3H5O2F HL (6999)
3-Fluoropropanoic acid;

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

Cu++ gl diox/w 25°C 0.10M U K1=3.00 1969GPb (24740)1504
0.1 M NaClO4 in 50% dioxane/H2O

C3H5O2I HL 3-I-Propionic CAS 141-76-4 (1315)
3-Iodopropanoic acid; I.CH2.CH2.CO0H

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

Cu++ gl NaClO4 20°C 2.00M U K1=2.1 B2=3.5 1981JOa (24745)1505
Spectrophotometry also used.

Cu++ gl diox/w 25°C 0.10M U K1=2.99 1969GPb (24746)1506
0.1 M NaClO4 in 50% dioxane/H2O

Cu++ sol oth/un 25°C ->0 U K1=1.91 1951LWa (24747)1507

C3H6N2OS L CAS 591-08-2 (1423)
N-Acetylthiourea;CH3.CO.NH.CS.NH2

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

Cu++ ISE mixed 25°C 82% U K1=8.23 B2=10.15 1979MTc (24762)1508
B3=11.65

Medium: 82% DMSO/H2O

C3H6N2O2 HL (7333)
2-Hydroxyiminopropanamide; CH3.C(:NOH).CONH2

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

Cu++ gl KNO3 25°C 0.10M C I K1=7.87 1995OSa (24774)1509
B(CuH-1L2)=5.66
B(CuH-2L2)=-4.74
B(Cu2H-1L2)=12.30
B(Cu2H-2L2)=5.66

At I=0.2 M: K1=7.82, B(CuH-1L2)=5.42, B(CuH-2L2)=-5.08, B(Cu2H-1L2)=12.98,
B(Cu2H-2L2)=6.00

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
Cu++	gl	KCl	25°C	0.20M	U			K1=6.04 B2=10.28 B(CuHL)=10.06	1992BKb (24781)	1510

Ligand as H2L

Cu++	gl	KNO3	25°C	0.50M	U			K1=2.87 B2=5.38 B3=7.52 B4=9.32 B5=10.79	1983Gwa (24782)	1511
------	----	------	------	-------	---	--	--	---	-----------------	------

Cu++	gl	KCl	25°C	0.10M	U			K1=3.08 K(Cu+H-1L)=6.29 K(Cu+2H-1L)=10.53	1981BDb (24783)	1512
------	----	-----	------	-------	---	--	--	---	-----------------	------

Cu++	EMF	oth/un	30°C	dil	U			K1=5.5 B2=10.20	1966NHa (24784)	1513
------	-----	--------	------	-----	---	--	--	-----------------	-----------------	------

Cu++	gl	oth/un	25°C	0.01M	U			B2=9.7	1956NEb (24785)	1514
------	----	--------	------	-------	---	--	--	--------	-----------------	------

C3H6N2O2 L Methylglyoxime CAS 2140-03-6 (2981)
Methylglyoxime; CH3.C(:N.OH).CH:N.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	diox/w	25°C	50%	U			K1=10.5 B2=20.6	1958BPa (24798)	1515

C3H6N2O3 H2L (7445)
2-(Hydroxyimino)propanohydroxamic acid; CH3C(:NOH)CONHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C			B2=22.65 B(CuHL2)=29.91 B(CuH-1L2)=12.16 B(Cu2HL2)=37.13 B(Cu2L2)=31.84	1999DDa (24820)	1516

B(Cu2H-1L2)=26.66

Cu++	gl	KNO3	25°C	0.10M	C			B2=22.65 B(CuHL2)=29.91 B(CuH-1L2)=12.16 B(Cu2HL2)=37.13 B(Cu2L2)=31.84	1998DFa (24821)	1517
------	----	------	------	-------	---	--	--	---	-----------------	------

B(Cu2H-1L2)=26.66

C3H6N4S HL CAS 79035-98-6 (6157)

4-Amino-5-mercapto-3-methy-1,2,4-triazole;

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

Cu++	gl	KNO3	30°C	0.10M	U	M	K1=7.93 B2=14.87	1989SRd (24837)	1518
------	----	------	------	-------	---	---	------------------	-----------------	------

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

Cu++	sp	oth/un	27°C	?	U		K1=0.57 B2=-1.83	1963FPa (24851)	1519
------	----	--------	------	---	---	--	------------------	-----------------	------

C3H6O52 HL Xanthic acid CAS 151-01-9 (590)
 (Ethoxy)dithiomethanoic acid; CH3.CH2O.CSSH

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

Cu++	sp	alc/w	25°C	75%	U		B2=9.56	1970BPd (24863)	1520
------	----	-------	------	-----	---	--	---------	-----------------	------

Medium: 75% MeOH, 0.3 M NaClO4

C3H6O2 HL Propionic acid CAS 79-09-4 (35)
 Propanoic acid; CH3.CH2.COOH

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

Cu++	oth	NaClO4	25°C	2.0M	U		K1=1.94	1990FTa (24923)	1521
------	-----	--------	------	------	---	--	---------	-----------------	------

Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.

Cu++	gl	KNO3	25°C	0.20M	M	M	K1=2.82	1988SKd (24924)	1522
------	----	------	------	-------	---	---	---------	-----------------	------

K(Cu(dien)+L)=2.61

K(H+L)=4.71

Cu++	gl	diox/w	25°C	50%	C	M	K1=3.41	1985STb (24925)	1523
------	----	--------	------	-----	---	---	---------	-----------------	------

K(Cu(phen)+L)=3.51

Cu++	gl	KNO3	25°C	0.10M	C	M	K1=1.91	1984DHa (24926)	1524
------	----	------	------	-------	---	---	---------	-----------------	------

K(Cu(phen)+L)=1.93

Cu++	sp	NaClO4	20°C	2.00M	U	M	K1=2.23 B2=3.58	1983JOa (24927)	1525
------	----	--------	------	-------	---	---	-----------------	-----------------	------

K(Cu(bpy)+L)=2.43

Cu++	gl	NaClO4	20°C	2.00M	U		K1=2.2 B2=3.6	1981JOa (24928)	1526
------	----	--------	------	-------	---	--	---------------	-----------------	------

B3=4.96

Spectrophotometry also used.

Cu++	sp	NaClO4	25°C	2.0M	C		K1=1.94 B2= 2.76	1976GFa (24929)	1527
------	----	--------	------	------	---	--	------------------	-----------------	------

Cu++	sp	NaClO4	25°C	2.00M	U		K1=2.2 B2=3.6	1974JOa (24930)	1528
------	----	--------	------	-------	---	--	---------------	-----------------	------

Cu++	sp	NaClO4	25°C	2.00M	U		K1=2.16		1970GFa (24931)1529
Cu++	sp	alc/w	25°C	100%	U		K1=3.32		1970SSf (24932)1530
Cu++	gl	diox/w	25°C	0.10M	U		K1=3.45		1969GPb (24933)1531
0.1 M NaClO4 in 50% dioxane/H2O									
Cu++	vlt	NaClO4	25°C	2.00M	U		K1=1.60 B3=2.30 B4=2.70	B2=2.65	1968FPa (24934)1532
Cu++	gl	diox/w	25°C	50%	U	M	K1=3.45 K(Cu(bpy)+L)=3.60		1968GPd (24935)1533
Medium: 50% dioxan, 0.1 M NaClO4									
Cu++	sp	NaClO4	30°C	0.10M	U		K1=2.06		1968RSc (24936)1534
K1=2.60 by alternative method of calculation									
Cu++	sp	oth/un	35°C	1.65M	U	I	K1=1.43		1967ADd (24937)1535
K1=1.98(I=0), 1.66(I=0.05)									
Cu++	ISE	oth/un	30°C	0.0	U		K1=2.2	B2=3.51	1966AAa (24938)1536
Cu++	sp	oth/un	30°C	0.10M	U		K1=2.3		1965DSa (24939)1537
Cu++	gl	NaClO4	25°C	3.0M	U		K1=1.86	B2=3.00	1964PCa (24940)1538
Cu++	sol	oth/un	25°C	->0	U		K1=2.22		1951LWa (24941)1539

C3H6O2S		HL		CAS 2444-37-3 (1074)					
(Methylthio)ethanoic acid; CH3.S.CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference ExptNo
Cu++	vlt	KN03	25°C	0.20M	C		K1=2.33		1985CEa (25086)1540
Method: differential pulse polarography, using anodically generated Hg++ as indicator ion.									
Cu++	gl	KN03	30°C	1.00M	U		K1=3.4	B2=6.10	19710Ta (25087)1541
Cu++	gl	NaClO4	25°C	1.00M	U		K1=2.40 B3=4.49	B2=4.35	1971SAb (25088)1542

C3H6O2S		H2L		Thiolactic acid		CAS 79-42-5 (366)			
2-Mercaptopropanoic acid; CH3.CH(SH).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference ExptNo
Cu++	gl	NaClO4	30°C	0.10M	U		K1=9.19	B2=17.48	1988NDa (25110)1543

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

```

*****
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	
Cu++	gl	NaCl04	25°C	0.50M	C			K1=2.52 B(Cu2H-1L3)=4.28	1995PLa (25325)	1549	
Cu++	gl	KN03	25°C	0.20M	M	M		K1=1.56 K(Cu(dien)+L)=1.52	1988SKd (25326)	1550	
K(H+L)=3.69											
Cu++	gl	NaCl04	25°C	2.00M	U	H		K1=2.66 K3=0.61	B2=4.28	1978FDa (25327)	1551
Cu++	sol	oth/un	20°C	2.10M	U	M		B(CuL(oxalate))=5.85	1978KUa (25328)	1552	
Cu++	gl	NaCl04	25°C	2.00M	U			K1=2.66 B3=4.89	B2=4.28	1976KGa (25329)	1553
Cu++	gl	NaCl04	30°C	0.20M	U			K1=6.50		1975JBb (25330)	1554
Cu++	gl	NaCl04	25°C	1.00M	C			K1=2.54	B2=4.00	1974BJa (25331)	1555
Cu++	sp	KN03	27°C	1.00M	U			K1=2.26	B2=2.95	1972ADb (25332)	1556
Cu++	sp	NaCl04	25°C	2.00M	U			K1=2.63 B3=5.27	B2=4.10	1972SSa (25333)	1557
Cu++	sol	KCl	25°C	0.10M	U	T		K1=2.36	B2=3.90	1970GNc (25334)	1558
35 C, K1=2.54, K2=0.90; 45 C, K1=2.77, K2=0.31											

Cu++ oth oth/un 25°C 0.07M U I K1=3.01 1968BVa (25335)1559
Method: circular dichroism. K1=3.40(I=0.05)

Cu++ vlt NaCl04 25°C 2.00M U K1=2.54 B2=4.11 1968FPa (25336)1560
B3=4.48
B4=4.11
B5=4.18

Cu++ sp NaCl04 30°C 0.10M U K1=2.06 B2=2.73 1968RSc (25337)1561

Cu++ gl NaCl04 25°C 1.0M U K1=2.49 B2=3.98 1967TGa (25338)1562
K3=0.3

Cu++ sp oth/un 31°C 0.10M U K1=2.55 1965DSa (25339)1563

Cu++ con oth/un 25°C ? U K1=3.02 B2=4.84 1954EMa (25340)1564

Cu++ sp oth/un 18°C 0.04M U B2=2.70 1953BBa (25341)1565

C3H6O3 HL Methoxyacetic CAS 625-45-6 (29)
Methoxyethanoic acid; CH3.O.CH2.COOH

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

Cu++ sp NaCl04 20°C 2.0M C M K1=2.13 B2= 3.65 1981J0b (25588)1566
K(Cu(bpy)+L)=2.28

Cu++ cal NaNO3 25°C 1.00M U H K1=1.83 B2=2.84 1974ARd (25589)1567

Cu++ gl NaCl04 25°C 3.0M U K1=2.01 B2=3.34 1964PCa (25590)1568

Cu++ ISE NaCl04 20°C 1.00M U K1=1.82 B2=2.81 1961SAa (25591)1569
B3=3.1
B4=2.8

Cu++ gl NaCl04 20°C 1.0M U K1=1.82 B2=2.81 1961SMa (25592)1570
B3=3.11
B4=2.8

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

Cu++ sp NaCl04 25°C 2.00M U K1=2.27 B2=3.51 1975PGa (25618)1571
B3=4.80
B4=5.99

Cu++ sp KNO3 ? 2.00M U K1=2.0 1971APa (25619)1572

Cu++ vlt KNO3 ? 1.00M U K1=2.51 1971APa (25620)1573

Cu++ EMF oth/un ? ? U K1=2.85 1971APa (25621)1574

C3H7NO L DMF CAS 68-12-2 (598)
N,N-Dimethylformamide; HCO.N(CH3)2

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

Cu++ sp non-aq 25°C 100% U HM 1992REb (25644)1575

K(CuA+L)=1.49

Medium: Nitromethane/0.1 M NaClO4. A is 1,4,8,11-Tetramethyl-1,4,8,11-Tetra-azacyclotetradecane. DH=-18.9 kJ mol⁻¹, DS=-34.7 J K⁻¹ mol⁻¹.

Cu++ sol oth/un 25°C ? U M 1968GGb (25645)1576

K(CuCl2+L)=1.06

K(CuCl2+2L)=1.46

C3H7NO2 HL Alanine CAS 56-41-7 (86)
2-Aminopropanoic acid; H2N.CH(CH3).COOH

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

Cu++ gl NaNO3 25°C 0.10M C M K1=8.05 B2=14.70 2004SSa (25833)1577

B(CuH-1L)=0.30

B(CuH-2L)=-10.16

B(CuLA)=13.42

B(CuHLA)=17.63

B(CuH-1LA)=6.20. HA is 6-aminopenicillanic acid.

Cu++ gl alc/w 25°C 40% C K1=9.27 B2=16.45 2003DKa (25834)1578

B(CuHL)=11.56

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

Cu++ gl oth/un 25°C 0.10M M M K1=8.13 B2=14.92 2000MOa (25835)1579

B(CuHLA)=26.90

B(CuLA)=19.13

Medium: NaOH. A: 2,2'-Dipicolylamine

Cu++ gl diox/w 25°C 50% M M K1=8.52 B2=16.36 1999HEa (25836)1580

K(CuA+L)=3.99

Medium: 50% v/v dioxane/H2O, 0.1 M NaNO3. H2A: tetracycline.

Cu++ gl alc/w 37°C 40% C M K1=7.74 B2=14.42 1998AAa (25837)1581

B(CuLA)=12.81

K(CuL+A)=5.07

K(CuA+L)=7.16

B(CuLC)=12.63

HC:2[o-hydroxyphenylazo]-2-cyanomethyl benzimidazole. 40% EtOH/H2O, I=0.15

H2A:5-[o-hydroxyphenylazo] barbituric acid. K(CuL+C)=4.89, K(CuC+L)=7.11.

Cu++ gl NaClO4 25°C 0.20M U T M K1=8.21 B2=15.05 1993PPa (25853)1597
K(CuA+L)=7.88

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Cu++ gl KCl 25°C 0.10M C TIH R K1=8.14 B2=14.96 1993SKa (25854)1598
IUPAC evaluation. DH(K1)=-22.2 kJ mol⁻¹, DH(B2)=-47.8. All T
At I=0:K1=8.50, B2=15.56; I=1.0:K1=8.17, B2=14.98.37 C, I=0.15:K1=8.05, B2=14.58

Cu++ gl KNO3 35°C 0.20M C M K1=7.94 1992YKa (25855)1599
B(Cu(edda)L)=18.67
B(Cu(en)L)=17.64
K(Cu(edda)+L)=4.17
K(Cu(en)+L)=9.70

Cu++ gl KNO3 25°C 1.00M C M K1=8.135 B2=14.973 1992Y0a (25856)1600
HA=L-phospho-serine: B(CuLA)=15.318; B(CuL(Ser))=15.158; B(CuL(Tyr))=15.422;
B(CuHL(Tyr))=24.956. HB=L-phospho-tyrosine: B(CuHLB)=20.32, B(CuLB)=15.094

Cu++ gl NaCl 37°C 0.15M U M 1991Hwa (25857)1601
B(CuLA)=12.53
B(CuHLA)=17.35

H2A is 7-oxabicyclo-[2,2,1]-hept-5-ene-2,3-dicarboxylic acid

Cu++ gl NaClO4 25°C 0.20M U M K1=8.13 B2=14.92 1991MBb (25858)1602
B(CuL(catechol))=20.45

Cu++ gl KNO3 25°C 0.10M U K1=8.13 B2=14.92 1990BDa (25859)1603

Cu++ gl KCl 25°C 0.20M C K1=8.082 B2=14.75 1990BMa (25860)1604
Ligand: D-Alanine

Cu++ gl KCl 25°C 0.20M C K1=8.087 B2=14.76 1990BMa (25861)1605
Ligand: L-Alanine

Cu++ gl KCl 25°C 0.16M U K1=8.087 B2=14.761 1990Bmd (25862)1606

Cu++ gl KNO3 25°C 0.10M C H 1990BPa (25863)1607
B(CuL(L-His))=17.80
B(CuHL(L-His))=21.88
B(CuL(D-His))=17.76
B(CuHL(D-His))=21.89
DH(CuL(L-His))=-63.6, DH(CuL(D-His))=-63.3 kJ mol⁻¹.

Cu++ gl NaClO4 30°C 0.20M U K1=9.16 B2=16.16 1990CBb (25864)1608
B(CuL(GlyGly))=14.59
B(CuL(GlyAla))=15.24
B(CuL(GlyLeu))=15.19

Cu++ ISE KNO3 25°C 0.16M C TIH K1=8.290 1990CSd (25865)1609
Method: Cu ion selective electrode. DH(K1)=-17.1 kJ mol⁻¹, DS(K1)=102.

Cu++	gl	KN03	37°C	0.15M	C	M	K1=7.90	B2=14.53	1990KKc	(25866)1610
							B(CuL(imidazole))=11.69			
							B(CuL(imidazole)2)=14.47			
							B(CuL(imidazole)3)=15.96			

A: imidazole

At I=5.0 M NaClO₄: B1=9.05, B2=17.00, B(CuHL)=11.79

H₂A=oxalic acid, H₂C=malonic acid

Cu++ gl diox/w 25°C 80% C I K1=10.56 B2=19.51 1989LTa (25872)1616
Medium: 80% dioxan/H2O, 0.1 M NaNO3. In 70%, K1=10.16, K2=8.65;
50%, K1=9.51, K2=8.00; 30%, K1=8.94, K2=7.48; 100% H2O, K1=8.22, K2=6.84

Cu++ ix NaClO4 27°C 0.50M U K1=6.3 B2=13.50 1987MGA (25874)1618
Many other metal-amino acid stability constants measured using ion exchange.

Cu++ gl alc/w 30°C 50% U T M K1=8.86 1987RSb (25876)1620
K(CuL+A)=9.21
K(CuL+C)=8.04

Medium: 50% EtOH/H₂O, 0.1 M KNO₃. HA=N-methylantranilic acid, HC=N-phenyl-antranilic acid

HA=picolinic acid N-oxide. DH(K1)=-18.2 kJ mol⁻¹, DS=96.0 J K⁻¹ mol⁻¹
DH(CuA+L)=-30.6, DS=42.1

Cu++ gl KNO3 30°C 0.10M U H K1=8.15 1986DRb (25878)1622
Data for 30-50 C. DH(K1)=-18.2 kJ mol⁻¹, D(K1)=-96.0 J K⁻¹ mol⁻¹.

Cu++ ISE KNO3 25°C 0.10M U M K1=8.24 1986DVa (25879)1623
K(CuL+salicylate)=9.47

Cu++ gl KCl 25°C 0.50M C M 1986LEa (25880)1624
B(CuLA)=18.284
HA=1,2-diaminoethane-N-ethanoic acid

Cu++ gl NaCl 37°C 0.15M U M 1986XHa (25881)1625
B(CuL(His))=16.88
B(CuH-1L(His))=6.04

Cu++ cal KNO3 25°C 0.50M C H K1=8.13 B2=14.77 1985AJb (25882)1626
DH(K1)=-26.60 kJ mol⁻¹, DH(B2)=-50.55.

Cu++ gl NaCl 37°C 0.15M U K1=7.876 B2=14.265 1985CFb (25883)1627
B(CuH-1L)=-0.02

Cu++ gl alc/w 25°C 50% U T HM 1985SRc (25884)1628
K(CuA+L)=4.10
A=2-(N,N-diethylaminomethyl)benzimidazole. At 35 C: K=4.56; 45 C: K=4.99.
DH=81 kJ mol⁻¹, DS=348 J K⁻¹ mol⁻¹

Cu++ gl KNO3 25°C 0.10M C M 1985Y0a (25885)1629
B(Cu(phen)L)=17.131
B(Cu(bpy)L)=16.116
B(CuAL)=17.344
B(CuBL)=17.321
B(CuCL)=12.008. A=2-Aminomethyl pyridine, B=Histamine, C=1,2-Diaminobenzene

Cu++ gl NaCl04 37°C 0.15M C M T K1=7.947 B2=14.460 1984BPd (25886)1630
B(CuHL)=10.401
B(CuH-1L2)=2.378
B(CuL(His))=17.000

Cu++ gl KNO3 25°C 0.10M C M K1=8.18 B2=15.01 1984DAb (25887)1631
B(CuLA)=17.38
H2A=Noradrenaline

Cu++ gl KCl 25°C 0.20M C M 1984KDb (25888)1632
K(Cu(Dopamine)+L)=6.84
B(CuHL(Dompamine))=31.06
K(Cu(Adrenaline)+L)=6.67
B(CuHL(Adrenaline))=30.24
K(Cu(Noradrenaline)+L)=6.90, B(CuHL(Noradrenaline))=29.90

Cu++ gl KNO3 25°C 0.10M C H R K1=8.18 B2=14.96 1983ACb (25889)1633

DH(K1)=-22.9; DH(B2)=-50.2 kJ mol⁻¹.

Cu++ vlt KNO3 30°C 0.30M C K1=8.1 B2=14.90 1983APb (25890)1634
Method: polarography. Medium pH 8.0.

Cu++ gl KNO3 30°C 0.10M C T HM K1=8.16 B2=14.98 1983RKa (25891)1635
B(CuAL)=7.04
HA is thiazolidine-4-carboxylic acid. DH(K1)=-21.1 kJ mol⁻¹, DS(K1)=86
J K-1 mol⁻¹; DH(K2)=-29.3, DS(K2)=34; DH(CuAL)=-12.4, DS(CuAL)=94.

Cu++ gl NaClO4 25°C 0.10M C I M K1=8.23 B2=15.05 1983TSa (25892)1636
B(CuLA)=15.22
When I=0.01: K1=8.42, K2=6.95, B(CuLA)=15.57
In 60% dioxan, I=0.01: K1=10.84, K2=8.81, B(CuLA)=20.03. H2A=homocysteic acid

Cu++ gl KCl 25°C 1.0M C 1982NDb (25893)1637
K3=0.57

Cu++ sp diox/w 30°C 50% U M K1=9.01 B2=16.62 1982PPb (25894)1638

Cu++ gl NaClO4 37°C 0.10M U T K1=7.12 B2=12.86 1981NSb (25895)1639

Cu++ gl KNO3 30°C 0.25M M M K1=8.20 B2=14.90 1981Rkb (25896)1640
K(Cu(mal)L)=12.08
Additional method: polarography.

Cu++ gl NaClO4 30°C 0.10M C M T K1=8.09 B2=14.81 1980ASb (25897)1641
Ternary complex with glycyl-sarcosine

Cu++ gl NaClO4 25°C 0.10M U T K1=8.33 B2=15.27 1980FSa (25898)1642

Cu++ gl NaClO4 25°C 0.10M C M 1980FSa (25899)1643
B(Cu(bpy)L)=16.05
K(Cu(bpy)+L)=8.05
B(CuL(phen))=17.17
K(Cu(phen)+L)=7.92

Cu++ gl NaClO4 25°C 0.15M C K1=8.0456 B2=14.819 1980LTa (25900)1644
B(CuH-1L)=0.5602
B(CuH-1L2)=4.2434
B(CuHL)=10.88

Cu++ sp KNO3 30°C 0.25M U M 1980Rka (25901)1645
B(CuL(oxalate))=12.60

Cu++ ISE diox/w 25°C 20% U K1=8.40 B2=15.45 1980YTa (25902)1646

Cu++ gl KNO3 25°C 0.10M C M 1979YSa (25903)1647
B(M(His)L)=17.24

Cu++ gl KCl 25°C 0.20M C M 1977NGa (25904)1648

B(CuH-1LA)=5.17

B(CuH-1LB)=5.12

B(CuH-1LC)=4.84

K(CuH-1L2+A=CuH-1LA+L)=0.71

K(CuH-1L2+B=CuH-1LB+L)=0.50, K(CuH-1L2+C=CuH-1LC+L)=0.72

HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine

Cu++ gl KCl 25°C 0.20M C 1976NGd (25905)1649

K(CuH-1A2+L=CuH-1AL+A)=5.17

K(CuH-1C2+L=CuH-1CL+C)=5.12

K(CuH-1D2+L=CuH-1DL+D)=4.86

HA is glycylglycine; HC is glycyl-DL-alpha-alanine;

HD is DL-alanyl-DL-alanine.

Cu++ gl NaCl04 30°C 0.20M U K1=8.21 B2=15.05 1975JBb (25906)1650

Cu++ gl KCl 25°C 0.20M C I K1=8.04 B2=14.73 1974GNc (25907)1651
In 50% w/w dioxan/H2O, 0.2 M KCl, K1=9.27, K2=7.46, K(CuL+H)=2.40.

Cu++ gl KCl 25°C 0.20M C I K1=8.04 B2=14.73 1974GNe (25908)1652
In 50% w/w dioxan/H2O, 0.20 M KCl, K1=9.27, K2=7.46, K(CuL+H)=2.44.

Cu++ gl KCl 25°C 0.20M U T K1=8.07 B2=14.79 1973GSb (25909)1653

Cu++ sp oth/un 25°C var U 1973Y0a (25910)1654
K(Cu+CuL2=2CuL)=1.77 pH 5.4

Cu++ nmr alc/w var 50% U H 1973Y0a (25911)1655
K(Cu+CuL2=2CuL)=1.43 pH 5.4

DH=3.8 kJ mol⁻¹, DS=47 J K⁻¹ mol⁻¹.

Cu++ gl KCl 25°C 0.05M U M T K1=8.18 B2=14.99 1972GSc (25912)1656
B(CuL(Thr))=15.23
B(CuHL(Tyr))=15.23
B(CuL(Gly))=15.36
B(CuL(Phe))=15.24

B(CuLA)=15.33, B(CuLB)=15.27. HA=norvaline, HB=a-aminobutanoic acid

Cu++ gl KNO3 25°C 0.10M U M K1=8.15 B2=14.82 1972INa (25913)1657
B(CuL(Val))=15.20
B(CuL(Ser))=14.91

Cu++ cal none 25°C 0.00 U M 1972YIa (25914)1658
B(CuLA)=15.77

HA=aminoisobutanoic acid

Cu++ cal KNO3 25°C 0.10M C H 1971BPi (25915)1659
DH(B1)=-51.5 kJ mol⁻¹, For D-His: DH=-51.7, for rac-His: DH=-51.6

Cu++ gl none 25°C 0.00 U T T K1=8.546 B2=15.48 1971GKa (25916)1660
 K1(30 C)=8.474; K2(30 C)=6.830; K1(35 C)=8.437; K2(35 C)=6.795

Cu++ gl KCl 25°C 0.05M U T H T K1=8.174 B2=14.95 1971GKa (25917)1661
 K1(35 C)=8.065, K2(35 C)=6.636
 DH(K1)=-19.7 kJ mol⁻¹, DH(K2)=-25.1, DS(K1)=92 J K⁻¹ mol⁻¹, DS(K2)=42

Cu++ gl NaCl04 25°C 0.20M U T K1=8.18 B2=15.00 1970CBd (25918)1662

Cu++ gl NaCl04 25°C 0.10M U T K1=8.25 B2=15.30 1970GPa (25919)1663

Cu++ gl NaCl04 25°C 0.10M U M 1970GPa (25920)1664
 B(CuL(bpy))=15.99

Cu++ gl KNO3 37°C 0.15M U K1=8.02 B2=14.65 1969CPc (25921)1665
 K(Cu+HL)=1.05
 K(CuL+HL)=0.46

Cu++ oth oth/un 25°C 0.10M U M K1=7.59 B2=14.76 1968BVa (25922)1666
 Method:circular dichroism. Ternary complexes with NTA and salicylic acid

Cu++ gl KNO3 ? 0.20M U 1968GSb (25923)1667
 K3=0.76

Cu++ oth NaCl04 25°C 0.50M U T K1=8.21 B2=15.00 1967RPd (25924)1668
 Method: optical rotation

Cu++ cal KNO3 22°C 0.10M U H 1967SSl (25925)1669
 DH(B2)=-49.7 kJ mol⁻¹, DS=118.7 J K⁻¹ mol⁻¹

Cu++ gl oth/un 40°C 0.0 U T H T K1=8.32 B2=15.08 1966ANb (25926)1670
 K1=8.70(10 C),8.54(25 C); K2=7.26(10 C),6.98(25 C). DH(K1)=-21.3 kJ mol⁻¹,
 DS=91.1 J K⁻¹ mol⁻¹; DH(K2)=-28.4, DS=37.8

Cu++ cal oth/un 25°C 0.02M U T H 1966ANb (25927)1671
 DH(K1)=-22.6 kJ mol⁻¹(10 C),-18.8(25 C),-16.7(40 C); DS=86.9 kJ mol⁻¹,99.5,
 105.8(10,25,40 C). DH(K2)=-23.0,-21.7,-23.6; DS=58.1,59.8,53.9(10,25,40 C)

Cu++ gl KCl 20°C 0.10M U T K1=8.22 B2=15.07 1966GIb (25928)1672

Cu++ gl KNO3 20°C 0.37M U T K1=8.17 B2=15.01 1966SWa (25929)1673

Cu++ gl KCl 40°C 0.20M U T H T K1=8.10 B2=14.61 1965SMb (25930)1674
 K1=8.40(15 C),8.29(25 C); K2=6.86(15 C),6.72(25 C). DH(K1)=-20.5 kJ mol⁻¹,
 DS=87.8 J K⁻¹ mol⁻¹; DH(K2)=-24.2, DS=46

Cu++ oth KNO3 20°C 0.10M U K1=8.5 B2=15.20 1964J0a (25931)1675
 Method: paper electrophoresis

Cu++ gl KCl 20°C 0.10M U T K1=8.15 B2=14.93 1963IPa (25932)1676

 Cu++ gl oth/un 40°C 0.0 U T H T K1=8.34 B2=15.00 1961IWb (25933)1677
 K1=8.95(0 C),8.76(10 C),8.66(20 C),8.56(30 C); K2=7.33(0 C),7.13(10 C),7.02
 (20 C),6.9(30 C). DH(K1)=-23.4 kJ mol⁻¹,DS=85 J K⁻¹ m⁻¹,DH(K2)=-25.9,DS=45.6

Cu++ EMF oth/un 25°C 0.30M U T B2=15.0 1961JWa (25934)1678
 K3=0.05

Method: platinum electrode. Medium: K2SO4

 Cu++ gl oth/un 25°C 3.0M U I K(CuL+H)=0.57 1959CBa (25935)1679

Medium: K2SO4. K=0.72(I=0.375)

 Cu++ oth none 25°C 0.0 U B2=15.54 1956CUa (25936)1680

Cu++ gl oth/un 25°C 0.01M U B2=15.1 1956NEb (25937)1681

Cu++ gl oth/un 25°C ->0 U T K1=8.51 B2=15.37 1951M0a (25938)1682

Cu++ gl oth/un 25°C 0.01M U B2=15.10 1950ALa (25939)1683

Cu++ vlt oth/un 25°C 0.10M U B2=14.82 1950Lda (25940)1684

Cu++ gl oth/un 25°C 0.01M U K1=8.16 B2=14.81 1950MMa (25941)1685

Cu++ sol oth/un 25°C ->0 U T K1=8.40 B2=15.76 1948KEa (25942)1686

Cu++ vlt KNO3 25°C 0.10M U T B2=15.01 1946KEa (25943)1687

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

Cu++ gl alc/w 30°C 40% C M K1=8.20 1997RRd (26361)1688
 K(CuA+L)=7.47

Medium: 40% v/v EtOH/H2O, 0.10 M KNO3.
 HA is 2-(phenylhydrazono)butanoic acid

 Cu++ gl alc/w 30°C 40% M K1=8.86 B2=16.00 1993RRd (26362)1689
 Medium: 40% v/v EtOH/H2O, 0.10 M KNO3.

Cu++ gl KCl 25°C 0.10M C TIH T K1=6.99 B2=12.45 1993SKa (26363)1690
 IUPAC evaluation. DH(B2)=-45.6 kJ mol⁻¹(T)

 Cu++ gl none 30°C 0 M K1=7.28 B2=13.15 1990NKb (26364)1691
 Data also for many N-alkyl substituted analogues of beta-alanine

Cu++ gl NaClO4 25°C 0.20M U M K1=6.71 B2=12.25 1990UBb (26365)1692
 K(CuLA)=10.76

H₂A=oxalic acid, H₂C=malonic acid

$$K(\text{CuC}+\text{L})=7.89$$
$$B(\text{CuH-1L2}) = -1.88$$

DH=58 kJ mol⁻¹, DS=279 J K⁻¹ mol⁻¹

By electrophoresis

$$B(\text{CuLA})=7.28$$

Method: polarography. Medium pH 8.5.

$$K(Cu+OH+L)=13.07$$
$$K(\text{Cu}(\text{mal})\text{L})=10.95$$
$$B(\text{Cu(asp)L}) = 14.78$$

H2asp is aspartic acid.

$$K(\text{Cu}(\text{ida}) + \text{L}) = 4.91$$

ternary complex with glycyl-sarcosine

$$B(\text{CuL(oxalate)}) = 11.72$$

Cu++ gl NaNO3 20°C 0.10M U K1=7.04 B2=12.54 1978LEb (26378)1705

Cu++ gl KCl 25°C 0.20M C 1976NGd (26379)1706

K(CuH-1A2+L=CuH-1AL+A)=4.96

K(CuH-1C2+L=CuH-1CL+C)=5.02

K(CuH-1D2+L=CuH-1DL+D)=4.74

HA is glycylglycine; HC is glycyl-DL-alpha-alanine;

HD is DL-alanyl-DL-alanine.

Cu++ gl NaClO4 25°C 0.10M U M 1974SCa (26380)1707

B(Cu(en)L)=16.58

K(CuL+en)=9.51

K(Cu(en)+L)=6.14

en: 1,2-diaminoethane

Cu++ gl NaClO4 25°C 0.10M U M 1974SCa (26381)1708

B(Cu(pn)L)=13.62

K(CuL+pn)=8.52

K(Cu(pn)+L)=3.80

pn: 1,3-diaminopropane

Cu++ sp oth/un 25°C var U 1973Y0a (26382)1709

K(Cu+CuL2=2CuL)=1.36 pH 5.8

Cu++ nmr alc/w 25°C 50% U H 1973Y0a (26383)1710

K(Cu+CuL2=2CuL)=1.40 pH 5.8

DH=-0.5 kJ mol⁻¹, DS=25 J K⁻¹ mol⁻¹

Cu++ gl NaClO4 25°C 0.10M U M K1=7.07 B2=12.68 1971SHa (26384)1711

B(CuL(bpy))=14.48

Cu++ gl NaClO4 25°C 0.20M U K1=7.69 B2=13.88 1970CBd (26385)1712

Cu++ gl KNO3 25°C 0.10M U T K1=6.99 1969YHa (26386)1713

Cu++ gl KNO3 ? 0.20M U 1968GSb (26387)1714

K3=1.46

Cu++ cal KNO3 22°C 0.10M U HM 1967SSl (26388)1715

DH(B2)=-45.6 kJ mol⁻¹, DS=84.9 J K⁻¹ mol⁻¹. Ternary complexes with NTA

Cu++ gl KCl 40°C 0.20M U T H T K1=6.93 B2=12.15 1965SMb (26389)1716

K1=7.16(15 C), 7.10(25 C); K2=5.59(15 C), 5.40(25 C). DH(K1)=-16.7 kJ mol⁻¹,

DS=83.6 J K⁻¹ mol⁻¹; DH(K2)=-25.1, DS=16.7

Cu++ sp oth/un 25°C 3.0M U I K1=6.55 B2=12.60 1956CUa (26390)1717

K(Cu+HL)=1.20

K(Cu+2HL)=2.31

K(Cu+HL+L)=7.66

I=0.375: K1=7.34, K2=5.48, K(Cu+HL)=1.71+)=1.20, K(Cu+HL+H)=7.96

At I=0 corr: K1=7.68, K2=5.84

Cu++ gl KCl 20°C 0.10M U T K1=7.13 B2=12.60 1954IRa (26391)1718

Cu++ vlt oth/un 25°C 0.10M U T B2=12.89 1954Lda (26392)1719
Medium: KH2PO4

Cu++ gl oth/un 20°C 0.01M U B2=12.9 1950ALa (26393)1720

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

Cu++ gl alc/w 30°C 40% M M K1=9.51 B2=16.55 1988ARb (26515)1721
K(CuA+L)=8.46
B(CuAL)=17.96
Medium: 40% EtOH/H2O, 0.05 M KNO3. HA=acetylacetone

Cu++ sp NaCl 20°C 0.15M U M 1983Vda (26516)1722
K(CuA+L)=6.64
H2A=orotic acid (C5H4N2O4), 2,4-(1H,3H)-pyrimidinedione-6-carboxylic acid

Cu++ gl NaCl04 37°C 0.15M U K1=8.16 B2=15.03 1981NSb (26517)1723

Cu++ gl NaNO3 30°C 0.20M C M K1=8.12 B2=14.83 1981RSd (26518)1724
K(Cu(asp)+L)=6.68
B(Cu(asp)L)=15.50
H2asp is aspartic acid.

Cu++ gl KCl 25°C 0.20M C M 1979KGa (26519)1725
B(CuHLA)=31.06
B(CuLA)=20.62
H2A=dopamine.

Cu++ gl diox/w 25°C 25% U K1=8.45 B2=15.33 1977GKa (26520)1726
In 35%: K1=8.74, B2=15.87; 50%:9.27, 16.73; 65%:9.64, 17.33; 0%:8.07, 14.79

Cu++ gl alc/w 25°C 20% U K1=8.34 B2=15.32 1977GKa (26521)1727
In 40% MeOH/H2O: K1=8.76, B2=15.95; 60%:9.17, 16.63; 75%:9.47, 17.13;
0%: 8.07, 14.79

C3H7NO2 L Methylglycinate CAS 616-34-3 (1738)
Glycine methyl ester; NH2.CH2.COOCH3

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

Cu++ gl NaNO3 25°C 0.10M M M 1997SKc (26550)1728
K(CuH-1A+L)=2.65
HA is glycyl-DL-leucine.

 Cu++ gl oth/un 25°C 0.15M U K1=3.84 1956Wmb (26551)1729

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

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

Cu++ gl oth/un 25°C 0.10M M M K1=7.94 B2=14.59 2000MOa (26574)1730
 B(CuHLA)=25.64
 B(CuLA)=18.46

Medium: NaOH. A: 2,2'-Dipicolylamine.

 Cu++ gl NaClO4 21°C 0.10M M K1=7.83 B2=14.57 1985LWb (26575)1731
 B(CuHL)=11.49
 B(CuH-1L)=-0.31

Values in 50% methanol-water (v/v) are also given.

 Cu++ gl KCl 25°C 1.0M U K1=7.80 B2=14.24 1983DPa (26576)1732
 K3=13.78
 B(CuH-1L2)=2.94

 Cu++ gl KNO3 25°C 0.10M C M K1=7.68 B2=14.16 1977DOa (26577)1733
 B(CuL(Gly))=14.94
 B(CuL(Thr))=14.70

 Cu++ gl KNO3 25°C 0.10M U M 1972IVc (26578)1734
 K(CuA+L)=5.73

H2A=methyliminodiethanoic acid

 Cu++ gl oth/un 30°C 0.0 U T H K1=8.12 B2=14.88 1964ICa (26579)1735
 At 20 : , K1=8.16, K2=6.89, By calorimetry:(25 C): DH(K1)=-19.2 kJ mol⁻¹
 DS=92.0 J K⁻¹ mol⁻¹; DH(K2)=-22.6, DS=54.3

 Cu++ gl oth/un 25°C 1.0M U I K1=7.84 B2=14.34 1960KFb (26580)1736
 When I=0.015 M: K1=8.08, K2=6.70

 Cu++ gl oth/un 25°C 0.01M U K1=7.83 B2=14.44 1959DLc (26581)1737

 Cu++ gl NaClO4 25°C 0.10M U K1=7.94 B2=14.59 1954BCb (26582)1738

C3H7NO2 HL (6927)
 N-Methylacetohydroxamic acid; CH3.CO.N(OH)CH3

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

Cu++ gl KCl 25°C 0.20M C M 2000FEa (26613)1739
 B(Cu(en)L)=17.07
 B(Cu(bpy)L)=16.67
 B(Cu(gly)L)=14.36

B(Cu(dien)L)=19.30

K(Cu(terpyridine)+L)=3.89.

Cu++ gl KCl 25°C 0.20M C K1=7.40 B2=13.30 2000FEc (26614)1740

Cu++ sp NaClO4 25°C 2.0M C 1999BGa (26615)1741

K(Cu+HL=CuL+H)=-0.801

C3H7NO2

HL

(7502)

Propanohydroxamic acid; C2H5CONHOH

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

Cu++ gl KCl 25°C 0.20M C K1=7.889 B2=14.32 2000FEc (26627)1742

B(CuH-1L2)=5.32

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

Cu++ gl NaClO4 20°C 0.15M U 1963HPa (26691)1743

K(Cu+HL)=7.00

K(Cu+2HL)=13.72

B(Cu2L)=14.00

K(2Cu+L+HL)=21.33

B(Cu2L2)=28.05, K(2Cu+2HL+L)=28.05

Cu++ vlt oth/un 25°C 0.17M U B2=16.0 1961KPa (26692)1744

Medium: phosphate buffer

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

Cu++ gl NaNO3 25°C 0.10M C M K1=7.87 B2=14.28 2004SSa (26950)1745

B(CuH-1L)=1.08

B(CuH-2L)=-9.31

B(CuLA)=12.13

B(CuHLA)=16.75

B(CuH-1LA)=5.20. HA is 6-aminopenicillanic acid.

Cu++ gl alc/w 25°C 40% C K1=9.42 B2=16.42 2003DKa (26951)1746

B(CuHL)=12.12

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

Cu++ gl NaNO3 25°C 0.10M M M K1=8.38 B2=15.45 2002SKa (26952)1747

B(CuH-1L)=0.50

B(CuAL)=17.53

B(CuAH-1L)=8.09

A is picolylamine

Cu++ gl oth/un 25°C 0.10M M M K1=7.89 B2=14.48 2000MOa (26953)1748
B(CuLA)=18.27

Medium: NaOH. A: 2,2'-Dipicolylamine.

Cu++ gl KNO3 25°C 0.10M C M K1=7.23 1999AAa (26954)1749
K(CuL+A)=3.98
B(CuLA)=11.21
K(CuL+B)=3.54
B(CuLB)=10.77

K(CuL+C)=3.68, B(CuLC)=10.91, K(CuL+D)=3.46, B(CuLD)=10.69.

HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.

Cu++ gl diox/w 25°C 50% M M K1=8.40 B2=16.30 1999HEa (26955)1750
K(CuA+L)=3.90

Medium: 50% v/v dioxane/H2O, 0.1 M NaNO3. H2A: tetracycline.

Cu++ gl KNO3 25°C 0.10M U M K1=7.95 B2=14.52 1998SYa (26956)1751
B(CuAL)=11.37
B(CuH-1AL)=4.86

HA is 2,3,4-trihydroxybutanoic acid (threonic acid).

Cu++ gl KNO3 25°C 0.10M U M 1997LZa (26957)1752
B(CuLA)=22.56
B(CuHLA)=27.93

Data for 3-methoxybenzyl, 5-Br-2-hydroxybenzyl & 3,5-diBr-2-hydroxybenzyl.

HA=6-(2'-Hydroxybenzyl)-1,4,8,11-tetraazacyclotetradecane-5,7-dione.

Cu++ gl NaNO3 25°C 0.10M M M K1=8.03 B2=14.65 1997SKc (26958)1753
B(CuAL)=13.39
B(CuH-1AL)=5.69

HA is glycyl-DL-leucine.

Cu++ gl KNO3 25°C 0.10M M M K1=8.16 1996AEa (26959)1754
Data for ternary complexes with dipicolinic acid.

Cu++ gl KNO3 25°C 0.10M C TI R K1=7.90 B2=14.49 1995BEa (26960)1755
IUPAC evaluation. I=0.05 M: K1=7.93, B2=14.57

Cu++ gl KNO3 35°C 0.20M C M K1=7.80 B2=14.54 1994YVa (26961)1756
B(Cu(P207)L)=15.32
B(Cu(P3010)L)=14.25

Cu++ gl NaCl 37°C 0.15M C M T K1=7.748 B2=14.083 1993BAa (26962)1757
B(CuHL)=10.03
B(CuH-1L2)=4.29
B(CuL(His))=16.97
B(CuHL(His))=20.87

B(CuL(His)2)=19.97, B(CuHL(His)2)=28.44

Cu++ gl NaClO4 25°C 0.20M U T M K1=8.33 B2=15.29 1993PPa (26963)1758
K(CuA+L)=7.41

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Cu++ gl KNO3 35°C 0.20M C M K1=7.80 1992YKa (26964)1759
B(Cu(edda)L)=18.63
B(Cu(en)L)=17.25
K(Cu(edda)+L)=4.13
B(Cu(en)+L)=9.45

Cu++ gl KNO3 25°C 1.00M C M K1=7.821 B2=14.428 1992Y0a (26965)1760
B(CuL(Ala))=15.158
B(CuL(Arg))=14.645
B(CuHL(Lys))=25.486

Cu++ ISE KNO3 25°C 0.16M C TIH K1=7.991 1990CSd (26966)1761
Method: Cu ion selective electrode. DH(K1)=-15.7 kJ mol⁻¹, DS(K1)=100.
J K⁻¹ mol⁻¹. Data for 35 and 45 C and for 30% and 50% v/v EtOH/H2O.

Cu++ gl KNO3 25°C 0.10M U I K1=8.08 B2=13.31 1990RAb (26967)1762
Data also for 10% w/w EtOH/H2O (K1=8.38; B2=14.25) and 25% (8,77; 15.31)

Cu++ gl NaClO4 25°C 3.00M M K1=8.55 B2=16.02 1988BFa (26968)1763
B(CuHL)=10.90

Cu++ gl NaClO4 25°C 0.10M C M K1=7.95 B2=14.52 1988CLa (26969)1764
B(CuL(acetylglycinate))=10.30

Cu++ cal NaClO4 25°C 0.10M C H 1988LGa (26970)1765
DH(K1)=-26.1 kJ mol⁻¹, DH(K2)=-27.3 kJ mol⁻¹. For HA=N-acetylglycine,
DH(B(CuAL))=-24.2 kJ mol⁻¹, DS(B(CuAL))=116 J K⁻¹ mol⁻¹.

Cu++ EMF NaClO4 25°C 3.00M C K1=8.55 B2=16.02 1987BFb (26971)1766
B(CuHL)=10.90

Cu++ gl KCl 25°C 0.20M C H K1=7.81 B2=14.24 1987KSa (26972)1767
B(CuH-1L2)=4.09
B(CuH-2L2)=-7.06
DH(K1)=-22.6 kJ mol⁻¹, DS=74 J K⁻¹ mol⁻¹; DH(B2)=-52.1, DS=98

Cu++ gl NaClO4 37°C 0.15M U M K1=7.84 B2=14.29 1987SNc (26973)1768
B(CuL(Asn))=16.72
K(Cu(Asn)+L)=8.83
K(CuL+Asn)=8.88

Cu++ gl NaCl 25°C 0.25M C K1=7.781 B2=14.295 1984A0a (26974)1769

Cu++ ISE KNO3 25°C 0.10M C M K1=8.11 B2=14.69 1984PDb (26975)1770

$$K(\text{Cu}(\text{nta})+\text{L})=4.96$$

Method: Cu ion selective electrode.

Cu++ sp NaCl 20°C 0.15M U M 1983VDa (26976)1771

$$K(\text{CuA}+\text{L})=6.49$$

H2A=orotic acid (C5H4N2O4), 2,4-(1H,3H)-pyrimidinedione-6-carboxylic acid

Cu++ gl NaClO4 37°C 0.15M C K1=8.034 B2=14.36 1982BKc (26977)1772
B(CuH-1L2)=4.832
B(CuHL)=10.645

Cu++ gl KNO3 30°C 0.25M M M K1=7.56 B2=14.01 1981RKb (26978)1773
K(Cu(mal)L)=11.41

Additional method: polarography.

Cu++ gl NaNO3 30°C 0.20M C M K1=7.84 B2=14.31 1981RSd (26979)1774
K(Cu(asp)+L)=6.48
B(Cu(asp)L)=15.30

H2asp is aspartic acid.

Cu++ gl NaNO3 30°C 0.20M C M K1=7.84 B2=14.31 1981RSe (26980)1775
B(Cu(ida)L)=15.86
K(Cu(ida)+L)=5.35

Cu++ gl KNO3 25°C 0.10M U K1=7.92 B2=14.73 1981SHd (26981)1776
B(CuH-1L2)=4.37
B(CuH-2L2)=-6.77
*K(CuL2)=-10.35

Cu++ gl NaClO4 30°C 0.10M C M K1=7.85 B2=14.43 1980ASb (26982)1777
ternary complex with glycyl-sarcosine

Cu++ sp KNO3 30°C 0.25M U M 1980RKa (26983)1778
B(CuL(oxalate))=11.99

Cu++ vlt NaClO4 30°C 0.10M C B2=14.9 1980RSd (26984)1779
B3=18.26

Method: polarography.

Cu++ ISE diox/w 25°C 20% U K1=8.14 B2=14.98 1980YTa (26985)1780

Cu++ vlt KNO3 25°C 0.50M U T H K1=7.88 B2=15.50 1979SSc (26986)1781

Cu++ gl KNO3 25°C 0.10M C M 1979YSa (26987)1782
B(Cu(His)L)=17.09

Cu++ gl KNO3 25°C 0.10M U M T K1=7.858 B2=14.428 1977BP a (26988)1783
B(CuL(His))=17.20

Cu++ gl KCl 25°C 0.20M C M 1977NGa (26989)1784

$B(\text{CuH-1LA})=4.94$
 $B(\text{CuH-1LB})=5.07$
 $B(\text{CuH-1LC})=4.86$
 $K(\text{CuH-1L2+A=CuH-1LA+L})=0.48$
 $K(\text{CuH-1L2+B=CuH-1LB+L})=0.44$, $K(\text{CuH-1L2+C=CuH-1LC+L})=0.73$
 HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine

Cu++ gl KCl 25°C 0.20M C 1976NGd (26990)1785
 $K(\text{CuH-1A2+L=CuH-1AL+A})=4.94$
 $K(\text{CuH-1C2+L=CuH-1CL+C})=5.07$
 $K(\text{CuH-1D2+L=CuH-1DL+D})=4.86$

HA is glycylglycine; HC is glycyl-DL-alpha-alanine;
 HD is DL-alanyl-DL-alanine.

Cu++ gl KNO3 25°C 0.10M C H T K1=7.86 B2=14.43 1976PSa (26991)1786
 Stereoselectivity in DH, not in K. DH(CuL2)=-53.6 kJ mol⁻¹ (DL-Ser=-52.8)

Cu++ gl KNO3 25°C 1.00M U 1975JPa (26992)1787
 $K(\text{CuHL2+H})=10.03$
 $K(\text{CuL2+H})=10.95$

Cu++ gl NaCl 25°C 0.15M U M K1=8.01 B2=14.59 1973KSb (26993)1788
 $B(\text{Cu+2L=CuH-1L2+H})=4.77$
 $B(\text{CuL(His)})=17.54$
 $B(\text{CuHL(His)})=21.70$
 $K(\text{Cu+2L=CuH-2L2+2H})=-6.18$, $K(\text{Cu+L+His=CuH-1L(His)+H})=6.90$

Cu++ gl KNO3 37°C 0.15M U M K1=7.57 B2=14.01 1973SKb (26994)1789
 $B(\text{CuL(en)})=16.87$
 $B(\text{CuLA})=16.27$

A=histamine

Cu++ gl NaCl04 25°C 3.00M U K1=8.95 B2=16.23 1973WIa (26995)1790

Cu++ sp oth/un 25°C var U 1973Y0a (26996)1791
 $K(\text{Cu+CuL2=2CuL})=1.50$ pH 5.3

Cu++ nmr alc/w var 50% U H 1973Y0a (26997)1792
 $K(\text{Cu+CuL2=2CuL})=1.36$ pH 5.3

DH=1.6 kJ mol⁻¹, DS=34 J K⁻¹ mol⁻¹

Cu++ gl KCl 25°C 0.05M U T T K1=7.93 B2=14.48 1972GMb (26998)1793
 $K1(20\text{ }^\circ\text{C})=7.97$, $K2=6.65$; $K1(30\text{ }^\circ\text{C})=7.88$, $K2=6.49$; $K1(35\text{ }^\circ\text{C})=7.80$, $K2=6.39$

Cu++ gl KCl 25°C 0.05M U M T K1=7.93 B2=14.57 1972GSc (26999)1794
 $B(\text{CuL(Thr)})=14.95$
 $K(\text{Cu+L+HTyr})=14.96$
 $B(\text{CuL(Gly)})=15.10$

$K(\text{CuL(Ala)})=15.12$, $K(\text{CuL(Phe)})=15.00$, $K(\text{CuLA})=15.06$, $K(\text{CuLB})=15.13$
 HA=a-aminobutanoic acid, HB=norvaline


```

-----
Cu++      gl  KNO3   25°C 0.10M U      K1=7.92   B2=14.57  1972INa (27000)1795
-----
Cu++      sp  oth/un  ?      ?      U      K1=8.1    B2=15.04  1972JPa (27001)1796
-----
Cu++      cal KCl    25°C 0.05M U   H   T   K1=7.93   B2=14.67  1971GNa (27002)1797
DH(K1)=-230.1 kJ mol-1, DH(K2)=-180.7, DS(K1)=75 J K-1 mol-1, DS(K2)=38
-----
Cu++      gl  oth/un 25°C 0.16M U      K1=7.85   B2=14.50  1970LBa (27003)1798
-----
Cu++      gl  KNO3   40°C 0.20M U T H   K1=7.73   B2=14.06  1968RMb (27004)1799
K1=8.02(15 C),7.89(25 C); K2=6.62(15 C),6.51(25 C)
DH(B2)=-40.1 kJ mol-1, DS=142.1 J K-1 mol-1
-----
Cu++      gl  KNO3   37°C 0.15M U   M   K1=7.565  B2=14.012 1967PSc (27005)1800
K(CuA+L)=6.41
K(Cu(en)+L)=6.70
K(CuB+L)=6.94

```

H2A=salicylic acid, B=histamine

```

-----
Cu++      cal KNO3   22°C 0.10M U   H                               1967SSl (27006)1801
DH(B2)=-58.9 kJ mol-1, DS=79.4 J K-1 mol-1
-----
Cu++      gl  oth/un 25°C 0.10M U   I      K1=7.57   B2=13.32  1964SYa (27007)1802
I=0 M: K1=8.40,K2=6.10; I=0.01: K1=8.20,K2=6.06; I=0.02: K1=8.0,K2=6.02;
I=0.05: K1=7.65,K2=5.85
-----
Cu++      vlt oth/un 25°C 0.10M U      B2=14.54      1952LDa (27008)1803
-----
Cu++      gl  oth/un 20°C 0.01M U      B2=14.60      1950ALa (27009)1804
*****
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
Cu++	gl	KNO3	25°C	0.50M	U		K1=4.88	1985WTa	(27206)1805
Cu++	gl	KNO3	30°C	0.20M	M		K1=6.44 B2=11.96	1984JMa	(27207)1806

		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
Cu++	gl	KCl	25°C	0.20M	C	H	K1=6.42	1987KSa	(27219)1807
							B(CuHL)=10.92		
							B(Cu2H-2L2)=8.13		
							B(CuH-2L2)=-6.50		
		DH(K1)=-23.1 kJ mol-1, DS=45 J K-1 mol-1; DH(Cu2H-2L2)=-28.3, DS=76							

 Cu++ cal KCl 25°C 0.10M U H 1980BDb (27220)1808
 B(CuH2L)=24.120
 B(Cu2L2)=34.568
 DH(CuH2L)=-53.43 kJ mol⁻¹, DH(Cu2L2)=-118.40.

Cu++ gl KCl 25°C 0.10M U B2=19.462 1976BMe (27221)1809
 B(CuH2L)=24.120
 B(Cu2L2)=34.568
 K(Cu+L=CuH-1L+H)=3.169

Cu++ gl oth/un 25°C 0.16M U K1=7.31 B2=14.37 1970LBa (27222)1810

 C3H7NO3 HL CAS 13782-57-5 (4235)
 N-Hydroxy-beta-alanine; HO.NH.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		K1=12.85 B(Cu5H-4L4)=46.66	1991KF a (27235)	1811

C3H7NO5S		H2L						CAS 23537-25-9	(2603)
2-Amino-3-sulfonatopropanoic acid; HO3S.CH2.CH(NH2).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	37°C	0.15M	U		K1=8.60 B2=14.58	1997NAb (27240)	1812
Cu++	gl	KNO3	25°C	0.50M	U		K1=7.90 B2=14.00	1979DZb (27241)	1813

C3H7NS2		HL						CAS 128-04-1	(2125)
Dimethyldithiocarbamic acid; (CH3)2N.CSSH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	EMF	non-aq	25°C	100%	U		B2=17.6	1987USa (27263)	1814
Medium: DMF, 0.1 M LiClO4									

Cu++ sp alc/w 20°C 52% U I K1=13.2 B2=25.70 1957JAa (27264)1815
 Medium: 51.7% EtOH. in 75% EtOH: K1=14.4, K2=13.4. In 89%: K1=15.4, K2=14.1.
 In aqueous: K1=11.4, K2=10.3

Cu++ sp alc/w 20°C 89% U I K1=15.4 B2=29.50 1956JAa (27265)1816
 Medium: 89% EtOH, 0.01 M NaOH. K1=11.4(0%), 13.2(51.7%), 14.4(75%);
 K2=10.3(0%), 12.5(51.7%), 13.3(75%)

 C3H7N3O2 HL Glycocyamine CAS 352-97-6 (2909)
 Guanidinethanoic acid; H2NC(:NH)NH.CH2.COOH

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

$$B(\text{CuH-2L}) = -10.70$$

C3H8NO5P H3L 3-Phosphono-Ala CAS 20263-06-3 (1509)
2-Amino-3-phosphonatopropionic acid; (H2O3P)CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		K1=9.60 B2=15.49 B(CuHL)=15.51 B(CuH2L2)=29.1 B(CuHL2)=22.4	1989KFb	(27340)1824

Cu++	gl	KNO3	25°C	0.20M	C		K1=10.36 B2=16.70 K(Cu+HL)=5.11	1978MAb	(27341)1825
------	----	------	------	-------	---	--	---------------------------------------	---------	-------------

C3H8NO5P H3L CAS 23052-80-4 (1508)
3-Amino-3-phosphonatopropionic acid; (H2O3P)(NH2)CH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		K1=9.34 B2=16.15 B(CuH2L)=18.01 B(CuHL)=14.20	1989KFb	(27356)1826

C3H8NO5P H3L Glyphosate CAS 1071-83-6 (1617)
N-(Phosphonomethyl)glycine; H2O3P.CH2.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.10M	C	I R	K1=11.90 B2=16.00 B(CuHL)=15.9	2001PRa	(27376)1827

IUPAC Recommended value

Cu++	gl	KCl	25°C	0.20M	C		K1=11.68 B2=16.42 B(CuHL)=15.53 B(CuH2L2)=29.37 B(CuH-1L)=2.16 B(CuHL2)=24.61	1997BKb	(27377)1828
------	----	-----	------	-------	---	--	--	---------	-------------

Cu++	gl	KNO3	25°C	0.10M	C	T H	K1=11.80 B2=15.86 B(CuHL)=15.71 B(CuH-1L)=1.89 B(Cu2L)=13.05	1997DSb	(27378)1829
------	----	------	------	-------	---	--------	--	---------	-------------

Data at 5-45 C. By calorimetry: DH(K1)=-10.9 kJ mol⁻¹, DS=192.2 J K⁻¹ mol⁻¹.
DH(B2)=-32.7, DS=195.3; DH(CuHL)=-4.5, DS=286.3; DH(CuH-1L)=20.4, DS=104.8.

Cu++	gl	KCl	25°C	0.20M	C		K1=11.68 B2=16.42 B(CuHL)=15.35 B(CuH-1L)=2.16 B(CuH2L2)=29.37	1994JKa	(27379)1830
------	----	-----	------	-------	---	--	--	---------	-------------

$$B(\text{CuHL2}) = 24.61$$

Cu++ gl KNO3 25°C 0.1M C K1=11.93 B2=16.02 1985Mma (27380)1831
B(CuHL)=15.85
K(CuL(OH)+H)=2.06

Cu++ gl KNO₃ 25°C 0.10M M K₁=11.92 1978LCA (27381)1832
K(CuL+H)=4.05

C3H8N06P H3L Phosphoserine CAS 17885-08-4 (1865)
Serine dihydrogenphosphate, O-Phosphoserine; NH2.CH(CH2.OP03H2).COOH

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

Cu++ gl KCl 25°C 0.10M U K1=6.71 1997ZTa (27426)1833
B(CuHL)=13.77

Cu++ gl KN03 25°C 0.10M C M K1=9.578 B2=15.656 1992Y0a (27427)1834
B(CuHL)=14.781
B(CuL(Ala))=15.631; B(CuHL(Arg))=21.16 , B(CuL(Arg))=15.614
B(CuH2L(Lys))=31.40, B(CuHL(Lys))=26.066

Cu++ g1 KNO₃ 25°C 0.10M C M K1=9.756 B2=15.869 1985Y0a (27428)1835
B(CuHL)=14.901
B(CuH(phen)L)=23.783
B(Cu(phen)L)=18.015
B(CuH(bpy)L)=22.655
B(Cu(bpy)L)=16.870, B(CuH(en)L)=24.621, B(Cu(en)L)=18.955

Cu++ gl KN03 15°C 0.15M C K1=9.57 B2=15.88 1983MBa (27429)1836
 K(Cu+HL)=4.67

Data for LL. For DL: K1=9.56, K2=6.25, K(Cu+HL)=4.67

Cu++ g^l KNO₃ 25°C 0.20M C M K₁=9.40 B₂=15.35 1979MBa (27430)1837
K(Cu+HL)=4.75
B(CuH(histamine)L)=23.49
K(Cu(histamine)+L)=8.23
K(Cu(phen)+HL)=4.28
K(Cu(phen)+L)=8.30, K(Cu(bpy)+HL)=4.38, K(Cu(bpy)+L)=8.34

Cu++ g1 KNO3 25°C 0.20M C K1=9.38 B2=15.38 1978MAb (27431)1838
K(Cu+HL)=4.72

Cu++ g1 KN03 25°C 0.20M C K1=9.38 B2=15.38 1978MAc (27432)1839
K(Cu+HL)=4.72
K(CuL+H)=5.06

Cu++ gl KN03 30°C 0.10M C M K1=9.32 B2=15.16 1978MAd (27433)1840
K(Cu+HL)=5.0

Cu++ gl KCl 25°C 0.15M U K1=9.64 B2=15.52 19590Sa (27434)1841
K(Cu+HL)=4.81

Cu++ gl oth/un 25°C 0.15M U K1=9.6 19570Sa (27435)1842

C3H8N2O L Alaninamide CAS 2726-84-5 (5392)
Alaninamide, 2-Aminopropanoic acid amide; NH2.CH(CH3).CO.NH2

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

Cu++ sp none 25°C 0.0 U K1=5.07 B2=8.90 1985GMa (27480)1843
B(CuH-1L)=-2.14
B(CuH-1L2)=1.95
B(CuH-2L2)=-6.19
B(CuH-2L)=-10.87

Cu++ gl KCl 25°C 0.50M C M K1=5.07 B2=8.99 1982GSd (27481)1844
K(CuH-1L+H)=7.22
K(CuH-1L2+H)=6.97
K(CuH-2L2+H)=8.16

Ternary complex with diethylenetriamine

C3H8N2O L Sarcosine amide CAS 6250-76-6 (2982)
Sarcosine amide; CH3.NH.CH2.CO.NH2

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

Cu++ gl oth/un 25°C 0.01M U K1=4.23 B2=8.88 1959DLb (27487)1845

C3H8N2O L CAS 4726-85-6 (4236)
beta-Alaninamide; H2N.CH2.CH2.CO.NH2

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

Cu++ gl NaCl04 25°C 0.10M M M K1=5.63 1981SPd (27493)1846
K(CuLOH+H)=6.78
K(Cu(bpy)+L)=5.25
K(CuH-1L(bpy)+H)=6.9

Cu++ gl KNO3 25°C 0.10M U K1=5.09 B2=9.59 1971YMa (27494)1847

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

Cu++ gl KNO3 20°C 0.10M C M K1=11.54 B2=19.13 1997LBc (27511)1848
B(CuHL)=15.48
B(CuHL2)=25.05
B(CuH2L2)=29.82

$$B(\text{CuH-1(dien)L})=9.43$$
$$B(\text{CuH}_2\text{AL}) = 26.92$$
$$B(\text{CuAL}) = 18.46$$
$$B(\text{CuHAL}) = 23.28$$
$$K(\text{CuA}+\text{L})=9.86$$

K1=11.136 B2=20.057 1993MOa (27513)1850

$$B(\text{CuHL}) = 15.683$$
$$B(\text{CuH}_2\text{L}_2) = 29.952$$
$$B(\text{CuHL2}) = 25.375$$
$$B(\text{CuL}(\text{Ala})) = 17.906$$
$$B(\text{CuL}(\text{Val}))=17.710$$

K1=10.61 B2=20.18 1992RAc (27514)1851

$$B(\text{CuHL}) = 15.37$$
$$B(\text{CuH}_2\text{L}_2) = 30.16$$
$$B(\text{CuHL2}) = 25.32$$
$$B(CuL_2Ni) = 23.98$$

1990NTb (27515)1852

$$B(\text{Cu}(\text{glu})\text{HL}) = 25.03$$
$$K(\text{Cu}(\text{glu}) + \text{H} + \text{L}) = 16.51$$
$$K(\text{CuHL}+\text{glu})=9.66$$

K1=9.87 B2=18.67 1988CHc (27516)1853

$$B(\text{CuHL}) = 14.72$$
$$B(\text{CuHL2}) = 24.06$$
$$B(\text{CuH}_2\text{L}_2) = 28.72$$
$$B(\text{CuH-1L})=2.15$$

captopril

1987SNC (27517)1854

$$B(\text{CuHL}(\text{Asn})) = 22.87$$
$$B(\text{CuL}(\text{Asn}))=17.67$$
$$K(\text{Cu(Asn)}+\text{H}+\text{L})=14.98$$
$$K(\text{CuHL}+\text{Asn})=7.50$$

K1=10.61 B2=20.18 1985NAc (27518)1855

$$B(\text{CuH}_2\text{L}_2) = 30.16$$
$$B(\text{CuHL}) = 15.37$$
$$B(CuHL2)=25.32$$

1982NSd (27519)1856

$$B(\text{Cu}(\text{imidazole})_2\text{L})=17.61$$

Cu++	gl	NaCl04	37°C	0.15M	U	M	1982NVb (27520)1857
							B(CuH2(histamine)L)=29.37
							B(CuH(histamine)L)=24.75
							B(Cu(histamine)L)=19.19

Cu++	gl	NaCl	37°C	0.15M	C	M	K1=10.587 B2=18.775 1981JMa (27521)1858
							B(CuL(His))=18.47
							B(CuHL)=14.973
							B(CuHL(His))=24.41
							B(CuHL2)=24.088
B(CuH2L(His))=28.09, B(CuH2L)=28.20							

Cu++	gl	NaCl04	37°C	0.15M	U	M	K1=10.61 B2=20.18 1981NSa (27522)1859
							B(CuHL)=15.37
							B(CuH2L2)=30.16
							B(CuHL2)=25.32

Cu++	gl	KCl	25°C	0.20M	C		K1=10.62 B2=19.81 1978GFa (27523)1860
							B(CuHL)=15.6
							B(Cu2H2L2)=30.09
							B(CuHL2)=25.31

Cu++	gl	KNO3	25°C	0.10M	C		K1=10.51 B2=19.83 1976BPb (27524)1861
							B(CuHL)=15.55
							B(CuH2L2)=30.06
							B(CuHL2)=25.34

Cu++	gl	oth/un	25°C	0.10M	U		K1=11.46 B2=19.95 1971HMD (27525)1862

Cu++	gl	none	25°C	0.00	U		1971HMD (27526)1863
							K(Cu+HL)=6.31
							K(Cu+L+HL)=15.74

Cu++	gl	KCl	25°C	0.50M	U		K1=6.2 B2=11.20 1969MMd (27527)1864

Cu++	gl	KCl	25°C	0.10M	U		K1=11.46 B2=19.95 1968HMa (27528)1865
							K(Cu+HL)=6.31
							K(Cu+HL+L)=15.74

Cu++	gl	oth/un	20°C	0.02M	U		K1=12.02 B2=20.34 1968HMa (27529)1866
							K(Cu+HL)=6.64
							K(Cu+HL+L)=16.14
Calculated from data of A. Albert, Biochem.J.,1952,50,690							

Cu++	gl	oth/un	25°C	0.10M	U	M	K1=10.6 B2=19.00 1968HMB (27530)1867
							B(CuLA)=23.91

A=2,3-diaminopropanoic acid methyl ester

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
Cu++	gl	KCl	25°C	0.10M	C		K1=10.76 B2=19.84 B(Cu5H-4L4)=40.16 B(CuH-1L2)=9.82	2003CDa (27563)	1868

Ligand is (S)-conformer. By spectrophotometry: K1=10.97, B2=20.16,
B(Cu5H-4L4)=40.03, B(CuH-1L2)=9.91.

Cu++	gl	KCl	25°C	0.20M	C	M	K1=10.32 B2=19.65 B(Cu2H-1L2)=20.88 B(CuH-1L2)=9.91 B(CuAHL)=27.09 B(CuAL)=20.45	2002KBa (27564)	1869
------	----	-----	------	-------	---	---	--	-----------------	------

A is N,N,N',N'',N''-pentamethyldiethylenetriamine.

Cu++	gl	KCl	25°C	0.20M	C		K1=10.89 B2=19.87 B(CuH-1L2)=9.98 B(Cu2H-1L2)=20.89	1989FSa (27565)	1870
------	----	-----	------	-------	---	--	---	-----------------	------

Cu++	gl	KCl	25°C	0.50M	C		K1=10.32 B2=20.04 B(Cu2H-1L2)=20.90 B(CuH-1L2)=11.11	1989LEa (27566)	1871
------	----	-----	------	-------	---	--	--	-----------------	------

Cu++	gl	NaClO4	25°C	0.10M	U		K1=10.90 B2=19.65 B(Cu2H-1L2)=21.41 B(CuH-1L2)=9.74	1986KKd (27567)	1872
------	----	--------	------	-------	---	--	---	-----------------	------

C3H8N2O2 HL (6039)
Sarcosinehydroxamic acid; CH3.NH.CH2.CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	M		K1=10.39 B2=18.52 B(Cu2H-1L2)=20.22 B(CuH-1L2)=8.77	1988KJa (27584)	1873

C3H8N2O2 L Serinamide (6329)
Serinamide, Serine amide; H2N.CH(CH2.OH).CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C		K1=4.612 B2=8.21 B(CuH-1L)=-1.948 B(CuH-1L2)=1.81 B(CuH-2L)=-9.515 B(Cu2H-3L2)=-8.65	1975BPa (27588)	1874

C3H8N2O2 HL (6666)
beta-Alaninehydroxamic acid; NH2.CH2.CH2.CO.NHOH

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

Cu++	gl	KCl	25°C	0.10M	C				2003CDa (27597)	1875
------	----	-----	------	-------	---	--	--	--	-----------------	------

B(CuHL)=17.22
B(Cu5H-4L4)=49.39

By spectrophotometry: B(CuHL)=16.85, B(Cu5H-4L4)=48.91.

Cu++	gl	KCl	25°C	0.20M	C	M		K1=12.85	2002KBa (27598)	1876
------	----	-----	------	-------	---	---	--	----------	-----------------	------

B(Cu5H-4L4)=46.66
B(CuAH2L)=34.01
B(CuAHL)=27.76
B(CuAL)=18.91

A is N,N,N',N'',N''-pentamethyldiethylenetriamine.

C3H8N2O3	H2L	CAS 55779-32-3	(5500)
----------	-----	----------------	--------

Serinehydroxamic acid, 2-Amino-N,3-dihydroxypropionamide; HO.CH2.CH(NH2).CO.NH.OH

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

Cu++	gl	KCl	25°C	0.50M	C			B2=19.65	1989LEd (27614)	1877
------	----	-----	------	-------	---	--	--	----------	-----------------	------

B(CuH-1L2)=10.09
B(Cu2H-1L2)=20.43

C3H8N2O3	HL	(6500)
----------	----	--------

beta-Aminoxy-D-Alanine; H2NOCH2.CH(NH2)COOH

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

Cu++	gl	KCl	25°C	0.20M	U			K1=7.93 B2=14.59	1992BKb (27622)	1878
------	----	-----	------	-------	---	--	--	------------------	-----------------	------

B(CuHL)=11.02

C3H8N4O	L	CAS 44648-02-4	(2983)
---------	---	----------------	--------

Guanylmethylurea; H2N.C(:NH).CH2.NH.CO.NH2

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

Cu++	gl	KCl	30°C	0.10M	U			K1=8.82 B2=15.99	1960DUa (27639)	1879
------	----	-----	------	-------	---	--	--	------------------	-----------------	------

C3H8OClP	L	CAS 1638-75-1	(1352)
----------	---	---------------	--------

P,P-Dimethyl-P-(chloromethylene)phosphineoxide; Cl.CH2.(CH3)2P:O

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

Cu++	oth	non-aq	rt	100%	U	M			1983RIa (27648)	1880
------	-----	--------	----	------	---	---	--	--	-----------------	------

K(CuCl+L)=2.69
K(CuCl+L)=2.35
K(CuCl+L)=2.53

Medium: MeCN. Method: IR using different IR-lines

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

Cu++ g1 NaClO4 20°C 0.10M U TI K1=17.82 1986NDb (27700)1881

C3H8O3 L Glycerol CAS 56-81-5 (2707)
Propane-1,2,3-triol; HO.CH2.CH(OH).CH2.OH

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

Cu++ vlt NaNO3 25°C 3.0M U 1995NVa (27714)1882
 B(CuL(OH)3)=20.2
 B(CuL2(OH)2)=21.1

Method: DC polarography, pH > 11. Ligand may be anion of glycerol?

Cu++ vlt mixed 20°C 3.0M U 1986NVa (27715)1883
 K[Cu+(H-1L)+30H]=20.2
 K[Cu+2(H-1L)+20H]=21.1

C3H8S HL Propylmercaptan CAS 75-33-2 (2515)
2-Propanethiol, Isopropylmercaptan; CH3.CH(SH).CH3

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

Cu++ gl alc/w 20°C 25% U T H K1=7.56 1978SKf (27803)1884
DH=-55.10 kJ mol⁻¹. Data also available when T=10 and 30. Alternative
methods: Conductivity and amperometric techniques.

Cu++ con a1c/w 20°C 25% C TIH 1978SKj (27804)1885
Kso(CuL2)=-7.56

Medium: 25% v/v EtOH/H₂O. Additional methods: potentiometry (25% EtOH/H₂O) polarography (25% EtOH/H₂O, 0.2 M NaClO₄). Data for 10 and 30 C. DH values

C3H9N L Trimethylamine CAS 75-50-3 (803)
Trimethylamine; (CH3)3.N

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

Cu++ sp NaCl04 25°C 0.20M U 1991CCb (27855)1886
K(CuA+L=CuAL)=1.81

A is rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradecane

Cu++ sp alc/w 26°C 100% U K1=2.88 B2=4.91 1971SAi (27856)1887
Medium: MeOH, 0.5 L.HNO3

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
Cu++	vlt	KNO3	25°C	?	C				1980AAb (27869)	1888
B3eff=16.22										

Cu++	vlt	KNO3	25°C	0.50M	U	M			1971HSa (27870)	1889
B(Cu+2L+20H)=20.6										

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
Cu++	vlt	KNO3	25°C	?	C				1980AAb (27881)	1890
B3eff=16.46										

Cu++	gl	oth/un	25°C	0.10M	U		K1=5.0	B2=9.00	1965D0a (27882)	1891
K3=3.2										
K4=2.5										

C3H9NO	L	CAS 78-91-1	(6010)
--------	---	-------------	--------

2-Amino-1-propanol; CH3.CH(NH2).CH2OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	alc/w	20°C	50%	C		K1=5.28	B2=9.27	1987THa (27890)	1892
K3=2.75										

Data for DL ligand. For R(-) ligand, K1=5.23, K2=4.33, K3=2.59.

C3H9NO	L	CAS 109-85-3	(1575)
--------	---	--------------	--------

2-Methoxyethylamine; CH3O.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	sp	KNO3	25°C	1.00M	U		K1=4.60	B2=7.84	1989CGa (27898)	1893
B3=9.55										
B(CuH-1L3)=-1.84										

Cu++	nmr	NaNO3	25°C	1.00M	U		K1=4.4	B2=8.5	1986TCa (27899)	1894
B3=10.4										

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
Cu++	gl	alc/w	20°C	50%	C		K1=4.56	B2=8.77	1987THa (27911)	1895
K3=2.77										

Cu++	vlt	KNO3	25°C	?	C		B2=9.60		1980AAb (27912)	1896
------	-----	------	------	---	---	--	---------	--	-----------------	------

B3eff=13.24

C3H9NO2 L Serinol CAS 534-03-2 (3624)
2-Amino-1,3-propanediol; HOCH2CH(NH2)CH2OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	U		K1=4.40 B(CuH-1L)=-2.23 B(CuH-1L2)=1.14 B(CuH-2L2)=-7.16	1999CCb (27919)	1897

C3H9NS L CAS 18542-42-2 (1215)
1-Amino-3-thiabutane; H2N.CH2.CH2.S.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	C	H	K1=5.572 B2=10.65	1977HGa (27933)	1898
DH(K1)=-33.3 kJ mol-1, DS(K1)=-30.5 J K-1 mol-1 DH(K2)=-38.1 kJ mol-1 DS(K2)=-15.0 J K-1 mol-1									
Cu++	gl	NaClO4	20°C	0.15M	U		K1=5.30 B2=9.68	1962HPa (27934)	1899
Cu++	gl	none	10°C	0.0	U	T H	K1=5.74 B2=11.06	1959MBa (27935)	1900
DH(K1)=-30 kJ mol-1, DS=4; DH(K2)=-20, DS=33. 20 C: K1=5.61, K2=5.20; 30 C: K1=5.41, K2=5.13; 40 C: K1=5.21, K2=4.98									
Cu++	gl	KNO3	30°C	1.0M	U		K1=5.58 B2=10.68	1954GFa (27936)	1901
Cu++	gl	none	30°C	0.0	U		K1=5.42 B2=10.53	1953MCa (27937)	1902

C3H9NS HL CAS 462-47-5 (1566)
3-Aminopropane-1-thiol; H2N.CH2.CH2.CH2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	U	T H	K(CuL+H)=7.9	1983BVa (27948)	1903

Cu++	vlt	oth/un	25°C	0.17M	U		B2=16.28	1961KPa (27949)	1904
------	-----	--------	------	-------	---	--	----------	-----------------	------

Medium: phosphate buffer

C3H9NS HL CAS 10061-40-2 (2593)
N-Methyl-2-aminoethanethiol; CH3.NH.CH2.CH2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	U	T H	K(CuL+H)=6.0	1983BVa (27956)	1905

C3H9N2O4P H2L CAS 30211-73-5 (7117)
 Glycylaminomethylphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C		K1=6.55 B2=11.93 B(CuHL)=11.98 B(CuH-1L)=1.644 B(CuH-2L)=-6.71 B(CuH-1L2)=4.89	1995HLA (27961)	1906

Cu++	gl	KNO3	25°C	0.10M	U		K1=6.86 K(CuL+H)=5.19 *K(CuL)=-5.17	1975HMc (27962)	1907
------	----	------	------	-------	---	--	---	-----------------	------

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
Cu++	gl	NaCl04	25°C	1.00M	C		K1=8.108 B2=14.995 B(CuH-1L2)=8.453	1986S0b (27972)	1908

C3H9N3O HL (6985)
 3-Aminopropanamidoxime; H2N.CH2.CH2.C(:NOH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl	25°C	0.10M	C		K(Cu+H+HL)=10.3 K(Cu+HL)=7.53 K(Cu+2HL)=13.58 B(-7,5,4)=4.98	19940Sa (27976)	1909

B(p,q,r); pH+qCu+rHL=Hp(Cu)q(HL)r. B(-8,5,4)=0.01

C3H9N3O2 HL CAS 471915-95-4 (8549)
 2,3-Diamino-N-hydroxypropanamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		B2=17.61 B(CuH2L)=22.25 B(CuHL)=18.09 B(CuH2L2)=33.31 B(CuHL2)=26.60	2002ECa (27979)	1910

B(Cu2L2)=28.6.

C3H9N3S L CAS 3685-60-7 (3553)
 Aminoethylisothiurea; H2N.CH2.CH2.S.C(:NH).NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	vlt	oth/un	25°C	0.17M	U		K1=14.04	1961KPa (27985)	1911
Medium: phosphate buffer									

C3H9N5		L					CAS 80247-85-7	(2974)	
Methylbiguanide; CH3.NH.C(:NH).NH.C(:NH).NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	KCl	30°C	0.25M	U		B2=17.12	1959RRa (27988)	1912
Cu++	gl	oth/un	32°C	0.05M	U		K1=9.53 B2=17.16	1956SRb (27989)	1913

C3H9O3P		L					CAS 121-45-9	(1786)	
Trimethylphosphite; (CH3O)3.P									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	cal	non-aq	25°C	100%	U	HM		1976MDb (27999)	1914
							K(Cu(hfac)2+L)=2.62 in A		
							K(Cu(hfac)2+L)=2.41 in B		
Metal: Bis(hexafluoroacetylacetonato)copper(II), (Cu(hfac)2).									
DH=-23 kJ mol ⁻¹ in A (A= o-Cl2C6H4) and DH=-25 in B (B= CH2Cl2).									

C3H9O3PS		H2L					CAS 69639-94-3	(545)	
(Ethylthiomethyl)phosphonic acid; CH3.CH2.S.CH2.PO3H2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U		K1=4.150 B2=7.28	1981WNa (28006)	1915
							K(Cu+L=Cu(OH)L+H)=-3.09		

C3H9O4P		H2L					(6694)		
(Phosphonylmethoxy)ethane; H2O3P.CH2.O.CH2.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	mixed	25°C	30%	M		K1=4.62	1993BCg (28010)	1916
Medium: 0.1 M NaNO3 in 30% Dioxane/H2O (v/v); both K1 are only estimates									
For 0.1 M NaNO3 in 50% Dioxane/H2O (v/v) K1=5.27									
Cu++	gl	NaNO3	25°C	0.10M	M		K1=3.73	1993CBb (28011)	1917
							K(Cu(bpy)+L)=3.86		
							K(Cu(phen)+L)=3.90		
Cu++	gl	NaNO3	25°C	0.10M	C	I	K1=3.73	1993CGa (28012)	1918
In 30% (50%) v/v 1,4-dioxan/H2O, K1=4.62 (5.27).									
Cu++	gl	NaNO3	25°C	0.10M	M		K1=3.73	1992SCa (28013)	1919

C3H9O6P H2L CAS 57-03-4 (2984)
2,3-Dihydroxypropylphosphoric acid, Glycerol 1-phosphate; HO.CH2.CH(OH).CH2.OP(=O)(OH)2

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

Cu++ gl NaNO3 25°C 0.10M U I K1=2.83 1992LCb (28037)1920
K(Cu(bpy)+L)=2.90
K(Cu(phen)+L)=2.92

In 30% dioxan/H2O K1=3.85; in 50% K1=4.65

C3H9O7P H2L (6547)
Propane-1,2,3-triol-2-phosphoric acid; HO.CH2.C(OH)(CH2OH)H2PO4

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

Cu++ gl NaCl 25°C 0.15M C H K1=2.808 1991KLa (28053)1921
B(CuH-1L)=-3.728
B(CuH-2L)=-10.312

DH(K1)=37.6 kJ mol⁻¹, DS(K1)=179.9 J K⁻¹ mol⁻¹

C3H10NO2P H2L (6428)
(1-Aminoethyl)methylphosphinic acid; CH3.CH(NH2).PO(CH3)(OH)

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

Cu++ gl KCl 25°C 0.20M C K1=5.45 B2=9.99 1991KJa (28061)1922
B(CuH-1L2)=1.20

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

Cu++ gl KNO3 25°C 0.10M U K1=9.13 B2=16.64 1979WNb (28065)1923
B(CuHL)=13.68
B(CuHL2)=22.32
B(CuH2L2)=27.25

Cu++ oth none 25°C 0.0 U K1=9.04 B2=16.51 1974WNb (28066)1924
B(CuHL2)=22.35
B(CuHL)=13.70
B(CuH2L2)=27.08

Cu++ gl KNO3 25°C 0.10M U K1=8.95 B2=16.44 1972WNb (28067)1925
B(CuHL)=13.63
B(CuH2L2)=27.36
B(CuHL2)=22.26

Cu++ gl KCl 25°C 0.10M U K1=8.47 B2=15.29 1969DMd (28068)1926

K(Cu+HL)=4.08
K(Cu+2HL)=8.07

C3H10NO3P H2L CAS 13138-33-5 (1982)

3-Aminopropylphosphonic acid; H2N.CH2.CH2.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U		K1=7.15 B(CuHL)=13.97 K(Cu+L=Cu(OH)L+H)=0.1	1979WNb (28084)	1927
Cu++	gl	KNO3	25°C	0.10M	U		K1=7.65 B2=13.9 B(CuHL)=13.68 B(CuH2L2)=27.3 B(CuHL2)=20.9	1972WNa (28085)	1928

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
Cu++	gl	KNO3	25°C	0.10M	C		K1=8.06 K(CuL+H)=5.45	1993SKc (28091)	1929
Cu++	gl	KNO3	25°C	0.10M	U		K1=7.99 B2=13.84 B(CuHL)=13.36 B(CuHL2)=20.84 B(CuH2L2)=26.08 B(CuH-1L)=0.20	1979WNb (28092)	1930
Cu++	gl	KNO3	25°C	0.10M	U		K1=7.992 B2=13.86 B(CuH-1L)=0.21 B(CuHL)=13.36 B(CuHL2)=20.84 B(CuH2L2)=26.06	1978WNb (28093)	1931

C3H10NO3P H2L CAS 67910-53-6 (1988)

Ethylaminomethylphosphonic acid; C2H5.NH.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U		K1=7.72 B2=13.0 B(CuHL)=13.42 B(CuHL2)=20.73 B(CuH2L2)=26.31 B(CuH-1L)=0.15	1979WNb (28104)	1932

C3H10NO4P H2L (6963)

1-Amino-2-hydroxypropylphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		K1=8.17 B2=14.97 B(CuHL)=12.13 B(CuH-1L2)=4.23 B(CuH-2L2)=-7.03	1994JKa	(28106)1933

C3H10NO4P H2L (6482)
1-Amino-2-methyloxyethanephosphonic acid; H2N.CH(P(=O)(OH)2)CH2.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	U		K1=8.13 B2=14.45 B(CuHL)=12.16	1990BJc	(28108)1934

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
Cu++	gl	NaCl04	37°C	0.15M	U	M	K1=10.45 B2=19.33 B(CuAL)=17.84 K(CuA+L)=9.24 K(CuL+A)=7.37	1997NAb	(28125)1935

H2A is cysteic acid.

Cu++	gl	diox/w	30°C	50%	U	I M	K(CuA+L)=9.00 K(CuC+L)=9.71	1986EBa	(28126)1936
------	----	--------	------	-----	---	-----	--------------------------------	---------	-------------

A=2,2'-dipyridylamine, C=2,2'-dipyridylketone

Cu++	gl	diox/w	30°C	50%	U	M	K1=10.10 B2=19.70 B(CuLA)=9.73	1984EBa	(28127)1937
------	----	--------	------	-----	---	---	-----------------------------------	---------	-------------

A=5-nitro-1,10-phenanthroline

Cu++	sp	diox/w	30°C	50%	U	M	K1=10.10 B2=19.69	1982PPb	(28128)1938
------	----	--------	------	-----	---	---	-------------------	---------	-------------

Cu++	gl	NaCl04	30°C	0.15M	U	M	K1=11.32 B(CuL(bpy))=10.37	1974PBb	(28129)1939
------	----	--------	------	-------	---	---	-------------------------------	---------	-------------

Cu++	gl	oth/un	25°C	0.10M	U		K1=10.71 B2=19.93	1970ABc	(28130)1940
------	----	--------	------	-------	---	--	-------------------	---------	-------------

DL, D and L isomers

Cu++	gl	oth/un	25°C	0.0	U	M	B(CuL(en))=19.75 B(CuLA)=17.98 B(CuLB)=18.72 K(CuL2+Cu(en)2=2CuL(en))=0.31	1967NKc	(28131)1941
------	----	--------	------	-----	---	---	---	---------	-------------

A=N,N'-diethylethylenediamine, B=1,3-propanediamine. K(CuL2+CuA2=2CuLA)=1.92

$K(\text{CuL}_2 + \text{CuB}_2 = 2\text{CuLB}) = 1.15$. Ternary complexes with EDTA, 5-sulfosalicylic acid

Cu++ gl NaClO4 25°C var U I 1962NMa (28132)1942
 $K_1 = 10.56 + 0.89I - 0.52I^{(3/2)} + 0.13I^{(2)}$, $B_2 = 19.64 + 2.11I - 1.24I^{(3/2)} + 0.28I^{(2)}$

Cu++ gl oth/un 25°C 0.0 U T H 1962NMe (28133)1943
 $K_1 = 4519.8/T - 10.181 + 0.01878T$
 $K_2 = 4238.8/T - 9.697 + 0.01530T$
At 25 C: $\text{DH}(K_1) = -54.3 \text{ kJ mol}^{-1}$, $\text{DS} = 20.9 \text{ J K}^{-1} \text{ mol}^{-1}$, $\text{DH}(K_2) = -55.2$, $\text{DS} = -11.3$

Cu++ gl KNO3 25°C 0.50M U T $K_1 = 10.78$ $B_2 = 20.06$ 1954BCa (28134)1944
0 C: $K_1 = 11.65$, $K_2 = 10.12$

Cu++ vlt KNO3 25°C 0.10M U $B_2 = 20.17$ 1949LAd (28135)1945

Cu++ gl KNO3 30°C 0.50M U $K_1 = 10.58$ $B_2 = 19.66$ 1945Cma (28136)1946

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

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

Cu++ gl KNO3 25°C 0.10M M M $K_1 = 9.85$ $B_2 = 17.45$ 2003SFa (28208)1947
 $B(\text{CuH-1L}) = 2.10$
 $B(\text{CuHL}) = 15.64$
 $B(\text{CuH}_2\text{L}_2) = 31.92$
 $B(\text{CuHL}_2) = 25.22$
 $B_3 = 21.82$, $B(\text{CuH}_3\text{L}_3) = 48.80$, $B(\text{CuH}_2\text{L}_3) = 40.76$, $B(\text{CuHL}_3) = 32.02$, $B(\text{Cu(atp)L}) = 15.37$, $B(\text{CuH(atp)L}) = 20.95$, $B(\text{CuH-1(atp)L}) = 5.04$, $B(\text{CuH-2(atp)L}) = -4.78$

Cu++ gl KNO3 20°C 0.10M C M $K_1 = 9.68$ $B_2 = 16.79$ 1997LBc (28209)1948
 $B_3 = 21.66$
 $B(\text{CuHL}) = 15.78$
 $B(\text{Cu(en)L}) = 18.61$

Cu++ gl NaClO4 37°C 0.15M U M $K_1 = 9.47$ $B_2 = 16.92$ 1997NAb (28210)1949
 $B(\text{CuHL}_2) = 22.12$
 $B(\text{CuAL}) = 16.95$
 $B(\text{CuHAL}) = 22.57$
 $K(\text{CuA+L}) = 8.35$

H2A is cysteic acid. $K(\text{CuL+A}) = 7.48$.

Cu++ gl NaClO4 20°C 0.10M C M $K_1 = 9.68$ $B_2 = 16.79$ 1996LGa (28211)1950
 $B_3 = 21.66$
 $B(\text{CuHL}) = 15.78$
 $B(\text{CuH-1L}) = 2.04$
 $B(\text{CuAL}) = 12.12$
HA=adenosine. $B(\text{CuHAL}) = 19.37$, $B(\text{CuAL}_2) = 18.9$, $B(\text{CuH-2AL}) = -5.13$

Cu++ gl NaClO4 20°C 0.10M U $K_1 = 9.68$ $B_2 = 16.79$ 1991WBa (28212)1951

B3=21.66
 B(CuHL)=15.78
 B(CuH-1L)=2.04

 Cu++ gl NaClO4 25°C 0.20M M K1=9.758 B2=17.069 1989PBa (28213)1952
 B(CuLA)=17.41

H2A=pyridine-2,6-dicarboxylic acid

 Cu++ gl diox/w 30°C 50% U I M 1986EBa (28214)1953
 K(CuA+L)=8.05
 K(CuC+L)=9.42

A=2,2'-dipyridylamine, C=2,2'-dipyridylketone

 Cu++ gl diox/w 30°C 50% U M K1=10.35 B2=18.44 1984EBa (28215)1954
 B(CuLA)=8.76

A=5-nitro-1,10-phenanthroline

 Cu++ vlt KNO3 25°C 1.0M C M K1=13.00 B2=19.44 1983GJb (28216)1955
 B(PbAL)=16.09
 B(PbBL)=16.20
 B(PbCL)=15.46

Method: polarography. H2A is malonic acid; H2B is phthalic acid;
 H2C is adipic acid.

 Cu++ vlt KNO3 25°C 1.0M C M K1=13.00 B2=19.44 1982GAa (28217)1956
 Method: polarography. B(CuAL)=15.69, B(CuBL)=15.55,
 where H2A is maleic acid and H2B is succinic acid.

 Cu++ gl KNO3 25°C 0.10M U M K1=10.80 1982KJa (28218)1957
 K(Cu2(CDTA)+2L)=18.93

 Cu++ gl KCl 25°C 1.0M C K1=9.97 B2=17.28 1982NDb (28219)1958
 K(Cu+OH+L)=15.73
 K(Cu+OH+2L)=18.95

 Cu++ gl KNO3 25°C 0.20M U K1=9.65 B2=16.82 1981M0d (28220)1959

 Cu++ vlt none 25°C 0.0 U 1981RKa (28221)1960
 B(CuL(Gly))=17.18
 B(CuL(Ala))=16.99
 B(CuL(Ser))=16.39
 B(CuL(B-Ala))=15.75

Spectrophotometry also used.

 Cu++ gl KCl 25°C 0.20M C H K1=9.65 B2=16.82 1976GSd (28222)1961
 By calorimetry: DH(K1)=-49.5 kJ mol⁻¹, DH(B2)=-95.5

 Cu++ gl KCl 25°C 0.20M C H K1=9.65 B2=16.82 1976SGa (28223)1962
 By calorimetry: DH(K1)=-49.5 kJ mol⁻¹, DS(K1)=19 J K⁻¹ mol⁻¹;
 DH(B2)=-95.5, DS(B2)=2.

Cu++ gl KCl 25°C 0.20M C HM 1976SGa (28224)1963

B(Cu(gly)L)=16.91

K(CuL+gly)=7.26

K(Cu(gly)+L)=8.84

By calorimetry: DH(Cu(gly)L)=-77.0 kJ mol⁻¹, DS(Cu(gly)L)=65 J K⁻¹ mol⁻¹;

DH(CuL+gly)=-27.5, DH(Cu(gly)+L)=-51.4.

Cu++ gl KCl 25°C 0.20M C HM 1976SGa (28225)1964

B(Cu(en)L)=18.83

K(CuL+en)=9.18

K(Cu(en)+L)=8.26

By calorimetry: DH(Cu(en)L)=-102.9 kJ mol⁻¹, DS(Cu(en)L)=15 J K⁻¹ mol⁻¹;

DH(CuL+en)=-53.4, DH(Cu(en)+L)=-49.5.

Cu++ vlt NaClO4 30°C 0.10M U K1=8.0 B2=19.21 1975MJc (28226)1965
B3=19.6

Cu++ gl oth/un 30°C 0.10M U M K1=9.72 B2=16.62 1975PBb (28227)1966
K(Cu(NTA)+L)=7.05
K(Cu(IDA)+L)=7.73

Cu++ sp oth/un 25°C var U 1973Y0a (28228)1967
K(Cu+CuL2=2CuL)=2.26 pH 6.3

Cu++ nmr alc/w 25°C 50% U H 1973Y0a (28229)1968
K(CuL2+Cu=2CuL)=2.66

Method: esr, pH=6.3. DH=4.5 kJ mol⁻¹, DS=28 J K⁻¹ mol⁻¹.

Cu++ gl oth/un 25°C dil U K1=9.18 B2=14.84 1972NBa (28230)1969

Cu++ gl NaClO4 25°C 0.10M U M K1=9.82 B2=17.04 1971SHa (28231)1970
B(CuL(bpy))=15.35
B(CuLA)=23.09

H2A=catechol

Cu++ gl NaClO4 25°C 0.30M C H K1=10.16 B2=17.30 1967Hwa (28232)1971
By calorimetry DH(K1)=-46.1 kJ mol⁻¹, DH(K2)=-46.1

Cu++ gl oth/un 25°C 0.0 U M 1967NKc (28233)1972

B(CuL(en))=18.58

B(CuLA)=16.26

B(CuLB)=18.72

K(CuL2+Cu(en)2=2CuL(en))=0.98

A=N,N'-diethylethylenediamine, B=1,2-propanediamine. K(CuL2+CuA2=2CuLA)=1.49

K(CuL2+CuB2=2CuLB)=1.15

Cu++ gl NaClO4 25°C var U 1965NKf (28234)1973

K1=9.63+0.402I-0.076I^(3/2)+0.085I⁽²⁾

K2=7.02+0.530I-0.018I^(3/2)+0.068I⁽²⁾

 Cu++ gl oth/un 25°C 0.0 U 1965NKf (28235)1974
 K(Cu(OH)L+H)=7.42
 K(Cu₂(OH)₂L₂+2H)=12.67
 K(2CuOHL=Cu₂(OH)₂L₂)=2.17
 K(Cu(OH)₂L+H)=11.70

Cu++ gl oth/un 10°C ->0 U T H K1=10.13 1958BFa (28236)1975
 DH(K1)=-58.2 kJ mol⁻¹, DS=-13. K1=9.72(20 C), 9.45(30 C), 9.16(40 C)

Cu++ gl KNO₃ 0°C 1.0M U T H K1=10.74 B2=18.79 1956HFb (28237)1976
 DH(K1)=-59 kJ mol⁻¹, DS=-13; DH(K2)=-54, DS=-50. 30 C: K1=9.62, K2=7.00

Cu++ oth oth/un 25°C 1.0M U H 1956RAa (28238)1977
 DS(Cu(NH₃)₄+2L=CuL₂+4NH₃)=46 J K⁻¹ mol⁻¹

Cu++ gl oth/un 25°C 0.15M U H 1955CHa (28239)1978
 At 25 C: DH(K1)=-52.3 kJ mol⁻¹, DS=8.4 J K⁻¹ mol⁻¹; DH(K2)=-51.4, DS=-37.6

Cu++ gl oth/un 0°C 0.15M U T K1=10.52 B2=18.46 1955CHb (28240)1979
 49.1 C: K1=9.00, K2=6.45

Cu++ cal KNO₃ 25°C 1.0M U H K1=9.98 B2=17.17 1955PBa (28241)1980
 DH(B2)=-95.3 kJ mol⁻¹, DS=8.4 J K⁻¹ mol⁻¹

Cu++ gl KCl 25°C 0.10M U K1=9.77 B2=16.94 1954IRa (28242)1981

Cu++ gl KNO₃ 0°C 1.0M U T K1=10.74 B2=18.79 1952HAa (28243)1982
 30 C: K1=9.62, K2=7.00

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

Cu++ gl diox/w 30°C 50% U I M 1986EBa (28334)1983
 K(CuA+L)=7.99
 K(CuC+L)=9.67
 A=2,2'-dipyridylamine, C=2,2'-dipyridylketone

Cu++ gl diox/w 30°C 50% U M K1=10.13 B2=19.53 1984EBa (28335)1984
 B(CuLA)=9.7
 A=5-nitro-1,10-phenanthroline

Cu++ gl KCl 25°C 1.0M U K1=10.56 B2=19.38 1983DPa (28336)1985

Cu++ gl KNO₃ 25°C 1.00M C H K1=10.50 B2=19.31 1982ABc (28337)1986
 By calorimetry: DH1=-45.2 kJ mol⁻¹, DS1=49.4; DH(B2)=-94.6, DS(B2)=51.8

Cu++ sp diox/w 30°C 50% U M K1=10.13 B2=19.54 1982PPb (28338)1987

```

-----
Cu++      gl  NaClO4  25°C 0.10M U      K1=12.77  B2=22.91  1981ATa (28339)1988
-----
Cu++      gl  KNO3    25°C 0.50M U      K1=10.40  B2=19.09  1972BFb (28340)1989
-----
Cu++      gl  none    25°C 0.00  U      K1=10.26  B2=18.77  1970NKa (28341)1990
-----
Cu++      gl  oth/un  10°C ->0 U T H    K1=10.64  B2=19.65  1959MBa (28342)1991
DH(K1)=-51.0 kJ mol-1, DS=15 J K-1 mol-1; DH(K2)=-52.3, DS=13.,
20 C: K1=10.30, K2=8.60; 30 C: K1=10.06, K2=8.38; 40 C: K1=9.72, K2=8.06
-----
Cu++      gl  KNO3    0°C 0.50M U T      K1=11.12  B2=20.15  1952BMa (28343)1992
25 C: K1=10.55, B2=19.11
-----
Cu++      gl  KNO3    0°C 0.50M U  H      1952BMb (28344)1993
0-25 C: DH(K1)=-35.5 kJ mol-1, DS=83.6 J K-1 mol-1, DH(K2)=-29.3, DS=66.9
-----
Cu++      gl  oth/un  0°C ->0 U      K1=10.92  B2=20.16  1952MCa (28345)1994
*****
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
-----
Cu++      gl  KCl      25°C 0.20M C  H      K1=8.37   B2=14.77  1987KSa (28370)1995
B(Cu2H-2L2)=10.25
DH(K1)=-50.2 kJ mol-1, DS= -8 J K-1 mol-1; DH(Cu2H-2L2)=-55.3, DS=11
-----
Cu++      gl  NaClO4  25°C 0.10M C  I      1981LTa (28371)1996
B(Cu2L2H-2)=12.89
-----
Cu++      gl  NaClO4  25°C 0.10M U      1978LKf (28372)1997
K(Cu+HL=CuL+H)=3.75
K(Cu+HL=CuH-1L+2H)=-6.6
K(Cu+2HL=CuH2L2)=-3.44
K(Cu+2HL=CuHL2+H)=6.34
K(Cu+2HL=CuL2+2H)=15.1.
-----
Cu++      gl  none    25°C 0.00  U  M      1970NTa (28373)1998
K(2Cu+2L+2H2O=Cu2(OH)2L2+2H)=10.30
-----
Cu++      gl  NaCl     30°C 0.16M U      1965MBa (28374)1999
K(Cu+H-1L)=18.40
-----
Cu++      gl  oth/un  10°C 0.0  U T H      1958BBc (28375)2000
K(Cu+L=CuH-1L+H)=3.72
DH(K)=-22 kJ mol-1, DS=-4. K=3.64(20 C), 3.57(30 C), 3.34(40 C)
-----
Cu++      gl  KNO3    30°C 1.0M U      K1=9.70    1951G0a (28376)2001
*****

```

C3H11N06P2 H4L (6772)
(Dimethylamino)-N-methylenediphosphonic acid; (CH3)2N.CH(P03H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.10M	M		K1=11.92 K(Cu+HL)=9.49	1978GMf (28406)	2002

C3H11N06P2 H4L (6735)
N-Methylimino-N,N-bis(methylenephosphonic acid); CH3.N(CH2P03H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		K1=13.82 B(CuH-1L)=3.44 B(CuH-2L)=-8.88 B(CuHL)=18.03 B(CuH2L)=21.54	1998KKc (28424)	2003

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C		K1=14.32 K(CuL+H)=4.38 K(CuHL+H)=3.40 *K(CuL)=-10.8	1993SKc (28425)	2004

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	U		K1=13.91 B(CuHL)=18.77 B(CuH2L2)=35.78	1988LDa (28426)	2005

C3H11N203P H2L CAS 23575-68-0 (4244)
Ethylenediamine-N-methylenephosphonic acid; H2N.CH2.CH2.NH.CH2.P03H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	oth/un	25°C	0.10M	U		K1=14.8 B2=20.90 K(Cu+HL)=8.2	1972AUa (28461)	2006

C3H11N203P H2L (6484)
N-Methyl-1,2-diaminoethanephosphonic acid; H2N.CH(P03H2)CH2.NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	U		K1=11.81 B2=21.54 B(CuHL)=17.39 B(CuHL2)=27.93 B(CuH2L2)=33.65	1990BJc (28467)	2007

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

Cu++	gl	KN03	25°C 0.10M C	K1=17.4	1997DBb (28513)2014
				K(CuL+H)=6.35	
				K(CuH2L+H)=3.46	
				K(CuHL+H)=4.57	
				K(CuH3L+H)=1.4	

Cu++	gl	KN03	25°C 0.10M C	K1=17.2 K(CuL+H)=6.33 K(CuHL+H)=4.53 K(CuH2L+H)=3.5	1989SAa (28514)2015
------	----	------	--------------	--	---------------------

Method: polarography. Medium pH=3.4-4.9.

In 10% ethanol/H₂O; I=0.1 M NaClO₄.

Cu++	gl	KCl	25°C	0.1M M	K1=17.40	1975MNa (28518)2019
					K(Cu+H ₁ L)=11.70	
					K(Cu+H ₂ L)=9.08	
					K(Cu+H ₃ L)=6.72	
					K(Cu+H ₄ L)=2.11	

Tris(dihydroxy-phosphonylmethyl)phosphineoxide;

Cu++	gl	R4N.X	20°C	0.10M	C	K1=9.9	1977ANb (28606)	2020
						K(Cu+H2L)=4.88		
						K(CuHL+H)=5.31		
						K(CuL+H)=7.71		

C4H2O4	H2L	Squaric acid	CAS 2892-51-5	(439)
--------	-----	--------------	---------------	-------

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

Cu++	gl	non-aq	25°C	100%	U	M	1991CFa (28629)2021
							K(Cu(bpy)+L)=4.87
							K(Cu(bpy)+2L)=9.34
							K(Cu(bpy)+H+L)=10.669
							K(2Cu(bpy)2+L)=7.52

Cu++ g1 NaCl04 25°C 0.50M U T K1=2.20 1969TWa (28630)2022

K1(38 C)=1.92, K1(50 C)=1.63. By spec., 25 C, K1=2.26; by emf, K1=2.15

Cu++ oth NaClO4 25°C 0.50M U K1=2.06 1969TWa (28631)2023

Method: paper chromatography

C4H3N2O2Br H2L 5-Bromouracil CAS 51-20-7 (8651)

5-Bromo-2,4-dihydroxypyrimidine;

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

Cu++ gl NaNO3 25°C 0.10M C M 2000SSd (28678)2024

K(Cu+HL)=7.39

K(Cu+L+OH)=18.52

K(Cu+L+2OH)=21.64

K(CuLOH+OH)=3.11

Also data for ternary complexes.

C4H3N2O2F HL 5-Fluorouracil CAS 51-21-8 (4277)

5-Fluoro-2,4(1H,3H)-pyrimidinedione;

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

Cu++ gl NaNO3 25°C 0.10M U M K1=8.08 1996SGa (28687)2025

K(CuA+L)=9.88

A is adenine.

C4H3N3O3S H3L Thiovioluric CAS 23036-77-3 (2000)

2-Thio-4,5,6(H)-pyrimidinetetrone 5-oxime

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

Cu++ gl NaNO3 25°C 0.50M C K1=3.90 B2= 7.00 1984HNb (28709)2026

Cu++ gl NaNO3 25°C 0.10M C 1979DDb (28710)2027

K(Cu+H2L)=3.903

K(Cu+2H2L)=7.00

Cu++ gl diox/w 30°C 50% U K1=4.44 B2=8.35 1973CSb (28711)2028

Medium: 50% dioxan, 0.1 M NaClO4

C4H3N3O4 H3L Violuric acid CAS 26351-19-9 (1208)

2,4,5,6-(1H,3H)Pyrimidinetetrone-5-oxime, 5-isonitrosobarbituric acid;

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

Cu++ gl NaCl 25°C 0.10M C 2002KSa (28734)2029

K(Cu+H2L)=3.57

Also by spectrohpotometry: K(Cu+H2L)=3.79

Cu++ gl NaNO3 25°C 0.50M C K1=4.25 B2= 7.29 1984HNb (28735)2030

Cu++ gl NaNO3 25°C 0.50M C M 1980VNa (28736)2031

K(Cu+H2L)=4.25

K(CuH2L+H2L)=3.04

K(Cu+H2L+A)=7.40, A=dimethyl-1,3 violurate

K(Cu+H2L+HB)=7.59, B=monomethylviolurate

Cu++ gl NaNO3 25°C 0.50M U K1=4.3 B2= 7.40 1978DDa (28737)2032

C4H3N3O4 H3L Oxonic acid CAS 937-13-3 (1296)

4,6-Dihydroxy-1,3,5-triazine-2-carboxylic acid; C3N3(OH)2.COOH

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

Cu++ sp NaClO4 20°C 0.20M U K1=8.13 1981LDa (28754)2033

C4H3N3O5 H3L Dilituric acid CAS 480-68-2 (8715)

5-Nitrobarbituric acid, 5-Nitro-2,4,6-pyrimidinetrione;

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

Cu++ gl KCl 25°C 0.05M C 2002MGb (28761)2034

K(Cu+HL)=4.91

K(CuHL+HL)=4.25

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

Cu++ gl KNO3 25°C 0.50M U K1=1.52 B2=2.34 1988KLa (28765)2035

B3=3.16

C4H4N2 L Pyrazine CAS 290-37-9 (620)

1,4-Diazine, Pyrazine;

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

Cu++ sp non-aq 20°C 100% U 1986MBc (28782)2036

K(CuA+L)=0.70

In CHCl3. CuA=cofacial binuclear bis(beta-diketone) copper(II) complex

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

Cu++ gl NaNO3 25°C 0.10M M M K1=5.49 2002SKa (28826)2037

K(CuA+L)=5.70

A is picolylamine

```

-----
Cu++      gl  diox/w 25°C 50% M    M    K1=6.21      1999HEa (28827)2038
              K(CuA+L)=3.89
Medium: 50% v/v dioxane/H2O, 0.1 M NaNO3. H2A: tetracycline.
-----
Cu++      gl  NaNO3 37°C 0.10M U    M    K1=4.36      1994MGd (28828)2039
              B(CuAL)=8.85
              *K(CuAL)=-6.48
              *K(Cu(OH)AL)=-8.78
HA is 6-aminopenicillanic acid.
-----
Cu++      gl  NaNO3 37°C 0.15M U          K1=4.55      1990CIa (28829)2040
              B(CuHL)=11.22
              B(Cu2L2)=12.71
-----
Cu++      gl  NaNO3 25°C 0.10M U          K1=4.97      B2=10.06 1989MPa (28830)2041
-----
Cu++      gl  KNO3 35°C 0.10M U    M    K1=6.04      1989SRc (28831)2042
              K(Cu(thiamine)+L)=5.67
-----
Cu++      gl  KNO3 25°C 0.10M U T H    K1=6.14      1983KSa (28832)2043
-----
Cu++      gl  KNO3 35°C 0.10M U          K1=6.04      B2=11.23 1981TSa (28833)2044
-----
Cu++      gl  KNO3 45°C 0.10M U          K1=5.6       1974KKa (28834)2045
-----
Cu++      kin oth/un 25°C dil U          K1=4.5       1968KYb (28835)2046
*****
C4H4N2O2      H2L      CAS 123-33-1 (8346)
3,6-Dihydroxypyridazine;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      vlt mixed 25°C 30% C T H    K1=13.16     1992SBb (28872)2047
Method: polarography. Medium: 30% DMSO/H2O, 0.10 M LiClO4.
Data for 15 and 35 C. DH(K1)=-59.1 kJ mol-1, DS(K1)=-38 J K-1 mol-1.
*****
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
-----
Cu++      gl  NaClO4 31°C 0.10M U T H    K1=7.63      B2=13.48 1984SJa (28879)2048
Also data for 18 and 42 C. DH(K1)=-104 kJ mol-1, DS(K1)=-196 J K-1 mol-1
DH(K2)=-57.2, DS(K2)=-76.8.
*****
C4H4N2O3      H2L      Barbituric acid CAS 67-52-7 (2818)
2,4,6-Trihydroxypyrimidine; C4HN2(OH)3
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo

```

Cu++	gl	NaCl	25°C	0.1M	U		K1=3.07		2000KSb (28906)	2049

Cu++	gl	alc/w	30°C	50%	U		K1=9.40		1988TGd (28907)	2050

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

Cu++	gl	KN03	30°C	0.50M	U		K1=6.0	B2=12.26	1989WIa (28926)	2051
B3=16.9										

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

Cu++	gl	KN03	30°C	0.10M	U		K1=5.7		1983SKa (28944)	2052

Cu++	gl	KN03	45°C	0.10M	U		K1=5.0		1973TKa (28945)	2053

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

Cu++	gl	alc/w	25°C	50%	U	M	K1=12.24		1978MCb (28958)	2054
K(Cu(bpy)+L)=10.84										
K(Cu(phen)+L)=11.07										
K(Cu(NTA)+L)=5.53										

C4H4O4			H2L		Maleic acid		CAS 110-16-7		(111)	
cis-Butenedioic acid; H0OC.CH:CH.COOH										

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

Cu++	gl	NaN03	25°C	0.10M	C	M	K1=4.07	B2= 6.96	1998KRa (29005)	2055
B(CuLA)=8.89										
HA: inosine										

Cu++	gl	alc/w	25°C	40%	U	M	K1=5.08	B2= 9.58	1994AKa (29006)	2056
Medium: 40% v/v EtOH/H2O, 0.10 M NaCl04										
Data for ternary complexes with picolinamide.										

Cu++	gl	KN03	25°C	0.10M	M	M	K1=4.694		1993AEa (29007)	2057

Cu++	gl	KN03	25°C	0.10M	C	M	K1=3.42		1993AEb (29008)	2058
K(Cu(AMP)+L)=5.63										
K(Cu(ADP)+L)=6.18										

$K(\text{Cu}(\text{ATP})+\text{L})=6.91$

$B(\text{CuL}(\text{AMP}))=8.83$

$B(\text{CuL}(\text{ADP}))=12.23$, $B(\text{CuL}(\text{ATP}))=13.31$.

Cu++	gl	NaCl	37°C	0.15M	C	M	K1=3.57	B2=5.50	1988BCc (29009)2059
							$B(\text{CuH-1L})=-3.51$		
							$B(\text{CuH2L2})=15.35$		

Ternary complex with enalapril

Cu++	gl	KNO3	25°C	0.10M	U	M	K1=4.02	B2=6.84	1988NSb (29010)2060
							$B(\text{CuLA})=9.39$		

H2A=malonic acid

Cu++	gl	NaClO4	25°C	0.10M	U	M	K1=2.88		1987NDa (29011)2061
							$K(\text{CuA+B+L})=14.53$		

H2A=iminodiethanoic acid, H2B=oxydiethanoic acid

Cu++	gl	KNO3	25°C	0.10M	U	M	K1=4.02	B2=6.84	1984VSa (29012)2062
							$B(\text{CuLA})=8.15$		
							$K(\text{CuA+L})=4.66$		
							$K(\text{CuL+A})=4.13$		

H2A=phthalic acid

Cu++	vlt	KNO3	25°C	1.0M	C		K1=4.43	B2= 6.90	1982GAa (29013)2063
------	-----	------	------	------	---	--	---------	----------	---------------------

Method: polarography.

Cu++	vlt	KNO3	25°C	1.0M	C	M	K1=4.43	B2= 6.90	1982GVa (29014)2064
							$B(\text{Cu(en)L})=15.51$		

Method: polarography. From potentiometric measurements $K(\text{H+L})=6.26$

Medium: pH 8.0

Cu++	gl	KNO3	25°C	0.10M	U	M	K1=3.42	B2=5.10	1980GMb (29015)2065
							$B(\text{CuLA})=12.69$		

A=histamine

Cu++	gl	NaClO4	30°C	0.10M	U		K1=3.43		1980NSd (29016)2066
------	----	--------	------	-------	---	--	---------	--	---------------------

Cu++	gl	NaClO4	25°C	0.10M	C	H	K1=3.40		1978GCa (29017)2067
------	----	--------	------	-------	---	---	---------	--	---------------------

By calorimetry, $\text{DH1}=14.4 \text{ kJ mol}^{-1}$, $\text{DS1}=114 \text{ J K}^{-1} \text{ mol}^{-1}$

Cu++	gl	oth/un	25°C	0.10M	U	M	K1=3.40	B2=5.48	1976BMb (29018)2068
							$B(\text{Cu(bpy)}(\text{malate}))= 11.89$		

Cu++	vlt	KNO3	28°C	1.50M	U		K1=3.18	B2=4.72	1975KNa (29019)2069
------	-----	------	------	-------	---	--	---------	---------	---------------------

Cu++	vlt	NaClO4	25°C	0.20M	U		K1=3.4	B2=4.9	1967NMa (29020)2070
							$B3=6.2$		

Cu++	gl	oth/un	25°C	0.10M	U		K1=3.4		1960YYa (29021)2071
------	----	--------	------	-------	---	--	--------	--	---------------------

Cu++ gl oth/un 25°C ->0 U K1=3.90 1951PJb (29022)2072

C4H4O4 H2L Fumaric acid CAS 110-17-8 (289)
trans-Butenedioic acid; HOOC.CH:CH.COOH

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

Cu++ gl KNO3 25°C 0.10M U M K1=3.19 1988NSb (29172)2073
B(CuLA)=6.28

H2A=malonic acid

Cu++ gl KNO3 25°C 0.10M U M K1=3.19 1984VSa (29173)2074
B(CuLA)=6.75
K(CuA+L)=3.26
K(CuL+A)=3.58

H2A=phthalic acid

Cu++ gl oth/un 25°C ->0 U K1=2.51 1951PJb (29174)2075

C4H4O5 H2L Oxobutanedioic CAS 328-42-7 (1733)
2-Oxosuccinic acid, Oxalacetic acid; HOOC.CH2.CO.COOH

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

Cu++ gl NaClO4 25°C 0.50M U TI K1=3.81 1990MOf (29243)2076
At 0.1 M, K1=4.22; at 0.2 M, K1=3.98. At 30 C and 0.5 M, K1=3.75.

Cu++ gl KCl 25°C 0.10M U K1=4.16 1976RLa (29244)2077
B(Cu2H-1L)=2.55
B(Cu2H-2L)=1.43

Cu++ sp NaClO4 25°C 0.20M U K(Cu+HL)=3.9 1972DTa (29245)2078

By kinetics: K(Cu+HL)=4.0

Cu++ gl oth/un 25°C 0.10M U K1=4.9 1958GHc (29246)2079

C4H5NO L Methylisoxazole CAS 5765-44-6 (2045)
5-Methylisoxazole; C3H2NO.CH3

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

Cu++ EMF KNO3 25°C 0.50M U K1=0.08 B2=0.93 1977LKa (29286)2080
Ag/Ag+ concentration cell, competitive method

C4H5NOF6 L CAS 68982-08-1 (5453)
1,1-Bis(trifluoromethyl)-2-aminoethan-1-ol; (CF3)2C(OH).CH.NH2

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

Cu++ gl oth/un 25°C 0.10M U B2=13.16 1977Cwa (29292)2081

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

Cu++ gl KNO3 25°C 0.50M U H K1=4.61 B2= 8.75 1979BEc (29300)2082
By calorimetry: DH(K1)=-16.4 kJ mol⁻¹, DS(K1)=19.1 J K⁻¹ mol⁻¹;
DH(B2)=-33.6, DS(B2)=54.8.

Cu++ sp alc/w ? 100% U 1971MSc (29301)2083
B4=11.33

Cu++ gl oth/un 30°C ? U K1=3.5 B2=8.20 1965JKa (29302)2084

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

Cu++ gl KNO3 25°C 0.50M U K1=1.39 B2=2.34 1976LKb (29321)2085
B3=2.90

C4H5N2Cl L CAS 872-49-1 (7589)
5-Chloro-1-methylimidazole;

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

Cu++ gl NaNO3 25°C 0.50M M K1=3.51 1998KSa (29328)2086

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

Cu++ gl KNO3 25°C 0.50M U K1=0.90 B2=1.46 1988KLa (29339)2087

C4H5N3O HL Cytosine CAS 71-30-7 (1096)
2-Oxy-6-aminopyrimidine;

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

Cu++ gl diox/w 25°C 50% M K1=3.35 1999HEa (29366)2088
Medium: 50% v/v dioxane/H2O, 0.1 M NaNO3.

Cu++ gl NaClO4 25°C 0.10M M 1995LWa (29367)2089
K(Cu+HL)=1.82
K(Cu(atp)+HL)=1.32

HA is 6-aminopenicillanic acid.

Cu++ gl KNO₃ 35°C 0.10M U M K₁=2.73 1989SRe (29370)2092
B(CuHLAsp)=13.46
K(CuL+Gly)=7.87

HA is glycine; H2D is oxalic acid; C is histamine.

Cu++ gl KNO3 45°C 0.10M U 1978KJa (29374)2096
K(Cu+HL)=2.82
K(CuHL+HL)=2.48

Cu++ sp NaClO4 25°C 0.05M U 1969Rwa (29376)2098
K(Cu+HL)=1.40
K(CuHL+HL)=1.25

C4H5N3O2 HL (1327)
4-Oximino-3-methyl-2-pyrazolin-5-one;

Cu++ gl alc/w 20°C 50% U T K1=5.67 B2=9.97 1981SSc (29425)2100
At 30 C: K1=5.67, B2=9.81

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

Cu++ gl NaClO4 30°C 0.10M M I K1=2.20 1985ARc (29433)2101
 Also data for 20-80% dioxane/H2O. For 40% dioxane/H2O, K1=4.56

C4H6NO3Cl HL CAS 52316-61-7 (7550)

N-Chloroacetyl glycine; ClCH2CONHCH2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	C	M	K1=4.11 B(CuL2(bpy))=12.43 B(CuL2(phen))=13.777 B(CuH-1L(bpy))=5.92 B(CuH-1L(phen))=7.64	1998MSd (29441)	2102

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
Cu++	gl	KCl	25°C	0.10M	C		B(Cu2L)=12.95	2003GRb (29455)	2103
Cu++	gl	NaClO4	30°C	0.20M	U		K1=5.28	1999PGa (29456)	2104
Cu++	gl	NaNO3	30°C	0.20M	U		K1=5.32	1999PPa (29457)	2105
Cu++	gl	NaClO4	25°C	0.10M	C		K1=3.75	1994MGb (29458)	2106
Cu++	gl	KNO3	25°C	0.10M	C	M	K(CuA+L)=4.29 K(CuAL+L)=3.14	1989IOd (29459)	2107

HA=ethanoic acid.

Cu++	gl	KNO3	25°C	0.50M	U		K1=3.35 B2=6.38 B3=9.23 B4=11.92 B5=14.45	1974LKa (29460)	2108
------	----	------	------	-------	---	--	---	-----------------	------

C4H6N2 L Methylpyrazole CAS 453-58-3 (368)

3-Methyl-1,2-diazole; C3H3N2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	U		K1=2.44 B2=4.49 B3=6.15 B4=7.41	1978LNa (29497)	2109

C4H6N2 L CAS 7554-65-6 (2052)

4-Methyl-1,2-diazole; C3H3N2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	U			K1=2.70 B3=6.81 B4=8.19	1978LKc	(29508)2110

C4H6N2 L 4-Me-Imidazole CAS 822-36-6 (353)
4-Methyl-1,3-diazole; C3H3N2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C	M		K(CuA+L)=4.34 K(CuAL+L)=3.85	1989IOd	(29517)2111

HA=ethanoic acid.

Cu++	gl	KNO3	25°C	0.50M	U			K1=4.18 B3=10.70 B4=13.05 B5=13.95	1981LKa	(29518)2112
------	----	------	------	-------	---	--	--	---	---------	-------------

Cu++	cal	non-aq	25°C	100%	U	HM		K(Cu(hfac)2+L)=7.0	1976MDb	(29519)2113
------	-----	--------	------	------	---	----	--	--------------------	---------	-------------

Medium: CCl4. M: Bis(hexafluoroacetylacetonato)copper(II), (Cu(hfac)2)
DH=-65 kJ mol⁻¹

Cu++	gl	oth/un	25°C	0.15M	U			K1=4.13 K3=2.87 K4=1.96	1957NGa	(29520)2114
------	----	--------	------	-------	---	--	--	-------------------------------	---------	-------------

C4H6N2 L N-Me-Imidazole CAS 616-47-7 (354)
N-Methyl-1,3-diazole; C3H3N2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.50M	M			K1=4.23	1998KSa	(29543)2115
Cu++	gl	KNO3	25°C	0.10M	C	M		K(CuA+L)=4.41 K(CuAL+L)=3.56	1989IOd	(29544)2116

HA=ethanoic acid.

Cu++	cal	NaNO3	25°C	1.0M	C			DH(K1)=-28.70 kJ mol ⁻¹ , DS(K1)=-14.0 J K ⁻¹ mol ⁻¹ .	1983ARa	(29545)2117
------	-----	-------	------	------	---	--	--	---	---------	-------------

Cu++	gl	KNO3	25°C	0.50M	M			K1=4.30 B3=10.96 B4=13.33 B5=14.93	1977LBb	(29546)2118
------	----	------	------	-------	---	--	--	---	---------	-------------

Cu++ g1 KCl 30°C 0.10M U K1=2.0 1957TBb (29632)2125

C4H6N2S L CAS 27464-82-0 (1457)
2,5-Dimethyl-1,3,4-thiadiazole; C2N2S(CH3)2

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

Cu++ gl KNO3 25°C 0.50M U K1=1.08 B2=1.94 1985GLa (29638)2126
Competitive potentiometric method using Ag(I) as an auxiliary cation
Using spectrophotometry, K1=1.02, B2=1.86, B=2.39

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

Cu++ sp KNO3 25°C 0.50M C K1=9.04 1977LWa (29654)2127

C4H6N4O L CAS 56-06-4 (5994)
2,4-Diamino-6-hydroxypyrimidine;

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

Cu++ gl KNO3 45°C 0.10M C 1986KZa (29669)2128
K(Cu+HL)=3.20

C4H6N4O L (1012)
4(5)-Aminoimidazole-5(4)-carboxamide; H2N.CO.C3H2N2.NH2

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

Cu++ gl NaClO4 25°C 0.10M C K1=3.54 B2= 5.76 1998TSa (29673)2129

Cu++ gl NaClO4 25°C 0.10M C K1=1.77 1998TSa (29674)2130

C4H6N4O L CAS 1672-50-0 (5993)
4,5-Diamino-6-hydroxypyrimidine;

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

Cu++ gl KNO3 45°C 0.10M C 1986KZa (29677)2131
K(Cu+HL)=4.52
K(CuHL+HL)=4.3

C4H6N4O3S2 L (6481)
2-Acetylamino-1,3,4-thiadiazole-5-sulphonamide;

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

Cu++ gl alc/w 25°C 50% U 1990FBb (29686)2132
B(Cu2L2)=18.361

B(Cu2H-1L2)=11.75

B(CuH-2L2)=2.69

B(CuL2(OH))=5.39

C4H6O2 HL But-3-enoic ac. CAS 625-38-7 (2989)

But-3-enoic acid; CH2:CH.CH2.COOH

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

Cu++ sol NaClO4 25°C 0.10M U K1=4.53 1949KAa (29728)2133

C4H6O2Br2 HL CAS 41459-42-1 (6308)

3-Bromo-2-(bromomethyl)-propanoic acid; BrCH2.CH(CH2Br).COOH

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

Cu++ gl NaClO4 31°C 0.10M U K1=2.69 1976RRb (29734)2134

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

Cu++ gl NaClO4 25°C 0.10M C K1=3.07 1978SPd (29738)2135

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

Cu++ gl KCl 25°C 0.10M C K1=2.15 B2=3.99 1982KMc (29744)2136

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

Cu++ gl KCl 25°C 0.10M C K1=1.39 B2=2.37 1982KMc (29748)2137

C4H6O4 H2L Succinic acid CAS 110-15-6 (112)

1,4-Butanedioic acid; HOOCH2.CH2.COOH

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

Cu++ gl KNO3 25°C 0.10M C M 2002Bma (29829)2138

K(CuL+A)=9.03

K(CuL+B)=10.52

HA is 1,2,4-triazole; HB is 3-amino-1,2,4-triazole.

Cu++ gl NaNO3 25°C 0.10M C M K1=3.20 1998KRa (29830)2139

B(CuLA)=8.38

HA: inosine.

Cu++	gl	KNO3	25°C	0.10M	U		K1=3.02	1998VZa (29831)	2140
							K(Cu+HL)=1.99		

Cu++	gl	KNO3	25°C	0.1M	C		K1=3.02	1998VZa (29832)	2141
							K(Cu+HL)=1.99		

Also K1=2.98 found by specrophotometry

Cu++	gl	NaNO3	25°C	0.10M	U	M	K1=6.75	1997ISd (29833)	2142
							K(CuL+gly)=7.85		
							K(CuL+ala)=6.78		
							K(CuL+leu)=6.20		
							K(CuL+asp)=8.10		

Cu++	gl	alc/w	25°C	40%	U	M	K1=4.75	B2= 9.00	1994AKa (29834)	2143
------	----	-------	------	-----	---	---	---------	----------	-----------------	------

Medium: 40% v/v EtOH/H2O, 0.10 M NaClO4
Data for ternary complexes with picolinamide.

Cu++	gl	NaClO4	25°C	1.0M	C	M	K1=2.404	1994FGa (29835)	2144
							K(Cu+HL)=1.50		
							K(CuL+A)=0.96		

HA=ethanoic acid

Cu++	gl	KNO3	25°C	0.10M	M	M	K1=5.768	1993AEa (29836)	2145
------	----	------	------	-------	---	---	----------	-----------------	------

Cu++	gl	KNO3	25°C	0.10M	C	M	K1=2.98	1993AEb (29837)	2146
							K(Cu(AMP)+L)=5.82		
							K(Cu(ADP)+L)=6.35		
							K(Cu(ATP)+L)=7.25		
							B(CuL(AMP))=9.02		

B(CuL(ADP))=12.40, B(CuL(ATP))=13.65.

Cu++	vlt	KNO3	30°C	0.10M	C	M	K1=2.60	B2= 4.30	1991STb (29838)	2147
------	-----	------	------	-------	---	---	---------	----------	-----------------	------

Method: polarography. Medium pH 9.5.
Ternary complexes with 2-amino-3-hydroxypyridine

Cu++	vlt	KNO3	30°C	0.10M	C	M	K1=2.60	B2= 4.30	1991STb (29839)	2148
							B(CuAL)=10.9			

Method: polarography, medium pH 9.5. HA is 2-amino-3-hydroxypyridine.

Cu++	gl	NaClO4	25°C	0.10M	U		K1=2.59	B2=4.30	1990MPa (29840)	2149
							B(CuHL)=7.03			
							B(CuHL2)=9.59			

Cu++	ISE	NaClO4	25°C	0.10M	C		K1=3.98	1989COb (29841)	2150
------	-----	--------	------	-------	---	--	---------	-----------------	------

Cu++	gl	KNO3	25°C	0.10M	U	M	K1=3.23	1988NSb (29842)	2151
							B(CuLA)=8.16		

H2A=malonic acid

Cu++ gl NaClO4 25°C 0.10M U M K1=2.49 1987NDa (29843)2152
K(CuA+B+L)=12.34

H2A=iminodiethanoic acid, H2B=oxydiethanoic acid

Cu++ gl NaClO4 30°C 0.10M M I K1=2.58 1985ARc (29844)2153
Also data for 20-80% dioxane/H2O. For 40% dioxane/H2O, K1=4.25.

Cu++ vlt KNO3 25°C 1.0M C K1=4.0 B2= 6.57 1982GAa (29845)2154
Method: polarography.

Cu++ vlt KNO3 25°C 1.0M C M K1=4.20 B2= 6.57 1982GVa (29846)2155
B(Cu(en)L)=15.29

Method: polarography. From potentiometric measurements K(H+L)=5.69
Medium: pH 8.0

Cu++ gl KNO3 25°C 0.10M U M K1=2.68 B2=3.7 1980GMB (29847)2156
B(CuHL)=7.14
B(CuLA)=11.93
B(CuHLA)=16.47

A=histamine

Cu++ gl NaClO4 35°C 0.10M U M K1=2.60 1980MPb (29848)2157
B(CuLA)=8.25

H2A=malonic acid

Cu++ gl NaClO4 30°C 0.10M U K1=2.57 1980NSd (29849)2158

Cu++ gl NaClO4 25°C 0.10M C H K1=2.61 1978GCa (29850)2159
By calorimetry, DH1=11.3 kJ mol⁻¹, DS1=88 J K⁻¹ mol⁻¹

Cu++ gl NaClO4 25°C 1.00M U 1978KCa (29851)2160
B(CuHL)=6.66
B(Cu2L)=3.70

Cu++ vlt KNO3 28°C 1.50M U K1=2.00 B2=4.03 1975KNa (29852)2161

Cu++ gl KNO3 25°C 0.10M C M 19750Da (29853)2162
K(Cu+HL)=1.87
K(Cu(bpy)+HL)=2.11
K(Cu(bpy)+L)=3.09
K(Cu+HL+bpy)=10.26

Cu++ gl NaClO4 30°C 0.10M U M 1975SJa (29854)2163
B(CuL(phthalate))=6.70
B(CuL(adipate))=7.05
B(CuL(sulphosalicylate))=8.50
B(CuL(dinitrosalicylate))=7.6

Cu++ ISE NaClO4 25°C 0.20M U I K1=2.26 1967Mnc (29855)2164
At I=0: K1=3.22

Cu++ cal KCl 25°C 0.10M U H 1967Mnc (29856)2165
DH(K1)=19.1 kJ mol⁻¹, DS=126 J K⁻¹ mol⁻¹

Cu++ gl NaClO4 20°C 0.10M U K1=2.93 1963CAa (29857)2166
K(Cu+HL)=1.70

Cu++ gl oth/un 25°C 0.10M U K1=2.6 1960YYa (29858)2167

Cu++ gl oth/un 25°C ? U K1=3.3 1958GHc (29859)2168

Cu++ gl oth/un 25°C ->0 U K1=3.33 1951PJb (29860)2169

C4H6O4 HL Acetoxyacetic a CAS 13831-30-6 (4249)
Acetoxyethanoic acid; CH3.CO2.CH2.CO0H

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

Cu++ gl NaNO3 30°C 0.40M U K1=1.22 1970BTa (30080)2170

C4H6O4 H2L Me-Malonic Acid CAS 516-15-2 (816)
Methylpropanedioic acid; H00C.CH(CH3).CO0H

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

Cu++ gl NaClO4 30°C 0.10M M I K1=5.13 B2= 8.66 1985ARc (30101)2171
Also data for 20-80% dioxane/H2O. For 40% dioxane/H2O, K1=8.48, K2=5.90.

Cu++ gl NaClO4 30°C 0.10M U K1=5.13 B2= 8.66 1983SHd (30102)2172

Cu++ gl NaClO4 25°C 0.10M U K1=4.89 B2=7.49 19680Va (30103)2173
K(Cu+HL)=1.66

Cu++ con oth/un 25°C .001M U K1=5.19 1931IRb (30104)2174

Cu++ ISE oth/un 25°C 0.10M U B2=8 1930RIa (30105)2175

C4H6O4S H2L Thiodiacetic CAS 123-93-3 (140)
2,2'-Thiodiglycolic acid, Thiodiethanoic acid; H00C.CH2.S.CH2.CO0H

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

Cu++ gl KNO3 35°C 0.10M C M K1=4.53 1999DSb (30169)2176
B(CuAL)=6.70

A is thiamine hydrochloride.

Cu++ gl KNO3 35°C 0.10M U M 1990RSd (30170)2177
B(Cu(asp)L)=7.50

K(CuL+met)=6.60, K(CuL+ox)=3.36, K(CuL+B)=7.00, K(CuL+trp)=7.33, K(CuL+HC)=6.97. A is imidazole, HB is phenylalanine, H2C is tyrosine.

HA=4-amino-5-mercapto-1,2,4-triazole, HC=4-amino-5-mercapto-3-methyltriazole

Cu++	gl	NaClO ₄	30°C	0.10M	C	M	1985SHb	(30173)2180
						B(CuAL)=8.93		
						K(CuL+A)=3.98		
						K(CuA+L)=4.35		
						B(CuBL)=9.07		

$K(\text{CuL}+\text{B})=4.13$, $K(\text{CuB}+\text{L})=4.49$. H_2A is ethylmalonic acid, H_2B is diethylmalonic acid.

Cu++ gl NaClO4 25°C 0.10M U TIH K1=4.63 B2= 7.44 1984DBa (30174)2181
Data for 35 and 45 C and I=0.2 and 0.3 M. At I=0, K1=4.60, K2=2.79.
DH(B2)=-13.9 kJ mol⁻¹, DS(B2)=92.7 J K⁻¹ mol⁻¹.

Cu++	gl	NaClO ₄	30°C	0.10M	U	M	1983SHd (30175)2182
						B(CuLA)=9.02	
						K(CuL+A)=4.44	
						K(CuA+L)=3.89	
						B(CuLB)=8.34	

H2A is methylmalonic acid, H2B is dimethylmalonic acid.
 $K(\text{CuL+B})=3.76$, $K(\text{CuB+L})=3.52$.

Cu++ gl NaClO4 25°C 0.10M U M 1982ABe (30176)2183

K(Cu(tpy)+L)=2.1
B(Cu(tpy)L)=14.4
K(Cu(tpy)+HL)=2.71
B(CuH(tpy)L)=19.1

$K(\text{Cu}(\text{tpy}) + \text{CuL} = \text{Cu}(\text{tpy})\text{L} + \text{Cu}) = -2.4$. tpy: 2,2',2''-terpyridine.

Cu++ gl NaClO₄ 25°C 0.10M C HM 1979CRa (30177)2184
B(CuL(bpy))=12.41
B(CuHL(bpy))=14.0

DH(CuL(bpy))=-40.6 kJ mol⁻¹, DS=101, DH(CuHL(bpy))=-35.0, DS=151

Cu++ gl NaClO4 25°C 3.0M C K1=4.63 B2=7.86 1979RWa (30178)2185
B(CuHL)=6.35

Cu++ gl NaCl04 25°C 0.10M C TI M K1=4.45 B2=7.05 1978AMb (30179)2186
K(Cu+HL)=2.60

Ternary data with 2,2'-bipyridyl

Cu++ gl oth/un 20°C 0.10M U K1=4.57 1961COa (30180)2187
K(Cu+HL)=3.18

Cu++ gl NaCl04 20°C 1.00M U K1=4.18 B2=7.08 1961SAa (30181)2188
B3=8.6
B4=11.9(?)

Cu++ oth NaCl04 20°C 1.0M U K1=4.18 B2=7.08 1960SAa (30182)2189
B3=8.6
B4=11.9

Cu++ gl oth/un 25°C 0.10M U K1=4.3 1960YYa (30183)2190

Cu++ gl KCl 30°C 0.10M U K1=4.5 B2=7.3 1957TBb (30184)2191

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

Cu++ gl NaCl04 30°C 0.10M U K1=7.06 B2=13.45 1988NDa (30280)2192

Cu++ gl NaCl04 30°C 0.10M M I K1=5.60 B2= 8.50 1985ARc (30281)2193
Also data for 20-80% dioxane/H2O. For 40% dioxane/H2O, K1=8.48, K2=4.54.

Cu++ nmr NaCl04 25°C 0.10M U K1=16.2 K2=<7.6 1978LMb (30282)2194
K(Cu+H3L=CuL+3H)=-2.4

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

Cu++ gl NaCl04 30°C 0.10M M I K1=3.90 B2= 5.40 1985ARc (30388)2195
Also data for 20-80% dioxane/H2O. For 40% dioxane/H2O, K1=7.13, K2=4.05.

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

Cu++ gl NaCl04 30°C 0.10M C M K1=3.46 1985SHb (30404)2196
B(CuAL)=8.11
K(CuL+A)=3.16
K(CuA+L)=4.65
B(CuBL)=8.29

K(CuL+B)=3.35, K(CuB+L)=4.83. H2A is ethylmalonic acid, H2B is diethylmalonic acid.

Cu++ gl NaClO4 30°C 0.10M U M K1=3.46 1983SHd (30405)2197
B(CuLA)=8.07
K(CuL+A)=4.61
K(CuA+L)=2.94
B(CuLB)=7.58

H2A is methylmalonic acid, H2B is dimethylmalonic acid.

K(CuL+B)=4.12, K(CuB+L)=2.76.

C4H6O4Se H2L CAS 6228-62-2 (984)
Selenodiethanoic acid; HOOCH2.Se.CH2.COOH

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

Cu++ gl NaClO4 25°C 0.10M C HM 1979CRa (30438)2198
B(CuL(bpy))=12.08
B(CuHL(bpy))=13.8

DH(CuL(bpy))=-35.9 kJ mol⁻¹, DS=138

Cu++ gl KNO3 25°C 0.10M C K1=3.55 1975LPa (30439)2199
K(Cu+HL)=2.50

Cu++ gl NaClO4 25°C 0.10M U K1=3.6 1966SYa (30440)2200

C4H6O5 H2L Isomalic acid CAS 595-48-2 (4250)
2-Hydroxy-2-methylpropanedioic acid; HOOCH(OH)(CH3).COOH

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

Cu++ sp KCl 20°C 0.10M U K1=4.42 1969AVa (30455)2201
K(Cu+HL)=2.70

C4H6O5 H2L Malic acid CAS 617-48-1 (393)
2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; HOOCH2.CH(OH).COOH

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

Cu++ gl KNO3 25°C 0.10M C M K1=4.22 2002BMa (30514)2202
K(CuL+A)=8.95
K(CuL+B)=10.28

HA is 1,2,4-triazole; HB is 3-amino-1,2,4-triazole.

Cu++ gl NaNO3 25°C 0.10M C M K1=6.80 1998KRa (30515)2203
B(CuLA)=11.87

HA: inosine.

Cu++ gl NaNO3 25°C 0.10M U M K1=6.10 1997ISd (30516)2204
K(CuL+gly)=7.25

$K(\text{CuL+ala})=6.45$
 $K(\text{CuL+leu})=5.92$
 $K(\text{CuL+asp})=7.90$

Cu++ sp KCl 25°C 0.10M C K1=3.67 1996DPa (30517)2205
 $B(\text{CuHL})=6.78$
 $B(\text{Cu2H-1L2})=5.15$
 $B(\text{Cu2H-2L2})=0.99$
 Method: ultraviolet circular dichroism.

Cu++ gl KNO3 25°C 0.10M C M K1=4.22 1993AEb (30518)2206
 $K(\text{Cu(AMP)+L})=5.74$
 $K(\text{Cu(ADP)+L})=6.28$
 $K(\text{Cu(ATP)+L})=6.99$
 $B(\text{CuL(AMP)})=8.94$
 $B(\text{CuL(ADP)})=12.33$, $B(\text{CuL(ATP)})=13.39$.

Cu++ gl NaNO3 25°C 0.50M M M 1989MAa (30519)2207
 $B(-3,1,1)=-6.1$
 $K(2\text{CuH-2L}=\text{Cu2H-4L2})=-14.5$
 $B(p,q,r): pH+qM+rH2L. K(UO2+\text{Cu}+2\text{H2L}=\text{UO2CuH-4L2}+8\text{H})= 1.11$

Cu++ gl NaClO4 25°C 0.50M C K1=3.39 1986LJa (30520)2208
 $B(\text{CuHL})=6.55$
 $B(\text{CuH-1L})=-0.99$
 Above results for S(-)-Malic acid. For R,S-Malic acid K1=3.40, $B(\text{CuHL})=6.31$
 $B(\text{Cu2H-2L2})=16.22$

Cu++ gl NaClO4 30°C 0.10M M I K1=3.20 B2= 5.10 1985ARc (30521)2209
 Also data for 20-80% dioxane/H2O. For 40% dioxane/H2O, K1=5.48, K2=4.30.

Cu++ sp NaNO3 25°C 0.50M U M 1979KR a (30522)2210
 $B(\text{Cu2Y2H-5L3})=-9.74$
 Binuclear species: Cu++/Y+++.

Cu++ gl NaClO4 25°C 1.00M U 1978KCa (30523)2211
 $B(\text{CuHL})=6.51$
 $B(\text{Cu2L})=4.40$

Cu++ vlt KNO3 24°C 1.50M U K1=3.98 B2=4.92 1978KNb (30524)2212

Cu++ sp NaNO3 25°C 0.50M U K1=14.68 1978KPc (30525)2213
 $B(\text{CuH2L})=22.05$
 $B(\text{CuHL})=19.08$
 $B(\text{Cu2L2})=30.27$
 $B(\text{CuH2L2})=35.98$
 Malic acid defined as H3L with protonation constants K1=15.46, K2=4.49, K3=3.14

Cu++ sp NaNO3 20°C 1.00M U K1=4.03 B2=6.26 1976HBd (30526)2214

Cu++	sol	KCl	25°C	0.10M	U	T	H	K1=4.53 K(Cu+HL)=2.44	1975DNc (30527)	2215
DH(K1)=45.93 kJ mol ⁻¹ and DS(K1)=241 J mol ⁻¹ K ⁻¹ . DH(K)=37.0 kJ mol ⁻¹ DS(K)=171 J mol ⁻¹ K ⁻¹ . Values also at 35 and 45 C										
Cu++	gl	KNO3	25°C	1.00M	U			K1=3.33 B(CuHL)=6.49 B(Cu2L2)=8.40 B(Cu2H-1L2)=4.64 B(Cu2H-2L2)=0.31	1975GCa (30528)	2216
Cu++	gl	NaClO4	30°C	0.20M	U			K1=8.43	1975JBb (30529)	2217
Cu++	gl	KNO3	25°C	0.10M	C		M	B(CuHL)=6.73 K(Cu+HL)=2.09 K(Cu+HL+bpy)=10.48 K(Cu(bpy)+L)=3.82	19750Da (30530)	2218
Cu++	vlt	NaNO3	?	1.00M	U			K1=4.22 B2=5.42 K(Cu+HL)=2.83 K(Cu+2HL)=4.32	1973ZGa (30531)	2219
Cu++	sp	NaClO4	30°C	0.10M	U			K1=3.97 K(2Cu+L)=7.71	1968RSk (30532)	2220
Cu++	gl	KNO3	25°C	1.0M	U			K(2Cu+2L)=8.0 K(Cu2(H-1L)2+2H)=7.8	1967RMb (30533)	2221
Cu++	sp	NaClO4	29°C	1.0M	U			K1=3.43	1965MNa (30534)	2222
Cu++	gl	NaClO4	20°C	0.10M	U			K(Cu+H2L)=2.00 K(Cu+HL)=3.42 K(CuL+H)=4.54	1963CAa (30535)	2223
Cu++	gl	NaClO4	20°C	1.0M	U		I	K1=3.4 K(Cu+HL)=3.3 B(Cu2L2(OH)2)=28.9	1957LEa (30536)	2224

In 4 M NaClO4: B2=6.2

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	U		M	K1=3.80 B(CuBL)=7.78	1989NDb (30803)	2225

H2B is malonic acid, H2C is phthalic acid.

$$K(CuA+L+C)=13.83$$

$\Delta H(K1) = -7.95 \text{ kJ mol}^{-1}$, $\Delta S(K1) = 49.5 \text{ J K}^{-1} \text{ mol}^{-1}$.

$$K(\text{CuL}+\text{H})=1.39$$
$$B(\text{CuH}(\text{tpy})\text{L})=18.7$$
$$B(\text{CuHL}(\text{bpy})) = 14.4$$
$$K(\text{Cu}+\text{HL})=2.92$$
$$K(Cu+20H+L)=12.7$$
$$K(Cu+30H+L)=15.8$$

K1=3.93

$$K(\text{Cu}+\text{HL})=2.67$$
 $K_1 = 3.9$

K1=3.9

C4H6O6 H2L D-Tartaric acid CAS 147-71-7 (93)

D-Tartaric acid, D-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	alc/w	25°C	50%	C	I	K1=5.80	1986ZMb (30966)	2237
In 50% dioxan, K=6.18									
Cu++	ISE	KNO3	25°C	0.50M	U		K1=2.5 B(CuHL)=5.5 B(Cu2L2)=8.7 B(Cu2H-1L2)=4.5 B(Cu2H-2L2)=0.1	1984BSb (30967)	2238
B(Cu2H-3L2)=-7.0; B(Cu2H-4L2)=-17.3; B(Cu8H-10L6)= -7.5									
Cu++	ISE	NaClO4	25°C	1.00M	C	H	K1=2.63 B2=4.39 B(CuHL)=5.58 B(Cu2L2)=8.60 B(Cu2H-1L2)=4.20 B(Cu2H-2L2)=-0.36	1980JOa (30968)	2239
Cu++	oth	NaClO4	20°C	1.0M	U		B(1,0,2)=4.7 B(2,0,3)=11.20 B(2,0,4)=11.8	1975JLb (30969)	2240

B(q,r,p): $q\text{Cu}+r\text{H}+p\text{L}=\text{CuqHrLp}$

Cu++	ISE	NaClO4	20°C	1.00M	C		Beff(1,1)=2.1 Beff(3,1)=6.28 Beff(2,2)=9.12 Beff(6,4)=25.28	1975JOa (30970)	2241
------	-----	--------	------	-------	---	--	--	-----------------	------

Beff(8,4)=28.96; Beff(10,4)=31.28. Beff(q,p): $q\text{Cu}+p\text{L}=\text{CuqLp}$. Valid at pH 4.4

C4H6O6 H2L DL-Tartaric acid CAS 133-37-9 (94)
DL-Tartaric acid,DL-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	U	M	K1=5.50 K(CuL+gly)=7.35 K(CuL+ala)=6.20 K(CuL+leu)=5.10 K(CuL+asp)=8.10	1997ISd (30992)	2242
Cu++	sp	NaClO4	25°C	0.1M	C		K1=0.60 B2=4.40	1993SKa (30993)	2243
Cu++	gl	NaNO3	25°C	0.50M	M	M	B(-4,1,1)=-5.5 K(2CuH-2L=Cu2H-4L2)=-13.4	1989MAa (30994)	2244

B(p,q,r): $\text{pH}+q\text{M}+r\text{H2L}$. $\text{K}(\text{UO2}+\text{Cu}+2\text{H2L}=\text{UO2CuH-4L2}+8\text{H})= 1.17$

 Cu++ ISE NaCl04 25°C 1.00M C H K1=2.65 B2=4.37 1980J0a (30995)2245
 B(CuHL)=5.57
 B(Cu2L2)=8.31
 B(Cu2H-1L2)=3.99
 B(Cu2L2H-2)=-0.52

 C4H6O6 H2L L-Tartaric acid CAS 87-69-4 (92)
 L-Tartaric acid, L-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH

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

Cu++	gl	KNO3	25°C	0.10M	C	M	K1=4.10 K(CuL+A)=8.80 K(CuL+B)=9.94	2002BMa (31099)	2246
------	----	------	------	-------	---	---	---	-----------------	------

HA is 1,2,4-triazole; HB is 3-amino-1,2,4-triazole.

Cu++	gl	NaNO3	25°C	0.10M	C	M	K1=6.96 B2=12.66 B(CuLA)=11.74	1998KR a (31100)	2247
------	----	-------	------	-------	---	---	-----------------------------------	------------------	------

HA: inosine.

Cu++	gl	NaCl04	25°C	0.50M	C		K1=2.85 B(Cu2L2)=8.77 B(Cu2H-1L2)=4.38 B(CuHL)=5.60 B(Cu2H-2L2)=-0.25	1995PLa (31101)	2248
------	----	--------	------	-------	---	--	---	-----------------	------

B(Cu6H-7L4)=-5.40, B(Cu8H-10L6)=-7.52.

Cu++	gl	KNO3	25°C	0.10M	M	M	K1=4.992	1993AEa (31102)	2249
------	----	------	------	-------	---	---	----------	-----------------	------

Cu++	gl	KNO3	25°C	0.10M	C	M	K1=3.20 K(Cu(AMP)+L)=5.55 K(Cu(ADP)+L)=6.10 K(Cu(ATP)+L)=6.88 B(CuL(AMP))=8.75	1993AEb (31103)	2250
------	----	------	------	-------	---	---	--	-----------------	------

B(CuL(ADP))=12.15, B(CuL(ATP))=13.28.

Cu++	vlt	NaNO3	25°C	1.0M	C	M	K1=3.60 B2= 5.75 B(Cu(iso-leu)L)=11.65 B(Cu(val)L)=11.13 B(Cu(thre)L)=10.85	1992KMa (31104)	2251
------	-----	-------	------	------	---	---	--	-----------------	------

Method: polarography. Medium: pH 8.0.

Cu++	vlt	NaNO3	25°C	1.0M	C	M	K1eff=3.60 B2eff=5.75 Beff(Cu(isoleucine)L)=11.65 Beff(Cu(val)L)=11.13	1992KMa (31105)	2252
------	-----	-------	------	------	---	---	---	-----------------	------

Method: differential pulse polarography. Medium: pH 8.0

B(Cu(threonine)L)=10.85

Cu++	oth	NaClO4	40°C	0.10M	C	K1=3.41 B(Cu2L2)=6.89	1982SYb (31106)2253
Method: paper electrophoresis. Medium: 0.10 M HClO4.							
Cu++	oth	oth/un	40°C	0.10M	U	M	1981YSa (31107)2254 B(Cu2L2(NTA)2)=12.25
Method: paper electrophoresis							
Cu++	gl	NaClO4	30°C	0.10M	U	K1=3.90	B2=7.10 1980NSd (31108)2255
Cu++	gl	NaClO4	25°C	1.00M	U	K1=3.15 B(CuHL)=4.70	1978KCa (31109)2256
Cu++	vlt	KNO3	24°C	1.50M	U	K1=3.18	B2=5.11 1978KNb (31110)2257
Cu++	oth	NaNO3	25°C	0.50M	U	M	K1=3.39 1972PBd (31111)2258 B(Cu8L6(OH)10)=132.5 B(CuL2(OH)2)=20.70
Method: optical rotation							
Cu++	ISE	NaNO3	25°C	0.50M	U	M	1972PPc (31112)2259 K(2Cu+Y+50H+3L)=54.40
Cu++	gl	NaClO4	25°C	0.10M	U	K1=3.34	B2=5.68 1972RMa (31113)2260
Values quoted for meso form. K1(dl)=3.52, K2(dl)=2.52, B2(meso-dl)=6.66							
Data also obtained by ion selective electrode							
Cu++	ISE	NaClO4	25°C	1.00M	U	K1=2.70	B2=4.00 1971BVb (31114)2261 K(Cu+L=Cu(H-1)L+H)=-2.6 K(2Cu+2L=Cu2(H-2)L2+2H)=-0.24 B(CuHL)=5.45 B(CuHL2)=7.52
Data for other complexes also available							
Cu++	gl	NaClO4	25°C	1.00M	U	K1=2.70	B2=4.00 1969BLb (31115)2262 B(CuHL)=5.45 B(CuHL2)=7.52 B(CuH2L2)=10.44 B(Cu2L2)=8.58 B(Cu2L3)=9.55, B(Cu2L4)=11.32
Cu++	dis	NaClO4	20°C	0.10M	U	K1=3.10	B2=5.41 1969MBe (31116)2263
Cu++	dis	NaClO4	25°C	1.00M	U	K1=3.25	B2=4.90 1969SLb (31117)2264
Cu++	vlt	KNO3	20°C	1.00M	U	K1=3.2	1969SVb (31118)2265
K1=3.2 for D,L and DL forms							
Cu++	gl	KNO3	25°C	1.0M	U	K1=2.6	1967RMb (31119)2266

B(Cu2L2)=8.2

Cu++	ix	oth/un	20°C	var	U	K1=3.1	B2=4.90	1964LUa (31120)2267
						K3=0.8		

Cu++	oth	NaCl04	?	1.0M	U	K1=3.2	1957LEa (31121)2268
						B(Cu8L6(OH)10)=133.1	

Cu++	sol	oth/un	?	?	U	K2=5.15	1956PKa (31122)2269
------	-----	--------	---	---	---	---------	---------------------

Cu++	oth	oth/un	?	?	U	K2=5.40	1955K0a (31123)2270
						K3=9.20	

Cu++	vlt	oth/un	25°C	var	U		1949MEa (31124)2271
						B(CuL2(OH)2)=9.85	

Cu++	EMF	NaCl04	20°C	1.0M	U	K1=3.20	B2=5.11	1948FRa (31125)2272
						K3=-0.34		
						K4=1.73		

LIGAND:(+)-acid. With racemic acid: K1=3.00, K2=2.11, K3=0.65, K4=0.44

C4H6O6 H2L meso-Tartaric CAS 147-73-9 (91)

meso-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH

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

Cu++	ISE	NaCl04	25°C	1.00M	C	H	K1=3.15	B2=5.31	1980J0b (31422)2273
							B(CuHL)=6.18		
							B(Cu2L2)=8.52		
							B(Cu5H-5L4)=4.04		
							B(Cu5H-6L4)=0.13		

C4H7NO2 HL Acetoacetamide CAS 2044-64-6 (1407)

3-Oxobutanamide;

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

Cu++	gl	NaCl04	25°C	0.5M	C		K1=7.22	1998HCb (31446)2274
------	----	--------	------	------	---	--	---------	---------------------

C4H7NO2 HL CAS 57-71-6 (6204)

But-2,3-dione monoxime; CH3.CO.C(:NOH).CH3

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

Cu++	gl	alc/w	25°C	75%	U		K1=8.2	B2=13.30	1986BTa (31451)2275
------	----	-------	------	-----	---	--	--------	----------	---------------------

Medium: 75% MeOH/H2O, 0.1 M NaCl04

C4H7NO2S HL Thioproline CAS 444-27-9 (1183)

Thiazolidine-4-carboxylic acid; C3H6NS.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	30°C	0.10M	C	H	K1=5.64	1983RKa (31463)	2276
DH(K1)=-20.2 kJ mol ⁻¹ , DS(K1)=41.									
Cu++	gl	NaClO4	25°C	0.15M	U		K1=6.02 B2=11.22 B(CuHL)=7.85	1976FJa (31464)	2277

C4H7NO3		HL					(680)		
2-Amino-2-acetyllethanoic acid; H2N.CH(CO.CH3).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	C			1988CLa (31483)	2278
							K(Cu+HL)=2.40 K(Cu+2HL)=4.54		

C4H7NO3		HL					CAS 543-24-8 (3586)		
N-Acetyl glycine; CH3.CO.NH.CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	cal	NaClO4	25°C	0.10M	C	H		1988LGa (31490)	2279
DH(K1)=1.9 kJ mol ⁻¹ , DH(K2)=1.9 kJ mol ⁻¹ .									
Cu++	gl	NaNO3	30°C	0.40M	U		K1=1.30	1970BTa (31491)	2280
Cu++	gl	oth/un	20°C	1.0M	U	I	K1=1.71	1960KFb (31492)	2281
K1=2.14(I=0.015)									

C4H7NO4		H2L					CAS 56-84-8 (21)		
Aminobutanedioic acid; H2N.CH(CH2.COOH).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	M		K1=8.46 B2=15.08 B(CuHL)=12.48	2003DFa (31625)	2282
Cu++	gl	NaNO3	25°C	0.10M	C		K1=8.94 B2=15.83 B(CuH-1L)=1.23	2000MSa (31626)	2283
Cu++	gl	KNO3	25°C	0.10M	C	M	K1=8.50 K(CuL+A)=4.07 B(CuLA)=12.57 K(CuL+B)=3.86 B(CuLB)=12.36 K(CuL+C)=3.47, B(CuLC)=11.97, K(CuL+D)=3.44, B(CuLD)=11.94. HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.	1999AAa (31627)	2284
Cu++	gl	KNO3	25°C	0.10M	C		K1=8.83	1999BIa (31628)	2285

B(CuLNi)=13.09
B(CuL2Ni)=21.02
B(CuLZn)=12.79
B(CuL2Zn)=20.30

Cu++ gl NaClO4 25°C 0.20M U T M K1=8.57 B2=15.55 1993PPa (31641)2298
K(CuA+L)=8.63

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Cu++ gl NaClO4 37°C 0.15M U M K1=9.46 B2=17.02 1992NAa (31642)2299
B(CuLA)=18.74
B(CuLB)=19.04
B(CuL(Orn))=17.57

HA=2,3-Diaminopropanoic acid, HB=2,4-diaminobutanoic acid

Cu++ gl KNO3 35°C 0.20M C M K1=8.38 1992YKa (31643)2300
B(Cu(edda)L)=18.94
B(Cu(en)L)=17.71
K(Cu(edda)+L)=4.44
K(Cu(en)+L)=9.33

Cu++ gl NaClO4 30°C 0.01M U T H K1=8.90 1991PPa (31644)2301
K(Cu(imidazole)+L)=4.02
K(Cu(Me-imidazole)+L)=4.30
K(Cu(Et-imidazole)+L)=4.34

40 C: K1=8.62, 50 C: K1=8.35. DH(K1)=-49.7 kJ mol⁻¹, DS=5.8 J K⁻¹ mol⁻¹

Cu++ gl KNO3 30°C 0.10M U 1990APa (31645)2302
K(Cu+H2L=CuL+2H)=-4.76
*K(CuL)=-6.74
K(Cu+2H2L=CuL2+4H)=-11.55
K(Cu+HL=CuL+H)=-1.14

Cu++ gl NaClO4 37°C 0.15M U M K1=9.46 B2=17.02 1990Nca (31646)2303
B3=14.82
B(CuLA)=15.28
B(CuLB)=14.18
B(CuLC)=16.40

HA=2-aminobutanoic acid, HB=4-amino-3-hydroxybutanoic acid,
HC=2-amino-3-hydroxybutanoic acid

Cu++ gl NaClO4 25°C 1.00M C K1=8.40 B2=15.90 1989BFb (31647)2304
B(CuHL)=12.40
B(CuH2L)=14.25
B(CuHL2)=20.15
B(CuH2L2)=24.08

B(CuH4L2)=28.26

Cu++ vlt KNO3 25°C 1.0M C K1=8.71 B2=15.64 1989FNa (31648)2305
B(CuHL)=12.38

$$B(\text{CuHL2})=20.39$$
$$B(\text{CuH2L2})=23.48$$

Method: chronocoulometry.

Cu++ gl NaCl04 25°C 0.50M C K1=8.76 B2=15.72 1987LEc (31649)2306
B(CuHL)=12.40

Cu++ g1 KNO3 35°C 0.20M C M K1=8.38 B2=15.02 1987PRa (31650)2307

Cu++ ISE KNO3 25°C 0.10M U M K1=8.40 1986Dva (31651)2308
K(CuL+salicylate)=9.63

Cu++ gl NaClO4 30°C 0.10M M I K1=8.40 B2=15.15 1985ARC (31652)2309
Also data for 20-60% dioxane/H2O. For 40% dioxane/H2O, K1=10.75, K2=9.32.

Cu++	g1	KN03	25°C	0.10M	C	M	K1=8.83	B2=15.93	1984DAb	(31653)2310
							B(CuHL)=12.52			
							B(CuHL2)=19.8			
							B(CuH2L2)=24.0			
							B(Cu2L)=10.34			

B(CuLA)=17.67; B(CuHLA)=23.1. H2A=Noradrenaline

Cu++ g1 NaNO3 25°C 0.25M C K1=8.70 B2=15.70 1984L0a (31654)2311
B(CuHL)=12.36
B(CuH2L2)=23.54
B(CuL2H)=19.87

Cu++ ISE none 25°C dil C 1984LOf (31655)2312
*K_s(CuL(s)+H=Cu+HL)=-2.362

Method: Cu ion selective electrode. Self medium.

Cu++ gl NaClO4 21°C 0.10M U K1=9.14 B2=16.16 1983Lwb (31656)2313
B(CuHL)=12.43
B(CuH-1L)=3.54

Cu++	nmr	NaNO3	25°C	4.00M	U	M	1982ZBa (31657)2314
							K(CuL2+2SCN)=-0.56
							K(CuL2+2I)=-0.58
							K(CuL2+2Br)=-0.58
							K(CuL2+2Cl)=-0.57

Cu++ gl KNO3 25°C 0.10M M K1=8.61 B2=13.72 1981GVa (31658)2315

Cu++ g1 KN03 25°C 0.20M U M K1=8.84 B2=15.82 1981M0d (31659)2316
K(CuA+L)=8.10

A is bis(2-imidazolyl)methane

Cu++ gl NaNO3 30°C 0.20M C K1=8.82 B2=15.71 1981RSd (31660)2317

Cu++ gl NaClO4 30°C 0.10M C M K1=8.40 B2=15.15 1980ASb (31661)2318

Cu++	gl	KNO3	25°C	0.10M	C		K1=8.84	B2=15.24	1980CKb (31662)	2319
							B(CuHL)=12.70			
Cu++	gl	KNO3	30°C	1.00M	U	M	K1=8.60	B2=15.50	1980SGd (31663)	2320
							B(CuL(malonate))=12.40			
							B(CuL(oxalate))=13.00			
Cu++	vlt	KNO3	30°C	1.00M	U		K1=8.6	B2=15.5	1980SSe (31664)	2321
Cu++	sp	NaNO3	25°C	1.00M	U				1979BSa (31665)	2322
							K(Cu+HL)=4.02			
Cu++	gl	KNO3	25°C	0.20M	C	M	K1=8.84	B2=15.82	1979MBe (31666)	2323
Also many ternary complexes										
Cu++	gl	KNO3	25°C	0.10M	U		K1=9.00	B2=15.84	1978SYa (31667)	2324
							B(CuHL)=12.72			
Cu++	gl	KNO3	25°C	0.10M	U		K1=9.079	B2=16.25	1977BP a (31668)	2325
							B(CuHL)=12.82			
							B(CuH2L2)=25.15			
							B(CuHL2)=21.21			
Cu++	gl	KNO3	25°C	0.10M	U	M			1977BP a (31669)	2326
							B(CuLA)=18.27			
							B(CuL(His))=18.18			
							B(CuHLA)=22.79			
							B(CuHL(His))=22.85			
HA=D-His										
Cu++	gl	NaCl	25°C	0.12M	U		K1=8.62	B2=14.86	1977BSb (31670)	2327
Cu++	gl	KCl	25°C	0.20M	C	M			1977NGa (31671)	2328
							B(CuH-1LA)=5.73			
							B(CuH-1LB)=5.55			
							B(CuH-1LC)=5.16			
							K(CuH-1L2+A=CuH-1LA+L)=1.27			
K(CuH-1L2+B=CuH-1LB+L)=0.93, K(CuH-1L2+C=CuH-1LC+L)=1.02										
HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine										
Cu++	gl	KCl	25°C	0.20M	C				1976NGd (31672)	2329
							K(CuH-1A2+L=CuH-1AL+A)=5.73			
							K(CuH-1C2+L=CuH-1CL+C)=5.55			
							K(CuH-1D2+L=CuH-1DL+D)=5.16			
HA is glycylglycine; HC is glycyl-DL-alpha-alanine; HD is DL-alanyl-DL-alanine.										
Cu++	gl	KNO3	25°C	0.10M	U		K1=8.94	B2=15.89	1975RIb (31673)	2330

$K(\text{CuL}+\text{H})=3.65$
 $B(\text{CuHL})=12.59$

Cu++ gl KCl 25°C 0.20M U HM K1=8.8 B2=15.76 1974NGa (31674)2331
 $K(\text{CuL}+\text{H})=3.68$
 $B(\text{CuL}(\text{Gly}))=15.78$
 DH(K1)=-25.5 kJ mol⁻¹, DH(K2)=-25.0, DH(CuL+H)=-10.5, DS(K1)=20 J K⁻¹ mol⁻¹,
 DS(K2)=12, DS(CuL+H)=9.

Cu++ gl KCl 25°C 0.20M C HM K1=8.70 B2=15.66 1973NGa (31675)2332
 $K(\text{CuL}+\text{H})=3.68$
 $B(\text{Cu}(\text{gly})\text{L})=15.78$
 $B(\text{CuAL})=15.63$
 By calorimetry: DH(K1)=-26 kJ mol⁻¹, DS(K1)=84 J K⁻¹ mol⁻¹; DH(K2)=-26,
 DS=46; DH(CuL+H)=-15, DS=38. DH(Cu(gly)L)=-55.7. H2A=glutamic acid

Cu++ gl NaClO4 25°C 0.10M U M 1973SSe (31676)2333
 $K(\text{CuL}+\text{Gly})=6.45$
 $K(\text{CuL}+\text{Ala})=6.41$
 $K(\text{CuL}+\text{Val})=6.37$
 $K(\text{CuL}+\text{Leu})=6.52$

Cu++ gl KNO3 25°C 0.10M U K1=8.4 1957Mca (31677)2334

Cu++ gl KCl 30°C 0.10M U K1=8.57 B2=15.35 1952Cmb (31678)2335

Cu++ vlt KNO3 25°C 1.0M U B2=15.20 1950Lda (31679)2336

 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
Cu++	gl	KNO3	35°C	0.10M	C	M	K1=10.56 B(CuAL)=13.68	1999DSb (32058)	2337

A is thiamine hydrochloride.

Cu++ gl NaNO3 25°C 0.10M M K1=11.21 1996KSc (32059)2338

Cu++ ISE alc/w 25°C 78% C K1=13.30 B2=19.85 1995LBb (32060)2339
 $B(\text{CuHL})=3.83$
 $K(\text{CuL}+\text{OH})=6.57$
 Medium: 78% EtOH/H2O, 0.01 M LiNO3. ($K_w=-14.76$)

Cu++ gl NaClO4 25°C 0.50M U K1=10.11 B2=15.77 1992GLa (32061)2340
 $B(\text{CuH-1L})=1.47$

Cu++ gl NaClO4 37°C 0.15M U M K1=10.48 B2=16.32 1992NAa (32062)2341
 $B(\text{CuLA})=21.04$
 HA=2,4-Diaminobutanoic acid

Cu++ gl NaClO4 37°C 0.15M U M K1=10.48 B2=16.32 1992RAC (32063)2342
B(CuLZn)=13.13, B(CuL2Zn)=20.13

Cu++ gl KNO3 35°C 0.20M U M 1992RKb (32064)2343

K(CuL+Gly)=6.14

K(CuL+Ala)=5.95

K(CuL+Val)=6.30

K(CuL+Leu)=6.09

K(CuL+Phe)=7.64, K(CuL+Trp)=7.96, K(CuL+Ser)=7.80, K(CuL+Thr)=7.90,

K(CuL+Met)=7.70, K(CuL+Asp)=8.38

Cu++ gl KNO3 25°C 0.10M C M K1=10.57 1991DAc (32065)2344

Data for ternary complexes with acetohydroxamic acid

Cu++ gl NaClO4 25°C 0.20M U K1=9.52 B2=15.10 1991UBa (32066)2345

Cu++ gl KNO3 25°C 0.10M C M K1=10.57 1990DAb (32067)2346

K(CuL+A)=5.85

B(CuLA)=16.42

H2A: salicylaldoxime

Cu++ gl KNO3 25°C 0.10M C M K1=10.57 1990DAc (32068)2347

K(CuL+A)=5.89

B(CuAL)=16.46

HL: benzohydroxamic acid

Cu++ gl NaClO4 25°C 0.20M C M 1990UBc (32069)2348

B(Cu(Gly)L)=15.71

B(Cu(Ala)L)=15.76

B(Cu(Phe)L)=15.73

B(Cu(HTyr)L)=15.52

B(Cu(Trp)L)=16.14, B(Cu(en)L)=18.31, B(Cu(1,3-pn)L)=16.97

Cu++ gl NaClO4 25°C 0.10M U M K1=9.76 1987NDa (32070)2349

K(CuL+A)=9.09

K(CuL+A+B)=14.53

K(CuL+A+C)=13.83

H2A=oxydiacetic acid, H2B=maleic acid, H2C=malonic acid + other ligands

Cu++ sp NaClO4 20°C 0.10M U M K1=10.36 B2=15.69 1985KV a (32071)2350

K(Cu+L+HAsp)=16.62

Cu++ EMF KCl 25°C 0.10M U K1=9.68 1985SNa (32072)2351

K1=9.46 by spectrophotometry

Cu++ gl alc/w 25°C 50% U T HM 1985SRc (32073)2352

K(CuA+L)=6.31

A=2-(N,N-diethylaminomethyl)benzimidazole. At 35 C: K=5.45; 45 C: K=4.64.

DH=-151.0 kJ mol⁻¹, DS=-388 J K⁻¹ mol⁻¹

 Cu++ gl NaClO4 25°C 0.10M U TIH K1=8.63 B2=14.43 1984DBa (32074)2353
 Data for 35 and 45 C and I=0.2 and 0.3 M. At I=0, K1=8.58, K2=5.73.
 DH(B2)=-15.6 kJ mol⁻¹, DS(B2)=211 J K⁻¹ mol⁻¹.

Cu++ ISE KNO3 20°C 0.10M U K1=10.63 B2=16.68 1984HKa (32075)2354

Cu++ gl KNO3 25°C 0.10M U K1=10.57 1983FSa (32076)2355

Cu++ ISE KNO3 25°C 0.10M U K1=9.32 B2=16.33 1983SVa (32077)2356

Cu++ gl NaClO4 25°C 0.10M U M 1982ABe (32078)2357

K(Cu(tpy)+L)=5.11

B(Cu(tpy)L)=17.4

K(Cu(tpy)+HL)=2.4

B(CuH(tpy)L)=24.0

K(Cu(tpy)+CuL=Cu(tpy)L+Cu)=-5.3. tpy: 2,2',2''-terpyridine.

Cu++ cal KNO3 15°C 0.50M U TIH 1982VRa (32079)2358

DH(K1)=-23.0 kJ mol⁻¹, DH(B2)=-50.4

Cu++ gl KNO3 25°C 0.10M U I K1=10.65 B2=16.30 1981FMb (32080)2359

Interpolated from graph. Data also for 20, 50, 80% v/v MeOH/H2O

Cu++ vlt KNO3 RT 0.25M C M B2=16.1 1981RRe (32081)2360

Method: polarography. B(Cu(gly)L)=16.13, B(Cu(ala)L)=16.00,

B(Cu(B-ala)L)=15.79.

Cu++ gl NaNO3 30°C 0.20M C K1=10.51 B2=16.11 1981RSe (32082)2361

Cu++ ISE KNO3 25°C 0.10M U K1=10.48 1980Nwa (32083)2362

Cu++ gl NaClO4 25°C 0.10M U HM K1=10.42 B2=16.02 1979BCa (32084)2363

B(CuL(bpy))=16.63

K(CuL+H)=1.93

*K(CuL)=-9.37

K(2CuLOH=Cu2L2(OH)2)=3.5

DH(K1)=-16.6 kJ mol⁻¹, DS=14.4 J K⁻¹ mol⁻¹; DH(B2)=-43.1, DS=16.2,

DH(B(CuHL))=-19, DS=172. DH(Cu+L+bpy)=-61.5, DS=112 kJ mol⁻¹

Cu++ gl KNO3 25°C 2.5M M K1=10.55 1979FLc (32085)2364

Cu++ ISE diox/w 25°C 10% U K1=10.93 B2=16.67 1978WIa (32086)2365

Cu++ sp NaClO4 25°C 0.50M U K1=10.15 1976KIa (32087)2366

Cu++ ISE KNO3 25°C 0.10M U K1=10.54 1975Nwa (32088)2367

Cu++ gl KNO3 25°C 0.10M U M 1973YBa (32089)2368

K(CuL+py)=2.65

K(CuLH=CuL+H)=-2.67							
Cu++	gl	KNO3	25°C	0.10M	U	M	1971TSh (32090)2369
K(CuL+Ala)=5.80 K(CuL+Gly)=5.87 K(CuL+Asp)=6.05							
Cu++	gl	KNO3	30°C	0.10M	U	M	1971TSj (32091)2370
K(CuL+A)=8.36							
A=1,2-diaminopropane							
Cu++	gl	KNO3	25°C	0.10M	U	M	1971TSj (32092)2371
K(CuL+A)=7.89 K(CuL+B)=6.53 K(CuL+C)=10.05 K(CuL+D)=10.80							
H2A=salicylic acid; H3B=sulphosalicylic acid; H4C=chromotropic acid; H4D=tiron							
Cu++	EMF	oth/un	30°C	0.10M	U	M	1970STf (32093)2372
K(CuL+en)=7.93 K(CuL+A)=8.36 K(CuL+B)=7.10							
A=1,2-diaminopropane; B=1,3-diaminopropane							
Cu++	gl	KNO3	25°C	0.05M	U	M	1969LAa (32094)2373
K(CuL+OH)=6.26 K(CuL+Gly)=6.42 K(CuL+Ala)=6.27 K(CuL+Leu)=6.53							
K(CuL+Val)=6.17, K(CuL+A)=3.57, A=valine ethyl ester, K(CuL+B)=3.69, B=glycine butyl ester							
Cu++	EMF	oth/un	?	?	U	M	1969STb (32095)2374
K(CuL+A)=7.89 K(CuL+B)=6.53 K(CuL+C)=10.05 K(CuL+D)=10.80							
H2A=salicylic acid; H3B=5-sulphosalicylic acid; H4C=3,5-pyrocatecholdisulphonic acid; H4D=chromotropic acid							
Cu++	gl	KNO3	0.4°C	0.10M	U		K1=11.70 1967TMg (32096)2375
Cu++	gl	KNO3	20°C	0.10M	U	H	K1=10.63 B2=16.68 1964ANa (32097)2376
By calorimetry: DH(K1)=-18.8 kJ mol-1, DS=139.2 J K-1 mol-1 DH(B2)=-45.6, DS=164							
Cu++	gl	oth/un	25°C	0.10M	U		K2=5.65 1957SYb (32098)2377
Cu++	gl	oth/un	30°C	0.10M	U		K1=10.4 1957TBb (32099)2378

Cu++ gl KCl 30°C 0.10M U K1=10.55 B2=16.20 1952Cma (32100)2379

C4H7NO5 H2L (1237)
N-Hydroxyaminobutanedioic acid; HO.NH.CH(CH2.COOH)COOH

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

Cu++ gl KNO3 25°C 0.10M U K1=6.54 B2=10.84 1987BKa (32410)2380

C4H7NO5 H2L (1234)
N-Hydroxyiminodiethanoic acid; HO.N(CH2.COOH)2

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

Cu++ gl KNO3 25°C 0.10M C H K1=8.45 B2=12.55 1987AKa (32414)2381
DH(B2)=-21.5 kJ mol⁻¹, DS=168 J K⁻¹ mol⁻¹

Cu++ gl KNO3 25°C 0.10M U K1=8.45 B2=12.55 1987BKa (32415)2382
K1 determined by ligand exchange with tris(2-aminoethyl)amine, according to
G.Schwarzenbach, E.Freitag, Helv.Chim.Acta, 34, 1147 (1951)

Cu++ gl KNO3 25°C 0.10M C K1=8.33 B2=12.13 1984FVa (32416)2383

C4H7N3 L CAS 13400-46-9 (3567)
4(5)-Aminomethylimidazole; C3H3N2.CH2.NH2

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

Cu++ gl NaClO4 25°C 0.10M U M K1=9.22 B2=17.17 1971HGc (32432)2384
B(CuLA)=22.83

H2A=catechol

Cu++ gl NaClO4 25°C 0.30M C H K1=8.73 B2=16.45 1967Hwa (32433)2385
By calorimetry DH(K1)=-47.7 kJ mol⁻¹, DH(K2)=-47.8

Cu++ gl oth/un 25°C 0.01M U K1=9.05 B2=16.8 1960HJa (32434)2386

C4H7N3S L CAS 14068-53-2 (1456)
2-Amino-5-ethyl-1,3,4-thiadiazole; C2N2S(C2H5).NH2

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

Cu++ gl KNO3 25°C 0.50M U K1=1.86 B2=2.97 1985GLa (32441)2387

C4H7N3S L CAS 13275-68-8 (1427)
2-Ethylamino-1,3,4-thiadiazole; C2HN2S.NHC2H5

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

Cu++ gl KNO3 25°C 0.50M U K1=1.53 1982GLa (32447)2388

 C4H7O2Br HL CAS 80-58-0 (3006)
 2-Bromobutyric acid; CH3.CH2.CH(Br)COOH

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

 Cu++ sol oth/un 25°C ->0 U K1=1.46 1951LWa (32455)2389

 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

 Cu++ gl NaClO4 25°C 0.30M U I 1982PNa (32491)2390
 K(Cu+HL)=11.41
 K(CuHL+HL)=10.92

In 50% dioxan/H2O: K(Cu+HL)=11.41

 Cu++ gl none 25°C 0.0 C 1977MTb (32492)2391
 K(Cu+2HL)=18.65
 K(2Cu(HL)2+2Cu+4H2O=[Cu(HL)(OH)]4+4H)= ca.13.4

 Cu++ gl KNO3 25°C 0.10M U I 1976LUa (32493)2392
 K(Cu+HL)=8.75
 K(CuHL+HL)=10.55
 K(Cu+H2L=CuHL+H)=-1.65
 K(Cu+2H2L=Cu(HL)2+2H)=-1.55
 Data for 25, 50 and 75% v/v dioxan/H2O. At 50%, K(Cu+HL)=10.50,
 K(CuHL+HL)=11.85, K(Cu+H2L=CuHL+H)=-2.0, K(Cu+2H2L=Cu(HL)2+2H)=-2.65

 Cu++ nmr non-aq ? 100% U I M 1972DFa (32494)2393
 K(CuL2+py)=3.25
 Method: ESR. Medium: benzene. In CH3Cl, K=3.47

 Cu++ vlt alc/w ? 20% U B2=20.11 1972PSc (32495)2394
 Medium: 0.05, 20% EtOH. Ammonia buffer

 Cu++ sp oth/un ? 0.10M U K1=7.9 B2=20.7 1972UCa (32496)2395
 Acetate buffer

 Cu++ gl diox/w 25°C 75% U I K1=12.23 B2=24.34 1963BAb (32497)2396
 In aqueous soln: K1=9.05, B2=18.50

 Cu++ dis non-aq 25°C 100% U M B2=19.24 1961DHa (32498)2397
 K(CuL2+A)=2.04
 K(CuL2+B)=3.36
 Medium: CHCl3, 0.1 NaClO4. A=quinoline, B=dodecylamine

 Cu++ gl diox/w 25°C 50% U K1=11.90 B2=23.10 1958BP a (32499)2398

Cu++ gl diox/w 25°C 50% U H K1=11.94 B2=23.30 1954CFa (32500)2399
DH(B2)=-58.2 kJ mol⁻¹

Cu++ gl diox/w 25°C 50% U T H K1=12.00 B2=23.44 1954CFa (32501)2400
DH(B2)=-50.2. 39.6 C: K1=11.80, K2=11.22

Cu++ gl diox/w 30°C 75% U K1=15.1 B2=29.2 1954UFa (32502)2401

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

Cu++ gl KNO3 25°C 0.10M C T H K1=8.05 2001BTa (32606)2402
Data for 15-45 C. DH(K1)=-22.54 kJ mol⁻¹, DS(K1)=-78.49 J K⁻¹ mol⁻¹.

Cu++ gl KNO3 25°C 0.10M C K1=8.05 1999BIa (32607)2403

Cu++ gl KNO3 25°C 0.10M C H K1=7.86 B2=14.40 1998ACb (32608)2404
By calorimetry|: DH(K1)=-22.3 kJ mol⁻¹, DS=73J K⁻¹ mol⁻¹; DH(B2)=-47.4
DS=112

Cu++ gl KNO3 25°C 0.10M C K1=7.849 B2=14.45 1998ZYa (32609)2405

Cu++ gl KNO3 25°C 0.10M M M K1=8.05 1996AEa (32610)2406
Data for ternary complexes with dipicolinic acid.

Cu++ gl NaClO4 37°C 0.15M U M 1994NAc (32611)2407
B(Cu(glu)L)=15.82
K(Cu(glu)+L)=7.30
K(CuL+glu)=7.22

Cu++ gl NaCl 37°C 0.15M C M K1=7.788 B2=14.14 1993BAa (32612)2408
B(CuHL)=10.08
B(CuHL2)=17.44
B(CuH-1L2)=4.17
B(CuL(His))=16.810
B(CuHL(His))=20.649

Cu++ gl NaClO4 25°C 0.20M C K1=7.94 1993BAb (32613)2409

Cu++ gl NaClO4 37°C 0.15M U M K1=8.60 B2=14.95 1990NCa (32614)2410
B(CuLA)=15.24
B(CuLB)=14.95
B(CuLC)=18.33

HA=2-aminobutanoic acid, HB=3-aminobutanoic acid, HC=4-amino-3-hydroxybutan-
oic acid

Cu++ gl NaClO4 21°C 0.10M M M K1=7.73 B2=14.39 1989WLa (32615)2411

B(CuH-1L)=2.32
 B(Cu(gly)L)=15.25
 B(CuH-1(gly)L)=7.79

 Cu++ gl NaClO4 37°C 0.15M U M K1=7.89 B2=14.31 1988NSa (32616)2412
 B(CuLA)=12.45, B(CuLA2)=15.61, A=imidazole. B(CuHLB)=21.36, B(CuLB)=16.89,
 B=histamine. B(CuHL(His))=22.03, B(CuL(His))=17.12

Cu++ gl KNO3 35°C 0.20M C M K1=7.37 B2=13.72 1987PRa (32617)2413

Cu++ gl NaCl 37°C 0.15M C M T K1=7.714 B2=14.210 1986BHa (32618)2414
 B(CuH2L2)=20.186
 B(CuHL2)=17.417
 B(CuH-1L)=0.675
 B(CuH-1L2)=3.941
 B(CuHL(His))=20.06, B(CuL(His))=16.756, B(CuH-1L(His))=5.70.

Cu++ gl NaClO4 21°C 0.10M U K1=7.69 B2=14.38 1983LWb (32619)2415
 B(CuH-1L)=2.33

Cu++ gl NaClO4 30°C 0.10M C M K1=7.80 B2=14.36 1980ASb (32620)2416
 ternary complex with glycyl-sarcosine

Cu++ ISE diox/w 25°C 20% U K1=8.20 B2=14.95 1980YTa (32621)2417

Cu++ gl KNO3 25°C 0.10M U T H K1=7.84 B2=14.46 1980ZYb (32622)2418

Cu++ gl KCl 25°C 0.20M C M 1977NGa (32623)2419
 B(CuH-1LA)=4.92
 B(CuH-1LB)=4.93
 B(CuH-1LC)=4.45
 K(CuH-1L2+A=CuH-1LA+L)=0.46
 K(CuH-1L2+B=CuH-1LB+L)=0.31, K(CuH-1L2+C=CuH-1LC+L)=0.32
 HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine

Cu++ gl KCl 25°C 0.20M C 1976NGd (32624)2420
 K(CuH-1A2+L=CuH-1AL+A)=4.92
 K(CuH-1C2+L=CuH-1CL+C)=4.93
 K(CuH-1D2+L=CuH-1DL+D)=4.45

HA is glycylglycine; HC is glycyl-DL-alpha-alanine;
 HD is DL-alanyl-DL-alanine.

Cu++ gl KCl 25°C 0.20M U HM T K1=7.79 B2=14.29 1975GNa (32625)2421
 K(CuH-1L2+H)=10.45
 K(CuH-2L2+H)=12.0

B(CuL(Gly)) = 14.91

Cu++ gl NaClO4 25°C 3.00M C H T K1=8.677 B2=16.052 1974BWa (32626)2422

Cu++ cal KNO3 25°C 0.10M C H 1971BPi (32627)2423

DH(B1)=-47.2 kJ mol⁻¹, for rac-His: DH=-47.5

Cu++ gl KNO3 25°C 0.10M U T K1=7.86 B2=14.42 1965RWa (32628)2424

Cu++ gl oth/un 25°C 0.15M U K1=7.78 B2=14.13 1958Lda (32629)2425

Cu++ gl oth/un 20°C 0.01M U B2=14.9 1950ALa (32630)2426

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

Cu++ gl NaNO3 25°C 0.10M C M K1=5.63 2004SSa (32849)2427

B(CuH-1L)=1.35

B(CuH-2L)=-8.05

B(CuH-1L2)=4.32

B(CuLA)=12.63

B(CuHLA)=17.11, B(CuH-1LA)=5.21. HA is 6-aminopenicillanic acid.

Cu++ gl NaCl 25°C 0.15M M K1=5.51 2003MYa (32850)2428

B(CuHL)=9.25

B(CuH-1L)=1.34

B(CuHL2)=19.23

B(CuH-2L)=-7.88

B(Cu2H-1L2)=11.71.

Cu++ gl NaNO3 25°C 0.10M M M K1=5.4 2002SKa (32851)2429

B(CuAL)=15.06

B(CuH-1L)=1.14

B(CuAH-1L)=6.87

A is picolylamine

Cu++ gl KCl 25°C 0.10M C M K1=5.40 1997BLb (32852)2430

B(CuH-1L)=1.47

B(CuH-2L)=-7.52

B(CuH-3L)=-18.66

B(CuH-1L2)=4.77

Tenary complexes with 1,13-dioxa-4,7,10,16,19,23-haxaazacyclotetracosane (A)

K(Cu2A+L)=6.18, K(Cu2A+HL)=4.86, K(Cu2AL=Cu2H-1AL+H)=-7.17 etc.

Cu++ gl KCl 25°C 0.20M C M 1997SKa (32853)2431

B(CuH-1L(1-Me-Uracil))=4.90

B(CuH-1L(Uridine))=4.76

B(CuH-1L1-Me-Thymine))=5.11

B(CuH-1L(Thymidine))=5.12

B(CuH-1L(1-Me-Cytosine))=3.61, B(CuH-1L(9-Me-Adenine))=3.20

B(CuH-1L(9-Et-Guanine))=4.14, B(CuH-1L(Ac-Histamine))=4.79

Cu++ gl diox/w 25°C 50% C K1=6.23 1996CBa (32854)2432

Medium: 50% v/v dioxane/H₂O, 0.20 M NaClO₄.

HA=3-indolylethanoic, HB=3-indolylpropanoic, HC=3-indolylbutanoic acid

H2A=catechol. $K(\text{CuL}(\text{HB})=\text{CuH}-1\text{L}(\text{HB})+\text{H})=-8.56$; H3B=pyrogallol. $B(\text{CuLC})=18.34$, $K(\text{CuLC}=\text{CuH}-1\text{LC}+\text{H})=-8.75$; H4C=tiron. $B(\text{CuLD})=16.5$; H2D=2,3-dihydroxynaphthale

Cu++ gl NaClO4 25°C 0.20M U M K1=5.78 1990McA (32858)2436
K(CuH-1L+H)=4.47
B(CuL(His))=15.61
B(CuHL(His))=20.40
B(CuH-1L(His)+H)=8.82

Cu++ gl NaNO₃ 30°C 1.00M U T H 1990PPb (32859)2437
B(CuL(imidazole))=2.33
40 C: K=2.02; 50 C:K=1.77, DH=-53.9 kJ mol⁻¹

Cu++ gl NaCl 25°C 5.00M C M K1=6.08 1990TRa (32860)2438
B(CuHL)=10.17
B(CuL(Gly))=13.29
B(CuH-1L(Gly))=4.75

Cu++ gl KCl 25°C 1.00M C 1989FKa (32861)2439
 $K(\text{CuH}-1\text{L2}=\text{CuH}-1\text{LOH}+\text{L}+\text{H})=-12.46$
 $K(\text{CuH}-1\text{L2}=\text{CuH}-2\text{L2}+\text{H})=-11.60$

Cu++	sp	KN03	25°C	1.00M U	K1=5.63	1989SGa (32862)2440
					B(CuHL)=9.36	
					B(CuH-1L)=1.24	
					B(CuH-1L(OH))=-8.28	
					B(CuH-1L2)=4.34	

Also $B(\text{CuH-2L2}) = -7.70$; $B(\text{Cu}_2\text{H-2L2(OH)}) = -4.65$.

[illegible]

Cu++ gl NaClO4 25°C 1.0M U M 1987SIb (32864)2442
 $K(\text{Cu}+\text{HL}=\text{CuH}-1\text{L}+2\text{H})=-5.60$
 $K(\text{CuH}-1\text{L}+\text{HA}=\text{CuH}-1\text{LA}+\text{H})=-2.93$

A is imidazole.

Cu++ gl NaClO4 25°C 1.00M C 1986SMb (32865)2443
 $K(2\text{CuL}=\text{Cu}_2\text{H}-1\text{L}_2+\text{H})=-5.06$
 $K(\text{CuH}-1\text{L}+\text{H})=9.31$

Cu++ cal KNO3 25°C 0.50M C H K1=5.46 1985AJb (32866)2444
 $B(\text{CuH}-1\text{L})=14.84$
 $B(\text{CuH}-1\text{L}_2)=17.83$
 $K(\text{Cu}+\text{L}=\text{CuH}-1(\text{OH})\text{L}+2\text{H})=19.51$
 $\text{DH}(\text{K1})=-2.6 \text{ kJ mol}^{-1}$, $\text{DH}(\text{CuH}-1\text{L})=1.6$, $\text{DH}(\text{CuH}-1\text{L}_2)=-27.9$,
 $\text{DH}(\text{CuH}-1(\text{OH})\text{L})=43.4$.

Cu++ gl NaNO3 35°C 0.10M U M K1=5.70 1985KSc (32867)2445
 $K(\text{CuL}+\text{CMP})=2.15$
 $\text{H}_2\text{CMP}=\text{cytidine-5'-monophosphoric acid}$

Cu++ gl KCl 25°C 0.20M C M 1984KDb (32868)2446
 $B(\text{CuHL}(\text{DOPA}))=29.40$
 Ternary data also with Dopamine, Adrenaline and Noradrenaline

Cu++ gl NaNO3 37°C 0.15M M M K1=5.633 B2=11.716 1984MEa (32869)2447
 $B(\text{CuH}-1\text{L})=1.274$
 $B(\text{CuH}-2\text{L})=-8.763$
 $B(\text{Cu}_2\text{H}-1\text{L}_2)=11.856$
 Ternary complexes with pyridoxamine or/and imidazole.

Cu++ nmr NaNO3 20°C 0.10M U M K1=5.91 1984WRa (32870)2448
 $B(\text{CuH}-1\text{L})=1.57$
 $B(\text{CuH}-1\text{L}_2)=4.50$
 $B(\text{CuL}(\text{ATP}))=10.58$
 $B(\text{CuH}-1\text{L}(\text{ATP}))=3.59$

Cu++ nmr none 20°C 0.0 U M K1=5.91 1984WRb (32871)2449
 $B(\text{CuH}-1\text{L})=1.57$
 $B(\text{CuH}-1\text{L}_2)=4.40$
 $B(\text{CuL}(\text{ATP}))=10.57$
 $B(\text{CuH}-1\text{L}(\text{ATP}))=3.67$

Cu++ nmr KCl 20°C 0.20M U K1=5.62 1983KRb (32872)2450
 $B(\text{CuH}-1\text{L})=1.45$
 $B(\text{CuH}-2\text{L})=-8.09$
 $B(\text{CuH}-1\text{L}_2)=4.56$
 $B(\text{Cu}_2\text{H}-3\text{L}_2)=-4.63$

Cu++ gl NaClO4 37°C 0.15M U M 1982NAa (32873)2451
 $B(\text{CuHLA})=20.92$

$B(\text{CuLA})=16.05$
 $B(\text{CuH-1LA})=8.79$
 $B(\text{CuLB})=12.94, B(\text{CuH-1LB})=5.91$. A=2,3-diaminopropanoic acid, B=3-aminobutanoic

 Cu++ gl NaClO4 37°C 0.15M U M 1982NAa (32874)2452
 $B(\text{CuHLA})=22.58$
 $B(\text{CuLA})=16.11$
 $B(\text{CuH-1LA})=8.49$
 A=2,4-diaminobutanoic acid. B=2-aminobutanoic $B(\text{CuLB})=13.40, B(\text{CuH-1LB})=6.54$

 Cu++ gl NaClO4 37°C 0.15M U M 1982NAa (32875)2453
 $B(\text{CuHLA})=23.25$
 $B(\text{CuLA})=16.55$
 $B(\text{CuH-1LA})=8.28$
 A=ornithine. B=glycinamide. $B(\text{CuLB})=11.25, B(\text{CuH-1LB})=4.19$

 Cu++ gl KCl 25°C 1.00M C K1=5.49 1982NDa (32876)2454
 $B(\text{CuH-1L})=1.13$
 $B(\text{CuH-2L})=-8.38$
 $B(\text{CuH-1L2})=4.05$
 $B(\text{Cu2H-3L2})=-5.26$

 Cu++ gl KCl 20°C 0.20M U 1981KRa (32877)2455
 $K(\text{Cu+HL}=\text{CuL+H})=-2.46$
 $K(\text{Cu+HL}=\text{CuH-1L+2H})=-6.79$
 $K(\text{Cu+HL}=\text{CuH-2L+3H})=-16.27$
 $K(\text{Cu+2HL}=\text{CuL2+2H})=-5.56$
 $K(\text{Cu+2HL}=\text{CuH-1L2+3H})=-11.64, K(\text{Cu+2HL}=\text{CuH-2L2+4H})=-21.76$

 Cu++ gl NaClO4 25°C 1.00M U M K1=5.54 1981NMa (32878)2456
 $B(\text{CuH-1L})=1.31$
 $B(\text{CuH-2L})=-7.99$
 $B(\text{CuH-1L2})=4.50$

 Cu++ gl NaClO4 25°C 0.10M M M K1=5.55 1981SPd (32879)2457
 $K(\text{Cu+H2L}=\text{CuL+2H})=-5.71$
 $K(\text{Cu+H2L}=\text{CuH-1L+3H})=-9.70$
 $K(\text{CuH-1L+H})=3.99$
 $K(\text{Cu}(\text{bpy})+\text{L})=5.09; K(\text{CuH-1}(\text{bpy})\text{L}+\text{H})=7.77$

 Cu++ gl NaClO4 37°C 0.15M U K1=5.70 1980NSc (32880)2458
 $B(\text{CuH-1L2})=5.50$

 Cu++ gl NaNO3 30°C 0.10M U 1979EHa (32881)2459
 $B(\text{CuH-2L})=-3.75$

 Cu++ cal KCl 25°C 0.20M C H K1=5.56 1977GNa (32882)2460
 $B(\text{CuH-1L})=1.33$
 $B(\text{CuH-2L})=-8.04$
 $B(\text{CuH-1L2})=4.46$

B(Cu2H-3L2)=-4.51

DH and DS values for all species

Cu++ gl KCl 25°C 0.20M U M 1977NGa (32883)2461

B(CuH-1L(Gly))=5.29

K(CuH-1L2+Gly=CuH-1LG+L)=0.83

B(CuH-1L(Ala))=5.17

K(CuH-1L2+Ala=CuH-1LA+L)=0.71

Also with Ser,Thr,Orn,Lys,Asp,Asn,Glu,Gln,Beta-Ala,norVal etc.

Cu++ gl KCl 25°C 0.20M C H K1=5.56 1976GNb (32884)2462

B(CuH-1L)=1.33

B(CuH-2L)=-8.04

B(CuH-1L2)=4.46

B(Cu2H-3L2)=-4.51

Calorimetry: DH(K1)=-2.92kJ mol⁻¹, DS=8 J K⁻¹ mol⁻¹; DH(CuH-1L)=2.8, DS=35

DH(CuH-2L)=46.2, DS=1; DH(CuH-1L2)=-28.3, DS=-10; DH(Cu2H-3L2)=38, DS=41

Cu++ gl KNO3 25°C 0.10M C K1=5.68 1975KMe (32885)2463

K(Cu+HL)=0.07

K(CuL+H)=2.47

*K(CuL)=-4.21

*K(CuH-1L)=-9.24

K(CuH-1L+L)=2.84, K(CuH-1L(OH)+CuH-1L)=2.15

Cu++ gl NaClO4 25°C 0.10M U K1=5.55 1975SIa (32886)2464

K(Cu(bpy)+L)=5.09

Cu++ gl KNO3 25°C 0.10M C K1=5.68 1974KMc (32887)2465

K(Cu+HL)=0.07

K(CuH-1L+H)=4.21

K(CuH-1L(OH)+H)=9.24

K(CuH-1L+L=CuH-1L2)=2.84

Cu++ gl KNO3 25°C 0.05M U M K1=5.26 1973NAa (32888)2466

K(CuH-1L+H)=4.31

K(CuH-1L+L)=2.92

K(CuH-1L+A)=2.4

A=glycylglycine methyl ester

Cu++ gl oth/un 25°C 0.14M U T K1=6.02 B2=11.06 1972PEb (32889)2467

Temperature range 10-40C

K1(10 C)=6.08, K1(40 C)=6.00, B2(10 C)=11.2, B2(40 C)=10.99

Cu++ gl diox/w 25°C 45% U T K1=7.34 B2=13.78 1972PEb (32890)2468

Temperature range 10-40C

K1(10 C)=7.66, K1(40 C)=7.04, B2(10 C)=14.45, B2(40 C)=13.17

Cu++ gl alc/w 25°C 70% U I K1=8.24 B2=15.51 1972PEb (32891)2469

K1(39.1%)=6.78, B2(39.1%)=12.82

Cu++	gl	diox/w	25°C	60%	U		K1=8.46	B2=15.13	1972PEb (32892)2470
Cu++	gl	NaClO4	25°C	0.10M	U	M	K1=5.71 K(CuH-1L+H)=4.15 K(Cu(bpy)+L)=4.98 K(CuH-1L+bpy)=7.71		1972SGd (32893)2471
Cu++	gl	NaClO4	25°C	1.00M	U	M	K1=5.60 K(Cu+L=CuH-1L+H)=1.31 K(Cu+L=CuH-2L+2H)=-8.21 K(Cu+2L=CuH-1L2+H)=4.50 K(CuL(Gly))=12.69 K(2Cu+2L=Cu2H-3L2+3H)=-4.69; K(Cu+L+Gly=CuH-1L(Gly)+H)=5.26		1971MMc (32894)2472
Cu++	gl	KNO3	25°C	0.10M	U		K1=5.68 K(CuH-1L+H)=4.18		1969YHa (32895)2473
Cu++	gl	NaClO4	25°C	0.10M	U	H	K1=5.56 K(CuH-1L+H)=4.06 K(CuH-1LOH+H)=9.29 K(CuH-1L+CuH-1LOH)=2.12 By calorimetry: DH(K1)=-25.5 kJ mol ⁻¹ , DS=20.9 J K ⁻¹ mol ⁻¹ DH(CuH-1L+H)=-28.8, DS=-18.8		1968BLc (32896)2474
Cu++	sp	oth/un	?	?	U	M	K(CuH-1L+A)=3.8		1968DWa (32897)2475
A=imidazole									
Cu++	gl	KNO3	25°C	0.10M	U		K1=5.56 K(CuH-1L+H)=4.12 K(CuH-1LOH+H)=9.38 K(CuH-1L+L)=3.17 K(CuH-1L+CuH-2L)=2.20		1967MAb (32898)2476
Cu++	cal	KNO3	22°C	0.10M	U	H			1967SSl (32899)2477
DH(B2)=-52.3 kJ mol ⁻¹									
Cu++	gl	KCl	25°C	0.16M	U		K1=5.44 K(CuH-1L+H)=4.20		1965BPc (32900)2478
Cu++	gl	KCl	25°C	0.10M	U		K1=6.52 K(CuH-1L+H)=4.79 K(Cu+L=CuH-1L+H)=1.73		1964DCa (32901)2479
Cu++	gl	KCl	25°C	1.0M	U		K1=5.42 K(CuH-1L+H)=4.38 K(CuH-1LOH+H)=9.52 K(CuH-1L(OH)2+H)=12.8 K(CuH-1L+CuH-1LOH)=-2.07		1964KMa (32902)2480

K(CuH-1L+L)=2.92

Cu++ gl KCl 25°C 0.16M U M K1=4.96 1960KFb (32903)2481

K(CuH-1L+H)=3.90

K(CuH-1L+L)=3.07

K(CuH-1LOH+H)=9.37

K(CuH-1L(OH)2+H)=12.2

K(CuH-1LOH+CuH-1L)=2.30, K(CuH-1L+A)=3.85, A=imidazole

Cu++ gl NaCl 25°C 0.10M U K1=5.43 B2=8.64 1959BRb (32904)2482

K(CuH-1L+H)=4.17

K(Cu(H-1L)2+H)=9.67

Cu++ gl oth/un 25°C 0.20M U K1=6.04 1957LDa (32905)2483

Cu++ gl KCl 25°C .058M U T B2=12.44 1957LYa (32906)2484
0 C: B2=13.32

Cu++ gl KNO3 25°C 0.10M U K1=6.6 1957MMa (32907)2485

Cu++ gl KCl 0°C 0.09M U T H K1=6.58 1957MMa (32908)2486

K(CuLOH+H)=4.00

DH(K)=-33 kJ mol⁻¹, DS=25.30 C: K1=7.17, K=5.35; 48.8 C: K1=5.73, K=5.38

Cu++ gl oth/un 25°C 0.02M U T K1=5.82 1956DRb (32909)2487

K(CuL(OH)2+H)=9.62

30 C: K1=5.50, K(CuLOH+H)=4.02; 40 C: K1=5.50, K=4.00

Cu++ gl oth/un 20°C ? U K1=5.88 1955DKc (32910)2488

K(CuLOH+H)=4.25

K(CuL(OH)2+H)=9.65

K(CuLOH+HL)=3.26

K(CuL2(OH)2+H)=10.20

Cu++ vlt oth/un 25°C 0.06M U B2=11.65 1954LDa (32911)2489

Medium: KH2PO4

Cu++ ix oth/un 22°C ? U K1=6.7 B2=10.7 1954WFa (32912)2490

Cu++ gl oth/un 25°C ->0 U K1=6.04 B2=11.66 1951M0a (32913)2491

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

Cu++ gl KNO3 25°C 0.10M U K1=8.1 1983FSa (33071)2492

Cu++ gl KCl 30°C 0.10M U K1=8.1 B2=12.6 1957TBb (33072)2493

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

Cu++	gl	KCl	25°C	0.10M	C				2003CDa (33125)	2494
------	----	-----	------	-------	---	--	--	--	-----------------	------

B(CuHL)=17.07
 B(Cu5H-4L4)=50.70

By spectrophotometry: B(CuHL)=17.44, B(Cu5H-4L4)=52.57.

Cu++	gl	KCl	25°C	0.20M	C			K1=13.24	1993FBa (33126)	2495
------	----	-----	------	-------	---	--	--	----------	-----------------	------

B(CuHL)=16.41
 B(Cu4H-2L4)=52.82
 B(Cu4H-3L4)=42.30

C4H8N2O4 H2L CAS 36244-81-2 (4267)
 N-Carboxymethyliminoacethydroxamic acid; HOOCH2.NH.CH2.CO.NH.OH

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

Cu++	sp	NaCl04	20°C	0.10M	U				1981KPa (33139)	2496
------	----	--------	------	-------	---	--	--	--	-----------------	------

K(Cu+HL)=6.69

Cu++	sp	NaCl04	20°C	0.10M	U			K1=11.32	1978KPd (33140)	2497
------	----	--------	------	-------	---	--	--	----------	-----------------	------

Cu++	sp	NaCl04	20°C	0.10M	U			K1=11.32	1972KMb (33141)	2498
------	----	--------	------	-------	---	--	--	----------	-----------------	------

K(Cu+HL)=6.13
 K(CuL+H2O=CuLOH+H)=-5.92
 K(CuLOH+H2O=CuL(OH)2+H)=-10.26

C4H8N2O4 HL CAS 20154-32-9 (1548)
 N-Hydroxy-asparagine; HO.NH.CH(CH2.CO.NH2)COOH

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

Cu++	gl	KCl	25°C	0.50M	C			K1=12.60 B2=19.07	1988LEb (33145)	2499
------	----	-----	------	-------	---	--	--	-------------------	-----------------	------

B(Cu2L3)=37.45
 B(Cu3L4)=53.43
 B(CuH-1L2)=9.08

C4H8N2S HL CAS 2055-46-1 (1522)
 3,4,5,6-Tetrahydro-pyrimidine-2-thiol; C4H7N2.SH

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

Cu++	gl	KNO3	30°C	0.50M	U			K1=8.94	1989WIa (33159)	2500
------	----	------	------	-------	---	--	--	---------	-----------------	------

C4H8N2S2 L CAS 120-79-6 (2820)
 N,N'-Dimethyl-dithiooxamide; CH3.NH.CS.CS.NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	none	25°C	0.0	U		K1=7.89	1976AMc (33166)	2501

C4H8N3O3P		H2L					CAS 270249-45-1	(8827)	
Amino-1H-imidazol-4ylmethylphosphonic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C		K1=13.65 B2=20.17 B(CuHL)=17.38 B(CuH2L2)=33.36 B(CuHL2)=27.09 B(CuH-1L2)=8.50	2003SBc (33170)	2502

C4H8O2		HL					CAS 79-31-2	(573)	
2-Methylpropanoic acid; CH3.CH(CH3).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	C	I M	K1=1.79 K(Cu(phen)+L)=1.84	1988LTc (33214)	2503
Data also for 50% v/v EtOH/H2O, and 50% v/v Dioxan/H2O mixtures									
Cu++	gl	oth/un	25°C	0.10M	U	I	K1=1.75 B2=2.70	1970CBe (33215)	2504
Medium: DMF, K1=2.90, K2=2.30, K3=2.21; Ethylene glycol, K1=4.30, K2=2.93, K3=1.67; 0.1, (CH3)2SO, K1=6.55, K2=6.26, K3=2.41									
Cu++	sp	NaClO4	30°C	0.10M	U		K1=1.97	1968RSc (33216)	2505
K1=2.36, alternative method of calculation									
Cu++	sp	oth/un	30°C	0.10M	U		K1=2.44	1965DSa (33217)	2506
Cu++	sol	oth/un	25°C	->0	U		K1=2.17	1951LWa (33218)	2507

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
Cu++	dis	non-aq	25°C	100%	C	I		2000NYa (33289)	2508
K(Cu+2HA(o)=CuL2(o)+2H)=-8.08									
Medium: pentan-1-ol. Distribution between 0.10 M NaClO4 and pentan-1-ol. Also data for hexan-1-ol, heptan-1-ol and octan-1-ol.									
Cu++	oth	NaClO4	25°C	2.0M	U		K1=1.85	1990FTa (33290)	2509
Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.									
Cu++	gl	KNO3	25°C	0.20M	M	M		1988SKd (33291)	2510

$$K(\text{Cu}(\text{dien})+\text{L})=2.61$$

$$K(\text{H}+\text{L})=4.69$$

Cu++	sp	NaClO4	25°C	2.0M	C		K1=1.89	B2= 4.13	1976GFa (33292)	2511

Cu++	EMF	NaClO4	25°C	2.0M	C		K1=1.85	B2= 2.49	1975GMa (33293)	2512
Method: quinhydrone electrode.										

Cu++	vlt	NaClO4	25°C	2.0M	C		K1=1.83	B2= 2.54	1975GTa (33294)	2513
Method: polarography.										

Cu++	sp	NaClO4	25°C	2.00M	U	I	K1=1.89	B2=2.76	1974GMb (33295)	2514

Cu++	sp	NaClO4	25°C	2.00M	U		K1=2.08		1970GFa (33296)	2515

Cu++	sp	alc/w	25°C	100%	U		K1=3.24		1970SSf (33297)	2516

Cu++	vlt	NaClO4	25°C	2.00M	U		K1=1.54	B2=2.48	1968FPa (33298)	2517
							B3=2.30			
							B4=2.95			

Cu++	gl	NaClO4	25°C	3.0M	U		K1=1.82	B2=2.98	1964PCa (33299)	2518

Cu++	sol	oth/un	25°C	->0	U		K1=2.14		1951LWa (33300)	2519

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

Cu++	cal	NaNO3	25°C	1.0M	U	H	K1=2.57	B2= 4.77	1977ARa (33383)	2520
							K3=0.06			
DH(K1)=2.4 kJ mol-1, DH(K2)=0										

Cu++	gl	diox/w	25°C	50%	U	M	K1=3.92		1972SGa (33384)	2521
							K(Cu(bpy)+L)=3.91			
Medium: 50% dioxan, 0.1 M NaClO4										

Cu++	gl	diox/w	30°C	50%	U		K1=3.5	B2=6.20	19710Ta (33385)	2522
Medium: 50% dioxan, 0.1 M KNO3										

Cu++	gl	diox/w	25°C	50%	U		K1=3.92		1969SAa (33386)	2523
Medium: 50% dioxan, 0.1 M NaClO4										

Cu++	gl	NaClO4	20°C	1.00M	U		K1=2.56	B2=4.76	1961SAa (33387)	2524
							B3=4.85			

Cu++	gl	oth/un	20°C	1.0M	U		K1=2.56	B2=4.76	1960SAb (33388)	2525
							B3=4.85			

Cu++ gl diox/w 30°C 50% U K1=4.55 B2=8.15 1956IFa (33389)2526

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
Cu++	gl	NaCl04	25°C	0.50M	C		K1=2.74 B2= 4.35 B(CuH-1L)=-3.96	1995PLa (33431)	2527

Cu++	EMF	oth/un	25°C	1.00M	U		K1=2.47 B2=4.33 B3=5.42	1971WAc (33432)	2528
------	-----	--------	------	-------	---	--	----------------------------	-----------------	------

Cu++	gl	oth/un	25°C	0.10M	U	I	K1=2.91 B2=4.80	1970CBe (33433)	2529
------	----	--------	------	-------	---	---	-----------------	-----------------	------

Medium: Ethylene glycol, 0.1 M. K1=4.65, K2=3.45.
0.1 in (CH3)2SO, K1=6.06, K2=4.86, K3=2.36

Cu++	EMF	NaCl04	25°C	1.0M	U		K1=2.74 B2=4.34 K3=0.4	1967TGa (33434)	2530
------	-----	--------	------	------	---	--	---------------------------	-----------------	------

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
Cu++	oth	NaCl04	25°C	2.0M	U		K1=2.66	1990FTa (33559)	2531

Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.

Cu++	vlt	NaCl04	25°C	2.00M	U		K1=2.68 B2=4.45 B3=4.57 B4=4.89	1975FPa (33560)	2532
------	-----	--------	------	-------	---	--	---------------------------------------	-----------------	------

Cu++	EMF	NaCl04	25°C	2.0M	C		K1=2.63 B2= 4.31	1975GMa (33561)	2533
------	-----	--------	------	------	---	--	------------------	-----------------	------

Method: quinhydrone electrode.

Cu++	sp	NaCl04	25°C	2.00M	U	I	K1=2.67 B2=4.71	1974GMb (33562)	2534
------	----	--------	------	-------	---	---	-----------------	-----------------	------

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
Cu++	oth	NaCl04	25°C	2.0M	U		K1=1.87	1990FTa (33599)	2535

Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.

Cu++	vlt	NaCl04	25°C	2.00M	U		K1=1.93 B2=3.07 B3=3.12	1975FPa (33600)	2536
------	-----	--------	------	-------	---	--	----------------------------	-----------------	------

B4=3.14

 Cu++ EMF NaClO4 25°C 2.0M C K1=1.86 B2= 3.12 1975GMa (33601)2537
 Method: quinhydrone electrode.

Cu++ sp NaClO4 25°C 2.00M U I K1=1.83 B2=2.82 1974GMb (33602)2538

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
Cu++	vlt	NaClO4	25°C	2.00M	U		K1=1.72 B3=2.71 B4=2.73	1975FPa (33642)	2539

Cu++ EMF NaClO4 25°C 2.0M C K1=1.80 B2= 2.63 1975GMa (33643)2540
 Method: quinhydrone electrode.

Cu++ ISE NaClO4 25°C 1.00M C K1=1.52 B2=2.24 1974BJa (33644)2541

Cu++ sp NaClO4 25°C 2.00M U I K1=1.77 B2=2.25 1974GMb (33645)2542

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
Cu++	cal	NaNO3	25°C	1.0M	U	H	K1=1.80 B2= 2.89	1977ARa (33663)	2543

DH(K1)=2.1 kJ mol⁻¹, DH(K2)=5.0

Cu++ EMF NaClO4 20°C 1.00M U K1=1.79 B2=2.87 1961SAa (33664)2544
 B3=3.20
 B4=2.8

Method: quinhydrone electrode.

Cu++	oth	NaClO4	20°C	1.0M	U		K1=1.79 B3=3.20 B4=2.8	1960SAb (33665)	2545
------	-----	--------	------	------	---	--	------------------------------	-----------------	------

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
Cu++	gl	alc/w	25°C	50%	C	I	K1=0.02	1979SRa (33722)	2546

In 96% DMF, 1.0 M NaClO4: K1=0.19

Cu++	cal	non-aq	25°C	100%	U	HM		1976MDb (33723)	2547
------	-----	--------	------	------	---	----	--	-----------------	------

K(Cu(hfac)2+L)=2.25 in A

K(Cu(hfac)₂+L)=1.89 in B
K(Cu(hfac)₂+L)=2.0 in C

Metal: Bis(hexafluoroacetylacetonato)copper(II), (Cu(hfac)₂). DH=-29 (in A), DH=-20 (in B) and DH=-19 (in C) kJ mol⁻¹. (A=CCl₄, B= CH₂Cl and C=o-Cl₂C₆H₄)

Cu++ sp alc/w 25°C 50% C K1=0.02 1975RSa (33724)2548
Medium: 50% EtOH, 1.0 M NaClO₄

C₄H₉N L Pyrrolidine CAS 123-75-1 (2997)
Pyrrolidine;

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

Cu++ gl oth/un 25°C 0.20M U K1=6.4 B2=12.4 1964PCa (33753)2549
K3=5.4
K4=5.2

Cu++ gl KNO₃ 25°C 0.20M U K1=6.4 B2=12.40 1961BMA (33754)2550
K3=5.4
K4=5.2

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

Cu++ vlt KNO₃ 25°C 1.0M C 1982PBc (33778)2551
B3=14.6
B4=15.5

Method: polarography.

Cu++ sp oth/un 25°C ? U M 1981CKb (33779)2552
K(Cu(C₆H₅)₄porphin+L)=-0.26

C₄H₉NO₂ HL N-Methylalanine (5666)
2-(N-Methylamino)propanoic acid; CH₃.NH.CH(CH₃)COOH

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

Cu++ gl KCl 25°C 0.10M U K1=7.58 B2=14.25 1977KDa (33796)2553

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

Cu++ gl oth/un 25°C 0.10M M M K1=8.19 B2=14.96 2000MOa (33814)2554
B(CuLA)=18.99

Medium: NaOH. A: 2,2'-Dipicolylamine.

Cu++ gl KNO3 25°C 0.10M U M K1=8.34 B2=15.35 1998SYa (33815)2555
 B(CuAL)=12.02
 B(CuH-1AL)=5.81

HA is 2,3,4-trihydroxybutanoic acid (threonic acid).

 Cu++ ISE KNO3 25°C 0.16M C TIH K1=8.416 1990CSd (33816)2556
 Method: Cu ion selective electrode. DH(K1)=-17.7 kJ mol⁻¹, DS(K1)=102.
 J K⁻¹ mol⁻¹. Data for 35 and 45 C and for 30% and 50% v/v EtOH/H₂O.

 Cu++ sp NaClO4 25°C 1.0M C 1989SMb (33817)2557
 K(CuH-2L+OH)=-1.7

 Cu++ gl NaClO4 25°C 0.10M C M K1=8.34 B2=15.35 1988CLa (33818)2558
 B(CuL(acetylglycinate))=10.76

 Cu++ cal NaClO4 25°C 0.10M C H 1988LGa (33819)2559
 DH(K1)=-25.8 kJ mol⁻¹, DH(K2)=-27.6 kJ mol⁻¹. For HA=N-acetylglycine,
 DH(B(CuAL))=-24.3 kJ mol⁻¹, DS(B(CuAL))=124 J K⁻¹ mol⁻¹.

 Cu++ gl NaClO4 25°C 0.10M U M 1986CLb (33820)2560
 K(Cu(bpy)+L)=8.23
 K(Cu(phen)+L)=8.16

 Cu++ gl NaClO4 37°C 0.10M U K1=7.16 B2=12.90 1981NSb (33821)2561

 Cu++ gl NaClO4 37°C 0.15M U K1=8.10 B2=15.13 1981NSb (33822)2562

 Cu++ gl oth/un 30°C 0.0 U T H K1=8.53 B2=15.57 1964ICa (33823)2563
 At 20 C: K1=8.55, K2=7.05 By calorimetry:(25 C):DH(K1)=-22.6 kJ mol⁻¹
 DS=87.8 J K⁻¹ mol⁻¹; DH(K2)=-23.8,DS=54.3

 Cu++ gl KCl 20°C 0.10M U K1=8.26 B2=15.10 1963IPa (33824)2564
 K(CuL+H)=1.2

 Cu++ gl oth/un 25°C 0.01M U B2=15.2 1956NEb (33825)2565

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

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

 Cu++ gl NaClO4 37°C 0.15M U M 1999NKb (33863)2566
 B(CuH(orn)L)=24.73
 B(Cu(orn)L)=15.41
 K(CuH(orn)+L)=7.06
 K(CuL+H+orn)=16.63

K(CuL+orn)=7.34

 Cu++ gl NaClO4 37°C 0.15M U M 1997NAb (33864)2567
 B(CuAL)=15.12

K(CuA+L)=6.52

K(CuL+A)=7.02

H2A is cysteic acid.

Cu++ gl NaCl04 37°C 0.15M U M 1994NAb (33865)2568

B(Cu(pn)L)=18.34

B(Cu(tn)L)=17.06

B(CuH(tn)L)=23.10

K(Cu(pn)+L)=7.89

pn is 1,2-diaminopropane; tn is 1,3-diaminopropane. Ligand is DL-isomer.

K(CuL+pn)=10.24; K(Cu(tn)+L)=7.59, K(CuL+tn)=8.96.

Cu++ gl NaCl04 37°C 0.15M U M 1994NAc (33866)2569

B(Cu(gln)HL)=20.21

B(Cu(glu)HL)=23.06

B(Cu(glu)L)=17.41

K(Cu(glu)+L)=8.89

K(CuL+glu)=9.31.

Cu++ gl alc/w 30°C 40% M M K1=9.47 B2=16.46 1988ARb (33867)2570

K(CuA+L)=8.36

B(CuAL)=17.86

Medium: 40% EtOH/H2O, 0.05 M KNO3. HA=acetylacetone

Cu++ gl NaCl04 37°C 0.15M U M 1982NSd (33868)2571

B(Cu(imidazole)L)=11.67

B(Cu(imidazole)2L)=15.30

Cu++ gl NaCl04 37°C 0.15M U M 1982NVb (33869)2572

B(CuH(histamine)L)=21.68

B(Cu(histamine)L)=17.21

Cu++ vlt NaCl04 25°C 0.40M U K1=8.2 B2=12.0 1979NSa (33870)2573

B3=14.3

B(Cu(OH)L)=11.2

B(Cu(OH)L2)=14.7

B(Cu(OH)2L)=14.9

Cu++ gl KCl 25°C 0.20M C M 1977NGa (33871)2574

B(CuH-1LA)=5.09

B(CuH-1LB)=5.03

B(CuH-1LC)=4.65

K(CuH-1L2+A=CuH-1LA+L)=0.63

K(CuH-1L2+B=CuH-1LB+L)=0.40, K(CuH-1L2+C=CuH-1LC+L)=0.50

HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine

Cu++ gl KCl 25°C 0.20M C 1976NGd (33872)2575

K(CuH-1A2+L=CuH-1AL+A)=5.09

K(CuH-1C2+L=CuH-1CL+C)=5.03

K(CuH-1D2+L=CuH-1DL+D)=4.65

HA is glycylglycine; HC is glycyl-DL-alpha-alanine;
HD is DL-alanyl-DL-alanine.

```
-----
Cu++      gl  NaNO3  25°C 0.10M M      K1=8.319  B2=15.450  1975SSd (33873)2576
-----
Cu++      gl  KCl    25°C 0.20M U      K1=8.02   B2=14.72   1973GSb (33874)2577
-----
Cu++      gl  KCl    25°C 0.05M U      K1=8.01   B2=14.76   1972GMb (33875)2578
-----
Cu++      gl  KCl    25°C 0.05M U      M  K1=8.13   B2=14.93   1972GSc (33876)2579
                                B(CuLA)=15.30
                                B(CuL(Ser))=15.06
                                B(CuL(Thr))=15.16
                                K(Cu+L+HTyr)=15.18
-----
```

B(CuL(Phe))=15.21. HA=norvaline

```
-----
Cu++      gl  KCl    25°C 0.05M U      M      1972GSc (33877)2580
                                B(CuA(Gly))=15.28
                                B(CuL(Ala))=15.27
-----
```

```
-----
Cu++      gl  oth/un 25°C 0.16M U      K1=7.84   B2=14.48   1970LBa (33878)2581
-----
Cu++      gl  KCl    40°C 0.20M U T H  K1=8.01   B2=14.54   1965SMb (33879)2582
K1=8.34(15 C),8.21(25 C); K2=6.85(15 C),6.72(25 C)
DH(K1)=-22.6 kJ mol-1,DS=79.4 J k-1 mol-1; DH(K2)=-22.2,DS=54.3
*****
```

C4H9NO2 HL 3-Aminobutyric CAS 2835-82-7 (2894)
3-Aminobutanoic acid; CH₃.CH(NH₂).CH₂.COOH

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      gl  NaCl04 37°C 0.15M U      M      1999NKb (33934)2583
                                B(CuH(orn)L)=24.22
                                B(Cu(orn)L)=15.24
                                K(CuH(orn)+L)=6.55
                                K(CuL+H+orn)=17.06
-----
```

K(CuL+orn)=8.08

```
-----
Cu++      gl  NaCl04 37°C 0.15M U      M      1997NAb (33935)2584
                                B(CuAL)=14.50
                                K(CuA+L)=5.90
                                K(CuL+A)=7.34
-----
```

H2A is cysteic acid.

```
-----
Cu++      gl  NaCl04 37°C 0.15M U      M      1994NAb (33936)2585
                                B(Cu(pn)L)=18.04
                                B(Cu(tn)L)=16.07
                                B(CuH(tn)L)=22.02
                                K(Cu(pn)+L)=7.59
-----
```

pn is 1,2-diaminopropane; tn is 1,3-diaminopropane. Ligand is DL-isomer.

$K(\text{CuL}+\text{pn})=10.88$; $K(\text{Cu}(\text{tn})+\text{L})=6.60$, $K(\text{CuL}+\text{tn})=8.91$.

Cu++ gl NaCl04 37°C 0.15M U M 1994NAc (33937)2586

$B(\text{Cu}(\text{gln})\text{L})=13.76$
 $K(\text{Cu}(\text{gln})+\text{L})=6.17$
 $K(\text{CuL}+\text{gln})=6.60$
 $B(\text{Cu}(\text{glu})\text{HL})=23.48$

$B(\text{Cu}(\text{glu})\text{L})=17.34$, $K(\text{Cu}(\text{glu})+\text{L})=8.52$, $K(\text{CuL}+\text{glu})=10.18$.

Cu++ gl NaCl04 37°C 0.15M U M 1982NSd (33938)2587

$B(\text{Cu}(\text{imidazole})\text{L})=10.62$
 $B(\text{Cu}(\text{imidazole})2\text{L})=13.68$

Cu++ gl NaCl04 37°C 0.15M U M 1982NVb (33939)2588

$B(\text{CuH}(\text{histamine})\text{L})=21.48$
 $B(\text{Cu}(\text{histamine})\text{L})=15.92$

Cu++ gl NaNO3 25°C 0.10M M K1=7.077 B2=12.899 1975SSd (33940)2589

Cu++ gl oth/un 25°C 0.16M U K1=7.12 B2=12.85 1970LBa (33941)2590

Cu++ gl KCl 40°C 0.20M U T H K1=7.00 B2=12.38 1965SMb (33942)2591

$K1=7.30(15\text{ C}), 7.18(25\text{ C})$; $K2=5.66(15\text{ C}), 5.59(25\text{ C})$

$\text{DH}(K1)=-20.9\text{ kJ mol}^{-1}$, $\text{DS}=66.9\text{ J K}^{-1}\text{ mol}^{-1}$; $\text{DH}(K2)=-19.2$, $\text{DS}=41.8$

C4H9NO2 HL 4-Aminobutyric CAS 56-12-2 (574)

4-Aminobutanoic acid; H2N.CH2.CH2.CH2.COOH

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

Cu++ gl NaCl04 37°C 0.15M U M 1999NKb (33964)2592

$B(\text{CuH}(\text{orn})\text{L})=23.48$
 $B(\text{Cu}(\text{orn})\text{L})=14.34$
 $K(\text{CuH}(\text{orn})+\text{L})=5.81$
 $K(\text{CuL}+\text{H}+\text{orn})=17.41$

$K(\text{CuL}+\text{orn})=8.27$

Cu++ gl NaCl04 37°C 0.15M U M 1997NAb (33965)2593

$B(\text{CuAL})=12.92$
 $K(\text{CuA}+\text{L})=4.32$
 $K(\text{CuL}+\text{A})=6.85$

H2A is cysteic acid.

Cu++ gl NaCl04 37°C 0.15M U M 1994NAb (33966)2594

$B(\text{Cu}(\text{pn})\text{L})=15.77$
 $B(\text{Cu}(\text{tn})\text{L})=14.92$
 $B(\text{CuH}(\text{tn})\text{L})=21.81$
 $K(\text{Cu}(\text{pn})+\text{L})=5.32$

pn is 1,2-diaminopropane; tn is 1,3-diaminopropane.

$K(\text{CuL}+\text{pn})=9.70$; $K(\text{Cu}(\text{tn})+\text{L})=5.45$, $K(\text{CuL}+\text{tn})=8.85$.

Cu++	gl	NaClO4	37°C	0.15M	U	M				1994NAc (33967)2595
										B(Cu(gln)L)=12.43 K(Cu(gln)+L)=4.84 K(CuL+gln)=6.36 B(Cu(glu)HL)=23.50 B(Cu(glu)L)=15.53, K(Cu(glu)+L)=7.01, K(CuL+glu)=9.46.
Cu++	gl	NaClO4	37°C	0.15M	U	M				1982NSd (33968)2596
										B(Cu(imidazole)L)=10.44
Cu++	gl	NaClO4	37°C	0.15M	U	M				1982NVb (33969)2597
										B(CuH(histamine)L)=21.64 B(Cu(histamine)L)=15.28
Cu++	gl	NaClO4	37°C	0.10M	U		K1=6.07			1981NSb (33970)2598
Cu++	gl	NaClO4	31°C	0.10M	U		K1=6.61			1976RRb (33971)2599
Cu++	gl	NaNO3	25°C	0.10M	M		K1=5.465			1975SSd (33972)2600

C4H9NO2		L				CAS 623-33-6		(3011)		
Glycine ethyl ester; H2N.CH2.CO.OCH2CH3										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KN03	25°C	0.10M	M	M	K1=8.90	B2=13.99	1995SHc (33996)2601	
							K(Cu(ada)+L)=4.05			
ada: N-(acetamido)-iminodiethanoic acid. K(H+L)=7.48.										
Cu++	gl	NaClO4	45°C	0.10M	U	T	K1=4.78	B2=8.31	1965CJa (33997)2602	
							K3=4.36			
K1=4.14(20 C),4.04(25 C),3.99(30 C),4.15(40 C); K2=3.29(20 C),3.89(25 C), 4.97(30 C),4.18(40 C); K3=4.38(20 C),4.24(30 C),4.01(40 C). Ternary with NTA										

C4H9NO2		HL		Dimethylglycine		CAS 1118-68-9		(88)		
N,N-Dimethyl-2-aminoethanoic acid; (CH3)2N.CH2.COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaClO4	21°C	0.10M	M		K1=7.00	B2=13.33	1984LOb (34017)2603	
							B(CuHL2)=18.20			
							B(CuH-1L)=-2.50			
Cu++	gl	KN03	25°C	0.10M	M		K1=7.21	B2=13.77	1975FSc (34018)2604	
Cu++	gl	KN03	25°C	0.10M	U	M			1972IVc (34019)2605	
							K(CuA+L)=5.57			
H2A=iminodiethanoic acid										

Cu++ gl oth/un 25°C 0.15M U K1=7.26 B2=13.53 1958Lda (34020)2606

Cu++ gl NaClO4 25°C 0.10M U K1=7.30 B2=13.65 1954BCb (34021)2607

C4H9NO2 HL N-Ethylglycine CAS 627-01-0 (3010)

N-Ethylglycine; CH3.CH2.NH.CH2.COOH

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

Cu++ gl NaClO4 25°C 0.10M U K1=7.34 B2=13.55 1954BCb (34037)2608

C4H9NO2S HL CAS 3335-52-2 (8306)

2-(Aminoethyl)thioethanoic acid;

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

Cu++ gl KNO3 25°C 0.50M U H K1=7.25 B2=13.40 1983HTa (34041)2609

K(Cu+HL)=1.42

K(CuL+HL)=1.19

K(CuL+H)=3.70

By calorimetry: DH(K1)=-20.0 kJ mol⁻¹, DH(K2)=-46.6, DH(Cu+HL)=0.0

C4H9NO2S HL Methylcysteine CAS 1187-84-4 (84)

2-Amino-3-methylmercaptopropanoic acid; H2N.CH(CH2.S.CH3)COOH

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

Cu++ gl NaNO3 25°C 0.10M M M K1=7.2 2002SKa (34073)2610

B(CuAL)=16.43

A is picolylamine

Cu++ oth NaClO4 35°C 0.10M C K1=5.35 B2=10.10 1998TEa (34074)2611

Method: paper electrophoresis.

Cu++ gl KCl 25°C 0.20M C K1=7.65 B2=14.13 1987SPa (34075)2612

Cu++ gl KNO3 25°C 0.10M U K1=7.88 B2=14.72 1964Lma (34076)2613

C4H9NO3 HL CAS 76412-53-8 (2545)

2-Amino-2-methyl-3-hydroxypropanoic acid; HO.CH2.C(CH3)(NH2).COOH

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

Cu++ sp KNO3 25°C 1.00M U K1=8.00 B2=14.93 1975JPa (34116)2614

K(CuHL2+H)=10.14

K(CuL2+H)=11.12

C4H9NO3 HL Threonine CAS 72-19-5 (48)

2-Amino-3-hydroxybutanoic acid; H2N.CH(CH(OH).CH3)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	C	M	K1=8.16 B2=14.67 B(CuH-1L)=1.53 B(CuH-2L)=-8.62 B(CuLA)=12.70 B(CuHLA)=16.92 B(CuH-1LA)=6.00. HA is 6-aminopenicillanic acid.	2004SSa (34181)	2615
Cu++	gl	NaNO3	25°C	0.10M	M	M	K1=8.22 B2=14.90 B(CuAL)=17.68 A is picolylamine	2002SKa (34182)	2616
Cu++	gl	oth/un	25°C	0.10M	M	M	K1=8.01 B2=14.73 B(CuHLA)=25.65 B(CuLA)=18.49 Medium: NaOH. A: 2,2'-Dipicolylamine.	2000MOa (34183)	2617
Cu++	gl	NaNO3	25°C	0.10M	M	M	K1=8.04 B2=14.81 B(CuAL)=13.32 B(CuH-1AL)=5.63 HA is glycyl-DL-leucine.	1997SKc (34184)	2618
Cu++	gl	KNO3	20°C	0.01M	U		K1=8.20 B2=14.48	1996EMa (34185)	2619
Cu++	gl	KNO3	25°C	0.10M	C	TIH R	K1=7.98 B2=14.66 B(CuH-1L2)=4.81 B(CuH-2L2)=-6.04 IUPAC evaluation. 0.05 M KCl(Tenatative): K1=8.02, B2=14.8 0.15 M, 37 C: K1=7.79, B2=14.30, B(CuH-1L2)=1.60, B(CuH-1L2)=4.69	1995BEa (34186)	2620
Cu++	gl	KNO3	25°C	0.10M	M	M	K1=8.68 B2=16.54 K(Cu(ada)+L)=6.01 ada: N-(acetamido)-iminodiethanoic acid. K(H+L)=8.99.	1995SHc (34187)	2621
Cu++	gl	KCl	25°C	0.20M	C		K1=7.91 B2=14.52 B(CuH-1L2)=4.68 B(CuH-2L2)=-6.05 K(CuL2=CuH-1L2+H)=-9.84 K(CuH-1L2=CuH-2L2+H)=-10.73	1994JKa (34188)	2622
Cu++	gl	NaCl04	25°C	0.20M	U	T M	K1=8.09 B2=15.32 K(CuA+L)=8.11 A is 2,2'-bipyridylamine. Also data for 35 and 45 C.	1993PPa (34189)	2623
Cu++	vlt	NaNO3	25°C	1.0M	C	M	K1=7.72 B2=14.35 B(CuL(tartrate))=10.85 Method: polarography. Medium: pH 8.0.	1992KMa (34190)	2624
Cu++	vlt	NaNO3	25°C	1.0M	C			1992KMa (34191)	2625

$$B_{2eff}=14.35$$

Cu++	gl	KN03	35°C	0.20M	C	M	K1=7.92	1992YKa	(34192)2626
							B(Cu(edda)L)=18.64		
							B(Cu(en)L)=17.06		
							K(Cu(edda)+L)=4.14		
							K(Cu(en)+L)=9.16		

H2A is 7-oxabicyclo-[2,2,1]-hept-5-ene-2,3-dicarboxylic acid

Cu++ cal NaClO4 25°C 0.10M C H 1988LGa (34195)2629
DH(K1)=-27.5 kJ mol⁻¹, DH(K2)=-28.0 kJ mol⁻¹. For HA=N-acetyl glycine,
DH(B(CuAL))=-25.2 kJ mol⁻¹, DS(B(CuAL))=114 J K⁻¹ mol⁻¹.

Cu++	gl	oth/un	20°C	0.10M	U	K1=8.26	B2=14.54	1987MTa	(34197)2631
------	----	--------	------	-------	---	---------	----------	---------	-------------

Cu++	gl	NaCl	37°C	0.15M	U	M	B2=13.87	1986XHa	(34199)2633
							B(CuHL)=11.25		
							B(CuH-1L)=2.89		
							B(CuHL(His))=22.10		
							B(CuL(His))=17.37		

Cu++ gl NaCl 25°C 0.25M C K1=7.888 B2=14.504 1984A0a (34200)2634

Cu++ g1 NaNO3 25°C 0.10M C K1=7.893 B2=14.53 1982Kpc (34202)2636
B(CuH-1L2)=4.79
B(CuH-2L2)=-5.78

 Cu++ gl NaNO3 25°C 0.10M U K1=8.05 B2=14.94 1981ISb (34203)2637
 K values for D, L and DL isomers. For the allo isomer, K1=7.47, K2=6.48

Cu++ gl oth/un 30°C 0.10M U M B2=14.77 1981REb (34204)2638
 K3=3.30
 B(CuAL)=15.36
 B(CuAL2)=19.01
 B(CuA2L)=18.30

Medium not stated. HA is phenylalanine. K(H+L)=9.20.

Cu++ gl NaClO4 30°C 0.10M C M K1=7.95 B2=14.62 1980ASb (34205)2639
 ternary complex with glycyl-sarcosine

Cu++ vlt NaClO4 30°C 0.10M C B2=14.9 1980RSd (34206)2640
 B3=18.68

Method: polarography.

Cu++ vlt KNO3 30°C 1.00M C M K1=7.80 B2=14.15 1980SGc (34207)2641

Cu++ gl KNO3 30°C 1.00M U M K1=7.80 B2=14.15 1980SGd (34208)2642
 B(CuL(malonate))=11.50
 B(CuL(oxalate))=12.10

Cu++ ISE diox/w 25°C 20% U K1=8.28 B2=15.21 1980YTa (34209)2643

Cu++ gl KNO3 25°C 0.10M C M 1979YSa (34210)2644
 B(Cu(His)L)=17.08

Cu++ cal NaNO3 25°C 0.10M C H 1978ISc (34211)2645
 For L-Thr and DL-Thr: DH(K1)=-25.6 kJ mol⁻¹, DS=68 J K⁻¹ mol⁻¹. DH(K2)=
 -20.7, DS=62. For L-allo-Thr: DH(K1)=-23.1, DS=65, DH(K2)=-18.8, DS=61.

Cu++ gl KNO3 25°C 0.10M U M T K1=7.946 B2=14.61 1977BP a (34212)2646
 B(CuL(His))=17.46
 B(CuHL(His))=21.43

Cu++ gl KNO3 25°C 0.10M C M T K1=7.99 B2=14.68 1977DOa (34213)2647
 B(CuH-1L2)=4.84
 B(CuH-2L2)=-5.94
 B(CuL(Gly))=15.17
 B(CuL(Sar))=14.70

Cu++ gl KCl 25°C 0.20M C M 1977NGa (34214)2648
 B(CuH-1LA)=4.95
 B(CuH-1LB)=4.98
 B(CuH-1LC)=4.81
 K(CuH-1L2+A=CuH-1LA+L)=0.49

K(CuH-1L2+B=CuH-1LB+L)=0.35, K(CuH-1L2+C=CuH-1LC+L)=0.68

HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine

 Cu++ vlt oth/un 25°C 0.06M U B2=14.54 1952LDa (34227)2661
 Medium: KH2PO4

 C4H9NO3 HL Homoserine CAS 1927-25-9 (578)
 2-Amino-4-hydroxybutanoic acid; HO.CH2.CH2.CH(NH2).COOH

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

Cu++	ISE	diox/w	25°C	20%	U		K1=8.32 B2=15.24	1980YTa (34348)	2662
------	-----	--------	------	-----	---	--	------------------	-----------------	------

Cu++	gl	KCl	25°C	0.10M	U		K1=7.93 B2=14.42	1971BDc (34349)	2663
------	----	-----	------	-------	---	--	------------------	-----------------	------

Cu++	gl	oth/un	25°C	0.16M	U		K1=8.00 B2=14.69	1970LBa (34350)	2664
------	----	--------	------	-------	---	--	------------------	-----------------	------

 C4H9NO3 HL CAS 4385-95-9 (1894)
 2-Aminooxybutanoic acid; CH3.CH2.CH(O.NH2).COOH

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

Cu++	gl	KNO3	25°C	0.50M	U		K1=4.23	1985WTa (34360)	2665
------	----	------	------	-------	---	--	---------	-----------------	------

Cu++	gl	KNO3	30°C	0.20M	M		K1=6.51 B2=12.68	1984JMa (34361)	2666
------	----	------	------	-------	---	--	------------------	-----------------	------

 C4H9NO3 HL (8269)
 2-Methyl-2-aminooxypropanoic acid;

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

Cu++	gl	KNO3	30°C	0.20M	M		K1=6.77 B2=11.80	1984JMa (34367)	2667
------	----	------	------	-------	---	--	------------------	-----------------	------

 C4H9NO3 HL CAS 924-49-2 (538)
 4-Amino-3-hydroxybutanoic acid; H2N.CH2.CH(OH).CH2.COOH

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

Cu++	gl	NaClO4	37°C	0.15M	U	M		1999NKb (34372)	2668
------	----	--------	------	-------	---	---	--	-----------------	------

B(CuH(orn)L)=26.71
 B(Cu(orn)L)=17.54
 K(CuH(orn)+L)=9.04
 K(CuL+H+orn)=13.69

K(CuL+orn)=4.52

Cu++	gl	NaClO4	37°C	0.15M	U	M		1997NAb (34373)	2669
------	----	--------	------	-------	---	---	--	-----------------	------

B(CuHAL)=25.85

H2A is cysteic acid.

Cu++	gl	NaClO4	37°C	0.15M	U	M		1994NAb (34374)	2670
------	----	--------	------	-------	---	---	--	-----------------	------

B(Cu(pn)L)=20.38
 B(Cu(tn)L)=19.13

$K(\text{Cu}(\text{pn})+\text{L})=9.93$
 $K(\text{CuL}+\text{pn})=7.36$
 pn is 1,2-diaminopropane; tn is 1,3-diaminopropane.
 $K(\text{Cu}(\text{tn})+\text{L})=9.66$, $K(\text{CuL}+\text{tn})=6.11$.

Cu++ gl NaCl04 37°C 0.15M U M 1994NAC (34375)2671
 $B(\text{Cu}(\text{gln})\text{L})=16.66$
 $K(\text{Cu}(\text{gln})+\text{L})=9.07$
 $K(\text{CuL}+\text{gln})=3.64$
 $B(\text{Cu}(\text{glu})\text{HL})=26.37$
 $B(\text{Cu}(\text{glu})\text{L})=17.39$, $K(\text{Cu}(\text{glu})+\text{L})=8.87$, $K(\text{CuL}+\text{glu})=4.37$.

Cu++ gl NaCl04 37°C 0.15M U M 1993NAd (34376)2672
 $B(\text{CuHLNi})=19.33$
 $B(\text{CuHLZn})=19.28$

Cu++ gl KCl 25°C 0.20M C H 1987KSa (34377)2673
 $K(\text{Cu}+\text{HL})=5.88$
 $K(2\text{Cu}+2\text{HL}=\text{Cu}_2\text{L}_2\text{H}+\text{H})=3.01$
 $K(\text{Cu}+2\text{HL}=\text{CuL}_2+2\text{H})=-7.29$
 $\text{DH}(2\text{Cu}+2\text{HL}=\text{Cu}_2\text{L}_2\text{H}+\text{H})=4.8 \text{ kJ mol}^{-1}$, $\text{DS}=74 \text{ J K}^{-1} \text{ mol}^{-1}$; $\text{DH}(\text{Cu}+2\text{HL}=\text{CuL}_2+2\text{H})=2.3$
 $\text{DS}=-132$

Cu++ gl NaCl04 37°C 0.15M U M 1982NSd (34378)2674
 $B(\text{Cu}(\text{imidazole})_2\text{L})=16.59$

Cu++ gl NaCl04 37°C 0.15M U M 1982NVb (34379)2675
 $B(\text{CuH}(\text{histamine})\text{L})=27.14$
 $B(\text{Cu}(\text{histamine})\text{L})=19.70$

Cu++ gl NaCl04 37°C 0.15M U K1=13.02 B2=19.1 1981NSa (34380)2676
 $B(\text{Cu}_2\text{L}_2)=28.1$

Cu++ vlt NaCl04 30°C 0.10M C 1980RSd (34381)2677
 $B_3=19.49$

Method: polarography.

Cu++ gl KCl 25°C 0.10M U K1=12.961 B2=18.856 1975BMa (34382)2678
 $B(\text{Cu}_2\text{L}_2)=28.696$

Cu++ gl oth/un 25°C 0.16M U K1=6.48 B2=12.54 1970LBa (34383)2679

C4H9NO3 HL CAS 5835-28-9 (3013)

N-(2-Hydroxyethyl)glycine; HO.CH2.CH2.NH.CH2.COOH

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

Cu++ gl oth/un 20°C 0.05M U 1957PAa (34391)2680
 $K(\text{CuL}_2\text{OH}+\text{H})=9.68$

C4H9NO3 L CAS 2788-84-3 (3014)
 Serine methyl ester; H2N.CH(CH2.OH).CO.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	M	M		K(CuH-1A+L)=2.81	1997SKc (34395)	2681

HA is glycyl-DL-leucine.

C4H9NO4 HL CAS 17149-11-0 (8049)
 (1-Hydroxymethyl)serine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	M			K1=7.84 B2=14.39 B(CuH-1L2)=5.04 B(CuH-2L2)=-5.49	1995KKb (34398)	2682

C4H9NO5S H2L Homocysteic ac. CAS 504-33-6 (6333)
 2-Amino-4-sulfobutanoic acid, Homocysteic acid; HS03.CH2.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	C	I		K1=8.03 B2=14.50 B(CuL(Ala))=15.22 B(CuLA)=14.57	1983TSa (34401)	2683

I=0.01: B(CuL(Ala))=15.57, B(CuLA)=14.77 In 60% dioxan, I=0.01:
 B(CuL(Ala))=20.03, B(CuLA)=18.99. A=delta-N-trimethylornithine

C4H9N3O2 HL CAS 20238-94-2 (1136)
 Glycyl-glycinamide; H2N.CH2.CO.NH.CH2.CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	U			K1=4.88 B(CuH-1L)=0.19 B(CuH-2L)=-8.20 B(CuH-3L)=-18.02	1975DBa (34409)	2684

Cu++	oth	oth/un	?	?	U			K1=6.71	1973KKc (34410)	2685
------	-----	--------	---	---	---	--	--	---------	-----------------	------

Cu++	gl	KNO3	25°C	0.10M	U			K1=4.80 K(CuH-1L+H)=5.05 K(CuH-2L+H)=7.96 K(CuH-2L=CuH-2LOH+H)=-9.77	1973YNb (34411)	2686
------	----	------	------	-------	---	--	--	---	-----------------	------

Cu++	gl	NaClO4	25°C	0.10M	U	M		K1=5.05 K(CuH-1L+H)=5.10 K(CuH-2L+H)=7.29 K(Cu(bpy)+L)=4.92	1972SGd (34412)	2687
------	----	--------	------	-------	---	---	--	--	-----------------	------

$$B(\text{CuL}(\text{bpy}))=12.92$$

$$K(\text{CuH}-1\text{L}(\text{bpy}))+\text{H}=7.4$$

C4H9N3O2 L CAS 21954-96-1 (4269)

Iminobisacetamide; $\text{HN}(\text{CH}_2.\text{CO}.\text{NH}_2)_2$

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

Cu++ sp oth/un 20°C 0.25M U K1=4.37 1968PRb (34414)2688

C4H9N3O2 HL CAS 57-00-1 (8275)

Methylguanidoethanoic acid;

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

Cu++ gl NaClO4 20°C 0.10M U T H K1=3.13 B2= 5.52 1983SSg (34415)2689

Also data for 30 and 40 C. $\text{DH}(\text{B}_2)=-10.2 \text{ kJ mol}^{-1}$, $\text{DS}(\text{B}_2)=204 \text{ J K}^{-1} \text{ mol}^{-1}$.

C4H9N3O2 L CAS 121532-11-4 (8091)

N-(2-Aminoethyl)oxamide;

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

Cu++ gl KNO3 25°C 0.10M C 1996CHd (34422)2690

$$B(\text{CuH}-1\text{L})=-0.50$$

$$B(\text{CuH}-2\text{L})=-8.83$$

$$B(\text{CuH}-3\text{L})=-19.28$$

$$B(\text{Cu}_2\text{H}-2\text{L})=-3.08$$

$$B(\text{Cu}_3\text{H}-4\text{L}_2)=-7.51, B(\text{Cu}_3\text{H}-5\text{L}_2)=-15.28$$

C4H9N3O4 H2L CAS 39158-78-0 (4271)

Iminodiacethydroxamic acid; $\text{HN}(\text{CH}_2.\text{CO}.\text{NH}.\text{OH})_2$

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

Cu++ sp NaClO4 20°C 0.10M U K1=16.11 1972KMb (34429)2691

$$K(\text{Cu}+\text{HL})=8.94$$

$$K(\text{CuL}(\text{OH})+\text{H})=7.30$$

$$K(\text{CuL}(\text{OH})_2+\text{H}=\text{CuLOH})=10.20$$

C4H9N3S2 HL CAS 14812-36-3 (4272)

Iminobis(thioacetamide); $\text{HN}(\text{CH}_2.\text{CS}.\text{NH}_2)_2$

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

Cu++ gl KCl 20°C 0.25M U K1=11.29 B2=18.18 1968PRb (34434)2692

By spectrophotometry K1=11.47, K2=7.05

C4H9N5 L (6904)

5-(3-Aminopropyl)-1H-tetrazole; $\text{NH}_2.\text{CH}_2.\text{CH}_2.\text{CH}_2.\text{CHN}_4$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaN03	20°C	0.10M	U		K1=8.08 B2=15.06	1978LEb	(34436)2693

C4H10N04P		H2L					(1510)		
2-Amino-3-(methylphosphinato)propanoic acid; H00C.CH(NH2).CH2.P(02H)CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		K1=8.15 B2=14.47	1991KJa	(34443)2694
							B(CuH-1L2)=2.72		

C4H10N05P		H3L					(6029)		
2-Amino-3-phosphonatobutanoic acid; CH3.CH(H203P).CH(NH2).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	20°C	0.10M	U		K1=9.41	1987BDc	(34446)2695
							K(Cu+HL)=3.75		

C4H10N05P		H3L					CAS 6323-99-5	(6043)	
2-Amino-4-phosphonatobutanoic acid; H203P.CH2.CH2.CH(NH2)COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		K1=9.19 B2=14.95	1989KFb	(34454)2696
							B(CuHL)=15.59		
							B(CuH2L2)=29.40		
							B(CuHL2)=22.45		

Cu++	gl	KCl	20°C	0.10M	U		K1=8.86	1987BDc	(34455)2697
							K(Cu+HL)=4.93		

C4H10N06P		H3L					(6967)		
N-(Phosphonomethyl)serine; H203P.CH2.NH.CH(CH20H)COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		K1=11.90 B2=16.33	1994JKa	(34468)2698
							B(CuHL)=15.61		
							B(CuH-1L)=3.36		
							B(CuH2L2)=29.08		
							B(CuHL2)=24.44		

B(CuH-1L2)=6.01, B(CuH-2L2)=-4.84.

C4H10N06P		H2L					CAS 6401-59-8	(2399)	
O-Phospho-2-methylserine;									

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

Sarcosine methylamide; CH₃.NH.CH₂.CO.NH.CH₃

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

Cu++	gl	oth/un	25°C	0.01M	U		K1=4.86 B2=8.90	1959DLb (34510)	2705
------	----	--------	------	-------	---	--	-----------------	-----------------	------

C₄H₁₀N₂O₂ L (3588)

2,3-Diaminopropanoic acid methyl ester; CH₂(NH₂).CH(NH₂).CO.OCH₃

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

Cu++	gl	oth/un	25°C	0.10M	U T		K1=8.99 B2=16.75	1971Hmd (34520)	2706
------	----	--------	------	-------	-----	--	------------------	-----------------	------

K1(37 C)=8.70, K1(50 C)=8.35, K2(37 C)=7.49, K2(50 C)=7.13

Cu++	gl	oth/un	25°C	0.10M	U	M		1971Hmd (34521)	2707
------	----	--------	------	-------	---	---	--	-----------------	------

K(CuLOH+H)=6.89

B(CuLA)=18.77

B(CuHLA)=23.91

HA=2,3-diaminopropanoic acid

Cu++	gl	oth/un	25°C	0.10M	U	M	K1=8.99 B2=16.75	1968Hmb (34522)	2708
------	----	--------	------	-------	---	---	------------------	-----------------	------

K(CuLOH+H)=6.83

Ternary complexes with 2,3-diaminopropanoic acid

C₄H₁₀N₂O₂ HL CAS 1883-09-6 (45)

2,4-Diaminobutanoic acid; H₂N.CH₂.CH₂.CH(NH₂).COOH

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

Cu++	gl	KNO ₃	20°C	0.10M	C	M	K1=11.28 B2=17.24	1997LBc (34535)	2709
------	----	------------------	------	-------	---	---	-------------------	-----------------	------

B(CuHL)=16.76

B(CuHL₂)=25.47

B(CuAL)=17.28

B(CuHAL)=27.64

B(CuH₂AL)=35.99, B(CuH₄AL)=49.68. A: 4-azaooctane-1,8-diamine.

B(CuH-1(dien)L)=9.43. B(CuBL)=18.75; B: 1,3-diaminopropane.

Cu++	gl	NaClO ₄	37°C	0.15M	U	M		1997NAb (34536)	2710
------	----	--------------------	------	-------	---	---	--	-----------------	------

B(CuHAL)=24.40

B(CuAL)=17.71

K(CuA+L)=9.11

K(CuL+A)=6.77

H₂A is cysteic acid.

Cu++	gl	NaClO ₄	37°C	0.15M	U	M		1990NTb (34537)	2711
------	----	--------------------	------	-------	---	---	--	-----------------	------

B(Cu(glu)HL)=25.56

B(Cu(glu)L)=17.23

K(Cu(glu)+H+L)=17.04

K(CuHL+glu)=8.57

K(Cu(glu)+L)=8.71, K(CuL+glu)=6.29

Cu++ gl NaClO4 37°C 0.15M U M 1987SNC (34538)2712

B(CuHL(Asn))=23.99
B(CuL(Asn))=17.13
K(Cu(Asn)+H+L)=16.10
K(CuHL+Asn)=7.00

Cu++ gl NaCl04 37°C 0.15M U M K1=10.94 B2=19.15 1985NAc (34539)2713

$B(\text{CuH}_2\text{L}_2) = 32.92$
 $B(\text{CuHL}) = 16.99$
 $B(\text{CuHL}_2) = 26.89$

$$B(\text{CuHL}(\text{bpy}))=23.57, \quad B(\text{CuL}(\text{bpy}))=17.42$$

Cu++ g1 NaCl04 37°C 0.15M U M 1982NSd (34540)2714

B(Cu(imidazole)HL)=21.23
B(Cu(imidazole)L)=14.89
B(Cu(imidazole)2L)=18.07

Cu++ gl NaCl04 37°C 0.15M U M 1982NVb (34541)2715

B(CuH₂(histamine)L)=28.79
B(CuH(histamine)L)=25.72
B(Cu(histamine)L)=18.40

Cu++ gl NaCl04 37°C 0.15M U M K1=10.94 B2=19.15 1981NSa (34542)2716

$B(\text{CuHL}) = 16.99$
 $B(\text{CuH}_2\text{L}_2) = 32.92$
 $B(\text{CuHL}_2) = 26.89$
 $B(\text{CuAL}) = 19.66$

HA=ornithine

Cu++ gl NaCl04 37°C 0.15M U M 1981NSa (34543)2717

$$\begin{aligned} B(\text{CuAL}) &= 17.35 \\ K(\text{CuL} + \text{A}) &= 6.41 \\ K(\text{CuA} + \text{L}) &= 9.24 \end{aligned}$$

HA=DL-2-aminobutanoic acid

Cu++ gl NaCl04 37°C 0.15M U M 1981NSa (34544)2718

$$\begin{aligned} B(\text{CuAL}) &= 16.30 \\ K(\text{CuL} + \text{A}) &= 5.36 \\ K(\text{CuA} + \text{L}) &= 9.14 \end{aligned}$$

HA=DL-3-aminobutanoic acid

Cu++ gl NaClO4 37°C 0.15M U M 1981NSa (34545)2719

$$\begin{aligned} B(\text{CuAL}) &= 19.93 \\ K(\text{CuL} + \text{A}) &= 8.99 \\ K(\text{CuA} + \text{L}) &= 6.91 \end{aligned}$$

HA=DL-4-amino-3-hydroxy-butanoic acid

Cu++ gl KCl 25°C 0.20M C K1=10.62 B2=18.61 1978GFa (34546)2720

$$B(\text{CuHL}) = 17.27$$

B(CuH₂L₂)=33.24
 B(CuHL₂)=26.89

Cu++ gl KNO₃ 25°C 0.10M U M 1977BP a (34547)2721
 B(CuL(His))=26.75

Cu++ gl KNO₃ 25°C 0.10M C K1=10.50 B2=19.02 1976BP b (34548)2722
 B(CuHL)=17.14
 B(CuH₂L₂)=33.19
 B(CuHL₂)=26.98

Cu++ gl oth/un 20°C .025M U K1=10.4 B2=19.48 1968HMa (34549)2723
 K(Cu+HL)=7.15
 K(Cu+2HL)=13.00
 K(Cu+HL+L)=17.22

 C4H₁₀N₂O₂ HL (2557)
 2-Amino-3-(methylamino)propanoic acid, CH₃.NH.CH₂.CH(NH₂)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO ₃	25°C	0.10M	C		K1=10.39 B2=19.67	1989NO a (34571)2724	
							B(CuHL)=15.92 B(CuH ₂ L ₂)=30.87 B(CuHL ₂)=25.87		

 C4H₁₀N₂O₂ HL EDMA (2784)
 Diaminoethane-N-ethanoic acid; H₂N.CH₂.CH₂.NH.CH₂.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO ₃	25°C	0.10M	C	M	K1=13.473 B2=21.16	1993MO a (34579)2725	
							B(CuHL)=16.25 B(CuHL ₂)=26.5 B(CuH-1L)=4.298 B(CuH-2L)=-7.56		

B(CuL(Ala))=19.214, B(CuL(Arg))=18.961, B(CuHL(Lys))=29.500,
 B(CuL(Val))=19.152

Cu++ gl KCl 25°C 0.50M C K1=12.854 B2=20.373 1985LE a (34580)2726

Cu++ gl KNO₃ 25°C 0.10M U M 1973YBa (34581)2727
 K(CuL+H)=3.19
 K(CuL+OH)=4.77
 K(CuL+py)=2.09
 K(CuL+A)=4.09
 K(CuL+B)=1.75. A=n-butylamine, H₂B=4-phenolsulphonic acid

Cu++ vlt oth/un 25°C 0.20M U K1=13.40 B2=21.44 1969FK a (34582)2728
 Medium: Na ethanoate

C4H10N2O3 HL CAS 4475-93-8 (5892)
 Threoninehydroxamic acid;
 2-Amino-N,3-dihydroxybutanamide; CH3.CH(OH).CH(NH2).CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.50M	C		B2=19.507 B(CuH-1L2)=9.918 B(Cu2H-1L2)=20.377	1989LEc (34599)	2729

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C	M	K1=5.55	2001AAa (34611)	2730

Also data for ternary complexes with 5'-GMP, 5'-IMP and 5'-CMP.

Cu++	gl	KNO3	25°C	0.10M	C		K1=4.76	2000ADa (34612)	2731
------	----	------	------	-------	---	--	---------	-----------------	------

C4H10N4O L CAS 16352-04-8 (3016)
 Guanylethylurea; H2N.C(:NH).CH2.CH2.NH.CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	30°C	0.10M	U		K1=9.7 B2=17.3	1960DUa (34641)	2732

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
Cu++	gl	alc/w	25°C	50%	C	I	K1=0.18	1979SRa (34673)	2733

In 50% EtOH/H2O, 1.0 M NaClO4: K1=0.31

C4H10S L CAS 352-93-2 (4259)
 Diethyl sulfide; C2H5.S.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	alc/w	25°C	50%	C	I	K1=-0.47	1979SRa (34717)	2734

Medium: 50% EtOH (0.24 mol fraction), 0.1 M NaClO4. In 96% DMF: K1=0.29

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
Cu++	vlt	NaClO4	20°C	0.70M	C		K1=6.6	1991CSa (34799)	2735

Method: differential pulse polarography.

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
Cu++	vlt	KNO3	25°C	?	C			B3eff=15.57	1980AAb (34828)	2736
Cu++	vlt	KNO3	30°C	0.50M	U			B(CuL(OH)2)=17.2 B(CuL2(OH)2)=18.9	1967FHa (34829)	2737
Cu++	gl	oth/un	25°C	0.10M	U			K1=5.0 K3=3.5 K4=2.8	1965DOb (34830)	2738
Cu++	vlt	KNO3	25°C	0.50M	U			B4=16.8	1955FKa (34831)	2739

C4H11NO L CAS 124-68-5 (948)

2-Amino-2-methylpropan-1-ol; CH3.C(NH2)(CH3).CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	sp	none	25°C	0.0	U			K1=5.38 B2=8.94	1986SAa (34847)	2740
Cu++	vlt	KNO3	25°C	0.50M	U			B(CuL(OH)2)=18.8 B(CuL2(OH)2)=21.1	1971HSa (34848)	2741

C4H11NO L CAS 5332-73-0 (5421)

3-Methoxypropylamine; CH3O.CH2.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	vlt	oth/un	25°C		C			B2=10.5	1994KNd (34853)	2742

Method: differential pulse polarography. Medium not stated.

C4H11NO L CAS 108-01-0 (3590)

N,N-Dimethyl-2-aminoethanol; HO.CH2.CH2.N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	vlt	KNO3	25°C	1.0M	U			K(Cu(OH)2L2)=20.51	1994KNa (34866)	2743

Method: Pseudopolarography with differential pulse anodic stripping voltam.

Cu++ vlt oth/un 25°C C 1994Knd (34867)2744

K(Cu+2OH+2L)=20.5

Method: differential pulse polarography. Medium not stated.

Cu++ vlt KNO3 25°C 1.0M C 1983AAb (34868)2745

K(Cu+2OH+L)=17.6

K(Cu+2OH+2L)=18.8

Method: polarography. Medium pH >11

Cu++ vlt KNO3 25°C ? C 1980AAb (34869)2746

B3eff=14.76

Cu++ sp KNO3 25°C 0.50M U 1970HHa (34870)2747

K(Cu+2L+2OH=CuH-2L2+2H2O)=19.7

Cu++ gl oth/un 25°C 0.10M U K1=4.7 B2=8.70 1965DOb (34871)2748

K3=3.3

K4=2.9

C4H11NOS L (1220)

1-Hydroxy-3-thia-5-aminopentane; HO.CH2.CH2.S.CH2.CH2.NH2

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

Cu++ gl KNO3 25°C 0.50M C H K1=5.243 B2=10.01 1977HGa (34880)2749

K(CuL2+OH)=4.39

DH(K1)=-31.6 kJ mol-1, DS(K1)=-5.9 J K-1 mol-1

DH(K2)=-36.1 kJ mol-1 DS(K2)=-29.7 J K-1 mol-1

Cu++ gl oth/un 20°C 0.0 U T H K1=5.37 B2=10.33 1959LBb (34881)2750

DH(K1)=-21 kJ mol-1, DS=29; DH(K2)=-25, DS=13. 10 C: K1=5.53, K2=5.15;

30 C: K1=5.26, K2=4.85

Cu++ gl NaClO4 30°C 1.0M U TI K1=5.44 B2=10.41 1953Mca (34882)2751

50 C: K1=4.99, K2=4.54. At I=0, 30 C: K1=5.08, K2=4.90

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

Cu++ gl oth/un 25°C 1.5M U M K1=4.67 B2= 8.72 1998SPa (34912)2752

K(Cu+3L)=10.20

Medium: Na2SO4; the same data measured by sp.:K1=4.60;B2=7.91;B3=10.54

Cu++ gl oth/un 25°C 1.5M U K1=4.67 B2= 8.72 1998SPb (34913)2753

B3=10.20

The same measured spectrophotometrically: 4.60; 7.91; 10.54

Medium: Na2SO4

Cu++ nmr KNO3 25°C 1.00M U K1=4.2 B2=7.4 1990CIId (34914)2754
 B(CuH-1L2)=0.2
 B(CuH-2L2)=-8.2

 Cu++ sp KNO3 25°C 1.00M U K1=4.38 B2=8.39 1989CGa (34915)2755
 B(CuH-1L2)=1.39
 B(CuH-2L2)=-6.97

 Cu++ gl KNO3 25°C 1.0M U M K1=4.38 B2= 8.08 1986CTa (34916)2756
 B(CuH-1L2)=1.4
 B(CuH-2L2)=-5.9
 B(CuAL)=16.7
 B(CuAH-1L)=9.9

B(CuAH-2L)=3.4. H2A is salicylic acid

 Cu++ nmr NaNO3 25°C 1.00M U K1=4.2 B2=7.4 1986TCa (34917)2757
 B(CuH-1L2)=0.2
 B(CuH-2L2)=-8.2

 Cu++ sp R4N.X 25°C 2.00M C I K1=4.74 B2=8.64 1983DBa (34918)2758
 K3=1.66

 Cu++ vlt KNO3 30°C 2.00M U 1971SSe (34919)2759
 B(CuL2(OH)2)=19.86

 Cu++ gl oth/un 20°C U K1=3.8 1968DPa (34920)2760
 K(CuH-1L2+H)=6.40
 K(CuH-2L2+H)=8.0
 K(CuH-3L2+H)=12.0

Combination of glass electrode and spectroscopy

 Cu++ vlt KNO3 30°C 0.50M U 1967FHa (34921)2761
 B(CuL(OH)2)=18.2
 B(CuL2(OH)2)=19.8

 Cu++ gl oth/un 25°C 0.43M U K1=4.75 B2=8.42 1966SKe (34922)2762
 K3=2.75

Medium: CH2OHCH2NH3NO3

 Cu++ gl oth/un 25°C 0.10M U K1=5.4 B2=9.60 1965DOb (34923)2763
 K3=3.2
 K4=1.8

 Cu++ vlt KNO3 30°C 0.50M U 1963STb (34924)2764
 B(CuL(OH)3)=18.97
 B(CuL2OH)=14.10
 B(CuL2(OH)2)=19.28

 Cu++ vlt KNO3 30°C 0.50M U 1962FHa (34925)2765
 B(CuL2(OH)2)=19.4

 Cu++ vlt KNO3 25°C 0.50M U 1955FKa (34926)2766
 B4=16.00

 C4H11NO2 L CAS 115-69-5 (949)
 2-Amino-2-methyl-1,3-propanediol; HO.CH2.C(NH2)(CH3).CH2.OH

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

Cu++	gl	KNO3	25°C	0.50M	U		K1=4.44 B(CuH-1L)=-2.29 B(CuH-1L2)=1.58 B(CuH-2L2)=-6.54	1999CCb (34978)	2767
------	----	------	------	-------	---	--	---	-----------------	------

Cu++ vlt KNO3 25°C 0.50M U 1971HSa (34979)2768
 B(CuL2(OH)2)=21.5

 C4H11NO3 L (7115)
 (2S,3S)-4-Aminobutane-1,2,3-triol; HOCH2CH(OH)CH(OH)CH2NH2

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

Cu++	gl	KNO3	25°C	0.10M	C		B(Cu2H-2L2)=1.41 B(Cu2H-3L2)=-6.46 B(Cu2H-4L2)=-15.30	1995JKb (34985)	2769
------	----	------	------	-------	---	--	---	-----------------	------

Data also for the (2R,3S)- isomer

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

Cu++	gl	KNO3	25°C	0.50M	U		K1=3.82 B(CuH-1L)=-2.138 B(CuH-1L2)=1.28 B(CuH-2L2)=-6.09	1999CCb (35023)	2770
------	----	------	------	-------	---	--	--	-----------------	------

Cu++	gl	NaCl	25°C	0.15M	C		K1=4.17 B3=11.01 B(CuH-1L)=-2.39 B(CuH-1L2)=1.28 B(CuH-2L2)=-6.208	1983BSa (35024)	2771
------	----	------	------	-------	---	--	--	-----------------	------

Cu++	gl	KNO3	25°C	0.10M	C	M	K1=4.05 K(Cu(ATP)+L)=3.50	1979FHa (35025)	2772
------	----	------	------	-------	---	---	------------------------------	-----------------	------

Cu++	vlt	NaCl04	25°C	2.00M	U		B3=9.55	1975BMb (35026)	2773
------	-----	--------	------	-------	---	--	---------	-----------------	------

Cu++ vlt KNO3 25°C 0.50M U 1971HSa (35027)2774
B(CuL2(OH)2)=21.7

Cu++ gl KNO3 25°C 0.10M U K1=3.95 B2=7.63 1969Bmd (35028)2775
K3=3.47
K4=3.0
K(CuH-1L+H)=6.0
K(2CuH-1L=(CuH-1L)2)=2.2
K(CuH-2L2+H)=7.90, K(CuH-1L2+H)=6.32

Cu++ gl KNO3 ? 0.10M U K1=3.98 B2=7.47 1962HSa (35029)2776
K3=3.2

C4H11N08P2 H5L CAS 2439-99-8 (2129)
N-Carboxymethyl-N,N-bis(methylenephosphonic acid); H00C.CH2.N(CH2.P03H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C		K1=16.5 K(CuL+H)=5.47 K(CuHL+H)=3.78 K(CuH2L+H)=2.8 K(CuL+OH)=3.1	2000SDa (35084)	2777

Cu++ gl KCl 25°C 0.20M C K1=15.97 1997BKb (35085)2778
B(CuHL)=21.14
B(CuH2L)=24.67
B(CuH-1L)=5.56

Cu++ gl KCl 25°C 0.20M C K1=15.97 1994JKa (35086)2779
B(CuHL)=21.14
B(CuH2L)=24.67
B(CuH-1L)=5.56

Cu++ gl KCl 25°C 0.15M U TIH K1=15.24 1991KMc (35087)2780
K(Cu+HL)=9.48
K(Cu+H2L)=6.74
At 60 C K1=14.83; K(Cu+HL)=10.32; K(Cu+H2L)=7.21

Cu++ sp KNO3 20°C 0.50M U K1=15.75 1974NKa (35088)2781
K(Cu+HL)=8.56
K(Cu+H2L)=6.15
K(Cu+H3L)=3.18
K(Cu+H4L)=2.79

Cu++ gl KNO3 25°C 0.10M U K1=12.53 1965WRa (35089)2782
K(CuHL+H)=4.14
K(CuL+H)=5.89

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

Cu++	gl	NaClO4	25°C	0.10M	U	T H		K(CuL+H)=5.8	1983BVa (35130)	2783
------	----	--------	------	-------	---	-----	--	--------------	-----------------	------

Cu++	gl	KN03	20°C	0.25M	U	I		K1=9.76 B2=19.20	1973MSd (35131)	2784
------	----	------	------	-------	---	---	--	------------------	-----------------	------

0.25 KN03, 25% MeOH: K1=10.56, K2=9.90; 25% EtOH: K1=10.76, K2=9.94

C4H11NS HL CAS 21100-03-8 (2592)

4-Aminobutanethiol; H2N.CH2.CH2.CH2.CH2.SH

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

Cu++	gl	NaClO4	25°C	0.10M	U	T H		K(CuL+H)=8.8	1983BVa (35142)	2785
------	----	--------	------	-------	---	-----	--	--------------	-----------------	------

C4H11N2O4P H2L CAS 53626-52-1 (9088)

2[(Aminoacetyl)amino]ethylphosphonic acid;

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

Cu++	gl	KN03	25°C	0.10M	U			K1=7.55 K(CuL+H)=5.21 *K(CuL)=-5.26	1975HMc (35145)	2786
------	----	------	------	-------	---	--	--	---	-----------------	------

C4H11N2O4P H2L (7118)

Alanylaminomethylphosphonic acid;

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

Cu++	gl	KN03	25°C	0.10M	C			K1=6.36 B2=12.06 B(CuH-1L)=1.586 B(CuHL)=11.82 B(CuH-2L)=-7.09 B(CuH-1L2)=4.65	1995HLA (35149)	2787
------	----	------	------	-------	---	--	--	--	-----------------	------

C4H11N2O4P H2L (7121)

Glycyl-1-aminoethylphosphonic acid;

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

Cu++	gl	KCl	25°C	0.10M	U			K1=6.86 B2=12.60 B(CuHL)=12.32 B(CuH-1L)=1.864 B(CuH-2L)=-6.62 B(CuH-1L2)=5.37	1995HLA (35154)	2788
------	----	-----	------	-------	---	--	--	--	-----------------	------

C4H11N3 L CAS 171868-16-9 (7833)

cis-3,4-Diaminopyrrolidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.10M	C		B2=17.53 B(CuHL)=16.8 B(CuH2L2)=32.38 B(CuHL2)=25.27	2001KSa (35158)	2789

For the trans-Isomer: B2=14.05, B(CuHL)=14.68, B(CuH2L2)=28.40

B(CuHL2)=21.59

C4H11N3O L (2704)
2-(Dimethylamino)acetamidoxime; (CH3)2N.CH2.C(:NOH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl04	25°C	0.10M	C		K1=6.602 B2=11.284 B(Cu2H-2L2)=4.98 K(4Cu+4L=Cu4H-6L4+6H)=3.27	1986S0b (35164)	2790

C4H11N3O HL (6986)
3-(Methylamino)propanamidoxime; CH3.NH.CH2.CH2.C(:NOH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl	25°C	0.10M	C		B(CuHL)=10.5 K(Cu+HL)=6.82 K(Cu+2HL)=12.9 B(-7,5,4)=4.13	19940Sa (35168)	2791

B(p,q,r); pH+qCu+rHL=Hp(Cu)q(HL)r. B(-8,5,4)=-0.62, B(-6,4,4)=6.16

C4H11N3O2 HL CAS 471915-94-3 (8550)
2,4-Diamino-N-hydroxybutanamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		B2=19.87 B(CuH2L)=23.20 B(CuHL)=19.38 B(CuH2L2)=36.73 B(CuHL2)=29.05	2002ECa (35171)	2792

B(CuH-1L2)=8.9, B(Cu2HL2)=38.08.

C4H11N5 L CAS 657-24-7 (2998)
Dimethylbiguanide; CH3.NH.C(:NH).NH.C(:NH).NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	oth/un	32°C	?	U		K1=9.51 B2=17.44	1960RAb (35181)	2793

Cu++ gl oth/un 32°C 0.05M U K1=8.50 B2=15.57 1956SRa (35182)2794

C4H11N5 L CAS 41283-85-6 (2999)
Ethylbiguanide; CH3.CH2.NH.C(:NH).NH.C(:NH).NH2

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

Cu++ gl oth/un 32°C 0.05M U K1=9.47 B2=17.03 1956SRa (35185)2795

C4H11N50 L CAS 53490-38-3 (3017)
N-(2-Hydroxyethyl)biguanide; HO.CH2.CH2.NH.C(:NH).NH.C(:NH).NH2

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

Cu++ gl KCl 30°C 0.20M U K1=9.96 B2=16.91 1960SRa (35188)2796

C4H11N502 HL CAS 20004-00-6 (2934)
Iminobis(acetamidoxime); HN(CH2.C(:NOH)NH2)2

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

Cu++ gl NaClO4 25°C 1.00M C K1=10.95 B2=14.76 19850Sa (35191)2797
K(CuH-1L2+H)=6.76

C4H11N503S HL CAS 92507-94-3 (2732)
2-Sulfoethylbiguanide; H03S.CH2.CH2.NH.C(:NH).NH.C(:NH)NH2

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

Cu++ sol oth/un 20°C 0.11M U 1984CFa (35194)2798
Kso=-20.62

C4H11N203P HL (7917)
(Glycylamino)methyl(methylphosphinic acid);

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

Cu++ gl KNO3 25°C 0.10M C K1=5.638 B2= 9.99 2001LKa (35196)2799
B(CuHL)=9.57
B(CuH-1L)=0.176
B(CuH-2L2)=-6.16
B(CuH-1L2)=3.427

C4H1102PS2 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

Cu++ sp alc/w 25°C 75% U B2=9.88 1970BPa (35212)2800

Medium: 75% MeOH, 0.3 M NaClO4

C4H11O3P H2L CAS 4923-84-6 (524)
Butylphosphonic acid; C4H9PO3H2

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

Cu++ gl KNO3 25°C 0.10M U K1=4.14 1981WNa (35242)2801

C4H11O4P H2L (5867)
n-Butyl phosphoric acid; C4H9O4P(OH)2

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

Cu++ gl NaNO3 25°C 0.10M U I K1=3.12 1992MSd (35277)2802

Also data for 20-50% v/v dioxane/H2O, 0.10 M NaNO3.
In 50% dioxane/H2O, 0.10 M NaNO3: K1=4.83.

Cu++ gl NaNO3 25°C 0.10M C M K1=3.12 1989MSd (35278)2803
K(Cu(bpy)+L)=3.27; K(Cu(phen)+L)=3.23

Cu++ gl NaNO3 25°C 0.10M C K1=3.12 1988MSa (35279)2804

C4H12NO3P H2L AMPPH CAS 18108-24-2 (222)
1-Amino-2-methylpropylphosphonic acid; (CH3)2CHCH(NH2)PO3H2

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

Cu++ gl KCl 25°C 0.10M U M K1=8.3 B2=14.77 1989NIb (35301)2805

B(CuL(Phe))=15.78; B(CuL(Tyr))=18.35; B(CuLA)=18,98. HA=dioxyphenylalanine

Cu++ gl KNO3 25°C 0.10M U K1=9.47 B2=17.32 1979WNb (35302)2806
B(CuHL)=13.71
B(CuHL2)=22.53
B(CuH2L2)=26.7
B(CuH-1L)=1.7

Cu++ gl KNO3 25°C 0.10M U K1=9.17 B2=16.95 1972WNb (35303)2807
B(CuHL)=13.70
B(CuH2L2)=27.51
B(CuHL2)=22.37

C4H12NO3PS H2L CAS 68694-58-6 (8085)
1-Amino-3-methylthiopropylphosphonic acid;

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

Cu++ gl KCl 25°C 0.20M C K1=8.21 B2=14.89 1998KMa (35314)2808

C4H12N2 L CAS 881-93-8 (3581)

1,2-Diamino-2-methylpropane; $\text{H}_2\text{N}.\text{CH}_2.\text{C}(\text{NH}_2)(\text{CH}_3)_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	var	U	I		1964NKa (35320)	2809
$K_1 = 10.40 + 0.404I - 0.234I^{(1.5)} - 0.190I^{(2)}$ $K_2 = 9.07 + 1.261I - 1.050I^{(1.5)} + 0.324I^{(2)}$									

C4H12N2		L					CAS 590-88-5	(3580)	
1,3-Diaminobutane; $\text{H}_2\text{N}.\text{CH}_2.\text{CH}_2.\text{CH}(\text{NH}_2).\text{CH}_3$									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	var	U			1965NKf (35327)	2810
$K_1 = 9.67 + 0.905I - 0.822I^{(3/2)} + 0.307I^{(2)}$ $K_2 = 7.25 + 1.169I - 1.116I^{(3/2)} + 0.402I^{(2)}$									

C4H12N2		L					CAS 110-60-1	(360)	
1,4-Diaminobutane; $\text{H}_2\text{N}.\text{(CH}_2)_4.\text{NH}_2$									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	20°C	0.10M	C	M	$K_1 = 8.62$ $B_2 = 13.40$ $B(\text{CuHL}) = 15.83$ $B(\text{CuH-1L}_2) = 0.065$ $B(\text{CuAHL}) = 19.02$	2000GLa (35349)	2811
H2A is cytidine 5'-monophosphoric acid.									

Cu++	gl	NaClO4	20°C	0.10M	C	M	$K_1 = 8.62$ $B_2 = 13.40$ $B(\text{CuHL}) = 15.83$ $B(\text{CuH-1L}_2) = 0.065$ $B(\text{CuAL}) = 11.40$ $B(\text{CuHAL}) = 18.20$	1996LGa (35350)	2812
HA=adenosine. $B(\text{CuH-1AL}_2) = 6.67$									

Cu++	gl	NaClO4	20°C	0.10M	C	M	$K_1 = 8.62$ $B_2 = 13.40$ $B(\text{CuHL}) = 15.83$ $B(\text{CuH-1L}_2) = 0.065$ $B(\text{CuAL}) = 11.40$ $B(\text{CuAHL}) = 18.20$	1996LGb (35351)	2813
A=adenosine. $B(\text{CuH-1AL}_2) = 6.67$									

Cu++	gl	NaClO4	20°C	0.10M	U		$K_1 = 8.62$ $B_2 = 13.40$ $B(\text{CuHL}) = 15.83$ $B(\text{CuH-1L}_2) = 0.065$	1993LGa (35352)	2814
------	----	--------	------	-------	---	--	--	-----------------	------

Cu++	gl	NaClO4	20°C	0.10M	U		$B(\text{CuH-1L}_2) = 0.065$	1991Wba (35353)	2815
------	----	--------	------	-------	---	--	------------------------------	-----------------	------

Cu++	gl	NaClO4	20°C	0.10M	C			1989LWc (35354)	2816
------	----	--------	------	-------	---	--	--	-----------------	------

B(CuH-1L2)=0.065

C4H12N2 L CAS 563-86-0 (59)

DL-2,3-Diaminobutane; H2N.CH(CH3).CH(CH3).NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U	H	K1=11.265 B2=20.92 B(CuHL)=14.67	1977PSb (35371)	2817

By calorimetry, DH1=-52.7 kJ mol⁻¹, DS1=38.9 J K⁻¹ mol⁻¹, DH(B2)=-100.0,
DS(B2)=64.1

Cu++	gl	KCl	25°C	0.10M	U		K1=10.86 B2=20.14	1970ABc (35372)	2818
------	----	-----	------	-------	---	--	-------------------	-----------------	------

DL and D isomers

Cu++	gl	KNO3	25°C	0.50M	U	T	K1=11.39 B2=21.21	1954BCa (35373)	2819
------	----	------	------	-------	---	---	-------------------	-----------------	------

0 C: K1=12.22, K2=10.65

C4H12N2 L Dimeen CAS 110-70-3 (125)

N,N'-Dimethyl-1,2-diaminoethane; CH3.NH.CH2.CH2.NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	ns	ns	C		K1=9.545 B2=16.76 B(Cu2H-2L2)=6.612 B(CuH-2L)=-9.940 B(CuH-1L)=1.114	1989FPa (35394)	2820

Cu++	gl	KNO3	20°C	1.00M	C		K1=9.543 B2=16.718 B(CuL(OH))=0.965 B(CuL2(OH))=-10.337 B(Cu2L2(OH)2)=6.539	1986FPa (35395)	2821
------	----	------	------	-------	---	--	--	-----------------	------

Cu++	gl	KNO3	25°C	0.10M	C	M	K1=10.071 B2=17.140 B(CuL(Ala))=17.696 B(CuL(Val))=17.423 B(CuL(Phe))=17.412 B(CuL(Trp))=17.748	19840Ya (35396)	2822
------	----	------	------	-------	---	---	---	-----------------	------

B(CuL(Tyr))=18.249; B(CuHL(Tyr))=27.450; B(CuLA)=17.138; B(CuLB)=18.274;
B(CuHLB)=28.379. HA=O-Me-tyrosine, H2B=5-hydroxytryptophan.

Cu++	gl	KCl	25°C	1.0M	U		K1=10.27 B2=17.58 B(Cu2H-1L2)=7.13	1983DPa (35397)	2823
------	----	-----	------	------	---	--	---------------------------------------	-----------------	------

Cu++	gl	NaClO4	25°C	0.10M	U		K1=12.27 B2=20.73	1981ATa (35398)	2824
------	----	--------	------	-------	---	--	-------------------	-----------------	------

Cu++	gl	KCl	25°C	0.20M	C	HM	K1=9.94 B2=16.97 B(CuL(gly))=16.70 B(CuL(en))=19.27 B(CuHL2)=22.66	1976GSd (35399)	2825
------	----	-----	------	-------	---	----	---	-----------------	------

Cu++ g1 KNO3 25°C 0.50M U T K1=10.47 B2=18.10 1954Bma (35408)2834
 0 C: K1=11.22, K2=8.31

Cu++ gl KCl 25°C 0.10M U K1=9.69 B2=16.34 1954IGa (35409)2835

C4H12N2 L CAS 108-00-9 (2661)
N,N-Dimethyl-1,2-diaminoethane; (CH3)2N.CH2.CH2.NH2

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

Cu++ gl KNO3 25°C 0.10M C M K1=9.812 B2=16.55 2002Y0a (35438)2836
B(CuH-1L)=2.322
B(CuH-2L)=-8.904
B(CuAL)=15.141
B(CuH-1AL)=6.391
B(CuHBL)=25.152, B(CuBL)=16.709, B(CuH-1BL)=6.701; B(CuCL)=15.405,
B(CuH-1CL)=6.825. HA is gly-gly, H2B is gly-L-tyr, HC is gly-L-trp.

Cu++ gl KCl 25°C 0.20M C HM K1=9.24 B2=16.20 1976GSd (35439)2837
B(CuL(Gly))=16.70
B(CuL(en))=18.55
By calorimetry: DH(K1)=-40.5 kJ mol⁻¹, DH(B2)=-80.7, DH(CuL(en))=-98.7,
DH(CuL(pn))=-90.4. Other data also

Cu++ gl KCl 25°C 0.20M C H K1=9.24 B2=16.20 1976SGa (35440)2838
By calorimetry: DH(K1)=-40.5 kJ mol⁻¹, DS(K1)=41 J K⁻¹ mol⁻¹;
DH(B2)=-80.7, DS(B2)=39.

Cu++ gl KCl 25°C 0.20M C HM 1976SGa (35441)2839
B(Cu(gly)L)=16.70
K(CuL+gly)=7.46
K(Cu(gly)+L)=8.63
By calorimetry: DH(Cu(gly)L)=-70.7 kJ mol⁻¹, DS(Cu(gly)L)=82 J K⁻¹ mol⁻¹;
DH(CuL+gly)=-30.2, DH(Cu(gly)+L)=-45.1.

Cu++ gl KCl 25°C 0.20M C HM 1976SGa (35442)2840
B(Cu(en)L)=18.55
K(CuL+en)=9.31
K(Cu(en)+L)=7.98
By calorimetry: DH(Cu(en)L)=-98.7 kJ mol⁻¹, DS(Cu(en)L)=24 J K⁻¹ mol⁻¹;
DH(CuL+en)=-58.2, DH(Cu(en)+L)=-45.3.

Cu++ gl KCl 25°C 0.20M C HM 1976SGa (35443)2841
B(Cu(pn)L)=16.98
K(CuL+pn)=7.74
K(Cu(pn)+L)=7.33
By calorimetry: DH(Cu(pn)L)=-90.4 kJ mol⁻¹, DS(Cu(pn)L)=22 J K⁻¹ mol⁻¹;
DH(CuL+pn)=-50.1, DH(Cu(pn)+L)=-40.9. pn is 1,3-diaminopropane.

Cu++ sp oth/un 25°C var U 1973Y0a (35444)2842
K(Cu+CuL2=2CuL)=2.10 pH 5.6

Cu++ nmr alc/w var 50% U H 1973Y0a (35445)2843

pH=5.6. $\Delta H = -7.0 \text{ kJ mol}^{-1}$, $\Delta S = 16 \text{ J K}^{-1} \text{ mol}^{-1}$

C4H12N2 L Butanediamine CAS 20759-15-3 (58)
 meso-2,3-Diaminobutane; H2N.CH(CH3).CH(CH3).NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U	H		K1=10.538 B2=19.79 B(CuHL)=13.91	1977PSb (35481)	2856

By calorimetry, DH1=-46.9 kJ mol⁻¹, DS1=44.3 J K⁻¹ mol⁻¹, DH(B2)=-96.8, DS(B2)=54

Cu++	gl	oth/un	25°C	0.10M	U			K1=10.41 B2=19.44	1970ABc (35482)	2857
------	----	--------	------	-------	---	--	--	-------------------	-----------------	------

Cu++	gl	KNO3	25°C	0.50M	U	T		K1=10.72 B2=20.06	1954BCa (35483)	2858
------	----	------	------	-------	---	---	--	-------------------	-----------------	------

0 C: K1=11.50, K2=10.05

C4H12N2O L CAS 2752-17-2 (312)
 Bis-(2-aminoethyl)ether; H2N.CH2.CH2.O.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	U	H		K1=8.970 B2=12.75 K(CuL+OH)=5.48	1974BVa (35494)	2859

By calorimetry: DH(K1)=-39.9 kJ mol⁻¹, DS=38, DH(K2)=-18.8, DS=8, DH(CuLOH)=-38.9, DS=-24

Cu++	gl	oth/un	20°C	0.0	U	T	H	K1=8.82 B2=13.11	1959LBb (35495)	2860
------	----	--------	------	-----	---	---	---	------------------	-----------------	------

DH(K1)=-46.0 kJ mol⁻¹, DS=13; DH(K2)=-15, DS=29. 10 C: K1=9.16, K2=4.58; 30 C: K1=8.58, K2=4.35; 40 C: K1=8.35, K2=4.25

C4H12N2O L CAS 111-41-1 (648)
 N-(2-Hydroxyethyl)diaminoethane, 1,4-Diaza-7-oxaheptane; H2N.CH2.CH2.NH.CH2.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	cal	NaCl04	25°C	0.10M	C				1975BAa (35521)	2861

DH(K1)=-46.4 kJ mol⁻¹, DS=42.1 J K⁻¹ mol⁻¹, DH(K2)=-4.4, DS=133.3, DH(CuL+2OH)=-51.6, DS=164.2

Cu++	vlt	KNO3	25°C	0.50M	U			B2=18.0 K(CuL2+OH)=3.2	1972HJa (35522)	2862
------	-----	------	------	-------	---	--	--	---------------------------	-----------------	------

Cu++	gl	KNO3	25°C	0.50M	U			K(CuL2+OH)=3.3	1972HJa (35523)	2863
------	----	------	------	-------	---	--	--	----------------	-----------------	------

Cu++	gl	KNO3	25°C	0.10M	U	M		K1=10.07 B2=17.58 B(CuLA)=22.51 B(CuLB)=22.08 B(CuLC)=21.48 B(CuLD)=20.64	1969Cmd (35524)	2864
------	----	------	------	-------	---	---	--	---	-----------------	------

B(CuLE)=19.71. H4A=Tiron, H4B=chromotropic acid; H2C=pyrocatechol;

H2D=8-hydroxyquinoline-5-sulfonic acid, H2E=salicylic acid

Cu++ gl NaClO4 25°C var U 1966NTa (35525)2865
K1=10.02+1.018SQRTI/(1+0.904SQRTI)-1.018SQRTI/(1+2.36SQRTI)+0.282I
K2=7.43+1.018SQRTI/(1+9.04SQRTI)-1.018SQRTI/(1+3.00SQRTI)+0.234I plus others

Cu++ gl KNO3 25°C 0.10M U T H K1=9.90 1959GMa (35526)2866
K(Cu(OH)L+H)=7.30
K(2Cu(OH)L=Cu2(OH)2L2)=2.2
DH(CuOHL+H)=-25 kJ mol⁻¹, DS=59. K=7.69(0.3 C), 7.08(42.5 C)
DH(dimer)=17, DS=92. K=1.7(0.3 C), 2.2(42.5 C)

Cu++ gl KNO3 25°C 0.50M U K1=10.11 B2=17.62 1958HDa (35527)2867

Cu++ gl KNO3 25°C 0.10M U K1=10.0 1957Mca (35528)2868

C4H12N2O2 L (6680)
1,4-Diamino-butane-2,3-diol; H2N.CH2.CH(OH).CH(OH).CH2.NH2

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

Cu++ gl KNO3 25°C 0.10M C 1993KRa (35550)2869
B(Cu2H-2L2)=9.64
B(Cu2H-3L2)=-0.55

Data for 3R,2S isomer. For 2R,3R isomer K(Cu2H-2L2)=10.90, K(Cu2H-3L2)=0.12

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

Cu++ gl KNO3 25°C 0.50M U K1=9.020 B2=14.26 1979HGb (35554)2870
K(CuL+OH)=5.90

Cu++ cal KNO3 25°C 0.50M C H 1979HGd (35555)2871
DH(K1)=-51.4 kJ mol⁻¹, DS(K1)=0.2 J K⁻¹ mol⁻¹; DH(K2)=-33.7, DS(K2)=-12;
DH(CuL+OH)=-18.0, DS(CuL+OH)=52.

Cu++ gl KNO3 30°C 1.0M U T K1=9.07 B2=14.15 1951G0a (35556)2872
0 C: K1=9.99, K2=6.28; 50 C: K1=8.57, K2=4.57

C4H12N2S2 L CAS 51-85-4 (3593)
2,2'-Dithiobis(ethylamine); H2N.CH2.CH2.S.S.CH2.CH2.NH2

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

Cu++ gl NaClO4 20°C 0.15M U K1=6.70 1963HPa (35568)2873
K(Cu+HL)=3.79

C4H12O3NP H2L (6836)

1-Amino-1-methylpropyl-1-phosphonic acid; CH₃.CH₂.C(CH₃)(NH₂)PO₃H₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.10M	U			K1=8.30 B2=14.77	1991NSa (35570)	2874

C₄H₁₃N₃O₃P+ HL (1971)
Trimethylammonium-methylphosphonic acid; +N(CH₃)₃.CH₂.PO₃H₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO ₃	25°C	0.10M	U			K1=2.18 1979WNa (35589)	2875	

C₄H₁₃N₆O₆P₂ 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
Cu++	gl	KCl	25°C	0.20M	C			K1=13.26 1998KKc (35595)	2876	

B(CuH-1L)=3.02
B(CuH-2L)=-9.47
B(CuHL)=17.60
B(CuH₂L)=21.15

Cu++	gl	KNO ₃	25°C	1.00M	M			K1=13.09 1982BGb (35596)	2877
------	----	------------------	------	-------	---	--	--	--------------------------	------

C₄H₁₃N₇O₇P₂ H₄L CAS 63132-40-1 (1347)
1-Hydroxy-4-aminobutyl-1,1-diphosphonic acid; (PO₃H₂)₂C(OH).CH₂.CH₂.CH₂.NH₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C			K1=15.70 1996DJa (35615)	2878	

B(CuH₂L₂)=40.49, B(Cu₂L)=23.62.

Cu++	gl	KCl	25°C	0.10M	M			K1=12.92 1978KMa (35616)	2879
------	----	-----	------	-------	---	--	--	--------------------------	------

C₄H₁₃N₂O₃P H₂L (6485)
N-Dimethyl-1,2-diaminoethanephosphonic acid; H₂N.CH(PO₃H₂)CH₂.N(CH₃)₂

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

C4H13N3	L	CAS 14478-63-8 (3000)
---------	---	-----------------------

1,3-Diamino-2-aminomethylpropane; H2N.CH2.CH(CH2.NH2).CH2.NH2

Cu++ gl KNO3 20°C 0.10M U K1=10.85 1962ANb (35626)2881
K(Cu+HL)=8.70
K(Cu+H2L)=3.60

C4H13N3 L Dien CAS 111-40-0 (584)
1,4,7-Triazaheptane, 2,2'-Iminobis(ethylamine), diethylenetriamine;
NH2.(CH2)2.NH.(CH2)2.NH2

Cu++ gl KCl 25°C 0.20M C K1=16.01 B2=20.94 2002KBa (35673)2882
B(CuH-1L)=6.99
B(CuHL2)=29.36

Cu++ gl KCl 25°C 0.20M C K1=16.01 B2=20.76 2001KBa (35675)2884
B(CuHL2)=29.34
B(CuH-1L)=6.99

Cu++ g1 KCl 25°C 0.20M C K1=16.10 B2=20.98 200FEa (35676)2885
B(CuHL)=18.42
B(CuHL2)=29.50
B(CuH-1L)=6.86

Cu++ gl NaClO₄ 25°C 0.10M C H K₁=16.1 1998IHa (35677)2886
K(Cu+HL)=8.5
*K(CuL)=-9.1

$\Delta H(K1) = -80.7 \text{ kJ mol}^{-1}$, $\Delta S = 29.8 \text{ J mol}^{-1} \text{ K}^{-1}$.

Cu++	g1	KN03	20°C	0.10M	C	M	K1=16.18	B2=21.30	1997LBC	(35678)2887
							B(Cu(en)L)=21.15			
							B(CuAL)=20.64			
							B(CuBL)=21.00			
							B(CuH-1BL)=10.58			

A: 1,3-diaminopropane; B: 1,8-diamino-4-azaoctane. B(CuCL)=21.09; B(CuDL)=20.13. C: 2,3-diaminopropanoic acid; D: 2,4-diaminobutanoic acid.

Cu++ gl KN03 25°C 0.10M C M K1=16.03 1996MMb (35679)2888
B(CuH-1L)=6.80

Ternary complexes with 10 different amino acids, e.g. $B(\text{CuH}_2\text{LGly})=30.31$,
 $B(\text{CuHLGly})=27.57$, $B(\text{CuLGly})=20.53$, $B(\text{CuH-1LGly})=9.90$

Cu++ gl NaClO4 25°C 0.20M U M 1996UBa (35680)2889
 $B(\text{Cu}(\text{catecholate})\text{L})=26.14$
 $B(\text{Cu}(\text{oxalate})\text{L})=18.21$
 $B(\text{Cu}(\text{malonate})\text{L})=18.55$
 $B(\text{Cu}(\text{gly})\text{L})=20.65$
 $B(\text{Cu}(\text{beta-Ala})\text{L})=19.86$, $B(\text{Cu}(\text{en})\text{L})=21.74$, $B(\text{Cu}(\text{1,3-pn})\text{L})=21.57$,
 $B(\text{Cu}(\text{2-aminophenol})\text{L})=20.27$, $B(\text{Cu}(\text{o-phenylenediamine})\text{L})=15.80$.

Cu++ gl KNO3 25°C 0.10M M M K1=15.871 19920Ma (35681)2890
 $B(\text{CuHL})=18.26$
 $B(\text{CuH-1L})=6.697$
 $B(\text{Cu}_2\text{H-1L}_2)=24.07$
 $B(\text{CuLA})=20.810$

A=2-amino-4-oxopteridine-6-carboxylate

Cu++ gl NaNO3 25°C 0.10M U 1990CFa (35682)2891
 $K(\text{CuL}=\text{CuL}(\text{OH})+\text{H})=-9.168$
 $K(2\text{CuL}=\text{Cu}_2\text{L}_2(\text{OH})+\text{H})=-8.26$

Cu++ gl KNO3 25°C 0.20M M M 1989SHc (35683)2892
 $K(\text{CuL}+\text{gly})=3.64$
 $K(\text{CuL}+\text{gly-val})=3.45$
 $K(\text{CuL}+\text{ser})=4.07$
 $K(\text{CuL}+\text{gly-gly-gly})=3.18$

Also data for gly-leu, ala, val, thre, methionine and 2-aminobutyric acid.

Cu++ gl KNO3 25°C 0.20M M M 1988SKd (35684)2893
 $K(\text{Cu}(\text{dien})+\text{A})=2.35$
 $K(\text{Cu}(\text{dien})+\text{B})=2.88$
 $K(\text{Cu}(\text{dien})+\text{C})=2.51$
 $K(\text{Cu}(\text{dien})+\text{D})=3.53$

A: glycine ethyl ester; B: alanine ethyl ester; C: serine ethyl ester;
D: histidine methyl ester. $K(\text{Cu}(\text{dien})+\text{H}+\text{D})=9.20$

Cu++ gl diox/w 30°C 50% U T M K1=18.50 1987PCb (35685)2894
 $K(\text{CuA}+\text{L})=13.09$
 $K(\text{CuB}+\text{L})=12.91$
 $K(\text{Cu}(\text{bpy})+\text{L})=12.30$
 $K(\text{Cu}(\text{phen})+\text{L})=12.33$

$K(\text{Cu}(\text{dipyridylamine})+\text{L})=12.12$; $K(\text{Cu}(\text{2-(2'-pyridyl)imidazoline})+\text{L})=10.76$
A=5-nitrophenanthroline, B=2-(2'-pyridyl)benzimidazole

Cu++ ISE KNO3 20°C 0.10M U K1=16.1 B2=21.20 1984HKa (35686)2895

Cu++ gl KCl 25°C 0.50M C M K1=16.55 B2=21.15 1982GSd (35687)2896
 $K(\text{CuL}+\text{HL})=2.94$
 $*K(\text{CuL})=-9.49$

Cu++	gl	KN03	25°C	0.10M	C	M			1981WNb (35688)2897
							K(CuL+OH)=4.67		
Cu++	oth	KN03	25°C	0.10M	U	H			1977FZa (35689)2898
							DH(K1)=-76.1 kJ mol ⁻¹ ; DS=50.1 J K ⁻¹ mol ⁻¹		
Cu++	sp	oth/un	25°C	0.10M	U		K1=18.8		1977TSa (35690)2899
Cu++	oth	KN03	25°C	0.20M	U				1975WTb (35691)2900
							K(CuL(OH)+H)=9.1		
							method: volume change, I=0.15-0.2(KN03)		
Cu++	vlt	alc/w	25°C	40%	U		B2=21.46		1974MIa (35692)2901
Cu++	gl	KN03	25°C	0.10M	U		K1=16.7	B2=21.50	1973AHc (35693)2902
Cu++	gl	KN03	25°C	0.10M	U	M			1973YBa (35694)2903
							K(CuL+py)=1.77		
							K(CuL+A)=3.49		
							K(CuL+H)=3.24		
							K(CuL+OH)=4.75		
							K(CuL+B)=1.72. A=n-butylamine, HB=p-phenol sulphonic acid		
Cu++	gl	KN03	25°C	0.13M	U		K1=15.91		1971AAa (35695)2904
							K(CuL+OH)=5.17		
Cu++	gl	KN03	25°C	0.11M	U	M			1971AAa (35696)2905
							K(CuL+Gly)=4.42		
							K(CuL+Val)=3.79		
							K(CuL+Sar)=3.98		
							K(CuL+B-Ala)=3.65		
							K(CuL+A)=2.52, A=glycine methyl ester		
Cu++	gl	NaCl04	25°C	0.10M	U	M	K1=16.02	B2=20.88	1971HBb (35697)2906
							K(Cu+L=CuLOH+H)=7.02		
							B(CuHL2)=29.08		
							B(CuLA)=18.92		
							HA=triglycine		
Cu++	gl	KCl	25°C	0.50M	U		K2=4.92		1971KZa (35698)2907
							K(Cu+HL=CuL+H)=5.88		
							K(CuL(OH)+H=CuL)=9.39		
							K(CuL+HL)=3.59		
Cu++	gl	R4N.X	25°C	1.00M	U	M	K1=16.17		1969ESb (35699)2908
							B(CuL(NH3))=19.32		
							Medium: NH4NO3		

Cu++	cal	KCl	25°C	0.10M	U	H	1961CPa (35700)2909
DG(K1)=-87.92 kJ mol ⁻¹ , DH=-75.3, DS=50; DG(K2)=-29.68, DH=-34.1, DS=-15							

Cu++	oth	KCl	20°C	0.10M	U		K1=7.60 B2=12.90 1960H0b (35701)2910

Cu++	gl	oth/un	20°C	0.0	U	T H	1959MBa (35702)2911
DG(K1)=-91.12 kJ mol ⁻¹ , DH=-79.1, DS=33; DG(K2)=-27.17, DH=-23, DS=4							
Data also at 30, 40 C							

Cu++	gl	oth/un	20°C	->0	U	T	K1=15.85 1953MCa (35703)2912
K1=15.40(30 C), 14.98(40 C)							

Cu++	gl	oth/un	35°C	1.0M	U	H	1952JHa (35704)2913
DH(K1)=-83.6 kJ mol ⁻¹							

Cu++	gl	KCl	30°C	1.0M	U	T	K1=16.11 1952JHa (35705)2914
40 C: K1=15.6							

Cu++	gl	KCl	20°C	0.10M	U		K1=16.0 B2=21.3 1950PSa (35706)2915
K(Cu(OH)L+H)=9.03							

Cu++	vlt	KN03	20°C	0.10M	U		B2=20.85 1949LAd (35707)2916

C4H14N2O4P2		H2L		CAS 37107-07-6		(4287)	
Ethylenebis(iminomethylenephosphonous acid)							

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

Cu++	gl	KN03	25°C	0.10M	U		K1=10.72 1971MMh (35824)2917

C4H14N2O6P2		H2L		EDDP0		CAS 1733-49-9 (2435)	
1,2-Diaminoethane-N,N'-bis(methylenephosphonic) acid; (H2O3P.CH2.NH.CH2)2							

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

Cu++	gl	KCl	25°C	0.10M	C		K1=15.6 1997MLa (35844)2918
							B(Cu2L)=18.5
							B(CuHL)=22.2
							B(CuH2L)=26.4
							B(CuH2L2)=38.6
B(CuH4L2)=49.6							

Cu++	gl	KN03	25°C	0.10M	U		K1=14.25 1976TIa (35845)2919
							K(Cu+H2L)=6.05

Cu++	gl	KN03	25°C	0.10M	U	M	K1=14.25 1975ITa (35846)2920

Cu++	gl	oth/un	25°C	0.10M	U		K1=18.0 1972AUa (35847)2921
							K(Cu+HL)=11.8
							K(Cu+H2L)=7.7


```

-----
Cu++      cal non-aq 25°C 100% U      M      1972KKd (35910)2930
                                         K(CuL2+bpy)=6.07
Medium: CHCl3
-----
Cu++      dis NaCl04 25°C 0.10M U      I      K1=2.54      B2=3.84      1971SIa (35911)2931
K1(I=1)=2.24, K1(I=3)=2.68, B2(I=1)=3.20, B2(I=3)=4.16
-----
Cu++      gl  diox/w 30°C 75% U      K1=4.3      1953UFe (35912)2932
-----
Cu++      gl  oth/un 20°C 0.10M U      K1=2.70      1951UIa (35913)2933
*****
C5H205      H2L      Croconic acid      CAS 488-86-8 (1643)
4,5-Dihydroxycyclopent-4-ene-1,2,3-trione;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      EMF non-aq 25°C 100% U      1992CSa (35935)2934
                                         K(Cu(bpy)+L)=8.028
                                         K(Cu(terp)+L)=6.976
                                         K(Cu(terp)+H+L)=9.88
                                         K(Cu(terp)+HL)=1.42
Medium: DMSO, 0.1 M Bu4NCl04. terp=terpyridine. K(CuA+L)=6.39, A=bis(2-pyr-
idylcarbonyl)amide anion.
*****
C5H3N204Br      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
-----
Cu++      gl  R4N.X 25°C 0.10M U      K1=5.58      1964TTa (35956)2935
Medium: Me4NBr
*****
C5H3N204I      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
-----
Cu++      gl  R4N.X 25°C 0.10M U      K1=6.59      1964TTa (35963)2936
Medium: Me4NBr
*****
C5H3N4Cl      L      6-Chloropurine      CAS 87-42-3 (3032)
6-Chloropurine;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      gl  KNO3 45°C 0.10M U      K1=6.8      1971TKc (35982)2937
-----
Cu++      gl  diox/w 25°C 50% U      K1=6.13      B2=11.79      1959CFb (35983)2938
*****

```

C5H4NBr L CAS 1120-87-2 (8780)
4-Bromopyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.50M	C		K1=2.03	2002KSb (35996)	2939

C5H4NCl L CAS 626-60-8 (322)
3-Chloropyridine; C5H4N.Cl

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.50M	C		K1=1.60	2002KSb (36008)	2940
Cu++	sp	non-aq	?	100%	U			1995NAa (36009)	2941

K(Cu2A4+2L=2CuA2L)=0.14
K(Cu2A4+4L=2CuA2L2)=27

Medium: ethanoic acid(HA)

Cu++	sp	NaCl04	25°C	1.00M	C	M		1994PMb (36010)	2942
------	----	--------	------	-------	---	---	--	-----------------	------

K(CuA+L)=1.22

A=Tris(2-aminoethyl)amine (tren)

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
Cu++	gl	NaCl	37°C	0.15M	C		K1=8.67 B2=14.20 B(CuH-1L2)=5.49 B(Cu3H-2L2)=11.60	2002HTc (36088)	2943

Cu++	gl	NaNO3	25°C	0.10M	U		K1=8.39 K(Cu+L2)=12.3	1987MPa (36089)	2944
------	----	-------	------	-------	---	--	--------------------------	-----------------	------

L2=orotic acid dimer

Cu++	sp	none	25°C	0.0	U	I		1986LLa (36090)	2945
------	----	------	------	-----	---	---	--	-----------------	------

K(Cu+HL)=4.85

Cu++	gl	NaCl	20°C	0.15M	U		K1=9.36 K(Cu+HL)=4.16	1979DZe (36091)	2946
------	----	------	------	-------	---	--	--------------------------	-----------------	------

Cu++	sp	oth/un	25°C	?	U			1979GRa (36092)	2947
------	----	--------	------	---	---	--	--	-----------------	------

K(Cu+HL)=4.89

C5H4N2O4 H2L Isoorotic acid CAS 23945-44-0 (3616)
1,2,3,6-Tetrahydro-2,6-dioxo-5-pyrimidinecarboxylic acid;

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

Cu++ gl KCl 25°C 0.10M U 1961TDb (36123)2948

K(Cu+HL)=4.12

C5H4N4 HL Purine CAS 120-73-0 (2149)

Purine;

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

Cu++ gl NaClO4 25°C 0.05M U B2=11.50 1969RWa (36140)2949

K(Cu+HL)=1.9

Cu++ gl diox/w 25°C 50% U K1=6.90 B2=13.34 1959CFb (36141)2950

C5H4N4O HL Hypoxanthine CAS 68-94-0 (1174)

6-Hydroxypurine;

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

Cu++ gl NaNO3 37°C 0.15M U K1=6.00 1990CIa (36159)2951

Cu++ gl KNO3 25°C 0.10M U T H 1983KSa (36160)2952

K(Cu+HL)=3.52

Cu++ gl KNO3 25°C 0.10M M M K1=5.80 1981GDa (36161)2953

K(Cu(nta)+L)=3.30

Cu++ gl KNO3 25°C 0.10M U M K1=7.08 1980GCa (36162)2954

K(Cu(phen)+L)=7.00

Cu++ gl NaClO4 25°C 0.10M U TIH K1=6.22 B2=11.97 1979RPb (36163)2955

Medium: KClO4. Data for 35 and 45 C and for I=0.05 and 0.20 M at 45 C.

DH(K1)=-111 kJ mol⁻¹, DS(K1)=-252 J K⁻¹ mol⁻¹; DH(K2)=-191.5, DS(K2)=-532

Cu++ gl KNO3 45°C 0.10M U K1=7.35 1971TKc (36164)2956

Cu++ gl NaClO4 25°C 0.05M U K1=6.54 1969RWa (36165)2957

Cu++ sp NaClO4 25°C 0.05M U 1969RWa (36166)2958

K(Cu+HL)=1.85

Cu++ gl diox/w 25°C 50% U K1=7.55 1959CFb (36167)2959

Cu++ gl oth/un 20°C 0.01M U K1=6.2 1953ALa (36168)2960

C5H4N4O2 HL Xanthine CAS 69-89-6 (4305)

Xanthine;

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

Cu++ gl KNO3 25°C 0.10M M M 1981GDa (36199)2961

$$K(\text{Cu}(\text{nta})+\text{L})=3.27$$

Cu++	gl	KNO3	25°C	0.10M	U	M		1980GCa (36200)2962
								K(Cu(phen)+L)=5.01

Cu++	gl	NaClO4	25°C	0.05M	U		K1=5.07	1969RWa (36201)2963
------	----	--------	------	-------	---	--	---------	---------------------

C5H4N4S		HL	6-Purinethiol	CAS	6112-76-1	(115)		
---------	--	----	---------------	-----	-----------	-------	--	--

6-Mercaptopurine, 6-Thiohypoxanthine;

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

Cu++	oth	oth/un	RT	dil	C	M		1998ZZa (36216)2964
								K(Cu(phen)2+L)=4.35
								K(Cu(bpy)2+L)=4.79

Method: fluorescence and spectroelectrochemical.

Medium: phosphate buffer, pH 7.0.

Cu++	gl	KNO3	45°C	0.10M	U		K1=7.0	1971TKc (36217)2965
------	----	------	------	-------	---	--	--------	---------------------

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

Cu++	gl	KNO3	25°C	0.10M	U	T	M	K1=3.19	1988NSc (36236)2966
								B(CuAL)=9.47	

HA is pyridine-2-carboxylic acid. At 40 C, K1=3.08, B(CuAL)=9.37.

Cu++	cal	NaNO3	25°C	1.00M	U	H		1979ARa (36237)2967
------	-----	-------	------	-------	---	---	--	---------------------

DH(CuL)=1.42 kJ mol⁻¹; DS=44.8.

Cu++	gl	diox/w	25°C	50%	U		K1=2.91	1968EGb (36238)2968
------	----	--------	------	-----	---	--	---------	---------------------

Medium: 50% dioxan, 0.1 M NaClO4

Cu++	gl	oth/un	25°C	->0	U		K1=1.90	1960LUb (36239)2969
------	----	--------	------	-----	---	--	---------	---------------------

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

Cu++	gl	NaClO4	25°C	0.10M	U	T	H	K1=5.676	B2=10.74	1977SMd (36269)2970
------	----	--------	------	-------	---	---	---	----------	----------	---------------------

DH=-79.0 kJ mol⁻¹, DS=-60 J K⁻¹ mol⁻¹

C5H4O3		HL	2-Furoic acid	CAS	88-14-2	(2492)		
--------	--	----	---------------	-----	---------	--------	--	--

Furan-2-carboxylic acid; C4H3O.CO0H

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

Cu++ cal NaNO3 25°C 1.0M C 1987ARb (36279)2971
 DH(K1)=4.60 kJ mol-1, DS(K1)=33.8 J K-1 mol-1.

Cu++ cal NaNO3 25°C 1.0M C 1982ARb (36280)2972
 DH(K1)=4.60 kJ mol-1, DS(K1)=33.8 J K-1 mol-1.

Cu++ gl NaNO3 25°C 0.10M U K1=2.39 1982MPc (36281)2973

Cu++ EMF NaClO4 25°C 1.00M U K1=1.38 1972LPb (36282)2974

Cu++ gl diox/w 25°C 50% U K1=2.79 1968EGb (36283)2975
 Medium: 50% dioxan, 0.1 M NaClO4

Cu++ gl oth/un 25°C ->0 U K1=1.32 1960LUb (36284)2976

C5H5N L Pyridine CAS 110-86-1 (31)
 Pyridine, Azine;

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

Cu++ gl NaNO3 25°C 0.50M C K1=2.60 2002KSb (36363)2977

Cu++ sp non-aq 25°C 100% C H K1=5.46 B2= 9.87 2000KKb (36364)2978
 3.20
 2.62

Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-44.4 kJ mol-1, DS=-44 J K-1 mol-1;
 DH(K2)=-38.7, DS=-45; DH(K3)=-39.7, DS=-72; DH(K4)=-30.1, DS=-51.

Cu++ sp non-aq 25°C 100% C K1=6.4 B2=11.90 1998ISa (36365)2979
 B3=15.8
 B4=18.5

Medium: acetonitrile.

Cu++ gl NaClO4 25°C 0.10M M I K1=2.50 B2=4.36 1997FAa (36366)2980
 Also for 0.9 mol parts EtOH in H2O K1=4.68; B2=6.57; For 0.45 mol parts of
 acetone in H2O K1=3.42; B2=5.17. See also Data for other org.solvent contents

Cu++ sp non-aq ? 100% U 1995NAa (36367)2981
 K(Cu2A4+2L=2CuA2L)=0.68
 K(Cu2A4+4L=2CuA2L2)=270

Medium: ethanoic acid(HA)

Cu++ sp NaClO4 25°C 1.00M C M 1994PMb (36368)2982
 K(CuA+L)=2.09

A=Tris(2-aminoethyl)amine (tren)

Cu++ sp NaClO4 25°C 0.20M U 1991CCb (36369)2983
 K(CuA+L=CuAL)=-0.128

A is rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradecane

Cu++ gl NaClO4 25°C 0.20M U M K1=2.56 B2= 4.45 1991UBa (36370)2984
K(Cu(ida)L)=12.15
K(CuAL)=9.24

H2A is pyridine-2,6-dicarboxylic acid.

Cu++ gl oth/un 25°C 1.00M C M K1=2.551 B2=4.474 1990NPa (36371)2985
B3=5.687
B4=6.592

Medium: 1.0 M H3SO3Na. Ternary complexes with azide

Cu++ vlt NaClO4 RT 0.50M C K1=2.00 B2= 3.70 1989CDd (36372)2986
B3=6.39

Method: polarography. Temperature not stated.

Cu++ gl KNO3 25°C 0.20M M M K1=2.80 1988SKd (36373)2987
K(Cu(dien)+L)=2.65

K(H+L)=5.24. For 4-benzylpyridine, K1=2.39, K(Cu(dien)+L)=2.11,
K(H+L)=4.97

Cu++ vlt R4N.X 25°C 0.10M U M 1987WRa (36374)2988
K(CuA+L)=3.0
K(CuAL+L)=0.37

A=2,3,9,10-tetramethyl-1,4,8,11-tetraazacyclotetradeca-1,3,8,10-tetraene
Medium=tetrabutylammonium hexafluorophosphate. Method=cyclic voltammetry

Cu++ sp non-aq 20°C 100% U 1986MBc (36375)2989
K(CuA+L)=-0.30

In CHCl3. CuA=cofacial binuclear bis(beta-diketone) copper(II) complex

Cu++ gl R4N.X 25°C 1.0M C M K1=2.450 B2= 4.35 1985CTb (36376)2990
K(CuAL2)=14.89
K(CuA+2L)=5.08
K(CuL2+A)=10.54

Medium: 1.0 M NH4NO3. H2A is salicylic acid.

Cu++ sp non-aq 21°C 100% U M 1983LKa (36377)2991
K(CuA+L)=-1.28

Medium: C2H4Cl2. A=tetraphenylporphin

Cu++ gl NaNO3 25°C 0.10M C K1=2.49 1981BKb (36378)2992

Cu++ gl oth/un 25°C ? U K1=2.5 B2=4.40 1980CDa (36379)2993
K3=1.3

Cu++ gl NaClO4 25°C 0.15M U T M K1=2.53 B2= 4.38 1978ABe (36380)2994
B3=5.66
B(CuH-1L)=-3.90

At 37 C, K1=2.5, B2=4.31, B3=5.5, B(CuH-1L)=-3.9.

Data for ternary complexes with ethanoic acid.

Cu++ cal non-aq 30°C 100% U H 1976AGb (36381)2995

$K(\text{CuA2+L})=0.04$
 $K(\text{CuB2+L})=-0.045$
 $K(\text{CuC2+L})=0.30$
 $K(\text{CuD2+L})=0.20$

In Benzene. A= N-methyl-2-hydroxybenzalimine. B= N-butyl-; C= N-para-fluoro-phenyl-; D= N-para-methoxyphenyl-. Also N-phenyl-, and other benzaldimines.

Cu++ cal non-aq 25°C 100% U HM 1976MDb (36382)2996

$K(\text{Cu(hfac)2+L})=4.5$

Medium: CH₂Cl₂. Metal: Bis(hexafluoroacetylacetonato)copper(II), (Cu(hfac)₂).
DH=-44 kJ mol⁻¹.

Cu++ cal non-aq 30°C 100% U H 1974DGa (36383)2997

$K(\text{CuA2+2L})=1.50$

In benzene. HA=thiobenzoyl-1,1,1-trifluoroacetone; DH=-30 kJ mol⁻¹; DS=-70

Cu++ cal non-aq 30°C 100% U H 1974G0b (36384)2998

$K(\text{CuA2+L})=0.67$
 $K(\text{CuB2+L})=0.98$
 $K(\text{CuC2+L})=2.85$
 $K(\text{CuD2+L})=2.74$

In benzene. HA=pentane-2,4-dione; HB=1-phenylbutane-3,4-dione; HC=1,1,1-trifluoropentane-2,4-dione; HD=1,1,1-trifluoro-4-phenylbutane-2,4-dione. Also DH

Cu++ cal non-aq 30°C 100% U H 1974G0b (36385)2999

$K(\text{CuA2+L})=3.04$
 $K(\text{CuB2+L}) > 5$
 $K(\text{CuB2L+L})=2.89$

In benzene. HA=1,1,1-trifluoro-4-(2-thienyl)butane-2,4-dione; HB=1,1,1,5,5,5-hexafluoropentane-2,4-dione

Cu++ oth non-aq 7°C 100% U TI M 1974HTa (36386)3000

$K(\text{CuA2+L})=-0.22$

Medium: benzene. A=Diethyldithiocarbamate. At -3 C (toluene): K=-0.036;
17 C (CHCl₃): K=-0.52

Cu++ gl KNO₃ 25°C 0.10M U K1=2.58 1974ILa (36387)3001

Cu++ vlt NaNO₃ 20°C 1.00M U K1=2.43 B2=4.40 1973CPa (36388)3002
B3=5.95
B4=6.60

Cu++ oth NaNO₃ 20°C 1.0M C K1=1.88 B2= 4.52 1973RAC (36389)3003
B3=6.00
B4=6.46

Method: recalculation of literature data.

Cu++ sp non-aq ? 100% U I M 1971MAi (36390)3004

$K(\text{CuA2+L})=2.35$

$K(\text{CuA2+2L})=3.44$

Medium: benzene. HA=dibenzoylmethane. In CHCl_3 , $K(\text{CuA2+L})=3.15$,
 $K(\text{CuA2+L2})=3.52$. In $\text{HCON}(\text{CH}_3)_2$, $K(\text{CuA2+L})=1.92$, $K(\text{CuA2+2L})=1.85$

Cu++ gl NaClO4 25°C 0.50M U I K1=2.56 B2=4.45 1970FRa (36391)3005
 Medium: 0.5 LiClO4. In 54.3% MeOH, 0.5 M LiClO4: K1=2.46, K2=1.92.
 0.5 LiClO4, 48.1% dioxan: K1=2.45, K2=1.83

Cu++ gl NaClO4 25°C 1.00M U K1=2.86 B2=4.78 1969MBb (36392)3006

Cu++ gl NaClO4 25°C 1.00M U M 1969MBb (36393)3007
 $B(\text{CuLA})=4.26$

H2A=malonic acid

Cu++ cal oth/un 25°C 0.0 U HM K1=2.50 B2=4.30 1968IEa (36394)3008
 $B3=5.16$
 $B4=6.04$

DH(K1)=-16.8 kJ mol⁻¹, DS=-8.4 J K⁻¹ mol⁻¹; DH(B2)=-37.2, DS=-42; DH(B3)=-67.3
 DS=-130; DH(B4)=-92.0, DS=-171. Ternary complexes with EDTA

Cu++ gl KNO3 25°C 0.61M U K1=2.60 B2=4.54 1967SBd (36395)3009
 $B3=5.8$
 $B4=6.7$

Cu++ dis R4N.X 20°C 1.0M U M K1=2.4 B2=4.3 1966FLc (36396)3010
 $B3=5.68$
 $B4=6.58$
 $B(\text{Cu}(\text{NH}_3)\text{L})=6.6$
 $B(\text{Cu}(\text{NH}_3)\text{L}_2)=8.1$

Medium: NH_4NO_3 . $B(\text{Cu}(\text{NH}_3)\text{L}_3)=9.09$; $B(\text{Cu}(\text{NH}_3)_2\text{L})=9.86$, $B(\text{Cu}(\text{NH}_3)_2\text{L}_2)=10.83$;
 $B(\text{Cu}(\text{NH}_3)_3\text{L})=11.62$. Other constants also given

Cu++ gl oth/un 25°C 0.50M U K1=2.408 B2=4.29 1964BJa (36397)3011
 $K3=1.137$
 $K4=0.605$

Medium: $\text{C}_5\text{H}_5\text{NHN}_3$

Cu++ gl NaClO4 25°C 0.10M U K1=2.54 1964KSb (36398)3012

Cu++ gl NaClO4 25°C 1.0M U H K1=2.46 B2=4.41 1963ABa (36399)3013
 $K3=1.27$
 $K4=0.84$

By calorimetry: DHi(average)=-12.5 kJ mol⁻¹, DS(K1)=4 J K⁻¹ mol⁻¹, DS(K2)=-4,
 DS(K3)=-17, DS(K4)=-25

Cu++ gl NaClO4 20°C 0.15M U K1=2.65 B2=4.86 1962HPa (36400)3014
 $B3=6.90$
 $B4=8.45$

Cu++ sp oth/un ? ? U K1=2.36 B2=4.32 1961ANa (36401)3015

K1=2.39

K3=1.35

In MeOH: K1=2.92; in EtOH: K1=3.37; in acetone: K1=4.42

Cu++ dis non-aq 20°C 100% U I M 1959GRb (36402)3016

K(CuA2+L)=0.37

Medium: CHCl3. HA=acetylacetone. In cyclohexane K=1.72

Cu++ gl oth/un 25°C 1.0M U K1=2.59 B2=4.33 1957LHa (36403)3017

B3=5.93

B4=6.54

B5=7.00

B(Cu2L4(OH)2)=24.71

Cu++ gl oth/un 25°C 0.50M U T K1=2.41 B2=4.29 1950BJa (36404)3018

K3=1.14

K4=0.60

Medium: 0.5 M C5H5N.HNO3

Cu++ gl KNO3 25°C 0.50M U K1=2.52 B2=4.38 1948BVa (36405)3019

K3=1.31

K4=0.85

Cu++ oth oth/un ? ? U 1948MMa (36406)3020

B6=10.2

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

Cu++ gl KNO3 25°C 0.50M U K1=2.03 B2=3.63 1978LRa (36701)3021

B3=4.83

B4=5.62

B5=6.00

C5H5NO L CAS 695-59-7 (397)

Pyridine N-oxide ; C5H4N(O)

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

Cu++ sp diox/w 25°C 50% U K1=-0.69 1963SBa (36717)3022

Medium: 50% dioxan, 0.5 M NaClO4

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

Cu++ gl KCl 25°C 0.20M C K1=6.84 B2=12.46 1998FKa (36738)3023

$$K(\text{Cu} + \text{HL} = \text{CuL} + \text{H}) = 1.05$$

Cu++ gl KCl 25°C 0.10M U K1=7.29 B2=13.06 1993LMc (36739)3024

Cu++ gl oth/un 20°C 0.01M U K1=7.0 B2=13.2 1956ARb (36740)3025

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

Cu++ sp alc/w 25°C 100% U IH K1=4.41 1985BCd (36765)3026

Medium: EtOH. In DMSO, $K_1=2.50$; in dimethylacetamide, $K_1=2.56$

Cu++ g1 KNO3 37°C 0.15M C M K1=7.66 B2=13.77 1980SHb (36766)3027

$$K(\text{CuH}-1\text{L}2+\text{H})=9.5$$

Cu++ gl diox/w 25°C 50% U K1=9.25 B2=16.70 1970GDa (36767)3028

Medium: 50% dioxan, 0.1 M NaClO₄

Cu++ gl NaCl04 25°C 0.10M U K1=7.85 B2=14.66 1970GDa (36768)3029

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

Cu++ gl diox/w 20°C 60% U I K1=8.86 B2=16.90 1979GBd (36801)3030

$$B(\text{CuHL2}) = 25.85$$

C5H5N02 HL CAS 35940-93-3 (3618)

3-Furancarboxaldehyde oxime (3-Furfuraldoxime); $C_4H_3O.CH(:N.OH)$

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

Cu++ gl diox/w 15°C 75% U I K1=10.39 B2=20.57 1963ASa (36807)3031

Medium: 75% dioxan, 0-0.1 M NaClO₄. At 25 C, I=0: K₁=10.28, K₂=9.88; 35 C:

9.90, K2=9.45. $\Delta H(K1) = -41.2 \text{ kJ mol}^{-1}$, $\Delta S = 56.8 \text{ J K}^{-1} \text{ mol}^{-1}$; $\Delta H(K2) = -58.4$, $\Delta S = -8$

C5H5N02 HL CAS 1121-23-9 (2315)

3-Hydroxypyridin-4(1H)-one;

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

Cu++ gl KNO3 37°C 0.15M C K1=9.49 B2=17.13 1980SHb (36822)3032

$$K(\text{CuH}-1\text{L}2+\text{H})=10.4$$
$$K(\text{CuL}+\text{H})=1.7$$

C5H5NO2 HL CAS 634-97-9 (2877)

Pyrrole-2-carboxylic acid; C₄H₄N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	cal	NaNO3	25°C	1.00M	U	H		1981ARb (36830)	3033
DH(K1)=5.3 kJ mol ⁻¹ ; DS(K1)=52.0.									
Cu++	gl	none	25°C	0.00	U		K1=2.58 B2=3.90	1972LUc (36831)	3034
Cu++	gl	diox/w	25°C	50%	U		K1=3.37	1968EGb (36832)	3035
Medium: 50% dioxan, 0.1 M NaClO4									

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
Cu++	gl	NaNO3	25°C	0.50M	C		K1=0.98	2002KSb (36849)	3036
Cu++	sp	alc/w	25°C	100%	U	I	K1=2.54 B2=5.13	1985BCc (36850)	3037
Medium: MeOH									
Cu++	sp	non-aq	25°C	100%	U	IH	K1=2.61 B2=5.28	1985BCc (36851)	3038
Medium: PrOH									

C5H5N3O4		H2L					CAS 59048-06-5	(6096)	
N-Methylvioluric acid;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.50M	C		K1=4.40 B2= 7.48	1984HNb (36869)	3039
Cu++	gl	NaNO3	25°C	0.50M	C	M		1980VNa (36870)	3040
							K(Cu+HL)=4.40		
							K(CuHL+HL)=3.08		
K(Cu+HL+A)=7.97, A=dimethyl-1,3 violurate									
Cu++	gl	NaNO3	25°C	0.50M	C		K1=4.40 B2=7.48	1978VNa (36871)	3041

C5H5N5		L				Adenine	CAS 73-24-5	(237)	
6-Aminopurine; H2N.C5H3N4									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	M	M		2002SKa (36910)	3042
							K(CuA+L)=7.27		
A is picolylamine									
Cu++	gl	NaNO3	25°C	0.10M	C	M	K1=9.14	2000SSd (36911)	3043
							K(Cu+HL)=3.01		
							K(Cu+HL+OH)=13.40		

$$K(Cu+L+OH)=15.63$$

Cu++ oth oth/un RT dil C M 1998ZZa (36912)3044

$$K(\text{Cu}(\text{bpy})_2 + \text{L}) = 4.70$$

Medium: phosphate buffer, pH 7.0.

$$K1=7.63$$
$$K(\text{Cu}+\text{HL})=2.68$$
$$K(\text{Cu(atp)}+\text{HL})=2.88$$
$$K1=8.65$$
$$*K(\text{CuAL}) = -7.05$$
$$*K(\text{Cu}(\text{OH})\text{AL}) = -8.25$$
$$K1=6.73$$
$$B(\text{Cu}(\text{nta})\text{L})=17.31$$

K1=2.84

$$K(\text{CuL}+\text{Gly})=8.09$$
$$B(\text{CuHL})=11.7$$
$$B(Cu_2L_2) = 17.9$$
$$B(Cu_2H-1L_2)=13.3$$
$$B(Cu2H-2L4)=10.4$$
$$K(\text{Cu}+\text{HL})=2.84$$
$$K(\text{Cu}+2\text{HL})=3.31$$

K1=7.4

1983SKa (36920)3052

 $K1=6.77$
$$K(\text{Cu}(\text{nta})+\text{L})=3.77$$

K1=6.77

$$K(\text{Cu}(\text{phen})+\text{L})=6.24$$

Cu++	gl	NaCl	37°C	0.15M	C				1974Mwa (36923)3055
K(Cu+HL)=2.68									
Cu++	gl	KNO3	45°C	0.10M	U		K1=8.53		1971TKc (36924)3056
Cu++	gl	NaClO4	25°C	0.05M	U		K1=6.99	B2=13.32	1969Rwa (36925)3057
K(Cu+HL)=2.7									
Cu++	kin	oth/un	25°C	0.01M	U		K1=7.4		1968KYb (36926)3058
Cu++	gl	oth/un	20°C	0.10M	U		B2=14.22		1960ASb (36927)3059
Cu++	gl	diox/w	25°C	50%	U		K1=8.94		1959CFb (36928)3060

C5H5N5O		L					CAS 700-02-7		(3033)
Adenine N-Oxide;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Cu++	gl	oth/un	25°C	?	U		K1=7.10		1960PEb (36999)3061

C5H5N5S		H3L					CAS 3647-48-1		(4307)
2-Amino-6-mercaptopurine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Cu++	gl	KNO3	45°C	0.10M	U				1973TKa (37006)3062
K(Cu+H2L)=3.4									

C5H5N5S		H3L					CAS 154-42-7		(4308)
2-Mercapto-6-aminopurine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference ExptNo
Cu++	gl	KNO3	45°C	0.10M	U				1973TKa (37014)3063
K(Cu+H2L)=3.6									

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
Cu++	dis	NaClO4	25°C	4.0M	C				1986SIc (37030)3064
K(Cu+2L=CuL2(org))=11.9									
Method: distribution from 4.0 M NaClO4 into MIBK.									
Cu++	gl	NaClO4	25°C	0.50M	C				1983H0b (37031)3065
K(Cu+HL=CuL+H)=-0.334									
Cu++	dis	NaClO4	25°C	1.0M	C	M	K1=4.80	B2= 9.14	1977SMe (37032)3066

Method: distribution from 1.0 M NaClO₄ into CCl₄/HL/tri-octylphosphine oxide (A). $K(\text{Cu}+2\text{HL}(\text{org})=\text{CuL}_2(\text{org})+2\text{H})=-1.26$.

Medium: CHCl₃

Cu++	sp	non-aq	25°C	100%	U	M	1969KLc	(37035)3069
						K(CuL2+A)=1.79		
						K(CuL2+B)=0.79		
						K(CuL2+C)=1.10		
						K(CuL2+D)=1.01		

Medium: benzene. A=tri-n-butylamine, B=tri-n-hexylamine, C=tri-n-octylamine, D=tri-n-laurylamine. Data for other complexes also available

Cu++ gl diox/w 20°C 50% U K1=6.3 B2=12.2 1945Cwa (37037)3071

C5H6N2 L CAS 1072-63-5 (8709)
1-Vinylimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	g1	KN03	25°C	0.50M	U			K1=3.60 B3=9.30 B4=11.35 B5=11.90	B2= 6.70	1989LKc (37082)3072

C5H6N2 L 2-Aminopyridine CAS 504-29-0 (1478)
2-Aminoazine, 2-Pyridylamine; C5H4N.NH2

Cu++ g1 NaNO3 25°C 0.50M C K1=1.80 2002KSb (37102)3073

Cu++ sp non-aq 25°C 100% C 2001LGa (37103)3074

K(Cu2A4L2+2L=2CuA2L2)=4.28

K(Cu2B4L2+2L=2CuB2L2)=4.18

K(Cu2C4L2+2L=2CuC2L2)=4.08

K(Cu2D4L2+2L=2CuD2L2)=3.85

Medium: acetonitrile. HA is hexanoic acid, HB is heptanoic acid, HC is octanoic acid, HD is nonanoic acid. Also K values by calorimetry.

Cu++ sp alc/w 25°C 100% U I K1=2.63 B2=5.67 1985BCc (37104)3075
Medium: MeOH

Cu++ sp non-aq 25°C 100% U IH K1=2.60 B2=5.43 1985BCc (37105)3076
Medium: N,N-dimethylacetamide

Cu++ gl KNO3 25°C 0.10M U TIH K1=5.43 B2=9.61 1976BBc (37106)3077

Cu++ gl KNO3 25°C 0.61M U K1=1.71 B2=3.25 1967SBd (37107)3078

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

Cu++ gl NaNO3 20°C 1.00M C K1=2.91 B2=5.16 1978CPa (37144)3079
B3=7.04

Cu++ gl KNO3 25°C 0.50M U K1=2.48 B2=4.47 1978LRa (37145)3080
B3=5.97
B4=7.01
B5=7.57

Cu++ gl NaNO3 20°C 1.00M U K1=2.91 B2=5.18 1973CPa (37146)3081
B3=7.06

Cu++ oth NaNO3 20°C 1.0M C K1=3.12 B2= 4.89 1973Rac (37147)3082
B3=7.05

Method: recalculation of literature data.

Cu++ gl KNO3 25°C 0.61M U K1=2.80 B2=4.84 1967SBd (37148)3083
B3=6.48
B4=7.5

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

Cu++ vlt KNO3 30°C 0.10M C M K1=6.50 B2=11.96 1991STb (37181)3084

Method: polarography. Medium pH 9.5.
Ternary complexes with oxalate and succinate.

Cu++ vlt KNO3 30°C 0.10M C K1=6.50 B2=11.96 1991STb (37182)3085
Method: polarography, medium pH 9.5.

Cu++ sp alc/w 25°C 100% U IH K1=6.13 B2=12.12 1985BCd (37183)3086
Medium: EtOH. In DMSO, B2=7.08; in dimethylacetamide, K1=12.18

Cu++ gl KNO3 20°C 0.10M U TIH K1=6.23 B2=10.61 1982KMe (37184)3087
Data for 0.05-0.20 M KNO3. At I=0, K1=6.85, K2=5.08.
Data for 30 and 40 C. DH(B2)=-59.7 kJ mol⁻¹, DS(B2)=-1.5 J K⁻¹ mol⁻¹.

C5H6N2O HL (3035)
2-Aminopyridine 1-oxide; C5H4N(-O)(NH2)

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

Cu++	gl	NaClO4	25°C	0.10M	U			1963SBb (37196)	3088
							K(CuL+H)=4.48		

Cu++	gl	NaClO4	25°C	0.10M	U	I	K1=13.11 B2=24.79	1963SBd (37197)	3089
At I=0.2 M K(Cu+HL)=0.85. I=0.5 M K(Cu+HL)=0.81									

C5H6N2O5 L CAS 2361-27-5 (2642)
2-Thiophenecarboxylic acid hydrazide; C4H3S.CO.NH.NH2

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

Cu++	sp	NaClO4	25°C	0.10M	U		K1=3.87 B2=7.40	1981BPc (37207)	3090
							K(Cu+H-1L)=10.66		

C5H6N2O2 HL Thymine CAS 65-71-4 (413)
2,4-Dihydroxy-5-methylpyrimidine; C4HN2(CH3)(OH)2

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

Cu++	gl	NaNO3	25°C	0.10M	M	M	K1=5.77	2002SKa (37246)	3091
							K(CuA+L)=6.54		

A is picolylamine

Cu++	gl	NaNO3	37°C	0.10M	U	M	K1=4.31	1994MGd (37247)	3092
							B(CuAL)=8.78		
							*K(CuAL)=-6.52		
							*K(Cu(OH)AL)=-8.84		

HA is 6-aminopenicillanic acid.

Cu++	gl	KNO3	35°C	0.10M	U	M	K1=6.61	1989SRc (37248)	3093
							K(Cu(thiamine)+L)=6.21		

Cu++	gl	NaNO3	25°C	0.10M	U	T		1987MPa (37249)	3094
							B(Cu2L2)=14.59		
							B(Cu2L4)=25.69		
							K(Cu+L2)=8.8		
							K(Cu+L2+H)=16.08		

L2=thymine dimer

Cu++	gl	KNO3	25°C	0.10M	U	T HM	K1=6.72	1983KSa (37250)	3095
Ternary complexes with bpy, phen and 5-sulfosalicylic acid									

Cu++	gl	KNO3	35°C	0.10M	U		K1=6.61 B2=12.46	1982TSa (37251)	3096
------	----	------	------	-------	---	--	------------------	-----------------	------

Cu++ gl KNO3 45°C 0.10M U K1=5.80 1974KKa (37252)3097

C5H6N2O2 HL CAS 3326-71-4 (2607)
2-Furanecarboxylic acid hydrazide; C4H3O.CONH.NH2

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

Cu++ gl diox/w RT 50% C I K1=3.338 B2= 5.80 1993BKe (37293)3098
Medium: 50% v/v dioxane/H2O. Data for 10-60% v/v dioxane/H2O and DMF/H2O.
Temperature not stated.

Cu++ gl KNO3 25°C 0.10M U M K1=4.35 B2=8.63 1990NAa (37294)3099
K(Cu(Oxine)+L)=4.56

Cu++ sp NaClO4 25°C 0.10M U K1=4.01 B2=7.60 1981BPc (37295)3100
K(Cu+H-1L)=9.57

C5H6N2O2 HL CAS 645-65-8 (3620)
4(or 5)-Imidazolylethanoic acid; C3H3N2.CH2.COOH

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

Cu++ gl NaClO4 25°C 0.10M C K1=6.86 B2=12.43 1998TSa (37311)3101
B(Cu2H-2L2)=1.90
B(Cu2H-4L2)=-20.11

Cu++ gl KCl 40°C 0.25M U T H K1=6.72 B2=12.12 1965AZa (37312)3102
K1=7.02(0 C),7.34(15 C),7.00(25 C); K2=5.71(0 C),5.81(15 C),5.69(25 C)
At 15 C: DH(K1)=-14.2 kJ mol-1; DH(K2)=-9.6

C5H6N2O2S HL CAS 15112-09-1 (8298)
N-Methyl-2-thiobarbituric acid;

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

Cu++ gl NaClO4 31°C 0.10M U T H K1=7.74 B2=13.66 1984SJa (37321)3103
Also data for 18 and 42 C. DH(K1)=-110 kJ mol-1, DS(K1)=-214 J K-1 mol-1
DH(K2)=-59.5, DS(K2)=-83.1.

C5H6N6 HL Diaminopurine CAS 1904-98-9 (4290)
2,6-Diaminopurine;

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

Cu++ gl KNO3 45°C 0.10M U K1=9.0 1973TKa (37331)3104

Cu++ gl NaClO4 25°C 0.05M U B2=13.68 1969RWa (37332)3105

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
Cu++	vlt	NaClO4	30°C	1.5M	C		K1=2.18 B3=3.34 B4=4.34	1981PBb (37348)	3106

Method: polarography.

Cu++	gl	NaClO4	30°C	0.10M	U		K1=5.02	1980NSd (37349)	3107
------	----	--------	------	-------	---	--	---------	-----------------	------

Cu++	gl	oth/un	25°C	0.10M	U		K1=3.4	1960YYa (37350)	3108
------	----	--------	------	-------	---	--	--------	-----------------	------

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

Cu++	cal	NaClO4	25°C	0.10M	C	H		1977ACa (37380)	3109
------	-----	--------	------	-------	---	---	--	-----------------	------

DH1=3.8 kJ mol⁻¹, DS1=127 J K⁻¹ mol⁻¹, DH(Cu+L+bpy)=-46.0

Cu++	gl	NaClO4	25°C	0.10M	C	M		1975BMd (37381)	3110
------	----	--------	------	-------	---	---	--	-----------------	------

B(Cu(bpy)L)=15.52

Cu++	gl	NaClO4	25°C	0.10M	U		K1=5.99 B2=9.61	1972RVh (37382)	3111
------	----	--------	------	-------	---	--	--------------------	-----------------	------

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

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

Cu++	gl	KNO3	25°C	0.10M	U	M	K1=2.87 B2=3.85	1980GMb (37398)	3112
------	----	------	------	-------	---	---	--------------------	-----------------	------

B(CuHL)=6.76
B(CuLA)=12.08
B(CuHLA)=16.36

A=histamine

Cu++	gl	NaClO4	35°C	0.10M	U	M	K1=2.96	1980MPb (37399)	3113
------	----	--------	------	-------	---	---	---------	-----------------	------

B(CuLA)=7.16
B(CuLB)=8.41

H2A=succinic acid, H2B=malonic acid

Cu++	gl	NaClO4	30°C	0.10M	U		K1=3.36	1980NSd (37400)	3114
------	----	--------	------	-------	---	--	---------	-----------------	------

Cu++	gl	NaClO4	30°C	0.10M	U	M		1979SJa (37401)	3115
------	----	--------	------	-------	---	---	--	-----------------	------

K(Cu+HL=CuL+H)=2.96

Additional data for dioxan-mixed NaClO4 solns & ternary complexes

Cu++	sp	NaClO4	30°C	0.10M	U		K1=2.96	1968RSk (37402)	3116
------	----	--------	------	-------	---	--	---------	-----------------	------

K(2Cu+L)=3.82

Cu++ gl oth/un 25°C 0.10M U K1=2.8 1960YYa (37403)3117

C5H6O4S3 H2L (7055)
Trithiocarboglycolic acid; H00C.CH2.S.CS.S.CH2.C00H

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

Cu++ gl alc/w 25°C 20% U T H K1=7.41 B2=12.72 1994BSc (37463)3118

C5H6O5 H2L Ketoglutaric CAS 328-50-7 (1146)
2-Ketoglutaric acid; H00C.CH2.CH2.CO.C00H

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

Cu++ gl KCl 25°C 0.10M U K1=5.0 B2=7.90 1975SDa (37469)3119

C5H6O5 H2L CAS 642-93-3 (5476)
3-Methyl-2-oxobutanedioic acid H00C.CO.CH(CH3).C00H

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

Cu++ gl KCl 25°C 0.10M C K1=5.83 1982KMc (37477)3120
B(Cu2L2)=15.5
K(Cu+H-1L)=9.6
K(2Cu+2H-1L=Cu2H-2L2)=22.4

C5H6O7 H3L (8107)
Carboxymethyltartronic acid;

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

Cu++ gl KCl 25°C 0.10M C K1=5.20 1984MMg (37482)3121
K(CuL+H)=3.01

C5H7NO6 L (5454)
1,1-Bis(trifluoromethyl)-3-aminopropan-1-ol; (CF3)2C(OH).CH2.CH2.NH2

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

Cu++ gl oth/un 25°C 0.10M U B2=10.09 1977Cwa (37497)3122

C5H7NO2 HL Glutarimide CAS 1121-89-7 (4312)
Piperidine-2,6-dione;

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

Cu++ gl alc/w 45°C 50% C K1=7.96 1996MMc (37502)3123
Medium: 50% v/v MeOH/H2O, 0.10 M KNO3.

Cu++ sp alc/w ? 100% U 1971MSc (37503)3124

B4=13.93

Medium: MeOH

C5H7NO3 HL 5-Oxoproline CAS 149-87-1 (2110)

2-Pyrrolidone-5-carboxylic acid, Pyroglutamic acid;

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

Cu++ gl NaClO4 25°C 0.10M U K1=1.57 1991YNa (37516)3125

B(CuH-1L)=-4.43

C5H7NO4S2 H3L CAS 36061-59-3 (1953)

Bis(carboxymethyl)dithiocarbamic acid; (HOOC.CH2)2.N.CSSH

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

Cu++ sp KNO3 20°C 0.10M U M B2=20.9 1974HGa (37545)3126

B(CuL(bpy))=20.0

B(CuL(phen))=20.9

Cu++ sp oth/un 20°C 0.10M U M 1972GHb (37546)3127

B(CuLA)=22.23

H2A=8-hydroxy-quinolone-5-sulfonic acid

Cu++ EMF KNO3 22°C 1.00M U K1=10.87 B2=20.92 1970TPb (37547)3128

Cu++ sp oth/un ? ? U M K1=10.8 B2=20.9 1969KHc (37548)3129

B(CuL(NH3)2)=17.4

Cu++ dis KNO3 20°C 0.10M U B2=21.5 1967HMc (37549)3130

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

Cu++ gl KNO3 25°C 0.50M U K1=0.60 B2=1.13 1982GKa (37565)3131

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

Cu++ gl diox/w 25°C 50% U K1=7.60 B2=13.87 1979PDa (37593)3132

C5H8NO3PS H2L CAS 68662-99-7 (7988)

Amino-2-thienylmethylphosphonic acid;

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

Amino-2-furanylmethylphosphonic acid;

Cu++ gl KNO3 25°C 0.10M C K1=8.33 B2=14.45 2001LCa (37605)3134
B(CuH-1L2)=3.62
B(CuH-2L2)=-7.29

1,2-Dimethylimidazole; $C_3H_2N_2(CH_3)_2$

Cu++ gl KNO3 25°C 0.50M U K1=3.72 B2=6.92 1981LKa (37609)3135
B3=9.55
B4=10.78

Cu++	g1	KN03	25°C	0.50M	U	K1=3.70	B2=6.80	1980L	Ba (37610)	3136
						B3=9.18				
						B4=10.80				
						B5=11.72				

1-Ethylimidazole; C₃H₃N₂.C₂H₅

Cu++	g1	KN03	25°C	0.50M	U	K1=4.40	B2=7.99	1979Lba	(37635)3137
						B3=10.98			
						B4=13.22			
						B5=14.20			

2,4-Dimethylimidazole; $C_3H_2N_2(CH_3)_2$

Cu++ g1 NaNO3 25°C 0.15M U K1=3.8 1957NGa (37641)3138

2-Ethylimidazole; C₃H₃N₂.C₂H₅

Cu++ gl NaClO4 30°C 0.20M U K1=5.28 1999PGa (37649)3139

Cu++ gl NaNO3 30°C 0.20M U K1=5.32 1999PPa (37650)3140

Cu++ gl KNO3 25°C 0.10M C M 1989IOd (37651)3141

K(CuA+L)=3.84

K(CuAL+L)=4.06

HA=ethanoic acid. For 2-isopropylimidazole, K(CuA+L)=3.55,

K(CuAL+L)=3.90.

Cu++ gl KNO3 25°C 0.50M U K1=3.60 B2=6.65 1982LKb (37652)3142

B3=8.90

B4=10.30

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

Cu++ gl KNO3 25°C 0.50M U K1=1.91 B2=3.54 1978LNa (37669)3143

B3=4.90

B4=5.98

C5H8N2O L (1429)

5-Amino-3,4-dimethylisoxazole; C3NO(CH3)2(NH2)

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

Cu++ sp KNO3 25°C 0.50M U K1=1.33 B2=1.78 1983Gwa (37681)3144

C5H8N2O2 HL CAS 6635-29-6 (4315)

Cyclopentan-1,2-dione dioxime

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

Cu++ gl NaNO3 20°C 0.20M U K1=8.87 B2=20.15 1970Mva (37691)3145

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

Cu++ gl KCl 25°C 0.20M C K1=5.63 1991JKa (37694)3146

B(CuH-1L)=3.23

B(CuH-1L2)=6.29

B(CuH-2L)=-6.04

B(Cu2H-3L2)=-0.82

C5H8N2O4 H2L (7335)

N-Pyruvoylglycine oxime; CH3.C(:NOH).CONH.CH2.COOH

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

Cu++ gl alc/w 30°C 40% M M K1=9.50 B2=17.62 1988ARb (37797)3153
Medium: 40% EtOH/H2O, 0.05 M KNO3

Cu++ dis NaClO4 25°C 4.0M C 1986SIc (37798)3154
K(Cu+2L=CuL2(org))=14.8

Method: distribution from 4.0 M NaClO4 into MIBK.

Cu++ dis NaClO4 25°C 0.10M C K1=8.3 1986SNa (37799)3155

Method: rate of distribution of volatile ligand between aqueous phase and inert gas phase. K(H+L)=9.17 assumed.

Cu++ oth NaClO4 25°C 0.10M C I R K1=8.0 B2=14.8 1982SLc (37800)3156
IUPAC evaluation. I=0 corr.: K1=8.25, B2=15.05. I=1 M: K1=8.1, B2=14.7
Kd(into benzene)=0.85(I=0.1), 1.07(I=1.0)

Cu++ gl diox/w 30°C 85% U I K1=10.06 B2=19.27 1981KCa (37801)3157
In 75% v/v dioxan: K1=9.98, B2=18.94; 50%: 9.10, B2=17.85; 40%: 8.78, 17.04;
30%: 8.59, B2=16.44

Cu++ gl mixed 30°C 85% U I K1=9.72 B2=18.86 1981KCa (37802)3158
In 75% v/v isopropanol: K1=9.45, B2=18.23; 50%: 8.97, B2=17.13 in 50%;
40%: 8.79, 16.68; 30%: 8.60, 16.31

Cu++ gl mixed 30°C 85% U I K1=10.24 B2=19.93 1981KCa (37803)3159
In 75% v/v acetone: K1=9.91, B2=18.87; 50%: 9.12, 17.28; 40%: 8.84, 16.64;
30%: 8.46, 15.97

Cu++ gl alc/w 30°C 85% U I K1=9.37 B2=18.22 1981KCa (37804)3160
In 75% v/v EtOH: K1=9.32, B2=17.89; 50%: 8.93, 16.90; 40%: 8.61, 16.90;
30%: 8.39, 16.01

Cu++ gl diox/w 24°C 50% U K1=9.5 1979ACa (37805)3161

Cu++ cal oth/un 25°C 0.05M U K1=7.91 B2=14.18 1979PKc (37806)3162
DH(K1)=-18.9 kJ/mol
DH(B2)=-44.4

Cu++ kin KNO3 25°C 0.10M C 1978MYa (37807)3163
K(Cu(bpy)+L)=8.77

Method: temperature jump.

Cu++ gl diox/w 30°C 75% U K1=10.16 B2=19.46 1977AHb (37808)3164

Cu++ gl NaClO4 25°C 1.00M C K1=8.42 B2=15.47 1977BMf (37809)3165

Cu++ sp diox/w 20°C 100% U M 1977EKa (37810)3166
K(CuL2+piperidine)=0.60
K(CuL2+isoBuNH2)=0.23
K(CuL2+pyridine)=0

Cu++ dis NaClO4 25°C 1.0M C M K1=7.81 B2=14.22 1977SMe (37811)3167
K(CuL2(org)+A(org))=1.28

Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylphosphine
oxide (A). K(Cu+2HL(org)=CuL2(org)+2H)=-3.73

Cu++ sp non-aq 20°C 100% U M 1976KTa (37812)3168
K(CuL2+isoquinoline)=1.82
K(CuL2+pyridine)=1.88
K(CuL2+3-picoline)=1.91
K(CuL2+4-picoline)=2.10

Medium: CH2Cl2

Cu++ sp non-aq 20°C 100% U M 1976KTa (37813)3169
K(CuL2+(2,4-lutidine))=0.91
K(CuL2+(3,5-lutidine))=2.06
K(CuL2+(2-cyanopyridine))=1.75
K(CuL2+(4-cyanopyridine))=1.60

Medium: CH2Cl2

Cu++ sp non-aq 20°C 100% U M 1976KTa (37814)3170
K(CuL2+(2-aminopyridine))=1.06
K(CuL2+(3-aminopyridine))=2.03
K(CuL2+(4-aminopyridine))=2.29

Medium: CH2Cl2

Cu++ gl diox/w 30°C 50% U M K1=9.50 B2=17.40 1975DBd (37815)3171
K(Cu(bpy)+L)=9.47
K(Cu(NTA)+L)=5.28
K(Cu(IDA)+L)=6.18

Cu++ sp non-aq 20°C 100% U M 1975KTa (37816)3172
K(CuL2+N,N-DiMeAcetamide)=0.89
K(CuL2+N,N-diEtAcetamide)=0.91
K(CuL2+N-n-PrAcetamide)=0.88
K(CuL2+N-iso-PrAcetamide)=0.95

Medium: CH2Cl2. K(CuL2+N,N-DiBu-acetamide)=0.86, K(CuL2+N-acetylmorpholine)=
0.95; K(CuL2+N-acetylpiperidine)=0.93; K(CuL2+N,N-dicyclohexylacetamide)=1.16

Cu++ sp non-aq 25°C 100% U M 1972GKb (37817)3173
K(CuL2+A)=0.55
K(CuL2+B)=0.96

Medium: benzene. A=quinoline, B=isoquinoline

Cu++ cal non-aq 25°C 100% U M 1972KKd (37818)3174
K(CuL2+bpy)=1.02

Medium: CHCl3

Cu++ sp non-aq 25°C 100% U H 1972YSa (37819)3175

Medium: pyridine. T=0-60C. ML2(low temp.species)=ML2(high temp. species)
DH=16.7 kJ mol⁻¹ DS=54 J K⁻¹ mol⁻¹

$K(\text{CuL2}+\text{A})=1.00$
 $K(\text{CuL2}+\text{B})=0.39$
 $K(\text{CuL2}+\text{py})=0.83$

Medium: HL. K1(I=1.0)=8.29, B2(I=1.0)=14.56

0.02 N(CH₃)₄Cl, 75% dioxan, 15-40 °C: K₁(25 °C)=12.06, K₂(25 °C)=10.43

$$K1(I=1)=7.81, K1(I=3)=8.41, B2(I=1)=14.22, B2(I=3)=15.42$$
$$K1(0\%)=7.80, \quad K1(100\%)=14.4, \quad B2(0\%)=14.51, \quad B2(100\%)=29.0$$

By calorimetry: $\Delta H(K1) = -20.1 \text{ kJ mol}^{-1}$, $\Delta S = 87.8 \text{ J K}^{-1} \text{ mol}^{-1}$; $\Delta H(B2) = -42.2$, $\Delta S = 142$

Medium: 20% acetone. $K=0.82(30\%), 0.93(40\%), 0.74(50\%), 0.44(70\%), 0.27(90\%)$

In CCl₄: K=2.02; in 3-Mebutanol:1.97; in benzene:1.15; in CHCl₃:0.94

Medium: 50% MeOH. By calorimetry: $\Delta H(K1) = -3.8(?)$ kJ mol⁻¹, $\Delta S = 54$ J K⁻¹ mol⁻¹, $\Delta H(K2) = -7.9(?)$, $\Delta S = 20.9(?)$

Medium: Na ethanoate

Cu++ gl diox/w 30°C 50% U K1=9.55 B2=17.68 1954BRc (37833)3189

DH(K1)=-20 kJ mol⁻¹, DS=92; DH(K2)=-28, DS=38. 0 C: K1=8.38, K2=7.06;

30 C: K1=8.22, K2=6.73; 40 C: K1=7.96, K2=6.4

Cu++ gl diox/w 30°C 75% U K1=11.85 B2=22.59 1953UFb (37835)3191
Alternative values: K1=12.46, K2=10.74

C5H8O2S HL CAS 19418-11-2 (408)
Tetrahydrothiophene-2-carboxylic acid; C4H7S.CO0H

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

Cu++ gl diox/w 25°C 50% U K1=4.31 1968EGb (38156)3192
Medium: 50% dioxan, 0.1 M NaClO4

C5H8O3 HL Laevulinic acid CAS 123-76-2 (941)
4-Ketopentanoic acid; CH3.CO.CH2.CH2.CO0H

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

Cu++ gl KCl 25°C 0.10M U K1=1.70 B2=2.55 1983LTa (38163)3193

Cu++ vlt NaClO4 30°C 1.50M C K1=1.60 B2= 3.21 1979PZa (38164)3194
Method: polarography. Medium pH 6.6.

Cu++ vlt NaClO4 30°C 1.00M U K1=1.60 B2=3.08 1970GPc (38165)3195

C5H8O3 HL CAS 16874-33-2 (2493)
Tetrahydrofuran-2-carboxylic acid; C4H7O.CO0H

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

Cu++ gl diox/w 25°C 50% U K1=3.47 1982MPc (38175)3196

Cu++ gl diox/w 25°C 50% U M K1=3.72 1968EGb (38176)3197
Medium: 50% dioxan, 0.1 M NaClO4

Cu++ gl diox/w 25°C 50% U M 1968GPd (38177)3198
K(Cu(bpy)2+L)=3.52

Medium: 50% dioxan, 0.1 M NaClO4

C5H8O4 H2L CAS 595-46-0 (1144)
Dimethylmalonic acid; H0OC.C(CH3)2.CO0H

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

Cu++ gl NaClO4 30°C 0.10M M I K1=4.82 B2= 8.30 1985ARc (38192)3199
Also data for 20-80% dioxane/H2O. For 40% dioxane/H2O, K1=6.59, K2=5.60.

Cu++ gl NaClO4 30°C 0.10M U K1=4.82 B2= 8.66 1983SHd (38193)3200

Cu++ vlt NaClO4 30°C 2.00M U K1=5.6 B2=6.7 1975MJa (38194)3201

B3=7.2

Cu++	gl	NaClO4	25°C	0.10M	U	K1=4.57	B2=7.09	19680Va (38195)	3202	
						K(Cu+HL)=0.70				

Cu++	gl	NaClO4	25°C	0.10M	U	K1=4.57	B2=7.09	19680Va (38196)	3203
------	----	--------	------	-------	---	---------	---------	-----------------	------

Cu++	con	oth/un	25°C	.001M	U	K1=4.84		1931IRb (38197)	3204
------	-----	--------	------	-------	---	---------	--	-----------------	------

Cu++	ISE	oth/un	?	0.10M	U	B2=6.4		1930RIa (38198)	3205
------	-----	--------	---	-------	---	--------	--	-----------------	------

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
Cu++	gl	NaClO4	30°C	0.10M	C		K1=4.95 B2= 7.77	1985SHb (38223)	3206

Cu++	gl	NaClO4	25°C	0.10M	U		K1=4.95 B2=7.77	19680Va (38224)	3207
						K(Cu+HL)=1.74			

Cu++	con	oth/un	25°C	.001M	U	K1=5.15		1931IRa (38225)	3208
------	-----	--------	------	-------	---	---------	--	-----------------	------

Cu++	ISE	oth/un	?	0.10M	U	B2=8		1930RIa (38226)	3209
------	-----	--------	---	-------	---	------	--	-----------------	------

C5H8O4 H2L CAS 498-21-5 (2234)

Methylsuccinic acid; HOOC.CH2.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.50M	C		K1=2.52	1986LEe (38255)	3210
						B(CuHL)=6.63			

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
Cu++	ISE	NaClO4	25°C	0.10M	C		K1=2.37	1989COb (38290)	3211

Cu++	gl	oth/un	25°C	0.10M	U		K1=2.4	1960YYa (38291)	3212
------	----	--------	------	-------	---	--	--------	-----------------	------

Cu++	gl	KCl	25°C	1.0M	U	I	K1=2.40	1955GLd (38292)	3213
In 2 M NaClO4						K1=2.84			

Cu++	gl	oth/un	25°C	->0	U		K1=3.16	1951PJb (38293)	3214
------	----	--------	------	-----	---	--	---------	-----------------	------

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
Cu++	gl	KNO3	25°C	0.10M	C		K1=3.75 K(Cu+HL)=1.5	1975LPa (38374)	3215

Cu++	gl	oth/un	20°C	0.10M	U		K1=3.52 K(Cu+HL)=2.40	1961C0a (38375)	3216
------	----	--------	------	-------	---	--	--------------------------	-----------------	------

C5H8O4S2	H2L	CAS 2068-24-8	(908)
----------	-----	---------------	-------

2,2'-(Methylenebis(thio))bis-ethanoic acid; HOOCCCH2SCH2SCH2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	oth/un	20°C	0.10M	U		K1=3.17 K(Cu+HL)=1.98	19610Ca (38389)	3217

C5H8O5	H2L	(+)-Citramalic	CAS 6236-09-5	(2692)
--------	-----	----------------	---------------	--------

S-2-Hydroxy-2-methylsuccinic acid; HOOCC(CH3)(OH)CH2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.50M	C		K1=3.78 B(CuHL)=6.94 B(CuH-1L)=-0.81	1986LEc (38405)	3218

C5H8O7	H2L	CAS 40120-71-6	(3022)
--------	-----	----------------	--------

2,3,4-Trihydroxypentanedioic acid, Trihydroxyglutaric acid; HOOCC(OH)(OH)C(OH)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	vlt	oth/un	25°C	0.80M	U		K(Cu+L=CuH-2)+2H)=10.5 ?	1967C0a (38414)	3219

Medium: Na2SO4

Cu++	vlt	oth/un	25°C	0.50M	U		K1=2.81 B2=4.10	1963CHd (38415)	3220
------	-----	--------	------	-------	---	--	-----------------	-----------------	------

Medium: K2SO4

Cu++	sp	none	?	0.0	U		K1=8.74	1957FGa (38416)	3221
------	----	------	---	-----	---	--	---------	-----------------	------

C5H9NO2	H2L	CAS 69651-97-4	(1164)
---------	-----	----------------	--------

2-Amino-(2-allyl)ethanoic acid; H2NCH(CH2CH=CH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C		K1=8.00 B2=14.63	1975IPb (38462)	3222

C5H9NO2	HL	CAS 14401-90-2	(6205)
---------	----	----------------	--------

Pent-2,4-dione monoxime; CH3COCH2C(=NOH)CH3

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

Cu++ gl alc/w 25°C 75% U K1=7.3 B2=11.80 1986BTa (38468)3223
Medium: 75% MeOH/H2O, 0.1 M NaClO4

C5H9NO2 HL Proline CAS 147-85-3 (44)
Pyrrolidine-2-carboxylic acid; C4H8N.COOH

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

Cu++ gl NaNO3 25°C 0.10M C M K1=8.78 B2=15.83 2004SSa (38532)3224
B(CuH-1L)=1.32
B(CuH-2L)=-10.35
B(CuLA)=14.75
B(CuHLA)=19.20

B(CuH-1LA)=7.49. HA is 6-aminopenicillanic acid.

Cu++ gl NaNO3 25°C 0.10M M M K1=8.82 B2=16.15 2002SKa (38533)3225
B(CuAL)=18.04

A is picolylamine

Cu++ gl KCl 25°C 0.10M C M K1=8.84 B2=16.36 2001DFd (38534)3226
B(CuLA)=18.80
B(CuH-1LA)=9.12

HA=1-Amino-N-hydroxy-1H-indole-3-propanamide.

Data also for D-Proline.

Cu++ gl KNO3 25°C 0.10M C K1=8.60 1999BIa (38535)3227

Cu++ gl KNO3 25°C 0.10M U M K1=8.80 B2=16.30 1998SYa (38536)3228
B(CuAL)=12.42
B(CuH-1AL)=6.31

HA is 2,3,4-trihydroxybutanoic acid (threonic acid).

Cu++ gl KNO3 25°C 0.10M U M 1997LZa (38537)3229
B(CuLA)=23.10
B(CuHLA)=28.33

HA=6-(2'-Hydroxybenzyl)-1,4,8,11-tetraazacyclotetradecane-5,7-dione. Data
for 3'-methoxy-, 3',5'-dibromo- and 5'-bromo-2'-hydroxybenzyl- derivatives

Cu++ gl alc/w 30°C 40% C M K1=8.90 1997RRd (38538)3230
K(CuA+L)=7.93

Medium: 40% v/v EtOH/H2O, 0.10 M KNO3.

HA is 2-(phenylhydrazono)butanoic acid

Cu++ gl NaNO3 25°C 0.10M M M K1=8.74 B2=16.08 1997SKc (38539)3231
B(CuAL)=13.91
B(CuH-1AL)=6.04

HA is glycyl-DL-leucine.

Cu++ gl KNO3 25°C 0.10M M M K1=9.66 B2=16.55 1995SHc (38540)3232

K(Cu(ada)+L)=6.15									
ada: N-(acetamido)-iminodiethanoic acid. K(H+L)=10.49.									

Cu++	gl	alc/w	30°C	40%	M	K1=9.22	B2=16.55	1993RRd	(38541)3233
Medium: 40% v/v EtOH/H2O, 0.10 M KNO3.									

Cu++	gl	KNO3	35°C	0.20M	C	M	K1=8.60	1992YKa	(38542)3234
							B(Cu(edda)L)=19.13		
							K(Cu(edda)+L)=4.63		

Cu++	gl	KCl	25°C	0.10M	U		K1=8.89	B2=16.09	1991NSa (38543)3235

Cu++	gl	NaClO4	25°C	0.10M	C	M	K1=8.80	B2=16.30	1988CLa (38544)3236
							B(CuL(acetylglutamate))=11.28		

Cu++	cal	NaClO4	25°C	0.10M	C	H		1988LGa	(38545)3237
DH(K1)=-27.9 kJ mol-1, DH(K2)=-28.5 kJ mol-1. For HA=N-acetylglutamate,									
DH(B(CuAL))=-26.2 kJ mol-1, DS(B(CuAL))=128 J K-1 mol-1.									

Cu++	nmr	none	27°C	0.0	U		K1=8.70	B2=16.34	1987GFb (38546)3238
							B3=16.54		
							K(Cu+HL)=0.85		
							K(CuL+HL)=1.39		
							K(CuL2+HL)=-0.05		

Cu++	gl	alc/w	30°C	50%	U	T	M	K1=10.11	1987RSb (38547)3239
							K(CuL+A)=9.25		
							K(CuL+C)=8.08		
Medium: 50% EtOH/H2O, 0.1 M KNO3. HA=N-methylantranilic acid, HC=N-phenyl-antranilic acid									

Cu++	gl	NaClO4	25°C	0.10M	U	M		1986CLb	(38548)3240
							K(Cu(bpy)+L)=8.55		
							K(Cu(phen)+L)=8.48		

Cu++	gl	KNO3	30°C	0.10M	U	HM	K1=8.69	1986DRa	(38549)3241
							K(CuA+L)=8.01		
HA=picolinic acid N-oxide. DH(K1)=-18.4 kJ mol-1, DS=105.7 J K-1 mol-1									
DH(CuA+L)=-30.6, DS=52.3									

Cu++	gl	KNO3	30°C	0.10M	U	H	K1=8.69	1986DRb	(38550)3242
Data for 30-50 C. DH(K1)=-18.4 kJ mol-1, D(K1)=-105 J K-1 mol-1.									

Cu++	gl	alc/w	25°C	50%	U	T	HM	1985SRc	(38551)3243
							K(CuA+L)=5.07		
A=2-(N,N-diethylaminomethyl)benzimidazole. At 35 C: K=5.27; 45 C: K=5.46.									
DH=36 kJ mol-1, DS=216 J K-1 mol-1									

Cu++	gl	NaCl	25°C	0.25M	C		K1=8.781	B2=16.218	1984AOa (38552)3244

Cu++ gl KNO3 30°C 0.10M C T HM K1=8.87 B2=16.45 1983RKa (38553)3245
B(CuAL)=7.87

HA is thiazolidine-4-carboxylic acid. DH(K1)=-22.0 kJ mol⁻¹, DS(K1)=97
J K-1 mol⁻¹; DH(K2)=-31.2, DS(K2)=42; DH(CuAL)=-24.8, DS(CuAL)=69.

Cu++ sp NaCl 20°C 0.15M U M 1983Vda (38554)3246
K(CuA+L)=6.98

H2A=orotic acid (C5H4N2O4), 2,4-(1H,3H)-pyrimidinedione-6-carboxylic acid

Cu++ gl KNO3 25°C 0.10M M M K1=9.00 B2=16.69 1982LBa (38555)3247
Data for ternary complexes with polymer-grafted L-proline ligands.

Cu++ gl NaNO3 25°C .005M U K1=8.99 B2=16.29 1980JMa (38556)3248
B(CuH-1L)=1.60

Cu++ gl NaNO3 25°C 0.50M U K1=8.99 B2=16.29 1980MJa (38557)3249
B(CuH-1L)=1.60

Cu++ gl KNO3 25°C 0.10M U M K1=8.82 B2=16.32 1977BPa (38558)3250
B(CuL(His))=18.11

Cu++ gl KNO3 25°C 0.10M M K1=8.86 B2=16.45 1975FSc (38559)3251

Cu++ oth NaNO3 25°C 0.50M U M K1=8.76 B2=16.31 1973KPb (38560)3252
B(CuLA)=14.20

Method: polarimetry. H3A=citric acid

Cu++ cal KNO3 25°C 0.10M C H 1971BPi (38561)3253
DH(B1)=-59.5 kJ mol⁻¹, for rac-His: DH=-59.8

Cu++ gl KCl 20°C 0.10M U K1=8.83 1970GVa (38562)3254

Cu++ EMF oth/un ? ? U K1=7.81 B2=14.51 1970KKa (38563)3255

Cu++ gl KNO3 37°C 0.15M U K1=8.69 B2=16.03 1969CPc (38564)3256
K(Cu+HL)=0.98
K(CuL+HL)=1.10

Cu++ oth NaClO4 ? 0.50M U M K1=8.72 B2=16.35 1968PPa (38565)3257
B(CuL(Val))=16.86
B(CuL(D-Val))=17.00

Method: polarimetry

Cu++ gl KCl 20°C 0.10M U K1=8.92 B2=16.58 1966GIb (38566)3258

Cu++ vlt oth/un 25°C 0.06M U B2=16.63 1954Lda (38567)3259
Medium:0.06 KH2PO4

Cu++ gl oth/un 20°C 0.03M U B2=16.8 1950ALa (38568)3260

C5H9NO2S HL CAS 60175-95-3 (3632)
 L-1,4-Thiazine-3-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	20°C	0.10M	U			K1=6.66 B2=12.54	1968HLA (38660)	3261

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
Cu++	gl	NaNO3	25°C	0.10M	C	M		K1=7.64 B2=13.47	2004SSa (38687)	3262

B(CuH-1LA)=5.71. HA is 6-aminopenicillanic acid.

Cu++	gl	NaNO3	25°C	0.10M	M	M		K1=8.03 B2=14.56	2002SKa (38688)	3263
------	----	-------	------	-------	---	---	--	---------------------	-----------------	------

A is picolylamine

Cu++	gl	alc/w	30°C	40%	C	M		K1=8.49	1997RRd (38689)	3264
------	----	-------	------	-----	---	---	--	---------	-----------------	------

Medium: 40% v/v EtOH/H2O, 0.10 M KNO3.
 HA is 2-(phenylhydrazono)butanoic acid

Cu++	gl	NaNO3	25°C	0.10M	M	M		K1=8.35 B2=15.88	1997SKc (38690)	3265
------	----	-------	------	-------	---	---	--	---------------------	-----------------	------

HA is glycyl-DL-leucine.

Cu++	gl	alc/w	30°C	40%	M			K1=8.68 B2=15.68	1993RRd (38691)	3266
------	----	-------	------	-----	---	--	--	---------------------	-----------------	------

Medium: 40% v/v EtOH/H2O, 0.10 M KNO3.

Cu++	gl	alc/w	30°C	50%	U T	M		K1=9.11	1987RSb (38692)	3267
------	----	-------	------	-----	-----	---	--	---------	-----------------	------

Medium: 50% EtOH/H2O, 0.1 M KNO3. HA=N-methylanthranilic acid, HC=N-phenyl-anthranilic acid

Cu++	gl	KNO3	30°C	0.10M	U	HM		K1=8.50	1986DRa (38693)	3268
------	----	------	------	-------	---	----	--	---------	-----------------	------

HA=picolinic acid N-oxide. DH(K1)=-18.4 kJ mol⁻¹, DS=105.7 J K⁻¹ mol⁻¹
 DH(CuA+L)=-30.6, DS=52.3

Cu++	gl	KNO3	30°C	0.10M	U	H		K1=8.50	1986DRb (38694)	3269
------	----	------	------	-------	---	---	--	---------	-----------------	------

Data for 30-50 C. DH(K1)=-19.6 kJ mol⁻¹, D(K1)=-52.4 J K⁻¹ mol⁻¹.

Cu++ gl KNO3 30°C 0.10M C T HM K1=8.46 B2=15.63 1983Rka (38695)3270
B(CuAL)=7.48

HA is thiazolidine-4-carboxylic acid. DH(K1)=-27.7 kJ mol⁻¹, DS(K1)=70
J K-1 mol⁻¹; DH(K2)=-34.4, DS(K2)=24; DH(CuAL)=-23.3, DS(CuAL)=66.

Cu++ EMF oth/un ? ? U K1=6.60 B2=12.00 1970KKa (38696)3271

Cu++ gl oth/un 25°C 0.15M U K1=8.33 B2=15.29 1958Lda (38697)3272

Cu++ vlt oth/un 25°C 0.15M U B2=15.4 1958Lda (38698)3273

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

Cu++ gl KNO3 20°C 0.10M U K1=7.6 1977SHa (38771)3274
K(CuH-1L+H)=6.2

Cu++ EMF KNO3 20°C 1.0M U K1=7.6 1976SHb (38772)3275
B(CuH-1L)=1.4

C5H9NO3S H2L CAS 6513-26-4 (2163)
N-3-Mercaptopropanoyl-glycine; HS.CH2.CH2.CO.NH.CH2.COOH

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

Cu++ gl KNO3 20°C 0.10M U K1=6.9 1977SHa (38790)3276
K(CuH-1L+H)=7.0

Cu++ gl KNO3 20°C 0.10M U K1=6.9 1976SHb (38791)3277
B(CuH-1L)=-0.1

C5H9NO3S2 H3L (2159)
2,3-Dimercaptopropanoyl-glycine; HS.CH2.CH(SH).CO.NH.CH2.COOH

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

Cu++ gl KNO3 20°C 0.10M U K1=7.0 1977SHa (38821)3278
K(CuH-1L+H)=5.3

C5H9NO4 H2L Glutamic acid CAS 56-86-0 (22)
2-Aminopentanedioic acid; H2N.CH(CH2.CH2.COOH)COOH

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

Cu++ gl KNO3 25°C 0.10M M K1=8.60 B2=15.19 2003DFa (38902)3279
B(CuHL)=13.27

Cu++ vlt oth/un RT 0.10M C 2003DZa (38903)3280

Method: polarography. Medium: 0.1 M phosphate, pH 7.

Data for 5.8-36.8% w/w urea/H₂O, 0.16 M KCl. At 36.8%, K₁=8.24, B₂=13.87, B(CuHL)=11.21, B(CuHL₂)=18.57.

K(CuL+C)=3.54, B(CuLC)=11.49, K(CuL+D)=3.47, B(CuLD)=11.42.
HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.

Data for 25-55C. H2A=dipicolinic acid. DH(K1)=-48.73 kJ mol⁻¹, DS(K1)=-2.26 J K⁻¹ mol⁻¹, DH(CuAL)=-63.93 kJ mol⁻¹, DS(CuAL)=-47.05 J K⁻¹ mol⁻¹.

A is imidazole, B is 2-Me-imidazole, C is 2-Et-imidazole.

B(CuLA)=17.15, B(CuHLA)=24.62, B(CuH-1LA)=7.75, B(CuHL2A)=29.46, B(CuH2L2A)=37.40, B(CuH4L2A)=46.93. HA=Pyridoxamine.

Medium: 20% w/w EtOH/H₂O, 0.1 M KNO₃.

Cu++ gl NaClO₄ 30°C 0.01M U T H K₁=8.55 1991PPa (38914)3291
K(Cu(imidazole)+L)=3.90
K(Cu(Me-imidazole)+L)=4.30

K(Cu(Et-imidazole)+L)=4.30									
40 C: K1=8.30, 50 C: K1=8.10. DH(K1)=-43.9 kJ mol ⁻¹ , DS=18.4 J K ⁻¹ mol ⁻¹									
Cu++	gl	NaClO4	37°C	0.15M	U		K1=8.52	B2=15.61	1990NTb (38915)3292
Cu++	gl	NaClO4	25°C	1.00M	C		K1=8.20	B2=14.93	1989BFb (38916)3293
							B(CuHL)=12.40		
							B(CuH2L)=14.65		
							B(CuHL2)=19.60		
							B(CuH2L2)=23.90		
Cu++	gl	KNO3	35°C	0.20M	C	M	K1=7.66	B2=13.88	1987PRa (38917)3294
Cu++	ISE	KNO3	25°C	0.10M	U	M	K1=7.87		1986DVa (38918)3295
							K(CuL+salicylate)=9.58		
Cu++	gl	NaCl	37°C	0.15M	U		K1=8.165	B2=14.599	1985CFb (38919)3296
							B(CuHL)=12.297		
							B(CuHL2)=19.27		
Cu++	gl	NaClO4	25°C	0.10M	U	M			1985NSd (38920)3297
							K(CuL+uracil)=5.39		
							K(CuL+thymine)=6.07		
Cu++	gl	KNO3	25°C	0.10M	C	M			1985Y0a (38921)3298
							B(Cu(bpy)L)=16.455		
							B(CuH(bpy)L)=20.812		
Cu++	gl	NaClO4	37°C	0.15M	C	M	K1=8.115	B2=14.504	1984BPd (38922)3299
							B(CuHL)=12.183		
							B(CuHL2)=18.682		
							B(CuH-1L)=1.079		
							B(CuL(His))=16.830		
Cu++	gl	KNO3	25°C	0.10M	C	M	K1=8.30	B2=15.03	1984DAb (38923)3300
							B(CuHL)=12.52		
							B(CuHL2)=19.6		
							B(Cu2L)=10.41		
							B(Cu2L2)=18.6		
B(CuLA)=17.40; B(CuHLA)=22.9. H2A=Noradrenaline									
Cu++	gl	KNO3	25°C	0.10M	M		K1=6.22	B2=11.32	1981GVa (38924)3301
Cu++	gl	NaClO4	30°C	0.10M	C	M	K1=7.85	B2=14.15	1980ASb (38925)3302
ternary complex with glycyl-sarcosine									
Cu++	gl	KNO3	25°C	0.10M	C		K1=8.62	B2=15.22	1980CKb (38926)3303
							B(CuHL)=12.62		
Cu++	gl	KNO3	30°C	1.00M	U	M	K1=8.20	B2=15.10	1980SGd (38927)3304

$$B(\text{CuL}(\text{oxalate})) = 12.80$$
$$B(\text{CuL(oxalate)}) = 12.8$$
$$K(\text{Cu}+\text{HL})=3.75$$

K1=8.30 B2=14.80
B(CuHL)=12.50

K1=8.545 B2=15.22 1977BPa (38931)3308
B(CuHL)=12.73
B(CuH2L2)=25.18
B(CuHL2)=20.57

1977BPa (38932)3309
B(CuL(His))=17.86
B(CuHL(His))=22.70
B(CuH2L(His))=26.68

K1=8.37 B2=14.53 1977BSb (38933)3310

1977NGa (38934)3311
 $B(\text{CuH-1LA})=5.07$
 $B(\text{CuH-1LB})=5.14$
 $B(\text{CuH-1LC})=4.67$
 $K(\text{CuH-1L2+A=CuH-1LA+L})=0.61$

HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine

K1=8.20 B2=14.29 1976GPd (38935)3312

1976Ngd (38936)3313
K(CuH-1A2+L=CuH-1AL+A)=5.07
K(CuH-1C2+L=CuH-1CL+C)=5.14
K(CuH-1D2+L=CuH-1DL+D)=4.67

HC is DL-alanyl-DL-alanine.

K1=8.39 B2=14.93 1975RIb (38937)3314
K(CuL+H)=4.10
B(CuHL)=12.49

K1=8.27 B2=14.74 1974NGa (38938)3315
K(CuL+H)=4.12
B(CuL(Gly))=15.10
B(CuL(Asp))=15.63

$DH(K1) = -20.9 \text{ kJ mol}^{-1}$, $DH(K2) = -28$, $DH(CuL+H) = -6.7$, $DS(K1) = 21 \text{ J K}^{-1} \text{ mol}^{-1}$,

Cu++ gl KCl 25°C 0.20M C HM K1=8.27 B2=14.74 1973NGa (38939)3316
K(CuL+H)=4.12
B(Cu(gl_y)L)=15.10

Cu++ cal KNO3 25°C 0.10M C H 1971BPi (38940)3317
DH(B1)=-47.3 kJ mol⁻¹, For D-His: DH=-47.7, for rac-His: DH=-47.9

Cu++ oth KNO3 20°C 0.10M U K1=10.1 B2=16.40 1964J0a (38942)3319
Method: paper electrophoresis

Cu++ gl oth/un 25°C 0.02M U K1=7.85 B2=14.40 1954REa (38944)3321
By polarography, I=0.1 M, B2=14.8. By spectrophotometry K2=4.24

3-Carboxymethylaminopropanoic acid; $\text{HOOC} \cdot \text{CH}_2 \cdot \text{NH} \cdot \text{CH}_2 \cdot \text{CH}_2 \cdot \text{COOH}$

3-Methyl-aspartic acid; $\text{H}_2\text{N}.\text{CH}(\text{CH}(\text{CH}_3)\text{COOH}).\text{COOH}$

$$B(\text{CuHL}) = 12.24$$

N-Methyliminodiethanoic acid; $\text{CH}_3\text{N}(\text{CH}_2\text{COOH})_2$

$$B(\text{CuH-1L})=2.43$$
$$K(\text{CuL}+\text{A})=5.76$$

H2A: salicylaldoxime

$$K(\text{CuL+Val})=5.46; K(\text{CuL+D-Val})=5.39$$

C5H9NO5 H2L (5289)
4-Hydroxy-2-aminopentane-1,5-dioic acid; HOOC.CH(NH2).CH2.CH(OH).COOH

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

Cu++ gl KN03 25°C 0.10M U K1=8.40 B2=14.97 1986Nka (39317)3339
B(CuHL)=12.10

Data for threo-diastereomer; for erithro-diastereomer K1=8.30; B2=14.40, B(CuHL)=12.12

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

Cu++ sp alc/w 25°C 75% U B2=10.92 1970PNa (39321)3340
Medium: 75% MeOH, 0.3 M NaClO4

Cu++ sp alc/w 20°C 89% U I K1=14.8 B2=28.40 1957JAa (39322)3341
Medium: 89% EtOH, 0.01 M NaOH
K1=10.9(0%), 12.6(51.7%), 13.9(75%); K2=9.9(0%), 12.1(51.7%), 12.9(75%)

Cu++ sp alc/w 25°C 75% U K1=13.9 B2=26.80 1956JAa (39323)3342
Medium: 75% EtOH, 0.01 M NaOH

Cu++ sp alc/w 25°C 75% U K1=13.9 B2=26.8 1956JAb (39324)3343
Medium: 75% EtOH

C5H9N3	L	Isohistamine	CAS 19225-96-8	(4294)
2-(2'-Aminoethyl)imidazole;				

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

Cu++ gl KNO3 25°C 0.10M C H K1=9.85 B2=17.01 1970EHa (39339)3344
By calorimetry DH(K1)=-48.1 kJ mol⁻¹, DH(K2)=-42.0

Cu++ gl oth/un 25°C 0.10M U K1=9.85 B2=16.98 1969EHc (39340)3345

C5H9N3 L Betazole CAS 51-45-6 (3601)
3-(2'-Aminoethyl)pyrazole;

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

Cu++ gl oth/un 25°C .02M U K1=7.5 1960HJa (39345)3346

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

Cu++	gl	NaCl04	37°C	0.15M	U	M		1999NNa (39403)3347	
------	----	--------	------	-------	---	---	--	---------------------	--

B(CuHAL)=21.48

B(CuAL)=16.26

K(CuA+L)=8.25

K(CuL+A)=7.02

K(CuHL+A)=7.97. HA is nicotinic acid.

Cu++	gl	NaCl	25°C	0.10M	C		K1=9.48 B2=15.98	1998TGa (39404)3348	
------	----	------	------	-------	---	--	------------------	---------------------	--

B(CuHL)=12.85

B(CuHL2)=21.48

B(CuH-1L2)=5.19

B(CuH-2L2)=7.02

Cu++	gl	NaCl	37°C	0.15M	C	M	K1=9.104 B2=15.214	1997MBa (39405)3349	
------	----	------	------	-------	---	---	--------------------	---------------------	--

B(CuHL)=12.42

B(CuHL2)=20.76

B(CuH-1L2)=4.02

B(Cu2H-2L2)=6.71

B(CuH-2L2)=-6.68, B(CuLA)=12.14, B(CuHLA)=16.25. H2A=anthranilic acid

Cu++	gl	NaCl04	37°C	0.15M	U	M		1997NAb (39406)3350	
------	----	--------	------	-------	---	---	--	---------------------	--

B(CuAL)=17.17

K(CuA+L)=8.57

K(CuL+A)=7.93

H2A is cysteic acid.

Cu++	gl	KCl	25°C	0.10M	C	H R	K1=9.56 B2=16.06	1997SJa (39407)3351	
------	----	-----	------	-------	---	-----	------------------	---------------------	--

B(CuHL)=12.88

B(CuHL2)=21.82

IUPAC evaluation. DH(K1)=-51.0 kJ mol⁻¹, DH(K2)=-41.3, DH(CuHL)=-74.8,

DH(CuHL2)=-125

Cu++	gl	NaNO3	25°C	0.10M	M	M	K1=9.55 B2=16.10	1997SKc (39408)3352	
------	----	-------	------	-------	---	---	------------------	---------------------	--

B(CuAL)=15.25

B(CuH-1AL)=6.25

B(CuHL)=12.70

HA is glycyl-DL-leucine.

Cu++	gl	KNO3	25°C	0.10M	M	M	K1=10.40 B2=18.12	1995SHc (39409)3353	
------	----	------	------	-------	---	---	-------------------	---------------------	--

K(Cu(ada)+L)=5.06

B(CuHL2)=23.84

ada: N-(acetamido)-iminodiethanoic acid. K(H+L)=9.84, K(2H+L)=16.07.

Cu++ gl NaCl04 37°C 0.15M U M 1994NAd (39410)3354
B(CuAL)=18.70
K(CuL+A)=9.46
K(CuA+L)=9.24

H2A is aspartic acid.

Cu++ gl NaCl04 37°C 0.15M U M 1994NAd (39411)3355
B(CuAL)=18.68
K(CuL+A)=9.44
K(CuA+L)=8.20

H2A is iminodiethanoic acid.

Cu++ gl KNO3 25°C 0.10M C M K1=9.66 B2=16.10 1993KAb (39412)3356
B(CuHL2)=21.82
A=famotidine. B(CuLA)=17.06, B(CuH-1LA)=11.36, B(CuH-2LA)=4.20

Cu++ gl NaCl04 37°C 0.15M U M 1993NKb (39413)3357
B(Cu(trp)HL)=22.23
B(Cu(trp)L)=17.25
K(CuHL+trp)=8.77
K(Cu(trp)+L)=9.02
K(CuL+trp)=8.01; B(Cu(glu)HL)=21.95, B(Cu(glu)L)=17.29, K(CuHL+glu)=8.49,
K(Cu(glu)+L)=8.77, K(CuL+glu)=8.05.

Cu++ gl NaCl04 37°C 0.15M U M 1993NKb (39414)3358
B(Cu(met)HL)=21.40
B(Cu(met)L)=16.72
K(CuHL+met)=7.94
K(Cu(met)+L)=8.71
K(CuL+met)=7.48.

Cu++ gl NaCl04 37°C 0.15M U M 1993NKb (39415)3359
B(Cu(met)HL)=22.25
B(Cu(met)L)=17.41
K(CuHL+met)=7.87
K(Cu(met)+L)=9.40
K(CuL+met)=7.14.

Cu++ gl KNO3 35°C 0.20M C M K1=9.02 1992YKa (39416)3360
B(Cu(edda)L)=19.67
K(Cu(edda)+L)=5.17

Cu++ gl KNO3 25°C 0.10M C H 1990BPpa (39417)3361
B(CuL(Ala))=17.05
B(CuL(Phe))=17.10
DH(CuL(Ala))=-77.0, DH(CuL(Phe))=-79.0 kJ mol⁻¹.

Cu++ gl NaCl04 37°C 0.15M U M K1=9.24 B2=16.16 1988NSa (39418)3362
B(CuHL(Asn))=21.36
B(CuL(Asn))=16.89

$K(\text{Cu}(\text{Asn})+\text{H}+\text{L})=13.47$

$K(\text{CuHL}+\text{Asn})=7.90$

Cu++ gl KNO3 25°C 0.10M C M K1=9.57 B2=16.14 1987DZa (39419)3363

B(CuHL)=12.88

B(Cu2HL)=21.83

B(CuH-1L2)=5.40

B(Cu2H-2L2)=7.40

ternary complexes: B(CuLA) DOPA =19.47; Noradrenalin=19.60; Dopamine=20.37;

Dhpp = 15.68; B(CuHLA) DOPA=26.99; Noradrenalin=24.38; Dhpp=21.20

Cu++ gl KNO3 35°C 0.10M C M K1=8.98 1985RRc (39420)3364

B(CuL(cytidine))=14.42

Cu++ gl NaCl 37°C 0.15M C K1=9.155 B2=15.41 1984ABg (39421)3365

B(CuHL2)=20.620

B(CuH-1L2)=4.981

B(CuH-2L2)=6.699

Cu++ cal KNO3 25°C 0.10M C H 1984ACb (39422)3366

DH(K1)=-50.6 kJ mol⁻¹, DS=13.4 J K⁻¹ mol⁻¹; DH(B2)=-92.8, DS=-2.9;

DH(CuHL)=-74.8, DS=-4; DH(CuHL2)=121, DS=12.

Cu++ gl KCl 25°C 0.10M U M K1=9.46 B2=15.94 1984DMc (39423)3367

Cu++ gl NaClO4 30°C 0.20M C M K1=9.79 B2=16.77 1984PBd (39424)3368

K(Cu(bpy)+L)=8.00

K(Cu(phen)+L)=8.13

Cu++ gl KNO3 25°C 0.50M U K1=9.42 B2=15.89 1983LWa (39425)3369

Cu++ gl NaClO4 37°C 0.15M C M K1=9.163 B2=15.47 1982BKc (39426)3370

B(CuHL)=12.576

B(CuHL2)=21.024

B(CuH-1L2)=4.219

B(Cu2H-2L2)=7.059

B(CuH-2L2)=-5.948, B(Cu(ser)L)=16.776, B(CuH(ser)L)=20.630, B(CuH-1(ser)L)

=6.665, B(Cu(val)L)=16.560, B(CuH(val)L)=20.715, B(CuH-1(val)L)=5.357.

Cu++ cal KNO3 25°C 0.10M U HM 1981AAc (39427)3371

B(CuZnL2)=18.00

B(CuCdL2)=18.36

B(CuZnH-1L2)=10.6

B(CuCdH-1L2)=10.6

DH(CuZnL2)=-84 kJ mol⁻¹; DH(CuCdL2)=-88.7

Cu++ gl KNO3 25°C 0.10M U I M 1981DAa (39428)3372

B(CuL(Gly))=17.05

B(CuH-1L(Gly))=5.66

Also data for 0-60% v/v 1-propanol

$$B(\text{CuL}(\text{citrate}))=14.95$$
$$B(\text{CuHL2})=21.79$$

By calorimetry: $\Delta H(K1) = -54.2 \text{ kJ mol}^{-1}$, $\Delta H(B2) = -95.4$, $\Delta H(\text{CuHL2}) = -129$

$$B(\text{CuHL2}) = 21.79$$
$$B(Cu2H-2L2)=7.00$$

DH(B2)=-95.4, DS(B2)=-13; DH(CuHL2)=-129.0; DS(CuHL2)=-16.

$$B(\text{Cu}(\text{gly})\text{L})=17.00$$
$$K(\text{Cu}(\text{gly})+\text{L})=8.93$$
$$\text{DH}(\text{CuL}+\text{gly})=-26.5, \text{DH}(\text{Cu}(\text{gly})+\text{L})=-55.2.$$
$$B(\text{Cu(en)}\text{L})=18.66$$
$$K(\text{CuL}+\text{en})=9.08$$
$$K(\text{Cu(en)} + \text{L}) = 8.09$$
$$\Delta H(\text{CuL}+\text{en})=-50.3, \quad \Delta H(\text{Cu}(\text{en})+\text{L})=-51.2.$$
$$B(\text{Cu}(\text{pn})\text{L}) = 17.00$$
$$K(\text{CuL}+\text{pn})=7.42$$
$$K(\text{Cu}(\text{pn})+\text{L})=7.35$$
$$B(\text{CuAL}) = 16.90$$
$$K(\text{CuL}+\text{A})=7.32$$
$$K(\text{CuA}+\text{L})=6.96$$

DH(CuL+A)=-37.3, DH(CuA+L)=-45.0. A is N,N'-dimethyl-1,2-diaminoethane.

$$B(\text{CuL}(\text{Gly})) = 17.03$$
$$B(\text{CuL}(\text{Ala})) = 16.99$$
$$B(\text{CuLA})=16.97$$
$$B(\text{CuLB})=16.94$$

HA=norvaline, HB= α -aminobutanoic acid

K1=9.28 B2=15.58

$$B(\text{CuL}(\text{Ser}))=16.27$$

 Cu++ gl KNO3 25°C 0.20M U T K1=9.53 B2=15.74 1971Rmd (39446)3390
 K1(15 C)=9.80, K1(40 C)=9.13, K2(15 C)=6.46, K2(40 C)=5.82

Cu++ gl KNO3 25°C 0.10M C H T K1=9.56 B2=16.13 1970EHa (39447)3391
 By calorimetry DH(K1)=-47.6 kJ mol⁻¹, DH(K2)=-40.1

Cu++ gl KNO3 25°C 0.16M U K1=9.56 B2=15.93 1970MBb (39448)3392

Cu++ gl oth/un 25°C 0.10M U K1=9.56 B2=16.13 1969EHc (39449)3393

Cu++ gl oth/un 25°C 0.10M U M K1=9.67 B2=16.41 1969HGb (39450)3394
 B(CuLA)=23.15

H2A=catechol

 Cu++ gl NaClO4 25°C 0.30M C H T K1=9.56 B2=16.20 1967Hwa (39451)3395
 By calorimetry DH(K1)=-43.0 kJ mol⁻¹, DH(K2)=-42.8

Cu++ gl KNO3 37°C 0.15M U M K1=9.278 B2=15.577 1967PSc (39452)3396
 K(Cu(en)+L)=7.86
 K(Cu(Ser)+L)=8.71
 K(CuA+L)=8.41

H2A=salicylic acid

 Cu++ gl oth/un 20°C 0.0 U K1=9.76 B2=16.47 1966PSc (39453)3397
 K(Cu2(OH)2L2+2H)=11.99

Cu++ sp oth/un 22°C 1.50M U K1=9.83 B2=26.43 1966ZAa (39454)3398
 Medium: K2SO4

Cu++ ISE oth/un 36°C 1.50M U K1=9.45 B2=25.41 1966ZAa (39455)3399
 K(CuLOH+H)=7.1

Medium: K2SO4

 Cu++ gl KNO3 25°C 0.10M U K1=9.48 B2=15.90 1964DCb (39456)3400
 K(CuLOH+H)=7.0
 K(2CuLOH=(CuLOH)2)=2.2

Cu++ gl KNO3 25°C 0.20M U K1=9.43 1963CCb (39457)3401

Cu++ gl oth/un 25°C .015M U T H K1=9.55 B2=16.04 1962HJa (39458)3402
 At 0 C: K1=10.10, B2=17.00. At 25 C, DH(K1)=33.4 kJ mol⁻¹, DS=66.9 J K⁻¹ mol⁻¹;
 DH(B2)=-58.5, DS=105

Cu++ gl oth/un 20°C 0.0 U T H K1=9.82 B2=16.51 1960NFa (39459)3403
 10 C: K1=10.25, K2=7.02; 30 C: 9.50, 6.45; 40 C: 9.12, 6.20
 DH(K1)=-64.9 kJ mol⁻¹, DS=-4.2; DH(K2)=-48.5, DS=-37.7

Cu++ gl KCl 25°C .135M U T K1=9.55 B2=16.03 1955MAb (39460)3404

0 C: K1=10.1, K2=6.9

Cu++ gl oth/un 20°C .015M U B2=16.2 1952ALa (39461)3405

Cu++ gl KNO3 30°C 1.0M U K1=9.60 B2=16.09 1952HAa (39462)3406

C5H9N3 L (3602)

4(5)-Aminomethyl-2-methylimidazole;

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

Cu++ gl oth/un 25°C .015M U T H K1=8.56 B2=15.60 1962HJa (39550)3407

At 0 C: K1=9.09,B2=16.57. At 25 C:DH(K1)=-33.4 kJ mol⁻¹,DS=54.3 J K⁻¹ mol⁻¹;

DH(B2)=-62.7,DS=96.1

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

Cu++ sp KNO3 30°C 0.10M U K1=8.1 1967GNb (39555)3408

Cu++ cal KNO3 30°C 0.10M U H 1967GNc (39556)3409

DH(K1)=-10.9 kJ mol⁻¹, DS=117 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

Cu++ vlt KNO3 25°C 0.10M C 2004YYa (39578)3410

K1eff=12.47

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

Cu++ sp KNO3 30°C 0.10M U K1=8.4 1967GNb (39585)3411

Cu++ cal KNO3 30°C 0.10M U H 1967GNc (39586)3412

DH(K1)=-2.1 kJ mol⁻¹, DS=154 J K⁻¹ mol⁻¹

C5H9O2Br HL CAS 95338-79-7 (1435)

2-Bromo-2-methylbutanoic acid; CH3.CH2.C(CH3)Br.COOH

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

Cu++ sp NaClO4 20°C 2.00M U M K1=1.43 B2=2.55 1983JOa (39612)3413

$$K(\text{Cu}(\text{bpy})+\text{L})=1.55$$

C5H9O2Br HL Br-isovaleric CAS 565-74-2 (1310)
2-Bromo-3-methylbutanoic acid; $(\text{CH}_3)_2\text{CH}.\text{CH}(\text{Br})\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ISE	NaClO4	25°C	1.00M	U		K1=1.50	1987FYa (39615)	3414
Cu++	gl	NaClO4	20°C	2.00M	U		K1=1.5 B2=2.6	1981J0a (39616)	3415

Spectrophotometry also used.
Ligand: Alpha-bromoisovaleric acid.

C5H10N07P H4L CAS 185745-21-5 (8090)
3-Amino-3-phosphonoglutaric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C		K1=11.53 B(CuH-1L)=1.83 B(CuH2L)=24.96 B(CuH2L2)=43.20 B(Cu2HL2)=34.73	1996KJa (39622)	3416

Alternative model: K1=11.42, B(CuHL)=20.03, B(CuH2L)=24.87, B(CuH-1L)=1.70

C5H10N07P H4L PMIDA CAS 5994-61-6 (2433)
N-(Phosphonomethyl)iminodiethanoic acid; $\text{H}_2\text{O}_3\text{P}.\text{CH}_2.\text{N}(\text{CH}_2.\text{COOH})_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C		K1=15.3 K(CuL+H)=4.72 K(CuHL+H)=2.2 K(CuL+OH)=3.9	2000SDa (39638)	3417
Cu++	gl	KCl	25°C	0.20M	C		K1=13.83 B(CuHL)=18.52 B(CuH-1L)=3.98	1997BKb (39639)	3418
Cu++	gl	NaCl	25°C	0.10M	U		K1=14.08 B(CuHL)=18.77	1993DLA (39640)	3419
Cu++	gl	KCl	25°C	0.15M	U	TIH	K1=15.00 K(Cu+HL)=8.87	1991KMc (39641)	3420

At 60 C K1=14.03; K(Cu+HL)=8.03

C5H10N2O L Prolinamide CAS 7531-52-4 (5978)
Prolinamide;

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

A is picolylamine

Cu++ gl KNO3 25°C 0.10M C K1=7.76 1999BIa (39766)3429

Cu++ gl KNO3 25°C 0.10M C H K1=7.71 B2=14.12 1998ACb (39767)3430
By calorimetry|: DH(K1)=-19.8 kJ mol⁻¹, DS=79 J K⁻¹ mol⁻¹; DH(B2)=-42.3
DS=124

Cu++ gl KNO3 25°C 0.10M C K1=7.765 B2=14.27 1998ZYa (39768)3431

Cu++ gl NaCl 37°C 0.15M C TIH R K1=7.47 B2=13.59 1995BEa (39769)3432
IUPAC evaluation. 25 C, I=0.1 M KNO3(Tentative) K1=7.75, B2=14.25
DH(K1)=-24 kJ mol⁻¹, DH(B2)=-49

Cu++ gl NaCl04 37°C 0.15M U K1=7.59 B2=13.68 1994NAc (39770)3433

Cu++ gl NaCl04 37°C 0.15M U M 1994NAc (39771)3434
B(Cu(glu)L)=14.34
K(Cu(glu)+L)=5.82
K(CuL+glu)=6.75

Cu++ gl NaCl04 25°C 0.20M C K1=7.78 1993BAb (39772)3435

Cu++ gl NaCl 37°C 0.15M U T K1=7.474 B2=13.600 1985CFb (39773)3436
B(CuH-1L)=-0.07

Cu++ gl KCl 25°C 0.10M C M T K1=7.475 B2=13.59 1982KBd (39774)3437
B(CuL(histamine))=15.97
B(CuHL(histamine))=20.11

Cu++ ISE diox/w 25°C 20% U K1=8.02 B2=14.80 1980YTa (39775)3438

Cu++ sp KNO3 25°C 0.10M U M 1979YSa (39776)3439
B(Cu(His)L)=17.06

Cu++ gl KCl 25°C 0.20M C M 1977NGa (39777)3440
B(CuH-1LA)=4.65
B(CuH-1LB)=4.69
B(CuH-1LC)=4.32
K(CuH-1L2+A=CuH-1LA+L)=0.19

K(CuH-1L2+B=CuH-1LB+L)=0.06, K(CuH-1L2+C=CuH-1LC+L)=0.12
HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine

Cu++ gl KCl 25°C 0.20M C 1976NGd (39778)3441
K(CuH-1A2+L=CuH-1AL+A)=4.65
K(CuH-1C2+L=CuH-1CL+C)=4.69
K(CuH-1D2+L=CuH-1DL+D)=4.32

HA is glycylglycine; HC is glycyl-DL-alpha-alanine;
HD is DL-alanyl-DL-alanine.

Cu++ gI KCl 25°C 0.20M U H T K1=7.62 B2=14.00 1975GNa (39779)3442
B(CuL(Gly))=14.70
B(CuL(Ser))=14.53

Cu++ gl NaCl04 25°C 0.10M U K1=7.38 B2=13.52 1973TSb (39781)3444

Cu++ g1 KNO3 25°C 0.10M U T K1=7.74 B2=14.20 1965Rwa (39783)3446

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

Cu++	nmr KCl	20°C 0.20M U	K1=5.28 B(CuH-1L)=1.22 B(CuH-2L)=-8.41 B(CuH-1L2)=3.83 B(CuH-3L2)=-5.18	1983KRa (39871)3448
------	---------	--------------	---	---------------------

Cu++ gl NaCl04 37°C 0.15M U K1=5.58 1980Nsc (39873)3450
B(CuH-1L2)=4.68

Also DH and DS values

B(Cu₂H-3L₂)=-4.66

Calorimetry: DH(K₁)=-25.4 kJ mol⁻¹, DS=15 J K⁻¹ mol⁻¹; DH(CuH-1L)=-2.8, DS=35; DH(CuH-2L)=46.7, DS=0; DH(CuH-1L₂)=-21.3, DS=4; DH(Cu₂H-3L₂)=38.5, DS=40

Cu++	gl	NaCl04	25°C	0.10M	U	K ₁ =5.26	1975SIa (39876)	3453
						K(Cu(bpy)+L)=4.51		

Cu++	gl	KNO3	25°C	0.10M	U	K ₁ =5.34	1972BBc (39877)	3454
						K(CuH-1L+H)=3.68		

Cu++	gl	KCl	25°C	0.16M	U	K ₁ =5.44	1965BPc (39878)	3455
						K(CuH-1L+H)=4.16		

C5H₁₀N₂O₃ HL Gly-beta-Ala CAS 3695-73-6 (972)
 Glycyl-3-alanine; H₂N.CH₂.CO.NH.CH₂.CH₂.COOH

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

Cu++	gl	NaCl04	25°C	0.10M	M	M	K ₁ =5.74	1981SPd (39902)	3456
						K(Cu+H ₂ L=CuL+2H)=-6.50			
						K(Cu+H ₂ L=CuH-1L+3H)=-11.17			
						K(CuH-1L+H)=4.67			

K(Cu(bpy)+L)=5.39; K(CuH-1L(bpy)+H)=8.48

Cu++	gl	KNO3	25°C	0.10M	C	K ₁ =5.69	1975BPa (39903)	3457
						B(CuH-1L)=1.122		
						B(CuH-1L ₂)=3.99		
						B(CuH-2L)=-9.009		
						B(Cu ₂ H-3L ₂)=-4.92		

Cu++	gl	KNO3	25°C	0.10M	U	K ₁ =5.70	1969YHa (39904)	3458
						K(CuH-1L+H)=4.64		

Cu++	gl	NaCl	25°C	0.12M	U	K ₁ =6.11	1967SBf (39905)	3459
						K(CuH-1L+H)=4.69		
						K(CuH-1L+L)=3.66		
						K(Cu(H-1L) ₂ +H)=9.53		
						K(CuH-1LOH+H)=9.79		

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

Cu++	gl	KCl	25°C	0.10M	U	M	K ₁ =5.65	1988YMa (39920)	3460
						K(CuH-1L+H)=4.85			
						B(CuL(ATP))=8.81			

Cu++	nmr	KCl	20°C	0.20M	U	K ₁ =5.90	1983KRa (39921)	3461
						B(CuH-1L)=1.53		

[illegible]

Also with Ser,Thr,Orn,Lys,Asn,Asp,Gln,Glu,beta-Ala,norVal

C5H10N2O3 HL Gly-Ala CAS 3695-73-6 (56)
Glycyl-alanine; H2N.CH2.CO.NH.CH(CH3).COOH

A=imidazole, B=2-methylimidazole, C=2-ethylimidazole.

Medium: 50% v/v dioxane/H₂O, 0.20 M NaClO₄.

HA=3-indolylethanoic, HB=3-indolylpropanoic, HC=3-indolylbutanoic acid

Cu++ gl KCl 25°C 0.20M C K1=5.73 1991JKa (39975)3468
B(CuH-1L)=1.52
B(CuH-1L2)=4.89
B(CuH-2L)=-7.80
B(Cu2H-3L2)=-4.05

Cu++ gl NaClO4 30°C 0.20M U M K1=5.84 1990CBa (39976)3469
 $K(\text{CuL}=\text{CuH}-1\text{L}+\text{H})=-4.41$
 $B(\text{CuLA})=18.26$
 $K(\text{CuLA}=\text{CuH}-1\text{LA}+\text{H})=-8.17$
 $K(\text{Cu}+\text{L}+\text{HB})=17.79$
H2A=catechol. $K(\text{CuL}(\text{HB})=\text{CuH}-1\text{L}(\text{HB})+\text{H})=-8.57$; H3B=pyrogallol. $B(\text{CuLC})=18.43$,
 $K(\text{CuLC}=\text{CuH}-1\text{LC}+\text{H})=-8.88$; H4C=tiron. $B(\text{CuLD})=16.4$; H2D=2,3-dihydroxynaphthale

Cu++ gl NaClO4 30°C 0.20M U K1=6.48 1990CBb (39977)3470
 $K(\text{CuH}-1\text{L}+\text{H})=3.92$

Cu++ gl NaClO4 25°C 0.20M U M K1=5.84 1990MCa (39978)3471
 $K(\text{CuH}-1\text{L}+\text{H})=4.41$
 $B(\text{CuL}(\text{His}))=16.14$
 $B(\text{CuHL}(\text{His}))=21.06$
 $B(\text{CuH}-1\text{L}(\text{His})+\text{H})=8.57$

Cu++ cal KNO3 25°C 0.50M C H K1=5.65 1985AJb (39979)3472
 $B(\text{CuH}-1\text{L})=15.09$
 $B(\text{CuH}-1\text{L}2)=18.25$
 $K(\text{Cu}+\text{L}=\text{CuH}-1(\text{OH})\text{L}+2\text{H})=19.60$
 $\text{DH}(\text{K}1)=-21.0 \text{ kJ mol}^{-1}$, $\text{DH}(\text{CuH}-1\text{L})=5.6$, $\text{DH}(\text{CuH}-1\text{L}2)=-22.0$,
 $\text{DH}(\text{CuH}-1(\text{OH})\text{L})=43.9$.

Cu++ gl NaClO4 37°C 0.15M U K1=5.85 1980NSc (39980)3473
 $B(\text{CuH}-1\text{L}2)=5.50$

Cu++ cal KCl 25°C 0.20M C H K1=5.76 1977GNa (39981)3474
 $B(\text{CuH}-1\text{L})=1.55$
 $B(\text{CuH}-2\text{L})=-7.94$
 $B(\text{CuH}-1\text{L}2)=4.63$
 $B(\text{Cu}2\text{H}-3\text{L}2)=-4.18$

Also DH and DS values

Cu++ gl KCl 25°C 0.20M C H K1=5.76 1976GNb (39982)3475
 $B(\text{CuH}-1\text{L})=1.55$
 $B(\text{CuH}-2\text{L})=-7.94$
 $B(\text{CuH}-1\text{L}2)=4.63$
 $B(\text{Cu}2\text{H}-3\text{L}2)=-4.18$

Calorimetry: $\text{DH}(\text{K}1)=-27.0 \text{ kJ mol}^{-1}$, $\text{DS}=20 \text{ J K}^{-1} \text{ mol}^{-1}$; $\text{DH}(\text{CuH}-1\text{L})=-3.2$, $\text{DS}=40$
 $\text{DH}(\text{CuH}-2\text{L})=47.6$, $\text{DS}=8$; $\text{DH}(\text{CuH}-1\text{L}2)=-24.1$, $\text{DS}=-8$; $\text{DH}(\text{Cu}2\text{H}-3\text{L}2)=36.8$, $\text{DS}=43$.

Cu++ gl KNO3 25°C 0.10M C K1=5.741 B2=11.16 1975BPa (39983)3476
 $B(\text{CuH}-1\text{L})=1.686$
 $B(\text{CuH}-2\text{L})=-7.723$
 $B(\text{CuH}-1\text{L}2)=4.910$
 $B(\text{Cu}2\text{H}-3\text{L}2)=-3.76$

Cu++ gl NaClO4 25°C 0.10M U K1=5.79 1975SIa (39984)3477
 $K(\text{Cu}(\text{bpy})+\text{L})=5.61$

C5H10N2O3 HL Sar-Gly (2332)
 Sarcosyl-glycine; CH3.NH.CH2.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	U		K1=5.32 K(Cu(bpy)+L)=4.32	1975SIa (40035)	3490
Cu++	gl	KCl	25°C	0.16M	U		K1=4.39 K(CuH-1L+H)=3.45 K(CuH-1L+L)=3.42 K(CuH-1LOH+H)=9.19 K(CuH-1L(OH)2+H)=11.9	1960KFb (40036)	3491

K(CuH-1LOH+CuH-1L)=(CuH-1L)2OH)=1.48

Cu++	gl	oth/un	25°C	0.02M	U		K1=5.30	1956DRb (40037)	3492
------	----	--------	------	-------	---	--	---------	-----------------	------

C5H10N2O3 HL B-Ala-Gly CAS 2672-88-0 (4323)
 beta-Alanylglycine; H2N.CH2.CH2.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	U		K1=5.82 B(CuHL)=10.83 B(CuH-1L)=1.26 B(CuH-2L)=-8.58 B(CuH-1L2)=3.86	1993SFa (40046)	3493
Cu++	gl	NaClO4	25°C	0.10M	M	M	K1=6.15 K(Cu+H2L=CuL+2H)=-6.71 K(Cu+H2L=CuH-1L+3H)=-11.46 K(CuH-1L+H)=4.75	1981SPd (40047)	3494

K(Cu(bpy)+L)=5.0; K(CuH-1L(bpy)+H)=7

Cu++	gl	KNO3	25°C	0.10M	U		K1=5.45 K(CuH-1L+H)=4.09	1971YMa (40048)	3495
Cu++	gl	KNO3	25°C	0.10M	U		K1=5.61 K(CuH-1L+H)=4.29	1969YHa (40049)	3496

C5H10N2O4 H2L (6346)
 2,4-Diaminopentanedioic acid; HOOC.CH(NH2).CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U		K1=11.80 B2=17.18 B(CuHL)=17.02	1984NKb (40068)	3497

Erithro(meso) isomer. For threo-form: K1=11.48, B2=16.74, B(CuHL)=16.5

C5H10N2O4 HL CAS 1955-67-5 (6736)

2-Aminopentanoic-5-hydroxamic acid; $\text{HOOC.CH(NH}_2\text{).CH}_2\text{.CH}_2\text{.CO.NOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.10M	C		B ₂ =16.21 B(CuHL)=17.24 B(CuH ₂ L ₂)=33.18 B(Cu ₂ L ₂)=27.51 B(Cu ₅ H-4L ₄)=39.76 B(CuHL ₂)= 25.23. DH(CuHL)=-50.1 kJ mol ⁻¹ , DS(CuHL)=162 J K ⁻¹ mol ⁻¹ DH(CuH ₂ L ₂)=-97.1, DS=309, DH(Cu ₂ L ₂)=-73, DS=280, DH(Cu ₅ H-4L ₄)=-90, DS=458	2004TDa (40073)	3498

Cu++	gl	KCl	25°C	0.20M	C		B(CuHL)=18.82 B(Cu ₂ H ₂ L)=33.24 B(Cu ₂ HL)=26.05 B(Cu ₂ L)=17.00	1993FBa (40074)	3499
------	----	-----	------	-------	---	--	---	-----------------	------

B(Cu₂H-1L)=6.98

C₅H₁₀N₂O₄ HL Gly-Ser CAS 7361-43-5 (281)
Glycyl-serine; $\text{H}_2\text{N.CH}_2\text{.CO.NH.CH(CH}_2\text{.OH).COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	nmr	none	18°C	0.0	U		K ₁ =5.74 B(CuHL)=9.3 B(CuH-1L)=1.81 B(CuH-3L)=-20.41	2001SAa (40093)	3500

Cu++	gl	KCl	25°C	1.00M	C		K(CuH-1L ₂ =CuH-1LOH+L+H)=-12.31	1989FKa (40094)	3501
------	----	-----	------	-------	---	--	---	-----------------	------

Cu++	gl	NaClO ₄	25°C	0.10M	C	M	K ₁ =5.66 B(CuH-1L(Gly))=1.65 B(CuH-1L(b-Ala))=4.94 B(CuH-1L(Val))=4.89 B(CuH-1L(Thr))=4.73	1983SHa (40095)	3502
------	----	--------------------	------	-------	---	---	--	-----------------	------

Data also for Cu complexes with Ser, Tyr and Glu.

Cu++	gl	KCl	25°C	0.20M	C	HM	K ₁ =5.66 B(CuH-1L)=1.68 B(CuH-2L)=-7.67 B(CuH-1L ₂)=4.64 B(Cu ₂ H-3L ₂)=-3.80	1982GFa (40096)	3503
------	----	-----	------	-------	---	----	--	-----------------	------

DH(K₁)=-29 kJ mol⁻¹, DS=7. + ternary complexes with many D and L amino acids

Cu++	gl	NaClO ₄	25°C	0.10M	U	M	K ₁ =5.66 K(Cu(bpy)+L)=5.56	1977SNa (40097)	3504
------	----	--------------------	------	-------	---	---	---	-----------------	------

C₅H₁₀N₂O₄ HL (7020)

N-Carboxymethylaminoaceto-N'-methylhydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	NaClO4	20°C	0.10M	U		K1=13.08	1978Kpd (40106)	3505

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
Cu++	nmr	none	18°C	0.0	U		K1=5.55 B(CuHL)=9.0 B(CuH-1L)=1.58 B(CuH-3L)=-13.7	2001SAa (40110)	3506

Cu++	gl	KCl	25°C	1.00M	C		K(CuH-1L2=CuH-1LOH+L+H)=-11.97 K(CuH-1L2=CuH-2L2+H)=-10.40	1989FKa (40111)	3507
------	----	-----	------	-------	---	--	---	-----------------	------

Cu++	gl	KCl	25°C	0.20M	C		K1=4.84 B(CuH-1L)=1.32 B(CuH-2L)=-7.82 B(CuH-1L2)=4.15 B(Cu2H-2L2)=-4.1	1986FTa (40112)	3508
------	----	-----	------	-------	---	--	---	-----------------	------

K(Cu+HL=CuL+H)=2.52, *K(CuL)=-3.52, K(CuH-1L+L)=2.83,
K(CuH-1L+OH)=4.61.

Cu++	gl	KCl	25°C	0.20M	C	M	B(CuH-1(ala)L)=5.45 B(CuH-1(b-ala)L)=5.87 B(Cu(bpy)L)=12.11 B(CuH-1(bpy)L)=5.39	1986FTa (40113)	3509
------	----	-----	------	-------	---	---	--	-----------------	------

B(CuAL)=13.20, B(CuH-1AL)=5.91, K(CuH-1L+A)=4.59; H2A is aspartic acid.
K(CuH-1L+ala)=4.13, K(CuH-1L+b-ala)=3.55, K(CuH-1L+bpy)=4.07.

Cu++	gl	NaClO4	25°C	0.10M	U	M	K1=4.96 K(Cu(bpy)+L)=4.32	1977SNa (40114)	3510
------	----	--------	------	-------	---	---	------------------------------	-----------------	------

C5H10N4O5		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
Cu++	gl	alc/w	30°C	50%	U	T H	K1=9.48	1992HRa (40127)	3511
Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.									
DH(K1)=-21.6 kJ mol ⁻¹ , DS(K1)=-109 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
Cu++	gl	NaClO4	25°C	0.10M	U	TIH	K1=10.25 B2=16.75	1980SAc (40133)	3512

Data for 0.075-0.15 M. At I=0, K1=10.70, K2=7.00. Also data for 30 C.
DH and DS values.

C5H10N6S2 L (6344)
1,2-Dioxopropene-1,2-bis(thiosemicarbazone)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	alc/w	25°C	50%	U		K1=12.41 B2=24.39 B3=28.62	1987MDc (40140)	3513

Medium: 50% EtOH/H2O, 0.1 M KClO4. Data also for other ligand analogues

C5H10O5S2 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
Cu++	dis	oth/un	25°C	0.25M	U		B2=16.6	1982SAa (40150)	3514

Cu++	sp	oth/un	?	?	U		K1=6.58 B2=7.92	1973KDd (40151)	3515
------	----	--------	---	---	---	--	-----------------	-----------------	------

C5H10O2 HL CAS 600-07-7 (1317)
2-Methyl-butanoic acid; CH3.CH2.CH(CH3)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	20°C	2.00M	U		K1=2.1 B2=3.8 B3=5.26	1981J0a (40170)	3516

Spectrophotometry also used.

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
Cu++	gl	NaNO3	25°C	0.10M	C	I M	K1=1.70 K(Cu(phen)+L)=1.78	1988LTc (40177)	3517

Data also for 50% v/v EtOH/H2O, and 50% v/v Dioxan/H2O mixtures

Cu++	sp	NaClO4	20°C	2.00M	U	M	K1=1.97 B2=3.59 K(Cu(bpy)+L)=2.13	1983J0a (40178)	3518
------	----	--------	------	-------	---	---	-----------------------------------	-----------------	------

Cu++	gl	NaClO4	20°C	2.00M	U		K1=2.00 B2=3.70 B3=5.25	1981J0a (40179)	3519
------	----	--------	------	-------	---	--	-------------------------	-----------------	------

Spectrophotometry also used.

Cu++ sol oth/un 25°C ->0 U K1=2.08 1951LWa (40180)3520

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

Cu++ dis non-aq 25°C 100% C I 2000NYa (40193)3521
K(Cu+2HA(o)=CuL₂(o)+2H)=-8.04

Method: distribution from 0.10 M NaClO₄ into pentan-1-ol. Also data for
hexan-1-ol, heptan-1-ol and octan-1-ol. K(2Cu+4HA(o)=Cu₂L₄(o)+4H)=-13.80

Cu++ gl diox/w 25°C 50% C M K1=3.44 1985STb (40194)3522
K(Cu(phen)+L)=3.61

Cu++ gl NaClO₄ 25°C 3.0M U K1=1.92 B2=<3.0 1964PCa (40195)3523

Cu++ sol oth/un 25°C ->0 U K1=2.12 1951LWa (40196)3524

C5H10O2 HL Pivalic acid CAS 75-98-9 (3026)
Trimethylethanoic acid, 2,2-Dimethylpropanoic acid; (CH₃)₃C.CO₂H

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

Cu++ sp NaClO₄ 20°C 2.00M U M K1=1.92 B2=3.39 1983JOa (40211)3525
K(Cu(bpy)+L)=2.09

Cu++ gl NaClO₄ 25°C 3.0M U K1=1.87 B2=3.7 1964PCa (40212)3526

Cu++ sol oth/un 25°C ->0 U K1=2.19 1951LWa (40213)3527

C5H10O2S HL CAS 4455-13-4 (4321)
(1-Methylethylthio)ethanoic acid; (CH₃)₂.CH.S.CH₂.CO₂H

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

Cu++ gl diox/w 25°C 50% U M K1=3.93 1972SGa (40225)3528
K(CuA+bpy)=3.94

Medium: 50% dioxan, 0.1 M NaClO₄

Cu++ gl diox/w 30°C 50% U K1=3.6 B2=6.40 19710Ta (40226)3529
Medium: 50% v/v dioxan, 1.0 M KNO₃

Cu++ gl NaClO₄ 25°C 1.00M U K1=2.49 B2=4.77 1971SAb (40227)3530
B3=5.11

C5H10O2S HL CAS 20600-60-6 (4322)
(Propylthio)ethanoic acid; CH₃.CH₂.CH₂.S.CH₂.CO₂H

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

Cu++ gl diox/w 25°C 50% U M K1=3.87 1972SGa (40232)3531
K(CuA+bpy)=3.92

Medium: 50% dioxan/H2O, 0.1 M NaClO4

Cu++ gl diox/w 30°C 50% U K1=3.5 B2=6.40 19710Ta (40233)3532

Medium: 50% (v/v) dioxan/H2O, 1 M KNO3

C5H10O2S HL CAS 7244-82-8 (3042)

3-Ethylthiopropionic acid; CH3.CH2.S.CH2.CH2.COOH

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

Cu++ gl diox/w 30°C 50% U K1=4.2 1956IFa (40237)3533

C5H10O3 HL (4296)

Isopropoxyethanoic acid; (CH3)2.CH.O.CH2.COOH

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

Cu++ gl NaClO4 25°C 1.00M U K1=1.78 B2=2.89 1971SAb (40291)3534

C5H10O5 L D-Arabinose CAS 10323-20-3 (3606)

D-Arabinose;

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

Cu++ ISE KNO3 25°C 0.70M U K1=0.18 1986HAe (40330)3535

C5H10O5 L CAS 1114-34-7 (6113)

D-Lyxose

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

Cu++ ISE KNO3 25°C 0.70M U K1=-0.29 1986HAe (40337)3536

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

D-Ribose;

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

Cu++ ISE KNO3 25°C 0.70M U K1=0.22 1986HAe (40341)3537

C5H10O5 L D-Xylose CAS 58-86-6 (3607)

D-Xylose;

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

Cu++ ISE KNO3 25°C 0.70M U K1=-0.29 1986HAe (40358)3538

C5H10O6 HL D-Ribonic acid CAS 18315-89-4 (6941)
 2R,3S,4R,5-Tetrahydroxo-pentanoic acid; D-Ribonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	C		K1=2.60 B2= 5.00 B(CuH-1L2)=-1.03 B(CuH-2L2)=-8.78 B(Cu2H-3L2)=-7.96 B(Cu2H-4L2)=-16.17	1998GGa (40375)	3539
B(CuH-3L)=-20.74									

Cu++	gl	NaNO3	20°C	0.10M	C		K1=3.52 B2= 6.10 K(CuL=CuH-2L+2H)=-11.85 B(Cu2H-3L2)=-7.26 *K(CuH-2L)=-10.30 *K(CuL2)=-6.09	1992ESa (40376)	3540
------	----	-------	------	-------	---	--	---	-----------------	------

C5H11N L CAS 1003-03-8 (304)
 Cyclopentylamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	37°C	0.15M	C		K1=8.006 B(Cu2H-2L2)=12.013	1974MWb (40388)	3541

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
Cu++	sp	NaClO4	25°C	0.20M	U		K(CuA+L=CuAL)=3.10	1991CCb (40409)	3542

A is rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradecane

Cu++	sp	mixed	?	50%	U	I M	K(CuCl2+L)=2.26 K(CuCl2+2L)=5.51	1973AMc (40410)	3543
------	----	-------	---	-----	---	-----	-------------------------------------	-----------------	------

Medium: 50% isopentanol/50% benzene. 25%/75%, 2.24, 5.51.
 100%/0%: K(CuCl2+L)=2.22, K(CuCl2+2L)=5.57. Data also in other media

Cu++	sp	non-aq	?	100%	U	M	K(CuA2+L)=4.04 K(CuA2+2L)=3.60	1971MAh (40411)	3544
------	----	--------	---	------	---	---	-----------------------------------	-----------------	------

Medium: benzene. HA=dibenzoylmethane. In CHCl3, Values are 3.51, 3.60.
 In DMF, 2.60, 3.30. In 92% benzene, 8% DMF, 2.00, 3.70

Cu++	oth	non-aq	20°C	100%	U	M	K(CuA2+L=CuA2L)=0.52	1959GRb (40412)	3545
------	-----	--------	------	------	---	---	----------------------	-----------------	------

Medium: CHCl3. HA=acetylacetone. In cyclohexane K=2.81

C5H11NO2 HL N,N-DiMeAlanine CAS 19036-43-2 (6128)
2-(N,N-Dimethylamino)propanoic acid; (CH3)2N.CH(CH3).COOH

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

Cu++ gl KCl 25°C 0.10M U K1=7.11 B2=13.32 1977KDa (40470)3546

C5H11NO2 HL Valine CAS 72-18-4 (43)
2-Amino-3-methylbutanoic acid; H2N.CH(CH(CH3)2)COOH

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

Cu++ gl NaNO3 25°C 0.10M C M K1=7.97 B2=14.82 2004SSa (40549)3547
B(CuH-1L)=1.68
B(CuH-2L)=-10.10
B(CuLA)=13.48
B(CuHLA)=17.80
B(CuH-1LA)=6.22. HA is 6-aminopenicillanic acid.

Cu++ gl alc/w 25°C 40% C K1=9.25 B2=16.65 2003DKa (40550)3548
B(CuHL)=7.31
Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.

Cu++ gl NaNO3 25°C 0.10M M M K1=8.16 B2=14.97 2002SKa (40551)3549
B(CuAL)=17.48
A is picolylamine

Cu++ gl oth/un 25°C 0.10M M M K1=8.09 B2=14.90 2000MOa (40552)3550
B(CuHLA)=27.05
B(CuLA)=18.92
Medium: NaOH. A: 2,2'-Dipicolylamine.

Cu++ gl diox/w 25°C 50% M M K1=8.30 B2=16.59 1999HEa (40553)3551
K(CuA+L)=3.28
Medium: 50% v/v dioxane/H2O, 0.1 M NaNO3. H2A: tetracycline.

Cu++ gl KNO3 25°C 0.10M U M K1=8.15 B2=14.97 1998SYa (40554)3552
B(CuAL)=11.63
B(CuH-1AL)=5.43
HA is 2,3,4-trihydroxybutanoic acid (threonic acid).

Cu++ gl KNO3 25°C 0.10M U HM 1997LZa (40555)3553
B(CuLA)=22.70
B(CuHLA)=28.22

HA=6-(2'-Hydroxybenzyl)-1,4,8,11-tetraazacyclotetradecane-5,7-dione. Data
for 3'-methoxy-, 3',5'-dibromo- and 5'-bromo-2'-hydroxybenzyl- derivatives

Cu++ gl NaNO3 25°C 0.10M M M K1=8.02 B2=14.98 1997SKc (40556)3554
B(CuAL)=13.08

$$B(\text{CuH-1AL})=5.42$$

HA is glycyl-DL-leucine.

Cu++ gl KNO3 25°C 0.20M U T HM K1=7.50 1996JLd (40557)3555

$$K(\text{Cu}(\text{bpy})+\text{L})=6.95$$

Data for 25-45 C. DH(K1)=-36.8 kJ mol⁻¹, DS(K1)=144 J K⁻¹ mol⁻¹;

DH(Cu(bpy)L)=-5.4, DS(Cu(bpy)L)=117.

Cu++ gl KNO3 25°C 0.10M M M K1=8.25 B2=15.27 1995SHc (40558)3556

$$K(\text{Cu}(\text{ada})+\text{L})=6.05$$

ada: N-(acetamido)-iminodiethanoic acid. K(H+L)=9.41.

Cu++ gl KNO3 30°C 0.10M U K1=8.11 1994RSa (40559)3557

Cu++ gl NaClO4 25°C 0.20M C K1=8.20 1993BAb (40560)3558

Cu++ gl NaClO4 25°C 0.20M U T M K1=8.91 B2=16.23 1993PPa (40561)3559

$$K(\text{CuA}+\text{L})=7.71$$

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Cu++ gl KCl 25°C 0.10M C TIH T K1=7.98 B2=14.76 1993SKa (40562)3560

IUPAC evaluation. DH(K1)=-22.8 kJ mol⁻¹, DH(B2)=-47 (T)

Cu++ vlt NaNO3 25°C 1.0M C M K1=8.15 B2=15.45 1992KMa (40563)3561

$$B(\text{CuL}(\text{tartrate}))=11.13$$

Method: polarography. Medium: pH 8.0.

Cu++ vlt NaNO3 25°C 1.0M C 1992KMa (40564)3562

$$K1_{\text{eff}}=8.15$$

$$B2_{\text{eff}}=14.80$$

Method: differential pulse polarography. Medium: pH 8.0

Cu++ vlt NaClO4 25°C 1.0M C M 1992SRa (40565)3563

$$B(\text{Cu}(\text{gly})\text{L})=15.66$$

$$B(\text{Cu}(\text{leu})\text{L})=15.86$$

Method: polarography.

Cu++ vlt NaClO4 25°C 1.0M C B2=15.25 1991MSd (40566)3564

$$K(\text{Cu}+\text{HL})=1.48$$

$$K(\text{Cu}+2\text{HL})=2.37$$

Method: polarography.

Cu++ vlt NaClO4 25°C 1.0M C M 1991SRb (40567)3565

$$B(\text{Cu}(\text{gly})\text{L})=15.66$$

$$B(\text{Cu}(\text{leu})\text{L})=15.86$$

Method: polarography.

Cu++ gl KNO3 25°C 0.10M C H 1990BP a (40568)3566

$$B(\text{CuL}(\text{L-His}))=17.93$$

$$B(\text{CuHL}(\text{L-His}))=21.51$$

B(CuL(D-His))=17.80

B(CuHL(D-His))=21.1

DH(CuL(L-His))=-65.9, DH(CuL(D-His))=-64.0 kJ mol⁻¹.

Cu++ ISE KNO3 25°C 0.16M C TIH K1=8.181 1990CSd (40569)3567

Method: Cu ion selective electrode. DH(K1)=-16.7 kJ mol⁻¹, DS(K1)=101.

J K-1 mol⁻¹. Data for 35 and 45 C and for 30% and 50% v/v EtOH/H2O.

Cu++ gl KNO3 37°C 0.15M C M K1=7.93 B2=14.68 1990KKc (40570)3568

B(CuL(imidazole))=11.75

B(CuL(imidazole)2)=14.59

B(CuL(imidazole)3)=16.31

Cu++ gl KNO3 37°C 0.15M U M K1=7.93 B2=14.62 1990KKc (40571)3569

B(CuAL)=11.75

B(CuA2L)=14.59

B(CuA3L)=16.31

A: imidazole

Cu++ gl diox/w 25°C 80% C I K1=10.45 B2=19.44 1989LTa (40572)3570

Medium: 80% dioxan/H2O, 0.1 M NaNO3. In 70%, K1=10.07, K2=8.72;

50%, K1=9.49, K2=8.12; 30%, K1=8.88, K2=7.52; 100% H2O, K1=8.15, K2=6.84

Cu++ gl NaNO3 25°C 0.10M U K1=7.98 B2=14.96 1989MPa (40573)3571

Cu++ gl NaClO4 25°C 0.10M C M K1=8.15 B2=14.97 1988CLa (40574)3572

B(CuL(acetylglycinate))=10.53

Cu++ cal NaClO4 25°C 0.10M C H 1988LGa (40575)3573

DH(K1)=-26.0 kJ mol⁻¹, DH(K2)=-27.3 kJ mol⁻¹. For HA=N-acetylglycine,

DH(B(CuAL))=-23.7 kJ mol⁻¹, DS(B(CuAL))=122 J K⁻¹ mol⁻¹.

Cu++ gl KNO3 25°C 0.10M C M T K1=8.11 B2=14.96 1988ZZa (40576)3574

ternary complexes: B(CuHL(DOPA))=24.71; B(CuL(DOPA))=18.26;

B(CuL(Dopamine))=18.23

Cu++ gl KNO3 35°C 0.20M C M T K1=8.08 B2=14.88 1987PMa (40577)3575

Cu++ gl NaClO4 25°C 0.10M U M 1986CLb (40578)3576

K(Cu(bpy)+L)=8.00

K(Cu(phen)+L)=7.94

Cu++ ISE KNO3 25°C 0.10M U M K1=7.62 1986DVa (40579)3577

K(CuL+salicylate)=9.75

Cu++ gl NaClO4 37°C 0.15M U K1=7.84 B2=14.45 1985AMb (40580)3578

B(Cu(edta)L)=20.9

B(CuH(edta)L)=29.65

Cu++ gl KNO3 25°C 0.10M C M 1985Y0a (40581)3579

B(CuCl)=11.955. A=2-Aminomethyl pyridine, B=Histamine, C=1,2-Diaminobenzene

Cu++ g1 NaClO₄ 37°C 0.15M C M T K1=7.931 B2=14.595 1984BBa (40582)3580
B(CuHL)=10.282
B(CuHL₂)=18.380
B(CuL(His))=16.925

Cu++ oth NaClO4 35°C 0.10M U M K1=8.02 B2=14.62 1984SYa (40583)3581
B(Cu(NTA)+L)=5.25

Method: paper electrophoresis

Cu++ gl NaCl 25°C 0.25M U T K1=7.979 B2=14.698 1983A0a (40584)3582
Data also for L-valine and (D+L)-valine

Cu++ vlt KNO3 30°C 0.30M C K1=8.2 B2=15.00 1983APb (40585)3583
Method: polarography. Medium pH 8.0.

Cu++ gl NaClO4 37°C 0.15M C K1=7.930 B2=14.60 1982BKc (40586)3584
B(CuHL)=10.282
B(CuHL2)=18.380

Cu++ gl NaClO4 30°C 0.10M C M T K1=8.05 B2=14.91 1980ASb (40587)3585
ternary complex with glycyl-sarcosine

Cu++ g1 NaNO3 25°C 0.50M U K1=8.14 B2=14.99 1980MJa (40588)3586
B(CuH-1L)=0.43

Cu++ gl KN03 30°C 1.00M U M T K1=8.00 B2=14.90 1980SGd (40589)3587
B(CuL(malonate))=12.00
B(CuL(oxalate))=12.60

Cu++ ISE diox/w 25°C 20% U K1=8.39 B2=15.52 1980YTa (40590)3588

Cu++ gl KNO3 25°C 0.10M C M 1979Ysa (40591)3589
B(Cu(His)L)=17.35

[illegible]

HA=D-His

Cu++ gl KN03 25°C 0.10M U M T K1=8.11 B2=14.79 1972INa (40593)3591
B(CuL(Ser))=14.84

Cu++ cal KNO3 25°C 0.10M C H 1971BPi (40594)3592

DH(B1)=-49.0 kJ mol⁻¹, For D-His: DH=-48.8, for rac-His: DH=-48.7

 Cu++ gl KNO3 37°C 0.15M U T K1=7.95 B2=14.61 1969CPc (40595)3593
 K(Cu+HL)=1.28
 K(CuL+HL)=1.13

Cu++ sp NaClO4 ? 0.50M U M K1=8.06 B2=14.78 1969PPb (40596)3594
 B(CuL(Gly))=16.00
 B(CuLA)=16.38

H3A=sulfosalicylic acid

 Cu++ oth NaClO4 ? 0.50M U M K1=8.06 B2=14.78 1969PPb (40597)3595
 B(CuL(Gly))=15.63
 B(CuL(Pro))=17.26

Method: circular dichroism. By polarimetry: B(CuL(Gly))=15.75;
 B(CuL(Pro))=16.86

 Cu++ oth NaClO4 ? 0.50M U M T K1=8.06 B2=14.78 1968PPa (40598)3596
 B(CuL(Gly))=15.75

Method: polarimetry

 Cu++ oth NaClO4 25°C 0.50M U M 1968RPc (40599)3597
 B(CuL(Gly))=15.75
 B(CuL(Pro))=16.86

Method: optical rotation. Ternary complexes with salicylic acid and NTA

 Cu++ oth oth/un 25°C 0.50M U T K1=7.98 B2=14.71 1967RPd (40600)3598
 Method: optical rotation.

 Cu++ gl KCl 20°C 0.10M U T K1=8.19 B2=15.18 1966GIb (40601)3599

 Cu++ sp oth/un 25°C ? U K1=7.93 B2=13.50 1957MSb (40602)3600

 Cu++ sp oth/un 25°C 0.72M U K1=8.03 1957MSb (40603)3601

 Cu++ vlt oth/un 25°C 0.15M U T H T B2=14.76 1956LWa (40604)3602
 DH(B2)=-85.8 kJ mol⁻¹, DS=0 J K⁻¹ mol⁻¹. B2=14.51(30 C), 14.28(35 C)

 Cu++ gl oth/un 25°C 0.02M U T K1=8.32 B2=15.42 1954REa (40605)3603

 Cu++ gl oth/un 20°C 0.01M U B2=15.1 1950ALa (40606)3604

 Cu++ gl oth/un 25°C 0.01M U K1=7.92 B2=14.44 1949MMa (40607)3605

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

 Cu++ gl NaNO3 25°C 0.10M C T M K1=7.50 B2=12.52 1999KAa (40794)3606
 K(CuA+L)=5.02

Data for 25-55C. H2A=dipicolinic acid. DH(K1)=-39.69 kJ mol⁻¹, DS(K1)=11.38 J K⁻¹ mol⁻¹, DH(CuAL)=-42.24 kJ mol⁻¹, DS(CuAL)=-44.92 J K⁻¹ mol⁻¹.

Cu++ gl KNO3 25°C 0.20M U T HM K1=8.10 1996JLd (40795)3607
K(Cu(bpy)+L)=7.80

Data for 25-45 C. DH(K1)=-8.8 kJ mol⁻¹, DS(K1)=185 J K⁻¹ mol⁻¹;
DH(Cu(bpy)L)=-8.8, DS(Cu(bpy)L)=179.

Cu++ gl KNO3 25°C 0.10M C M 1994CDb (40796)3608
B(CuAL)=14.80
B(CuHAL)=19.54
B(CuH2AL)=23.70

A:6-Deoxy-6-N-histamine-b-cyclodextrin. Data also for D-isomer

Cu++ gl KCl 25°C 0.10M C TIH R K1=8.12 B2=14.93 1993SKa (40797)3609
IUPAC evaluation. DH(K1)=-21.4 kJ mol⁻¹, DH(B2)=-50

Cu++ gl diox/w 25°C 80% C I K1=10.71 B2=19.86 1989LTa (40798)3610
Medium: 80% dioxan/H2O, 0.1 M NaNO3. In 70%, K1=10.12, K2=8.71;
50%, K1=9.51, K2=8.08; 30%, K1=8.91, K2=7.49; 100% H2O, K1=8.20, K2=6.86

Cu++ gl KCl 25°C 0.50M C M K1=8.155 B2=15.034 1986LEa (40799)3611
B(CuLA)=18.348, A=ethylenediamine-N-acetate

Cu++ sp NaCl 20°C 0.15M U M 1983Vda (40800)3612
K(CuA+L)=6.62

H2A=orotic acid (C5H4N2O4), 2,4-(1H,3H)-pyrimidinedione-6-carboxylic acid

Cu++ gl NaClO4 30°C 0.10M C M T K1=8.05 B2=14.85 1980ASb (40801)3613
ternary complex with glycyl-sarcosine

Cu++ gl KCl 25°C 0.20M C M 1977NGa (40802)3614
B(CuH-1LA)=4.97
B(CuH-1LB)=5.04
B(CuH-1LC)=4.65
K(CuH-1L2+A=CuH-1LA+L)=0.51

K(CuH-1L2+B=CuH-1LB+L)=0.41, K(CuH-1L2+C=CuH-1LC+L)=0.53

HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine

Cu++ gl KCl 25°C 0.20M C 1976NGd (40803)3615
K(CuH-1A2+L=CuH-1AL+A)=4.97
K(CuH-1C2+L=CuH-1CL+C)=5.04
K(CuH-1D2+L=CuH-1DL+D)=4.65

HA is glycylglycine; HC is glycyl-DL-alpha-alanine;
HD is DL-alanyl-DL-alanine.

Cu++ gl KNO3 25°C 0.10M C T K1=8.12 B2=14.94 1975IPb (40804)3616

Cu++ gl KCl 25°C 0.20M U T K1=8.07 B2=14.82 1973GSb (40805)3617

B(CuL(Ala))=15.33; B(CuLA)=15.30, A=2-aminobutanoic acid

3-(Ethylamino)propanoic acid; C2H5.NH.CH2CH2COOH

3-Decyl: $K_1=6.33$

Alanine ethyl ester;

$$K(\text{CuH-1A+L})=2.63$$

HA is glycyl-DL-leucine.

$$K(\text{Cu(ada)} + \text{L}) = 4.46$$

ada: N-(acetamido)-iminodiethanoic acid. $K(H+L)=7.31$.

DL-2-Amino-3-methylbutanoic acid; $\text{H}_2\text{N}.\text{CH}(\text{CH}(\text{CH}_3)_2).\text{COOH}$

$$K(\text{CuA}+\text{L})=8.25$$
$$B(\text{CuAL}) = 17.75$$

Medium: 40% EtOH/H₂O, 0.05 M KNO₃. HA=acetylacetone

$$K(\text{CuL}+\text{A})=6.71$$

H2A=orotic acid (C5H4N2O4), 2,4-(1H,3H)-pyrimidinedione-6-carboxylic acid

Data for ternary complexes with polymer-grafted L-proline ligands.

C5H11NO2 HL CAS 3183-21-9 (3044)
N-Isopropylglycine; (CH3)2.CH.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl04	25°C	0.10M	U		K1=6.70 B2=12.45	1954BCb (40903)	3627

C5H11NO2 HL CAS 25303-14-4 (3043)
N-n-Propylglycine; CH3.CH2.CH2.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl04	25°C	0.10M	U		K1=7.25 B2=13.31	1954BCb (40906)	3628

C5H11NO2S HL CAS 60116-17-8 (8308)
(3-Aminopropyl)thioethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	U	H	K1=6.867 K(Cu+HL)=1.63 K(CuHL+HL)=1.11 K(CuL+H)=4.95 K(CuL+H)=4.95	1983HTa (40909)	3629

By calorimetry: DH(K1)=-14.2 kJ mol⁻¹, DH(Cu+HL)=1.6, DH(CuHL+HL)=9.6.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	C	M	K1=7.73 B2=14.46 B(CuH-1L)=-0.97 B(CuHLA)=17.24 B(CuLA)=12.29 B(CuH-1LA)=4.92	2004SSa (40979)	3630

HA is 6-aminopenicillanic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	alc/w	25°C	40%	C		K1=8.94 B2=16.11 B(CuHL)=5.63	2003DKa (40980)	3631

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C	M	K1=8.26 K(CuL+A)=3.80 B(CuLA)=12.06 K(CuL+B)=3.71 B(CuLB)=11.97	1999AAa (40981)	3632

K(CuL+C)=3.42, B(CuLC)=11.68, K(CuL+D)=3.41, B(CuLD)=11.67.

HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.

Cu++ gl diox/w 25°C 50% M M K1=8.32 B2=16.37 1999HEa (40982)3633
K(CuA+L)=2.86

Medium: 50% v/v dioxane/H2O, 0.1 M NaNO3. H2A: tetracycline.

Cu++ gl KCl 25°C 0.20M C K1=7.76 B2=14.27 1998KMa (40983)3634

Cu++ gl NaNO3 25°C 0.10M M M K1=7.86 B2=14.60 1997SKc (40984)3635
B(CuAL)=12.75
B(CuH-1AL)=5.88

HA is glycyl-DL-leucine.

Cu++ gl KNO3 25°C 0.10M C R K1=7.85 B2=14.52 1995BEa (40985)3636
IUPAC evaluation

Cu++ gl KNO3 25°C 0.10M M M K1=8.29 B2=15.33 1995SHc (40986)3637
K(Cu(ada)+L)=6.04
ada: N-(acetamido)-iminodiethanoic acid. K(H+L)=9.12.

Cu++ gl NaNO3 25°C 0.10M U K1=7.88 B2=14.67 1995ZWa (40987)3638
Data for DL-methionine.

Cu++ gl KNO3 35°C 0.20M C M K1=7.70 B2=14.31 1994YVa (40988)3639
B(Cu(P207)L)=15.33
B(Cu(P3010)L)=14.13
B(Cu(atp)L)=12.57

Cu++ gl NaClO4 37°C 0.15M U K1=8.01 B2=15.03 1993NKb (40989)3640

Cu++ gl NaClO4 25°C 0.20M U T M K1=8.23 B2=15.48 1993PPa (40990)3641
K(CuA+L)=7.70

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Cu++ gl KNO3 25°C 0.70M C K1=7.54 B2=13.86 1992AAc (40991)3642
K(Cu+OH+2L)=17.43

Cu++ gl KNO3 35°C 0.20M C M K1=7.70 1992YKa (40992)3643
B(Cu(edda)L)=18.60
K(Cu(edda)+L)=4.10

Cu++ gl NaCl 37°C 0.15M U M 1991Hwa (40993)3644
B(CuLA)=12.85

H2A is 7-oxabicyclo-[2,2,1]-hept-5-ene-2,3-dicarboxylic acid

Cu++ gl KCl 25°C 0.50M M T H K1=11.60 1988MAa (40994)3645
Data for 25-40 C.

Cu++ gl KNO3 35°C 0.20M C M K1=7.70 B2=14.31 1987PMa (40995)3646

Cu++ gl KCl 25°C 0.20M C K1=7.76 B2=14.29 1987SPa (40996)3647

Cu++ gl NaClO4 37°C 0.15M C M K1=7.490 B2=13.696 1984BPd (40997)3648
B(CuL(His))=16.731

Cu++ gl KCl 25°C 0.20M U K1=7.55 B2=14.05 1982FGa (40998)3649

Cu++ gl KNO3 25°C 0.10M U M T K1=7.85 B2=14.53 1977BPa (40999)3650
B(CuL(His))=17.271

Cu++ gl KNO3 25°C 0.10M C T K1=7.85 B2=14.51 1975IPb (41000)3651

Cu++ oth KNO3 20°C 0.10M U K1=8.1 B2=14.80 1964J0a (41001)3652
Method: paper electrophoresis

Cu++ gl KNO3 25°C 0.10M U T K1=7.87 B2=14.72 1964LMa (41002)3653

Cu++ gl NaClO4 20°C 0.15M U K1=8.00 B2=15.23 1963HPa (41003)3654

Cu++ vlt oth/un 25°C 0.02M U B2=14.75 1954Lda (41004)3655
Medium:ca. 0.02 KH2PO4-K2HPO4

Cu++ gl oth/un 20°C 0.01M U B2=14.7 1950ALa (41005)3656

C5H11NO2S HL CAS 2442-39-9 (8307)
3-(2-Aminoethyl)thiopropionic acid;

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

Cu++ gl KNO3 25°C 0.50M U H K1=6.24 B2=10.75 1983HTa (41138)3657
K(Cu+HL)=1.19
K(CuL+H)=4.45

By calorimetry: DH(K1)=-15.4 kJ mol⁻¹, DH(K2)=-38.6, DH(Cu+HL)=1.8.

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

Cu++ oth NaClO4 35°C 0.10M U K1=9.50 B2=16.90 1998GAc (41221)3658
Method: electrophoresis. Medium: 0.10 M HClO4, 0.01 M H2L

Cu++ gl KNO3 25°C 0.15M U K1=16.5 B2=21.70 1962KRa (41222)3659

Cu++ vlt oth/un 25°C 0.17M U B2=15.13 1961KPa (41223)3660
Medium: phosphate buffer

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

Cu++ gl NaClO4 25°C 1.00M C I K1=7.80 B2=14.54 1981CPb (41288)3661
In 2.0 M NaClO4: K1=8.02, B2=15.10

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

Cu++ gl NaNO3 25°C 0.10M U K1=7.77 B2=14.50 1995ZWa (41301)3662

Data for DL-selenomethionine.

C5H11NO3 HL CAS 93715-84-5 (3626)

N-(2'-Hydroxyethyl)-3-aminopropanoic acid; H2N.CH2.CH(CH2.CH2.OH).COOH

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

Cu++ gl KCl 20°C 0.10M U K1=7.40 B2=12.25 1964ULa (41307)3663

K(CuH-1L+H)=7.15

C5H11NO3S HL CAS 6367-98-2 (3634)

S-(2'-Hydroxyethyl)-L-cysteine; H2N.CH(CH2.S.CH2.CH2.OH).COOH

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

Cu++ gl KNO3 20°C 0.10M U K1=7.64 B2=14.15 1968HLA (41314)3664

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

Cu++ EMF non-aq 25°C 100% U B2=18.2 1987USa (41317)3665

Medium: DMF, 0.1 M LiClO4

Cu++ ISE non-aq 25°C 100% U K1=12.3 B2=25.0 1984LSb (41318)3666

Medium: DMSO, 0.1 M NaClO4; Ag-electrode. In MeOH: K1=11.7, B2=23.9

Cu++ vlt non-aq 20°C 100% U M 1973CLa (41319)3667

K(CuL2+py)=-0.02

K(CuL2+A)=0.46

K(CuL2+B)=-0.30

K(CuL2+C)<-0.5

Medium: MeCN, 0.1 M Et4NClO4. Method: voltammetry

A=4-ethylpyridine, B=2,4-lutidine, C=2,6-lutidine

Cu++ sp alc/w 25°C 75% U B2=8.80 1970PNa (41320)3668

Medium: 75% MeOH, 0.3 M NaClO4

Cu++ sp non-aq ? 100% U M 1968SRg (41321)3669

K(Cu(HA)2+HL=CuHAL+H2A)=2.5

$K(\text{CuHAL}+\text{HL}=\text{CuL}_2+\text{H}_2\text{A})=2.1$
 $K(\text{Cu}(\text{HA})_2+2\text{HL}=\text{CuL}_2+2\text{H}_2\text{A})=4.6$
 $K(\text{Cu}(\text{HA})_2+\text{CuL}_2)=0.35$

Medium: CCl₄. H₂A=dithizone

 Cu++ sp alc/w 20°C 75% U K1=14.9 B2=28.8 1956JAb (41322)3670

C₅H₁₁N₂O₇P H₃L CAS 6665-42-5 (3636)
 O-Phosphorylserylglycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ISE	KN ₃	25°C	0.15M	U		K1=7.89 B2=11.6 B(CuHL)=11.58 K(Cu+HL+L)=18.0 K(CuH-1L+H)=5.79	19660Sb (41380)	3671

Cu/Hg and glass electrodes

C₅H₁₁N₃O₂ H₂L CAS 15855-91-1 (4328)
 Glycyl-beta-alanineamide; H₂N.CH₂.CO.NH.CH₂.CH₂.CO.NH₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KN ₃	25°C	0.10M	U		K(Cu+H ₂ L)=5.22 K(CuHL+H)=5.42 K(CuL+H)=8.99	1973YNb (41385)	3672

C₅H₁₁N₃O₂ L CAS 121532-10-3 (8092)
 N-(3-Aminopropyl)oxamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KN ₃	25°C	0.10M	C		B(CuH-1L)=0.97 B(CuH-2L)=-8.09 B(CuH-3L)=-19.00 B(Cu ₂ H-2L)=-1.77	1996CHd (41387)	3673

B(Cu₃H-4L₂)=-5.3, B(Cu₃H-5L₂)=-13.65

C₅H₁₁N₃O₂ L (7334)
 N-2-Aminoethyl-2-hydroxyiminopropanamide; CH₃.C(:NOH).CONH.CH₂CH₂NH₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KN ₃	25°C	0.10M	C		K1=10.01 B2=13.4 B(CuHL)=15.91 B(CuH-1L)=-0.84 B(CuHL ₂)=22.7?	19950Sa (41389)	3674

N-Methyl analogue: K1=7.99, B(CuH-1L)=0.78, B(CuH-1L₂)=3.81, B(CuH-2L₂)=-6.67

B(Cu2H-1L2)=11.32

C5H11N3O2 H2L CAS 101854-68-6 (4327)
beta-Alanylglycineamide; H2N.CH2.CH2.CO.NH.CH2.CO.NH2

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

Cu++ gl KNO3 25°C 0.10M U 1973YNb (41391)3675

K(Cu+H2L)=5.16

K(CuHL+H)=5.39

C5H11O8P H2L 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

Cu++ gl mixed 25°C 30% M K1=3.769 1993BCg (41405)3676

Medium: 0.1 M NaNO3 in 30% Dioxane/H2O (v/v)

For 0.1 M NaNO3 in 50% Dioxane/H2O (v/v) K1=4.376

Cu++ gl NaNO3 25°C 0.10M M K1=2.962 1993CBb (41406)3677
K(Cu(bpy)+L)=3.010

Cu++ gl NaNO3 25°C 0.10M U I K1=2.96 1992MSd (41407)3678

Also data for 20-50% v/v dioxane/H2O, 0.10 M NaNO3.

In 50% dioxane/H2O, 0.10 M NaNO3: K1=4.38.

Cu++ gl diox/w 25°C 30% C I K1=3.77 1989LCb (41408)3679
Medium: 30% dioxan/H2O, 0.1 M NaNO3. In 0%, K1=2.96; 20%, K1=3.45;
40%, K1=4.09; 50%, K1=4.38

Cu++ gl NaNO3 25°C 0.10M C M K1=2.96 1989MSd (41409)3680
K(Cu(bpy)+L)=3.01; K(Cu(phen)+L)=3.00

Cu++ gl NaNO3 25°C 0.10M C K1=2.96 1988MSa (41410)3681

C5H12NO3P H2L CAS 67550-64-5 (6434)
1-Aminocyclopentylphosphonic acid; C5H8(NH2)(PO3H2)

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

Cu++ gl KCl 25°C 0.20M C K1=8.46 B2=15.56 1991KJa (41428)3682

B(CuHL)=13.05

B(CuH-1L2)=3.81

C5H12NO3P H2L PYPH (223)
Piperidine-2-phosphonic acid; C5H10N.PO3H2

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

Cu++ gl KNO3 24°C 0.10M U K1=8.76 1989YKa (41430)3683
K(Cu+HL)=2.85

C5H12NO4P H2L (6435)
(1-Amino-2-carboxyethyl)ethylphosphinic acid; H00C.CH2.CH(NH2).PO(C2H5)(OH)

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

Cu++ gl KCl 25°C 0.20M C K1=6.53 B2=11.62 1991KJa (41435)3684
B(CuH-1L2)=1.68

C5H12NO4P HL CAS 51276-47-2 (5704)
2-Amino-4-(methylhydroxyphosphoryl)butanoic acid;

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

Cu++ gl NaCl04 23°C 0.10M U K1=7.19 1990YTa (41437)3685

Cu++ gl NaCl 25°C 0.10M U 1989YTa (41438)3686
B(Cu2L)=7.19
B(Cu3L)=9.11

C5H12NO6P H3L (6968)
N-(Phosphonomethyl)threonine; H203P.CH2.NH.CH(CH(OH)CH3)COOH

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

Cu++ gl KCl 25°C 0.20M C K1=11.51 B2=16.08 1994JKa (41448)3687
B(CuHL)=15.30
B(CuH-1L)=2.63
B(CuH2L2)=28.69
B(CuHL2)=23.90

B(CuH-1L2)=6.26, B(CuH-2L2)=-4.24.

C5H12N2 L CAS 38932-70-6 (4301)
1,1-Di(aminomethyl)cyclopropane; C3H4(CH2.NH2)2

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

Cu++ gl oth/un 25°C U K1=10.12 B2=17.76 1972NBa (41450)3688

C5H12N2 L (4652)
2-Aminomethylpyrrolidine;

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

Cu++ gl KNO3 25°C 1.00M U M B2=18.81 1989KUa (41453)3689
B(CuL(D-Pro))=17.90
B(CuL(L-Pro))=18.3

Ligand as S-isomer. Data also for other enantioselective ternary ligands

C5H12N2 L CAS 171868-16-9 (7832)
cis-1,2-Cyclopentanediamine;

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

Cu++ gl KCl 25°C 0.10M C K1=10.59 B2=19.75 2001KSa (41455)3690
For the trans-isomer: K1=8.58, B2=15.81. B(CuH-1L2)=8.97

C5H12N2O HL CAS 93099-93-5 (3045)
3-Amino-3-methylbutan-2-one oxime; CH3.C(NH2)(CH3).C(:NOH).CH3

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

Cu++ gl NaClO4 25°C 0.02M U I 1982PNa (41465)3691
K(Cu+HL)=8.03

In 50% dioxan/H2O: K(Cu+HL)=8.00

Cu++ gl oth/un 24°C 0.27M U 1958MUa (41466)3692
K(Cu+2HL=Cu(HL)2)=11.9
K(Cu(HL)2=H+CuHL2)=-4.1
K(CuHL2=H+CuL2)=-9.9

C5H12N2O L (3046)
Sarcosine dimethylamide; CH3.NH.CH2.CO.N(CH3)2

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

Cu++ gl oth/un 25°C 0.01M U K1=5.60 B2=10.54 1959DLc (41471)3693

C5H12N2O L Valinamide CAS 3474-22-1 (5977)
Valinamide; NH2.CH(CH(CH3)2).CO.NH2

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

Cu++ gl KCl 25°C 0.10M C K1=4.55 B2= 8.14 1989DFa (41482)3694
B(CuH-1L)=-1.99
B(CuH-1L2)=1.82
B(CuH-2L2)=-5.66

Cu++ gl KCl 25°C 0.50M C K1=4.55 B2=8.15 1988DFb (41483)3695
B(CuH-1L)=-1.99
B(CuH-1L2)=1.82
B(CuH-2L2)=-5.66

C5H12N2OS2 HL CAS 54887-93-3 (8360)
N-(2-Aminoethyl)-N-2-(hydroxyethyl)dithiocarbamic acid;

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

Cu++ sp KNO3 20°C 0.10M C 1978SHa (41485)3696
K(Cu+2HL=Cu(HL)2)=18.6

EDTA used as a competitive ligand.

C5H12N2O2 HL Ornithine CAS 1069-31-4 (46)
2,5-Diaminopentanoic acid; H2N.CH2.CH2.CH2.CH(NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	C	M		K1=11.72 B2=15.79 B(CuH-1L)=1.75 B(CuHL)=17.89 B(CuLA)=16.69 B(CuHLA)=22.57	2004SSa (41515)	3697

HA is 6-aminopenicillanic acid.

Cu++	gl	NaNO3	25°C	0.10M	M	M		K1=11.9 B2=16.30 B(CuHL)=18.00 B(CuAL)=18.28 B(CuAHL)=27.39	2002SKa (41516)	3698
------	----	-------	------	-------	---	---	--	--	-----------------	------

A is picolylamine

Cu++	gl	KNO3	25°C	0.10M	C	H		B2=15.53 B(CuHL)=17.81 B(CuH2L2)=34.48 B(CuHL2)=25.50 K(Cu+HL)=7.32	2000CCc (41517)	3699
------	----	------	------	-------	---	---	--	---	-----------------	------

Calorimetry: DH(B2)=-55.3 kJ mol⁻¹, DS(B2)=112 J K⁻¹ mol⁻¹; DH(CuHL)=-73.6
DS=94; DH(CuH2L2)=-151, DS=154; DH(CuHL2)=-107.2, DS=128. Additional data.

Cu++	gl	KCl	30°C	0.16M	U	I		K1=13.01 B2=15.42 B(CuHL)=18.21 B(CuH2L2)=34.49 B(CuH4L2)=42.62	1997BSb (41518)	3700
------	----	-----	------	-------	---	---	--	--	-----------------	------

Also data for 5.8-36.8% w/w urea/H2O.

Cu++	gl	NaClO4	37°C	0.15M	U	M		B(CuHAL)=24.86	1997NAb (41519)	3701
------	----	--------	------	-------	---	---	--	----------------	-----------------	------

H2A is cysteic acid.

Cu++	gl	NaNO3	25°C	0.10M	M	M		K1=12.25 B2=15.62 B(CuAL)=14.86 B(CuH-1AL)=5.79 B(CuHL)=18.04	1997SKc (41520)	3702
------	----	-------	------	-------	---	---	--	--	-----------------	------

HA is glycyl-DL-leucine.

Cu++	gl	KNO3	25°C	0.10M	M	M		K1=12.97 B2=17.34 K(Cu(ada)+L)=4.99 B(CuHL)=18.34	1995SHc (41521)	3703
------	----	------	------	-------	---	---	--	---	-----------------	------

ada: N-(acetamido)-iminodiethanoic acid. K(H+L)=10.43, K(2H+L)=19.21.

Cu++	gl	NaCl04	37°C	0.15M	U	M	1990NTb (41522)3704
							B(Cu(glu)L)=16.70 K(Cu(glu)+L)=8.18
Cu++	gl	NaCl04	37°C	0.15M	U	M	1987SNc (41523)3705
							B(CuHL(Asn))=24.72 B(CuL(Asn))=15.12 K(Cu(Asn)+H+L)=16.83 K(CuHL+Asn)=7.07
Cu++	gl	NaCl04	37°C	0.15M	U	M	1985NAc (41524)3706
							B(CuH2L2)=34.32 B(CuHL)=17.67 B(CuHL2)=26.12
							B(CuHL(bpy))=24.58, B(CuL(bpy))=17.34
Cu++	gl	KNO3	25°C	0.10M	C	M	K1=10.53 B2=15.60 1984DAb (41525)3707
							B(CuHL)=17.80 B(CuHL2)=25.38 B(CuH2L2)=34.45 B(CuHLA)=27.27
							H2A=Noradrenaline
Cu++	gl	NaCl04	37°C	0.15M	U	M	1982NSd (41526)3708
							B(Cu(imidazole)HL)=21.43 B(Cu(imidazole)L)=14.37 B(Cu(imidazole)2HL)=24.98
Cu++	gl	NaCl04	37°C	0.15M	U	M	1982NVb (41527)3709
							B(CuH2(histamine)L)=31.46 B(CuH(histamine)L)=26.87 B(Cu(histamine)L)=18.91
Cu++	gl	NaCl04	37°C	0.15M	U		1981NSa (41528)3710
							B(CuHL)=17.67 B(CuHL2)=26.12 B(CuH2L2)=34.32
Cu++	gl	KNO3	25°C	0.10M	U	M	B2=15.71 1978SYa (41529)3711
							B(CuHL)=17.95 B(CuH2L2)=34.65 B(CuHL2)=25.73 B(CuH(Aspartate)L)=25.65
							B(Cu(Asp)L) = 15.29
Cu++	gl	KNO3	25°C	0.10M	U	M	1977BP a (41530)3712
							B(CuL(His))=17.24 B(CuHLA)=27.37 B(CuHL(His))=27.49

HA=D-His

Cu++ gl KCl 25°C 0.20M C M 1977NGa (41531)3713

B(CuH-1LA)=4.89
B(CuH-1LB)=4.80
B(CuH-1LC)=4.55
K(CuH-1L2+A=CuH-1LA+L)=0.43

K(CuH-1L2+B=CuH-1LB+L)=0.17, K(CuH-1L2+C=CuH-1LC+L)=0.42

HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine

Cu++ gl KNO3 25°C 0.10M C 1976BPb (41532)3714

B(CuHL)=17.81
B(CuH2L2)=34.45

Cu++ gl KNO3 25°C 0.10M U I K1=11.3 B2=15.92 1970CMc (41533)3715

K(Cu+HL)=7.87
K(CuHL+HL)=6.18

I=1.0 M, K(Cu+HL)=7.17, K(CuHL+HL)=6.14

Cu++ gl KNO3 25°C 0.10M U 1970CMc (41534)3716

K(CuL+H)=7.1
K(CuHL2+H)=8.53

Cu++ gl oth/un 20°C 0.01M U B2=13.0 1952ALa (41535)3717

C5H12N2O2 HL CAS 36207-49-5 (834)

2-Amino-N-hydroxypentanamide; CH3.CH2.CH2.CH(NH2).CO.NH.OH

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

Cu++ gl KCl 25°C 0.50M C K1=10.609 B2=19.70 1986LEb (41588)3718

B(CuH-1L2)=9.838
B(Cu4L5)=62.616

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

Cu++ gl NaCl 25°C 0.15M M M K1=10.71 B2=20.13 2003MYa (41597)3719

B(Cu3L4)=49.44
B(CuLA)=18.31
B(CuH-1LA)=10.03
B(CuLA2)=21.44

B(CuH-1L2A)=12.81. HA is glycylglycine.

Cu++ gl KCl 25°C 0.20M C M K1=10.35 B2=19.02 2001KBa (41598)3720

B(CuH-1L2)=9.55
B(Cu2H-1L2)=19.92

B(CuHL(dien))=27.74

B(CuL(dien))=20.57

K(Cu(dien)+L)=4.56

Cu++ gl KCl 25°C 0.20M C K1=10.48 B2=19.41 19960Ga (41599)3721
B(CuH-1L2)=9.85
B(Cu2H-1L2)=20.20

Cu++ gl NaCl 37°C 0.15M M M K1=10.78 B2=20.06 1992MMd (41600)3722
B(Cu3L4)=49.46

B(CuNiL2)=22.77, B(CuNiH-2L2)=10.94, B(CuNiH-3L3)=11.44.

B(CuZnL2)=21.90, B(CuZnH-1L2)=16.72, B(CuZnH-2L2)=10.01, B(CuZnH-3L3)=9.57

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

Cu++ gl KNO3 25°C 0.10M C 1974NBb (41610)3723

K(Cu+HL)=7.22

K(CuHL+HL)=6.14

K(CuHL=CuL+H)=-6.30

K(CuHL2=CuL2+H)=-9.27

Cu++ gl KNO3 20°C 0.10M U K1=7.11 B2=13.36 1968HLA (41611)3724

C5H12N2O2S2 HL CAS 22801-37-2 (3637)

L-2-Amino-3-(2'-aminoethyldithio)propanoic acid;

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

Cu++ gl NaClO4 20°C 0.15M U K1=7.08 B2=13.80 1963HPa (41616)3725

C5H12N2O3S HL (3638)

2-Amino-3-(2'-aminoethylsulfinyl)propanoic acid;

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

Cu++ gl KNO3 20°C 0.10M U K1=6.56 B2=12.00 1968HLA (41618)3726

C5H12N2O4S HL CAS 34234-57-6 (3639)

2-Amino-3-(2'-aminoethylsulfonyl)propanoic acid;

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

Cu++ gl KNO3 20°C 0.10M U K1=6.30 B2=11.62 1968HLA (41620)3727

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
Cu++	sp	NaNO3	25°C	0.10M	U		K1=8.85 B2=14.15	1989APb (41637)	3728

C5H12O5		L		Arabitol			CAS 488-82-4	(5403)	
Arabitol; HO.CH2.HOCH.HCOH.HCOH.CH2.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ISE	KNO3	25°C	0.70M	U		K1=0.09	1986HAe (41673)	3729

C5H12O5		L		Ribitol			CAS 488-81-3	(3009)	
Ribitol, Adonitol; HO.CH2.HCOH.HCOH.HCOH.CH2.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ISE	KNO3	25°C	0.70M	U		K1=-0.23	1986HAe (41677)	3730

C5H12O5		L		Xylitol			CAS 87-99-0	(2139)	
Xylitol; HO.CH2.HCOH.HOCH.HCOH.CH2.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ISE	KNO3	25°C	0.70M	U		K1=-0.17	1986HAe (41681)	3731

C5H13NO		L					CAS 108-16-7	(947)	
1-Dimethylaminopropan-2-ol; CH3.CH(OH).CH2.N(CH3)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	vlt	KNO3	25°C	1.0M	U		K(Cu(OH)2L2)=20.33	1994KNa (41721)	3732
Method: Pseudopolarography with differential pulse anodic stripping voltam.									

Cu++	vlt	KNO3	25°C	0.01M	U		B(CuL2(OH)2)=18.24	1990KNa (41722)	3733

C5H13NO		L					CAS 2508-29-4	(3627)	
5-Amino-1-pentanol; H2N(CH2)5.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	vlt	NaClO4	20°C	0.70M	C		K1=6.2	1991CSa (41725)	3734
Method: differential pulse polarography.									

C5H13NO2		L					CAS 35152-18-2	(4334)	
1,1'-Imino-2-ethanol-3-propanol; HO.CH2.CH2.NH.CH2.CH2.CH2.OH									

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

Cu++ vlt KNO3 25°C 0.50M U 1971HSa (41729)3735

B(CuL(OH)2)=18.4
B(CuL(OH)3)=19.3
B(CuL2(OH)2)=19.4

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
Cu++	sp	none	25°C	0.0	U		K1=5.22 B2=8.19	1986SAa (41739)	3736

Cu++	gl	oth/un	25°C	0.10M	U		K1=4.9 B2=9.10 K3=3.4 K4=2.0	1965DOb (41740)	3737
------	----	--------	------	-------	---	--	------------------------------------	-----------------	------

C5H13NO4 L (7116)

(2R,3S,4S)-5-Aminopentane-1,2,3,4-tetrol; HOCH2CH(OH)CH(OH)CH(OH)CH2NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C			1995JKb (41747)	3738

B(Cu2H-2L2)=1.02
B(Cu2H-3L2)=-5.69
B(Cu2H-4L2)=-14.14
B(Cu2H-5L2)=-23.08

Data also for the (2R,3R,4R)- isomer

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
Cu++	gl	KCl	25°C	0.10M	M		K1=11.18 K(Cu+HL)=9.12	1978GMf (41761)	3739

C5H13NO8P2 H4L (3714)

N-(2'-Carboxyethyl)iminobis(methylenephosphonic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U		K1=13.0	1965WRa (41767)	3740

K(Cu+HL)=7.2
K(CuL+H)=4.71

C5H13N3 L (1866)

cis-3,5-Diaminopiperidine; C5H9N(NH2)2

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

Cu++ gl KCl 25°C 0.10M C K1=11.42 B2=20.14 2000PSb (41790)3741

C5H13N3O HL (6983)
3-(Dimethylamino)propanamidoxime; (CH3)2N.CH2.CH2.C(:NOH)NH2

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

Cu++ gl NaCl 25°C 1.00M C 19920Sb (41797)3742
K(Cu+HL)=5.61
B(-7,5,4)=-0.26
B(-8,5,4)=-5.48

B(p,q,r); pH+qCu+r(HL)=Hp(Cu)q(HL)r

C5H13N5O L CAS 53644-71-4 (3048)
1-(2-Methoxyethyl)biguanide; CH3O.CH2.CH2.NH.C(:NH).NH.C(:NH).NH2

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

Cu++ sp KCl 30°C 0.20M U K1=9.77 B2=16.27 1960SRa (41800)3743

C5H13N5O HL (3047)
1-(3-Hydroxypropyl)biguanide; HO.CH2.CH2.CH2.NH.C(:NH).NH.C(:NH).NH2

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

Cu++ sp KCl 30°C 0.20M U K1=9.57 B2=16.99 1960SRa (41803)3744

C5H14N02P HL (7265)
Aminomethyl(butylphosphinic acid); H2NCH2PO(OH)C4H9

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

Cu++ gl KNO3 25°C 0.10M C K1=5.37 B2=6.27 1996RLa (41815)3745
B(CuH-1L)=-4.95

C5H14N03P H2L CAS 13138-37-9 (1985)
1-Aminopentylphosphonic acid; CH3.(CH2)3.CH(NH2).PO3H2

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

Cu++ gl KNO3 25°C 0.10M U K1=8.97 B2=16.27 1979WNb (41821)3746
B(CuHL)=13.25
B(CuHL2)=21.60
B(CuH2L2)=25.9
B(CuH-1L)=0.8

Cu++ gl KNO3 25°C 0.10M U K1=10.22 B2=16.12 1972WNb (41822)3747
B(CuHL)=13.34
B(CuH2L2)=26.72
B(CuHL2)=21.75

C5H14NO3P H2L CAS 82101-93-7 (544)
2-(2-Dimethylaminopropyl)phosphonic acid; (CH3)2N.C(CH3)2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U		K1=8.27 B(CuHL)=14.70 K(Cu+L=Cu(OH)L+H)=0.91 B(CuH2L2)=28.92	1981WNa (41825)	3748

C5H14NO3P H2L CAS 72696-97-0 (1990)
Diethylaminomethylphosphonic acid; (C2H5)2N.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U		K1=7.46 B(CuHL)=14.12 B(CuH2L2)=27.56 B(CuH-1L)=-0.02	1979WNb (41830)	3749

C5H14NO5P H2L CAS 5994-60-5 (1302)
N,N'-Bis(2-hydroxyethyl)aminomethylphosphonic acid; (HO.CH2.CH2)2N.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	20°C	0.10M	U		K1=9.52 K(Cu+HL)=3.43 K(CuL+OH)=6.92	1970KMa (41841)	3750

C5H14N2 L CAS 462-94-2 (359)
1,5-Diaminopentane; H2N.(CH2)5.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	20°C	0.10M	C	M	K1=8.62 B2=13.40 B(CuHL)=15.83 B(CuH-1L)=0.06 B(Cu(dien)L)=20.42 B(Cu(3,3-tri)L)=16.64	1997LBc (41859)	3751

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
Cu++	gl	oth/un	25°C		U		K1=9.92 B2=17.22	1972NBa (41867)	3752
Cu++	gl	KNO3	30°C	1.0M	U	T H	K1=9.94 B2=17.39	1952HAa (41868)	3753

DH(K1)=-50.2 kJ mol⁻¹, DS=29; DH(K2)=-50.2, DS=-29. 0 C: K1=10.95, K2=8.25;

50 C: K1=9.41, K2=6.86

Cu++ gl KCl 30°C 1.0M U K1=9.94 B2=17.39 1952HAa (41869)3754

C5H14N2 L CAS 111-33-1 (938)
2,6-Diazaheptane, N,N'-Dimethyl-1,3-diaminopropane; CH3.NH.CH2.CH2.CH2.NH.CH3

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

Cu++ gl KCl 25°C 0.50M U K1=8.38 1974KZa (41879)3755

C5H14N2 (4303)
N,N,N'-Trimethyl-1,2-diaminoethane; L

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

Cu++ gl KNO3 25°C 0.10M C M K1=8.738 B2=13.20 2002Y0a (41884)3756

B(CuH-1L)=0.984

B(CuH-2L)=-9.387

B(CuAL)=14.268

B(CuH-1AL)=6.060

B(CuHBL)=24.614, B(CuBL)=16.438, B(CuH-1BL)=6.687; B(CuCL)=14.485,
B(CuH-1CL)=6.261. HA is gly-gly, H2B is gly-L-tyr, HC is gly-L-trp.

C5H14N2 L CAS 19522-62-7 (3031)

N-Isopropylethylenediamine; (CH3)2.CH2.NH.CH2.CH2.NH2

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

Cu++ gl KNO3 25°C 0.50M U T K1=9.07 B2=16.52 1952BMa (41895)3757

0 C: K1=9.46, K2=8.00

Cu++ gl KNO3 var 0.50M U H 1952BMb (41896)3758

0-25 C. At 0 C: DH(K1)=-24.2 kJ mol⁻¹, DS=92.0 J K⁻¹ mol⁻¹; DH(K2)=-34.3,
DS=29.3

C5H14N2 L CAS 111-39-7 (3030)

N-n-Propylethylenediamine; CH3.CH2.CH2.NH.CH2.CH2.NH2

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

Cu++ gl KNO3 25°C 0.50M U T K1=9.98 B2=18.14 1952BMa (41901)3759

0 C: K1=10.49, K2=8.70

Cu++ gl KNO3 var 0.50M U H 1952BMb (41902)3760

0-25 C. At 0 C: DH(K1)=-31.8 kJ mol⁻¹, DS=83.6 J K⁻¹ mol⁻¹; DH(K2)=-33.4, DS=46

C5H14N2O L CAS 52319-87-1 (3628)

N-(2'-Hydroxyethyl)-1,3-diaminopropane; H2N.CH2.CH2.NH.CH2.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	oth/un	25°C	0.0	U	I		1964NMa (41906)	3761
							K(2CuOHL=Cu2(OH)2L2)=2.59		
							K(Cu(OH)2L+H)=10.17		
							K(Cu+OH+L)=17.35		
In I M NaClO4: K(CuOHL+H)=7.07+1.018SQRTI/(1+SQRTI),									
K(Cu2(OH)2L2+2H)=11.55+1.018SQRTI/(1+SQRTI)									

Cu++	gl	NaClO4	25°C	var	U	I		1963NMa (41907)	3762
K1=10.42+0.690I-0.252I^(3/2)+0.055I^(2)									

		C5H14N2O		L			CAS 36753-44-3	(3050)	
N-(2-Hydroxypropyl)ethylenediamine; H2N.CH2.CH2.NH.CH2.CH(OH).CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	oth/un	25°C	0.50M	U		K1=10.40 B2=17.80	1960HDa (41912)	3763

		C5H14N2S		L			CAS 56973-49-0	(1855)	
1,6-Diamino-3-thiahexane; H2N.CH2.CH2.S.CH2.CH2.CH2.NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	U		K1=10.035 B2=12.90	1979HGb (41921)	3764
							K(CuL+H)=4.77		
							K(CuL2+H)=9.7		
							K(CuL+OH)=4.60		

Cu++	cal	KNO3	25°C	0.50M	C	H		1979HGd (41922)	3765
DH(K1)=-59.0 kJ mol-1, DS(K1)=-5.8 J K-1 mol-1; DH(K2)=-32.7, DS(K2)=-54;									
DH(CuL+OH)=-13.4, DS=43; DH(Cu+HL)=-29.3, DS=-9; DH(CuL+HL)=-31.8, DS=-59.									

		C5H14N2S		L			CAS 53204-43-6	(1853)	
1-Amino-3-aza-6-thiaheptane; H2N.CH2.CH2.NH.CH2.CH2.S.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	C	H	K1=11.377 B2=17.68	1977HGa (41928)	3766
DH(K1)=-58.5 kJ mol-1, DS(K1)=21.3 J K-1 mol-1									
DH(K2)=-45.3 kJ mol-1 DS(K2)=-31.4 J K-1 mol-1									

		C5H14N2S		L			(1299)		
2-Aza-5-thia-7-amino-heptane; CH3.NH.(CH2)2.S.(CH2)2.NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	cal	KNO3	25°C	0.50M	C	H	K1=8.619	1983HHc (41932)	3767
DH(K1)=-41.3 kJ mol-1.									

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
Cu++	cal	KNO3	25°C	0.50M	C	H		1980SVa (41967)	3773
DH1=-63.6 kJ mol ⁻¹ , DS1=-3.3, DH(K2)=-31.8, DS2=41 + CuHL, CuHL2 and Cu(HL)2									
Cu++	gl	KNO3	20°C	0.10M	U		K1=11.55 K(Cu+HL)=8.33 K(Cu+H2L)=2.01	1970KAd (41968)	3774

C5H15N3 L CAS 34066-95-0 (1066)
1,4,7-Triazaooctane; H2N.CH2.CH2.NH.CH2.CH2.NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.13M	U		K1=15.32 K(CuL+OH)=5.07	1971AAa (41976)	3775
Cu++	gl	KNO3	25°C	0.11M	U	M	K(CuL+Gly)=4.65 K(CuL+Val)=3.99 K(CuL+Sar)=3.98 K(CuL+b-Ala)=3.15	1971AAa (41977)	3776

C5H15N3 L CAS 13531-52-7 (738)
1,4,8-triazaooctane, N-(2-Aminoethyl)propane-1,3-diamine; H2NCH2CH2NHCH2CH2CH2NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	20°C	0.10M	C		K1=16.76 B2=20.59	2001GJb (41985)	3777
Cu++	gl	NaClO4	25°C	0.10M	C	H	K1=16.5 K(Cu+HL)=8.8 *K(CuL)=-9.5	1998IHa (41986)	3778
DH(K1)=-83.5 kJ mol ⁻¹ , DS=33.0 J mol ⁻¹ K-1									

Cu++	gl	KNO3	20°C	0.10M	C	M	K1=16.76 B2=20.59 B(CuH-2L)=-3.63 B(Cu(en)L)=20.18 B(CuAL)=20.25 B(CuBL)=20.45	1997LBc (41987)	3779
------	----	------	------	-------	---	---	--	-----------------	------

A: 1,3-diaminopropane. B(CuCL)=19.59. B: 2,3-diaminopropanoic acid;
C: 2,4-diaminobutanoic acid.

Cu++	cal	KNO3	25°C	0.50M	U	H		1974BFb (41988)	3780
DH(K1)=-80.42, DH(K2)=-25.52, DH(M+HL=MHL)=-48.12, DH(MHL+HL=M(HL)2)=-24.69 and DH(ML+OH=MLOH)=-9.54 kJ mol ⁻¹ .									

Cu++	gl	KNO3	25°C	0.10M	U		K1=16.4 B2=19.8	1973AHc (41989)	3781
------	----	------	------	-------	---	--	-----------------	-----------------	------

C5H16N4 L (3614)

Tetrakis(aminomethyl)methane; $C(CH_2.NH_2)_4$

Cu++ gl KNO3 25°C 0.10M U 1968ZBa (42007)3783

Cu++ g1 KNO3 25°C 0.10M U K1=11.0 B2=19.43 1966ZBa (42008)3784

$$K(\text{Cu}+\text{H}_2\text{L})=5.4$$
$$K(\text{CuL}+\text{HL})=6.9$$

C5H17N013P4 H5L ADOPPH CAS 82372-37-0 (228)
1-Hydroxy-3-(N,N-bis(methylenephosphonic)-aminopropylidene)-1,1-diphosphonic acid;

Cu++ g1 KNO3 25°C 1.0M U K1=16.1 1982SBa (42015)3785

$$K(\text{Cu}+\text{H}_2\text{L})=9.8$$
$$K(\text{Cu}+\text{H}_4\text{L})=6.1$$

C6HOC15 HL CAS 87-86-5 (506)
Pentachlorophenol; H0.C6.C15

Cu++ ISE none 25°C 0.0 M K1=4.3 1997DFc (42024)3786

By spectrophotometry, $K_1=4.1$.

C6H3N3O7 HL Picric acid CAS 88-89-1 (593)

C6H3N3O7	HL	Picric acid	CAS 88-89-1 (593)
----------	----	-------------	-------------------

2,4,6-Trinitrophenol; $\text{HO.C}_6\text{H}_2(\text{NO}_2)_3$

Cu++ gl NaNO3 25°C 0.10M M M K1=7.99 B2=14.62 2002SKa (42077)3787

$$B(\text{CuAL}) = 17.32$$

A is picolylamine

Cu++ sp oth/un 21°C 0.40M U B2=2.70 1955BKa (42078)3788

Medium:0.2-0.6(some EtOH)

C6H3OC13 HL CAS 88-06-2 (508)

2,4,6-Trichlorophenol; HO.C6H2(Cl)3

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

Cu++ ISE none 25°C 0.0 M K1=5.0 1997DFc (42161)3789

Method: Cd ion selective electrode. Self medium. K1 calculated for I=0.

By spectrophotometry, K1=4.8.

C6H4NO2Cl 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

Cu++ gl diox/w 25°C 50% U K1=6.20 1961SHa (42174)3790

Medium: 50% dioxan, 0.1 M KNO3

C6H4N2O4 H2L CAS 89-01-0 (5801)

Pyrazine-2,3-dicarboxylic acid;

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

Cu++ sp non-aq 25°C 100% U IH K1=3.75 1986BCa (42205)3791

In dimethylacetamide, I= 0.05 M Bu4N.ClO4. In DMSO, K=2.84

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

Cu++ gl KCl 25°C 0.10M M K1=10.04 B2=17.8 1986HAd (42257)3792

C6H4N4O HL CAS 900-47-0 (3083)

4-Hydroxypteridine;

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

Cu++ gl oth/un 20°C 0.01M U K1=4.8 B2=9.5 1954AHb (42272)3793

C6H4N4O2 H2L Lumazine CAS 487-21-8 (3084)

2,4-Dihydroxypteridine (2,4-Pteridinediol)

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

Cu++ gl KNO3 25°C 0.10M C 1988K0a (42282)3794

K(Cu+HL)=15.45

K(Cu+2HL)=30.58

Cu++ gl oth/un 20°C 0.01M U B2=8.3 1953ALa (42283)3795

C6H5NO L Picolinaldehyde CAS 1121-60-4 (1186)
 2-Pyridinecarboxaldehyde; C5H4N.CHO

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

Cu++	gl	KNO3	25°C	0.10M	U	M		2000Nda (42365)	3796
------	----	------	------	-------	---	---	--	-----------------	------

B(Cu(val)L)=16.86
 B(Cu(val)L2)=19.41
 B(Cu(phe)L)=16.71
 B(Cu(phe)L2)=19.25

B(Cu(trp)L)=16.62, B(Cu(trp)L2)=19.42.

Cu++	gl	KNO3	25°C	0.10M	U	M	K1=2.65 B2= 4.99	1999Nda (42366)	3797
------	----	------	------	-------	---	---	------------------	-----------------	------

Data for ternary complexes with histidine.

Cu++	gl	NaNO3	30°C	0.50M	U	M		1979EDa (42367)	3798
------	----	-------	------	-------	---	---	--	-----------------	------

K(Cu+H-1L)=10.31
 K(Cu+2(H-1L))=20.00
 K(Cu+H-1L+malonate)=15.54
 B(CuL(malonate))=8.41

B(CuH2L(malonate))=15.18; B((CuL2(malonate))=11.10 plus other constants

Cu++	gl	NaNO3	30°C	0.50M	U	M		1979EDa (42368)	3799
------	----	-------	------	-------	---	---	--	-----------------	------

K(Cu+H-1L+oxalate)=16.31
 K(Cu+H-1L+2(oxalate))=19.79
 B(CuL(oxalate)2)=26.81
 B(CuHL(oxalate)2)=31.78

Cu++	sp	KCl	30°C	0.50M	U		K1=2.94 B2=4.75	1977EEa (42369)	3800
------	----	-----	------	-------	---	--	-----------------	-----------------	------

B3=6.32
 B4=8.52
 B(CuH-1L)=-1.94
 B(CuH-2L)=-8.56

Cu++	ISE	KNO3	25°C	0.10M	U		K1=2.94 B2=4.74	1976HEa (42370)	3801
------	-----	------	------	-------	---	--	-----------------	-----------------	------

B3=6.32
 B4=8.52

Cu++	gl	KNO3	25°C	0.10M	U	I	K1=2.72	1976HEa (42371)	3802
------	----	------	------	-------	---	---	---------	-----------------	------

K(Cu+H-1L)=10.67
 K(Cu+2(H-1L))=ca.20.5

Cu++	vlt	NaNO3	20°C	0.50M	C			1976PPb (42372)	3803
------	-----	-------	------	-------	---	--	--	-----------------	------

K(Cu+LH2O)=3.29
 K(Cu+LOH)=11.04
 K(CuL+LOH)=5.97
 K(Cu+2(LH2O))=6.58

B(CuL(LOH))=13.47; B(Cu(LH2O)2(LOH))=14.36; B(Cu(LOH)2)=21.22 where L= free

Cu++	gl	none	25°C	0.00	U	K1=2.65	B2=4.34	1971GRa (42373)3804
						K(CuLOH+H)=4.29		
						K(CuL2OH+H)=3.89		
						K(CuL2(OH)2+H)=5.16		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	diox/w	25°C	50%	C		K1=7.766 B2=16.826	1988CFb	(42435)3805
Medium: 50% v/v dioxan/H2O, 0.1 M KNO3									
Cu++	gl	diox/w	25°C	50%	C	M	B(CuAL)=18.94	1988CTa	(42436)3806
Medium: 0.2 M KNO3. H2A=3-Hydroxynaphthalene-1-carboxylic acid									
Cu++	gl	KNO3	25°C	0.10M	U	T	K1=5.83	1988NSc	(42437)3807
At 40 C, K1=5.74.									
Cu++	sp	mixed	?	50%	U	I M	K(CuCl+L)=1.85 K(CuCl+2L)=4.40	1972AMa	(42438)3808
Medium: 50% benzene, 50% 3-methylbutanol. 0% benzene, values are 2.22 and 4.27. 75% benzene, 1.74 and 4.37. Data also in CCl4 and DMF mixtures									
Cu++	vlt	KNO3	25°C	0.20M	U	M	B2=16.1 B(CuL2A2)=18.2	1972CMc	(42439)3809
A=imidazole									
Cu++	vlt	NaNO3	20°C	0.50M	U	M	B2=15.35 B3=16.8	1972PFa	(42440)3810
Cu++	EMF	oth/un	rt	0.50M	U	M	B(CuL(Ala))=19.30	1971MGc	(42441)3811
Cu++	sp	NaNO3	20°C	0.20M	U		K1=7.9 B2=14.75	1970PBa	(42442)3812
By polarography B2=14.88, B(CuL(OH)2)=16.9									
Cu++	gl	diox/w	25°C	50%	U		K2=6.15	1966WRb	(42443)3813
Medium: 50% dioxan, 0.1 M HClO4. Ternary complexes with phenanthroline									
Cu++	sp	NaClO4	25°C	1.0M	U		K1=8.73 B2=15.51	1965MBb	(42444)3814
Cu++	sp	oth/un	?	0.02M	U	M	B(CuL(NTA))=15.94	1963ISa	(42445)3815

Cu++ ISE NaNO3 20°C 0.10M U K1=7.95 B2=14.95 1960ANb (42446)3816

Cu++ gl oth/un 25°C 0.0 U K1=7.55 1957LUa (42447)3817

Cu++ sp KNO3 25°C 0.10M U K1=8.6 B2=16.0 1957SYa (42448)3818

Cu++ gl oth/un 25°C 0.02M U I K1=6.2 B2=12.2 1955HCa (42449)3819
In 50% dioxan K1=6.6

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

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

Cu++ gl NaCl 25°C 0.10M U K1=3.22 2001DSb (42645)3820

Cu++ gl NaClO4 37°C 0.15M U K1=8.01 B2=14.68 1999NNA (42646)3821

Cu++ gl KNO3 30°C 0.10M U M K1=2.52 1989BBg (42647)3822
K(CuA+L)=2.61
B(CuAL)=14.53

H2A is 8-hydroxyquinoline-5-sulfonic acid.

Cu++ gl KNO3 25°C 0.10M U K1=8.00 B2=15.50 1988ZMa (42648)3823

Cu++ gl NaNO3 20°C 0.50M U K1=3.23 1970PBa (42649)3824

Cu++ vlt NaNO3 20°C 0.50M U K1=3.46 1970PBa (42650)3825

Cu++ sp oth/un 25°C 0.10M U M 1970PBa (42651)3826
K(Cu(Gly)2+L)=1.09
K(Cu(Ala)2+L)=0.96
K(Cu(Ser)2+L)=0.74

C6H5NO2S H2L (6876)
2-Mercaptopyridine-3-carboxylic acid;

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

Cu++ sp alc/w 25°C 50% C K1=10.41 1995ISa (42704)3827
K(Cu+H2L=CuHL+H)=1.80
K(CuL+H)=-6.15
K(Cu+HL)=7.60

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

Cu++ sp alc/w 25°C 50% C 1995SIa (42705)3828
K(Cu+H2L=CuHL+H)=1.82

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

Cu++ gl alc/w 25°C 40% U M K1=7.40 1993ARb (42706)3829

K(CuHA+L)=7.80
K(Cu+HA+L)=17.78

Medium: 40% (v/v) EtOH/H2O, 0.10 M KN03. By spectrophotometry:
K(CuHA+HL=CuHAL+H)=1.10, K(Cu+HA+L)=17.64. H4A is gallic acid.

C6H5N03 H2L CAS 609-71-2 (5910)

2-Hydroxypyridine-3-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	sp	alc/w	25°C	50%	C			K1=9.05 B2=19.42 K(Cu+H2L=CuHL+H)=1.70 K(Cu+H2L=CuL+2H)=-6.80 K(CuL+H)=-5.70 K(CuHL+HL=CuL2+2H)=-7.74	1995ISa (42718)	3830

Medium: 50% v/v EtOH/H2O, 0.10 M NaCl04. K(Cu+HL)=7.92.

Cu++	sp	alc/w	25°C	50%	C				1995SIa (42719)	3831
								K(Cu+H2L=CuHL+H)=1.72 K(Cu+H2L=CuL+2H)=-6.8 K(CuHL+HL=CuL2+2H)=-7.74		

Medium: 50% v/v EtOH/H2O, 0.10 M NaCl04.

Cu++	gl	alc/w	25°C	40%	U	M		K1=8.50 B2=16.45 K(CuHA+L)=9.05 K(Cu+HA+L)=19.03	1993ARb (42720)	3832
------	----	-------	------	-----	---	---	--	---	-----------------	------

Medium: 40% (v/v) EtOH/H2O, 0.10 M KN03. By spectrophotometry:
K(CuHA+HL=CuHAL+H)=2.40, K(Cu+HA+L)=19.91. H4A is gallic acid.

Cu++	gl	alc/w	25°C	50%	U			K1=9.05 B2=19.42 B(CuAL)=19.65 B(CuL+A)=10.60	1993SAa (42721)	3833
------	----	-------	------	-----	---	--	--	--	-----------------	------

Medium: 50% v/v EtOH/H2O, 0.1 M NaCl04. H2A is salicylic acid.

C6H5N03 H2L CAS 874-24-8 (4356)

3-Hydroxypyridine-2-carboxylic acid; C5H3N.(OH)(COOH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	sp	alc/w	25°C	50%	C			K1=8.42 B2=14.24 K(Cu+HL=CuL+H)=-0.80 K(CuL+HL=CuL2+H)=-3.40	1995ISa (42745)	3834

Medium: 50% v/v EtOH/H2O, 0.10 M NaCl04.

Cu++	sp	alc/w	25°C	50%	C				1995SIa (42746)	3835
								K(Cu+H2L=CuL+2H)=-0.8		

Medium: 50% v/v EtOH/H2O, 0.10 M NaCl04.

C6H5N03 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
Cu++	gl	KNO3	30°C	0.10M	U	M	K1=3.1 K(CuA+L)=2.32 K(CuB+L)=7.12	1986KR a (42823)	3836
HA=picolinic acid, HB=6-methylpicolinic acid									
Cu++	gl	NaClO4	25°C	0.10M	U	T	K1=3.62 B2=6.80	1981RR b (42824)	3837
Temp range 25-50. K1 at 50 C = 3.22; K2 at 50 C = 2.95									

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
Cu++	gl	KCl	25°C	0.10M	M		K1=12.30 B2=22.33	1985HA b (42848)	3838

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
Cu++	gl	NaCl	25°C	0.10M	U		K1=11.37 B2=20.21	1993DL a (42884)	3839
Cu++	gl	KNO3	35°C	0.20M	C	M	K1=11.18 B(Cu(edda)L)=21.47 K(Cu(edda)+L)=6.97	1992YK a (42885)	3840
Cu++	gl	KNO3	25°C	0.10M	C	M	K1=11.60 B2=20.60 K(CuA+L)=10.14 B(CuAL)=22.06	1989DA a (42886)	3841
H2A: 8-hydroxyquinoline-5-sulfonic acid.									
Cu++	gl	NaClO4	30°C	0.05M	U	TIH	K1=12.18 B2=22.40	1986ND a (42887)	3842
I=0.1, 40 C: K1=11.24, B2=20.46; 50 C: K1=11.16, B2=20.21									
I=0.1, 30 C: K1=11.55, B2=21.06; I=0.2, 30 C: K1=11.49, B2=21.28									
Cu++	gl	KCl	25°C	0.10M	M		K1=11.70 B2=21.10	1984HA b (42888)	3843
Cu++	gl	KNO3	25°C	0.10M	U		K1=11.67 B2=20.95	1972JW a (42889)	3844
Cu++	gl	KNO3	30°C	0.10M	U		K1=11.65 B2=20.93	1964MT b (42890)	3845

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
Cu++	gl	NaClO4	30°C	0.10M	U	T	K1=3.94 B2=6.69	1982RR a (42965)	3846

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
Cu++	gl	KNO3	25°C	0.50M	U			K1=2.48 B3=7.95 B4=8.43	1981LMb (42984)	3847

C6H5N4Cl L CAS 2346-74-9 (5786)
2-Chloro-9-methylpurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	dis	NaClO4	25°C	1.00M	U			K1=1.2	1985A0a (42992)	3848

C6H5N4Cl L CAS 2436-75-0 (5790)
8-Chloro-9-methylpurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	dis	NaClO4	25°C	1.00M	U			K1=1.2	1985A0a (42995)	3849

C6H5N5 L (1699)
3-(Pyrazin-2-yl)-1,2,4-triazole; C4H3N2.C2H2N3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	U	M		B2=5.2 K(Cu+H-1L)=7.6 K(Cu+2H-1L)=11.3 B(Cu(bpy)L2)=13.3 K(Cu+bpy+H-1L)=16.1 K(Cu+bpy+2H-1L)=18.8.	1991GBa (42998)	3850

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
Cu++	gl	KNO3	25°C	0.10M	U			K1=12.89 B2=23.05	1972JWa (43076)	3851
Cu++	gl	KNO3	30°C	0.10M	U			K1=12.56 B2=22.39	1964MTb (43077)	3852

C6H5O3I HL CAS 16065-34-2 (2690)
5-Hydroxy-2-(iodomethyl)-4H-pyran-4-one;

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

Cu++ sp NaCl 25°C 0.10M C K1=6.46 1976Kic (43096)3853

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

Cu++ sp NaCl 25°C 0.10M C K1=5.71 1976Kic (43101)3854

C6H6NBr L (8782)
5-Bromo-2-methylpyridine;

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

Cu++ gl NaNO3 25°C 0.50M C K1=0.67 2002KSb (43187)3855

C6H6NCl L CAS 10445-91-7 (8781)
4-(Chloromethyl)pyridine;

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

Cu++ gl NaNO3 25°C 0.50M C K1=2.44 2002KSb (43203)3856

C6H6NO5P H3L CAS 145432-83-3 (7384)
6-Phosphonopyridine-2-carboxylic acid; H00C.C5H3N.PO3H2

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

Cu++ gl KCl 25°C 0.20M C K1=10.47 B2=14.55 1997BDa (43220)3857

C6H6NO5P H3L (7385)
6-Phosphonopyridine-3-carboxylic acid; H00C.C5H3N.PO3H2

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

Cu++ gl KCl 25°C 0.10M C K1=7.87 B2=14.23 1997BDa (43224)3858
B(CuHL)=11.13
B(CuH-1L)=0.04
B(CuH2L2)=20.8
B(CuHL2)=18.19

C6H6NO6P H2L CAS 330-13-2 (5865)
4-Nitrophenylphosphoric acid; N02.C6H4.O.PO.(OH)2

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

Cu++ gl NaNO3 25°C 0.10M U I K1=2.33 1992MSd (43232)3859

Also data for 20-50% v/v dioxane/H2O, 0.10 M NaNO3.
In 50% dioxane/H2O, 0.10 M NaNO3: K1=3.99.

Cu++ gl NaCl 25°C 0.15M C H K1=2.148 1991KLa (43233)3860
DH=20.4 kJ mol⁻¹, DS=109.7 J K⁻¹ mol⁻¹

Cu++ gl diox/w 25°C 30% C I K1=3.27 1989LCb (43234)3861
Medium: 30% dioxan/H₂O, 0.1 M NaNO₃. In 0%, K1=2.33; 20%, K1=2.90;
40%, K1=3.63; 50%, K1=3.99

Cu++ gl NaNO₃ 25°C 0.10M C M K1=2.33 1989MSd (43235)3862
K(Cu(bpy)+L)=2.66; K(Cu(phen)+L)=2.71

Cu++ gl NaNO₃ 25°C 0.10M C K1=2.33 1988MSa (43236)3863

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

Cu++ gl KNO₃ 25°C 0.50M U K1=1.83 B2=3.08 1974WAb (43253)3864
B3=3.54

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

Cu++ gl NaCl 25°C 0.10M C 19900Sa (43274)3865
K(Cu+HL)=3.93
K(Cu+2HL)=7.48
K(Cu+HL=CuL+H)=0.90
K(Cu+2HL=CuHL₂+H)=5.43
K(Cu+2HL=CuL₂+2H)=-1.53, K(3Cu+3HL=Cu₃H-1L₃+4H)=5.57,
K(3Cu+3HL=Cu₃H-2L₃+5H)=-0.97

Cu++ EMF NaNO₃ 20°C 0.50M U B2=18.6 1973PEa (43275)3866
K(Cu+2HL)=8.3
K(Cu+L+HL)=15.85
B(CuL(OH)₂)19.85
B(CuL₂OH)=20.0
K(Cu(HL)₂=CuHL₂+H)=-2.55; K(CuHL₂=CuL₂+H)=-7.17

Cu++ gl KNO₃ 24°C 0.10M U M K1=10.8 B2=16.80 1962BEa (43276)3867
Ternary complexes with NTA

Cu++ vlt oth/un 25°C ? U B2=18.68 1961LLa (43277)3868
0.2 phosphate buffer

Cu++ gl oth/un 25°C dil U 1961LLa (43278)3869
K(Cu(HL)₂=CuHL₂+H)=-2.77
K(CuHL₂=CuL₂+H)=-6.70

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
Cu++	gl	KNO3	25°C	0.50M	U			K1=2.87 B2=5.40	1976WAa (43308)	3870

Cu++	vlt	KNO3	25°C	0.20M	U			K1=16.1	1972CMc (43309)	3871
------	-----	------	------	-------	---	--	--	---------	-----------------	------

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
Cu++	gl	KNO3	25°C	0.50M	U			K1=1.65 B2=2.69 B3=3.19	1981LRa (43323)	3872

Cu++	sp	oth/un	25°C	var	U	M			1973FDa (43324)	3873
------	----	--------	------	-----	---	---	--	--	-----------------	------

K(Cu(Gly)+L)=1.12
K(Cu(Gly)2+L)=0.96

Cu++	oth	none	0°C	?	U			K1=1.80 B2=3.20	1971KAc (43325)	3874
------	-----	------	-----	---	---	--	--	-----------------	-----------------	------

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
Cu++	gl	KNO3	35°C	0.15M	U T H			K1=3.28	1980SKb (43344)	3875

Temperature range is 25-45C. At 35C, DH1=-13.56 kJ mol-1;
DS1=18.83 J mol-1 K-1

Cu++	gl	diox/w	35°C	50%	U			K1=4.12	1980SKb (43345)	3876
------	----	--------	------	-----	---	--	--	---------	-----------------	------

C6H6N2O2 HL (8281)
3-Hydroxy-2-amidocarboxypyridine, Hydroxypicolinamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	alc/w	25°C	40%	U			K1=8.37 B2=16.18	1994AKa (43365)	3877

Medium: 40% v/v EtOH/H2O, 0.10 M NaClO4

Cu++	gl	KNO3	25°C	0.10M	C			K1=7.66 B2=14.34	1990ARa (43366)	3878
------	----	------	------	-------	---	--	--	------------------	-----------------	------

C6H6N2O2 HL CAS 31888-72-9 (2051)
Isonicotinoylhydroxamic acid; C5H4N.CO.NH.OH

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

Cu++ gl NaCl04 35°C 0.10M U M K1=6.44 B2=11.50 1977ASd (43409)3879
 K(CuL+bpy)=6.60
 K(CuL+Oxine-5-sulph)=5.18

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

Cu++ cal non-aq 30°C 100% U M 1971GHc (43414)3880
 K(CuL2+A)=0.72
 K(CuL2+B)=-0.15
 K(CuL2+C)=0.71
 K(CuL2+D)=1.38

Medium: benzene. A=4-cyanopyridine; B=dioxan; C=2-methylpyridine; D=3-methylpyridine. K(CuL2+py)=1.19; K(CuL2+E)=0.40, E=2,4,6-trimethylpyridine

 Cu++ sp non-aq 22°C 100% U T M 1971GHc (43415)3881
 K(CuL2+A)=0.00
 K(CuL2+py)=1.34
 K(CuL2+B)=1.09
 K(CuL2+C)=1.64

Medium: benzene. K(CuL2+D)=1.63. A=dioxan, B=2-Me-pyridine, C=3-Me-pyridine, D=4-Me-pyridine

C6H6N2O2 HL CAS 5657-61-4 (1430)
 Nicotinyhydroxamic acid; C5H4N.CO.NH.OH

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

Cu++ gl NaCl04 35°C 0.10M U M K1=6.78 B2=12.31 1977ASd (43433)3882
 K(CuL+bpy)=6.92
 K(CuL+Oxine-5-Sulph)=5.49

C6H6N2O3 HL CAS 99-57-0 (469)
 2-Amino-4-nitrophenol; H2N.C6H3(OH)(NO2)

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

Cu++ gl diox/w 30°C 50% U K1=6.15 B2=11.08 1966VMa (43441)3883
 Medium: 50% dioxan, 0.1 M NaCl04

C6H6N2O3 H2L CAS 2504-83-8 (1141)
 Imidazolylpyruvic acid; C3H3N2.CH2.CO.COOH

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

Cu++ gl KCl 25°C 0.10M U K1=7.9 B2=15.00 1975SDa (43449)3884

C6H6N2O3S H2L CAS 342778-78-3 (8834)

2-(4-Methylthiazol-2-yl)-2-(hydroxyimino)ethanoic acid;

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

Cu++	gl	KNO3	25°C	0.10M	C			B2=13.86 B(CuH2L2)=25.66 B(CuHL2)=21.25	2002MSa (43454)	3885
------	----	------	------	-------	---	--	--	---	-----------------	------

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

Cu++	sp	oth/un	20°C	0.10M	C			K1=9.14	1981LGc (43461)	3886
------	----	--------	------	-------	---	--	--	---------	-----------------	------

Medium: acetate (0.1 M) or phosphate (0.1 M) buffers.

Cu++	gl	NaCl	20°C	0.15M	U			K1=8.85 K(Cu+HL)=2.85	1979DZc (43462)	3887
------	----	------	------	-------	---	--	--	--------------------------	-----------------	------

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

Cu++	gl	NaClO4	25°C	0.10M	C			K1=6.27 B2=10.96	1998TSa (43478)	3888
------	----	--------	------	-------	---	--	--	------------------	-----------------	------

C6H6N4 L 9-Methylpurine CAS 20427-22-9 (2480)
9-Methylpurine;

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

Cu++	gl	NaClO4	25°C	1.00M	U			K1=1.88	1983ALa (43484)	3889
------	----	--------	------	-------	---	--	--	---------	-----------------	------

Cu++	sp	NaClO4	25°C	0.18M	U	H		K1=1.70 B2=2.43	1983ALb (43485)	3890
------	----	--------	------	-------	---	---	--	-----------------	-----------------	------

DH(K1)=-18.9 kJ mol⁻¹

C6H6N4O L CAS 2503-56-2 (3682)
5-Methyl-7-hydroxy-[1,2,4]-triazolo[1,5-a]pyrimidine;

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

Cu++	gl	KNO3	20°C	0.10M	U			K1=3.19 B2=5.90	19660Ca (43495)	3891
------	----	------	------	-------	---	--	--	-----------------	-----------------	------

C6H6N4O HL CAS 1006-08-2 (4357)
7-Methylhypoxanthine;

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

Cu++	gl	NaClO4	25°C	0.05M	U			K1=5.80	1969RWa (43499)	3892
------	----	--------	------	-------	---	--	--	---------	-----------------	------

Cu++ sp NaCl04 25°C 0.05M U 1969RWa (43500)3893

K(Cu+HL)=1.4

C6H6N4O HL CAS 875-31-0 (4358)

9-Methylhypoxanthine;

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

Cu++ gl NaCl04 25°C 0.05M U K1=5.40 1969RWa (43502)3894

C6H6N4S L CAS 50-66-8 (3092)

6-Methylthiopurine;

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

Cu++ gl diox/w 25°C 50% U K1=7.69 B2=14.96 1959CFb (43507)3895

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

Cu++ gl alc/w 30°C 40% C M K1=12.15 1997RRd (43622)3896

K(CuA+L)=12.18

Medium: 40% v/v EtOH/H2O, 0.10 M KNO3.

HA is 2-(phenylhydrazono)butanoic acid

Cu++ gl KNO3 30°C 0.10M U K1=12.32 1994RSa (43623)3897

Cu++ gl KNO3 35°C 0.20M C M K1=13.64 B2=24.08 1994YVa (43624)3898

B(Cu(P207)L)=19.81

B(Cu(P3010)L)=18.72

Cu++ gl alc/w 30°C 40% M K1=12.11 B2=21.93 1993RRd (43625)3899

Medium: 40% v/v EtOH/H2O, 0.10 M KNO3.

Cu++ gl KNO3 25°C 1.00M C K1=13.64 B2=24.92 1992BKd (43626)3900

Cu++ gl KNO3 35°C 0.20M C M K1=13.64 1992YKa (43627)3901

B(Cu(edda)L)=23.51

K(Cu(edda)+L)=9.01

Cu++ gl NaCl04 25°C 0.20M U M K1=13.66 B2=24.96 1991MBb (43628)3902

B(CuL(Ala))=20.45

B(CuL(Trp))=20.63

B(CuL(Phe))=19.92

B(CuL(Tyr))=19.67

Cu++ gl NaCl04 30°C 0.20M U K1=13.66 B2=24.96 1990CBa (43629)3903

H2A: 8-hydroxyquinoline-5-sulfonic acid.

HA=4-amino-5-mercapto-1,2,4-triazole, HC=4-amino-5-mercapto-3-methyltriazole

H2A=malonic acid

H2A=phthalic acid

A is bis(2-imidazolyl)methane

H2A=dopamine.

Cu++	gl	KNO3	25°C	0.20M	C	HM	K1=13.81	B2=24.90	1979MBb (43641)3915
K(Cu(bpy)+L)=14.12 DH(K1)=-22 kJ mol ⁻¹ , DH(K2)=-23, DH(Cu(bpy)+L)=-30									
Cu++	gl	KCl	25°C	0.20M	C	M	K1=13.82	B2=24.69	1976GKc (43642)3916
B(CuL(Ala))=20.54 B(CuL(Phe))=20.37									
Cu++	sp	NaClO4	25°C	0.10M	U	M	K1=13.96	B2=25.03	1973SHa (43643)3917
B(CuL(phen))=23.56									
Cu++	gl	KNO3	25°C	0.10M	U		K1=13.83	B2=24.75	1972JWa (43644)3918
Cu++	gl	NaClO4	25°C	0.10M	U		K1=13.96	B2=25.03	1971GSb (43645)3919
Cu++	gl	NaClO4	25°C	0.10M	U	M			1971HGc (43646)3920
K(CuL2+Cu(bpy)2=2Cu(bpy)L)=6.15 K(CuL2+CuA2=2CuAL)=5.47 K(CuL2+CuB2=2CuBL)=4.64 K(CuL2+CuC2=2CuCL)=3.46									
A=4-(2'-pyridyl)imidazole; B=2-(2'-aminomethyl)pyridine; C=4-aminomethylimidazole; K(CuL2+Cu(en)2=2Cu(en)L)=2.05									
Cu++	gl	NaClO4	25°C	0.20M	U		K1=12.97		1970CBd (43647)3921
Cu++	gl	NaClO4	25°C	0.10M	U	M	K1=13.96	B2=25.03	1970GSa (43648)3922
B(CuL(bpy))=22.39									
Cu++	gl	KNO3	25°C	0.10M	U		K1=12.61	B2=22.21	1969Cmd (43649)3923
Cu++	gl	oth/un	25°C	0.10M	U		K1=13.96	B2=25.03	1969HGb (43650)3924
Cu++	gl	KNO3	25°C	1.0M	U	I			1968TMa (43651)3925
K(Cu+H2L=CuL+2H)=-8.679 K'(CuL+H2L=CuL2+2H)=-10.955									
In 50% MeOH, 0.1 M KNO: K=-7.85, K'=-9.02									
Cu++	sp	NaClO4	25°C	0.10M	U		K1=13.88	B2=24.32	19670Hb (43652)3926
Cu++	gl	NaClO4	30°C	0.10M	U		K1=13.58	B2=24.07	1966APb (43653)3927
Cu++	gl	KNO3	?	0.20M	U		K1=14.27	B2=27.63	1966DMe (43654)3928
Cu++	gl	KNO3	25°C	0.10M	U	M	K1=12.74		1966LMe (43655)3929
K(Cu(bpy)+L)=13.10									
Cu++	gl	KCl	25°C	0.10M	U		K1=13.76	B2=24.51	1965JNa (43656)3930
Cu++	gl	KNO3	30°C	0.10M	U		K1=12.52	B2=22.18	1963MNC (43657)3931

```

-----
Cu++      gl  oth/un 20°C 0.10M U          1958PEe (43658)3932
          K(Cu+HL=CuL+H)=1.25
          K(CuL+HL=CuL2+H)0.65
-----
Cu++      gl  oth/un 25°C ->0 U          K1=14.1   B2=24.6   1957TIa (43659)3933
-----
Cu++      gl  oth/un 25°C ->0 U          K1=8.09   B2=19.82  1956NMa (43660)3934
-----
Cu++      vlt oth/un  ?    ?    U          K1=23.65  B2=31.60  1955VGb (43661)3935
          B3=41.42
-----
Cu++      gl  diox/w 30°C 75% U          K1=19.5   B2=30.7   1954UFa (43662)3936
*****
C6H6O2S          HL          (3683)
2-Acetyl-3-hydroxythiophene; C4H2S(CO.CH3)OH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
Cu++      gl  diox/w 25°C 50% U    M    K1=7.86          1967SIb (43901)3937
          K(Cu(bpy)+L)=8.32
Medium: 50% dioxan, 0.1 M NaCl04
-----
Cu++      sp  diox/w 25°C 10% U          K1=6.30          1966PSb (43902)3938
Medium: 10% dioxan, 0.1 M NaCl04. By glass electrode, K1=6.46
*****
C6H6O2S          HL          CAS 36448-58-5 (3684)
3-Acetyl-4-hydroxythiophene; C4H2S(CO.CH3)OH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
Cu++      sp  diox/w 25°C 10% U          K1=5.4          1966PSb (43914)3939
Medium: 10% dioxan, 0.1 M NaCl04
*****
C6H6O2S2          HL          CAS 13431-03-3 (5723)
Benzenethiosulfonic acid; C6H5.SO2.SH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
Cu++      ISE alc/w 20°C 30% U T          K1=6.26   B2=9.51   1986GUa (43917)3940
          B3=11.66
*****
C6H6O3          H3L    Pyrogallol          CAS 87-66-1 (696)
1,2,3-Trihydroxybenzene; C6H3(OH)3
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
Cu++      gl  NaCl04 25°C 0.20M U    M    K1=12.80          1991MBb (43935)3941
          B(CuL(Tyr))=18.35
          B(CuL(Trp))=19.67

```

B(CuL(Phe))=18.58

Cu++ gl NaCl04 30°C 0.20M U K1=12.80 1990CBa (43936)3942

Cu++ gl NaCl04 30°C 0.10M M TIH 1986DNa (43937)3943

K(Cu+HL)=12.54

K(Cu+2HL)=23.01

Data for 0.05-0.20 M NaCl04. Extrap. to I=0.0, K(Cu+HL)=12.89,
K(Cu+2HL)=23.44. Data for 30-50 C. DH(Cu+HL)=-19.1 kJ mol⁻¹.

Cu++ gl KNO3 ? 0.20M U 1966DMe (43938)3944

K(Cu+HL)=12.4

K(CuHL+HL)=11.8

C6H6O3 HL Maltol CAS 118-71-8 (2442)

3-Hydroxy-2-methyl-4H-pyran-4-one;

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

Cu++ sp NaCl04 25°C 2.0M C T H K1=7.89 B2=14.44 1982GHa (44056)3945

Data for 20-40 C. DH(K1)=-14.1 kJ mol⁻¹, DS(K1)=103 J K⁻¹ mol⁻¹.

DH(K2)=-18.9, DS(K2)=62.

Cu++ gl NaCl04 25°C 0.50M U K1=7.68 B2=13.78 1973CAa (44057)3946

Cu++ sp NaCl04 25°C 0.50M U K1=7.70 B2=13.68 1973CAa (44058)3947

Cu++ gl diox/w 30°C 50% U K1=10.05 B2=18.39 1957Cwa (44059)3948

C6H6O3 HL Allomaltol CAS 644-46-2 (2688)

5-Hydroxy-2-methyl-4H-pyran-4-one;

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

Cu++ sp NaCl 25°C 0.10M C K1=6.87 1976KIc (44122)3949

C6H6O4 HL Kojic acid CAS 501-30-4 (1800)

5-Hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;

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

Cu++ gl diox/w 25°C 40% C K1=5.42 B2=10.17 1990SHb (44155)3950

Medium: 40% v/v dioxane/H2O, 0.03 M KCl.

Cu++ sp KCl 25°C 0.10M C K1=6.88 1987PEa (44156)3951

Cu++ sp NaCl 25°C 0.10M C K1=6.68 B2=12.56 1976KIc (44157)3952

Cu++ gl NaCl04 25°C 2.00M C K1=6.6 B2=11.7 1975GHa (44158)3953

Cu++ gl diox/w 30°C 75v% U K2=10.13 1960KFc (44159)3954

Cu++ EMF KCl 21°C 0.10M U K1=6.6 B2=11.8 19590Kb (44160)3955
Method: H electrode

Cu++ gl diox/w 30°C 50% U K1=9.3 B2=16.5 1954BFa (44161)3956

C6H6O5S H2L (8129)
2,3-Dihydroxybenzenesulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Cu++ gl KNO3 25°C 0.10M C M K1=12.65 B2=22.50 1989DAa (44268)3957
K(CuA+L)=10.90
B(CuAL)=22.82

H2A: 8-hydroxyquinoline-5-sulfonic acid.

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
Cu++ gl KNO3 30°C 0.10M U K1=13.29 B2=23.52 1963Mnc (44274)3958

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
Cu++ gl NaClO4 25°C 0.20M U M K1=15.82 1991MBb (44350)3959
B(CuL(Tyr))=18.35
B(CuL(Trp))=19.96
B(CuL(Phe))=18.83

Cu++ gl NaClO4 30°C 0.20M U K1=13.82 B2=25.01 1990CBa (44351)3960

Cu++ gl KNO3 25°C 0.10M C M K1=12.17 B2=21.69 1989DAa (44352)3961
K(CuA+L)=10.34
B(CuAL)=22.26

H2A: 8-hydroxyquinoline-5-sulfonic acid.

Cu++ gl NaClO4 30°C 0.05M U TIH K1=13.80 B2=25.15 1986NDa (44353)3962
I=0.1, 40 C: K1=13.05, B2=23.67; 50 C: K1=12.92, B2=23.28
I=0.1, 30 C: K1=13.58, B2=24.77; I=0.2, 30 C: K1=13.25, B2=24.24

Cu++ gl NaClO4 25°C 0.10M C K1=13.41 B2=23.38 1985BCf (44354)3963

Cu++ gl KCl 30°C 0.10M U TIH K1=15.08 B2=28.77 1980BDe (44355)3964
Data for I=0.20 and 0.30 M. Data at 40 C. DH and DS values.
At I=0, K1=15.63, K2=14.04.

Cu++	gl	KCl	25°C	0.20M	U	M	K1=13.73	B2=25.08	1978SKa (44356)	3965
Cu++	gl	NaClO4	25°C	0.50M	C	I M	K1=13.06	B2=26.87	1975LAa (44357)	3966
Cu++	sp	NaClO4	25°C	0.10M	U	M	K1=14.28	B2=25.42	1973SHa (44358)	3967
							B(CuL(bpy))=22.39			
							B(CuL(phen))=23.44			
Cu++	gl	KNO3	25°C	0.10M	U		K1=14.23	B2=25.49	1969CMd (44359)	3968
Cu++	gl	KNO3	25°C	0.10M	U	M	K1=14.27		1966LMe (44360)	3969
							K(Cu(bpy)+L)=15.14			
Ternary complexes with TTHA										
Cu++	sp	NaClO4	25°C	0.10M	U	I	K1=14.43		19650Na (44361)	3970
							K(Cu+HL)=5.14			
							K2=10.93(I=0.35)			
Cu++	gl	KCl	20°C	0.10M	U		K1=14.53		1964PCa (44362)	3971
							K(Cu+HL)=5.48			
Cu++	gl	KNO3	30°C	0.10M	U		K1=13.99	B2=25.16	1963MNC (44363)	3972
Cu++	gl	NaClO4	25°C	1.0M	U		K1=12.76	B2=23.73	1960NAf (44364)	3973
Cu++	gl	oth/un	25°C	0.0	U		K1=15.62		1959NAa (44365)	3974
Cu++	gl	NaClO4	25°C	1.0M	U		K1=12.79		1959NAa (44366)	3975
Cu++	gl	KNO3	25°C	0.10M	U		K1=14.57		1957Mca (44367)	3976
							K(CuLOH+H)=7.2			
Cu++	gl	KCl	25°C	0.10M	U		K1=14.31		1956NAb (44368)	3977

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
Cu++	gl	KCl	25°C	0.10M	C		K1=5.54		1984MMg (44529)	3978
							K(CuL+H)=3.56			

C6H7N L Picoline CAS 109-06-8 (320)										
2-Methylpyridine; C5H4N.CH3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.50M	C		K1=1.62		2002KSb (44558)	3979

Cu++ gl oth/un 25°C 0.10M M M K1=7.95 B2=14.95 2000MOa (44559)3980
B(CuLA)=18.47

Medium: NaOH. A: 2,2'-Dipicolylamine.

Cu++ vlt NaClO4 RT 0.50M C K1=3.30 B2= 6.40 1989CDd (44560)3981
B3=9.32

Method: polarography. Temperature not stated.

Cu++ gl KNO3 25°C 0.61M U K1=1.69 B2=2.8 1967SBd (44561)3982

Cu++ gl NaClO4 25°C 0.10M U K1=1.3 1964KSb (44562)3983

Cu++ gl oth/un 25°C 1.30M U K1=1.75 B2=2.65 1964PAb (44563)3984
Medium: 1.3 M NaNO3+picoline HNO3

Cu++ gl KCl 20°C 0.20M U K1=1.16 B2=1.85 1960HOb (44564)3985

Cu++ sp non-aq 20°C 100% U M 1959GRb (44565)3986
K(CuA2+L)=0.69

Medium: cyclohexane. HA=acetylacetone

C6H7N L beta-Picoline CAS 108-99-6 (324)

3-Methylpyridine; C5H4N.CH3

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

Cu++ gl NaNO3 25°C 0.50M C K1=2.78 2002KSb (44632)3987

Cu++ sp non-aq 25°C 100% C H K1=5.97 B2=10.87 2000KKb (44633)3988
3.93
3.02

Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-43 kJ mol⁻¹, DS=-32 J K⁻¹ mol⁻¹;
DH(K2)=-38, DS=-34; DH(K3)=-29, DS=-23; DH(K4)=-21, DS=-12.

Cu++ sp NaClO4 25°C 1.00M C M 1994PMb (44634)3989
K(CuA+L)=2.26

A=Tris(2-aminoethyl)amine (tren)

Cu++ gl KNO3 25°C 0.50M U K1=2.78 B2=4.97 1978LRb (44635)3990
B3=6.58
B4=7.60
B5=8.03
B6=8.86

Cu++ oth non-aq 27°C 100% U T M 1974HTa (44636)3991
K(CuA2+L)=-0.31

Medium: benzene. A=Diethyldithiocarbamate. Method: EPR. At 2 C: K=0.041;
62 C: K=-0.7

Cu++ gl KNO3 25°C 0.61M U K1=2.70 B2=4.72 1967SBd (44637)3992

B3=6.12

B4=6.9

Cu++	gl	NaClO4	25°C	0.10M	U	K1=2.77	1964KSb (44638)	3993
------	----	--------	------	-------	---	---------	-----------------	------

Cu++	gl	oth/un	25°C	1.30M	U	K1=2.76 K3=1.44 K4=0.90	B2=4.69	1964PAb (44639)	3994
------	----	--------	------	-------	---	-------------------------------	---------	-----------------	------

Medium: 1.3 M NaNO3+picoline HNO3

Cu++	gl	KCl	20°C	0.10M	U	K1=9.0	B2=15.9	1960H0b (44640)	3995
------	----	-----	------	-------	---	--------	---------	-----------------	------

C6H7N L gamma-Picoline CAS 108-89-4 (325)

4-Methylpyridine; C5H4N.CH3

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

Cu++	sp	non-aq	25°C	100%	C	H	K1=5.08 3.62 3.40	B2= 9.06	2000KKb (44728)	3996
------	----	--------	------	------	---	---	-------------------------	----------	-----------------	------

Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-45.3 kJ mol⁻¹, DS=-55 J K⁻¹ mol⁻¹;
DH(K2)=-42, DS=-65; DH(K3)=-40, DS=-66; DH(K4)=-28, DS=-27.

Cu++	gl	NaClO4	25°C	0.20M	U	M	K1=2.93 K(Cu(ida)L)=12.21 K(CuAL)=11.22	B2= 5.16	1991UBa (44729)	3997
------	----	--------	------	-------	---	---	---	----------	-----------------	------

H2A is pyridine-2,6-dicarboxylic acid.

Cu++	vlt	NaClO4	RT	0.50M	C		K1=3.30 B3=9.64	B2= 6.18	1989CDd (44730)	3998
------	-----	--------	----	-------	---	--	--------------------	----------	-----------------	------

Method: polarography. Temperature not stated.

Cu++	gl	KNO3	25°C	1.00M	U		K1=2.86 B3=6.84 B4=7.96	B2=5.14	1979LRa (44731)	3999
------	----	------	------	-------	---	--	-------------------------------	---------	-----------------	------

Cu++	cal	non-aq	30°C	100%	U	H		1976AGb (44732)	4000
------	-----	--------	------	------	---	---	--	-----------------	------

K(CuA2+L)=0.08

K(CuB2+L)=0.04

K(CuC2+L)=0.52

K(CuD2+L)=0.11

In Benzene. HA=N-methyl-2-hydroxybenzalimine. HB=N-butyl-; HC=N-4-fluorophenyl-; HD=N-para-methoxyphenyl-. Also N-phenyl-, and other benzalimines

Cu++	cal	non-aq	30°C	100%	U	H		1974G0b (44733)	4001
------	-----	--------	------	------	---	---	--	-----------------	------

K(CuA2+L)=3.17

In benzene. HA=1,1,1-trifluoropentane-2,4-dione. DH=-30.7 kJ mol⁻¹; DS=-41

Cu++	oth	non-aq	27°C	100%	U	T	M	1974HTa (44734)	4002
------	-----	--------	------	------	---	---	---	-----------------	------

K(CuA2+L)=-0.21

Cu++	oth	oth/un	?	?	U	K1=2.94 K3=2.24 K4=1.76	B2=5.49	1969WAb (44735)4003
------	-----	--------	---	---	---	-------------------------------	---------	---------------------

HA=salicylaldehyde, HB=2-hydroxyacetophenone, HC=2-hydroxypropiophenone, HD=2-hydroxybenzophenone. Medium:CHCl₃. Many other tertiary ligands

Cu++ gl diox/w 25°C 50% U M K1=2.70 1967SIb (44738)4006
K(Cu(bpy)+L)=2.09

Cu++ gl NaClO4 25°C 0.10M U K1=2.88 1964KSb (44739)4007

Medium: 1.3 M NaNO₃+picoline HNO₃

Cu++ gl KCl 20°C 0.10M U K1=16.0 B2=21.3 1960H0b (44742)4010

Medium: cyclohexane. HA=acetylacetone

C6H7N L Aniline CAS 62-53-3 (583)
Aminobenzene, aniline; C6H5.NH2

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

Cu++ sp NaClO4 25°C 0.20M U 1991CCb (44854)4013

K(CuA+L=CuAL)=0.73

A is rac-5,5,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradecane

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

Cu++ gl diox/w 25°C 20% C I K1=8.42 B2=15.00 2004DKb (44899)4014
Medium: 20% v/v dioxane/H2O, 0.10 M NaClO4. Also data for 40 and 60%.

Cu++ gl NaClO4 25°C 0.20M U M K1=8.36 1991MBb (44900)4015
B(CuL(Tyr))=15.19
B(CuL(Trp))=15.88
B(CuL(Phe))=14.86

Cu++ gl diox/w 30°C 50% U M 1990DSc (44901)4016
B(CuL(NTA))=7.36
B(CuL(IMDA))=5.77

Cu++ dis alc/w 30°C 20% U 1989SBa (44902)4017
Keff=6.69

At pH 7.24 using HPLC, with 20% methanol-water-ammonium acetate mobile phase

Cu++ gl KNO3 30°C 0.10M U M K1=8.03 B2=15.49 1989SRd (44903)4018
K(CuA+L)=7.34
B(CuLA)=14.76
K(CuC+L)=7.33
B(CuCL)=15.26

HA=4-amino-5-mercapto-1,2,4-triazole, HC=4-amino-5-mercapto-3-methyltriazole

Cu++ gl KNO3 25°C 0.10M U M K1=7.81 B2=14.73 1988NSb (44904)4019
B(CuLA)=13.51

H2A=malonic acid

Cu++ gl KNO3 25°C 0.10M U M K1=7.81 B2=14.73 1984Vsa (44905)4020
B(CuLA)=7.35
K(CuA+L)=3.86
K(CuL+A)=-0.46

H2A=phthalic acid

Cu++ dis NaClO4 25°C 1.00M C K1=8.08 B2=14.60 1975Bgb (44906)4021

Cu++ gl NaClO4 25°C 0.10M U M K1=8.49 B2=15.52 1975SPa (44907)4022
B(CuAL)=16.18 A=bipyridyl
K(CuA+L)=8.18
K(CuL+A)=7.69

Cu++ gl NaClO4 25°C 0.10M U K1=8.49 B2=15.52 1975SPb (44908)4023

B(CuL(bpy))=16.18
 K(Cu(bpy)+L)=8.18
 K(CuL+bpy)=7.69

Cu++	gl	none	20°C	0.0	U	K1=8.77	B2=16.14	1961PEb (44909)4024
Cu++	gl	none	20°C	0.0	U	K1=8.8	B2=16.1	1959SIb (44910)4025
Cu++	gl	diox/w	25°C	50%	U	K1=9.25	B2=17.72	1952FCa (44911)4026

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
Cu++	gl	NaNO3	20°C	1.00M	U		K1=3.79 B2=6.69 B3=8.58	1973PEa (44949)4027	
Cu++	vlt	NaNO3	20°C	1.00M	U		K1=3.72 B2=6.70 B3=8.40	1973PEa (44950)4028	
Cu++	sp	NaNO3	20°C	1.00M	U		K1=3.75 B2=6.70	1973PEa (44951)4029	
Cu++	vlt	NaNO3	20°C	1.00M	U			1973PEa (44952)4030	
							K(Cu+2H-1L=CuH-2L2)=23.0		
Cu++	gl	KNO3	25°C	0.16M	U		K1=3.56 B2=6.23 B3=8.00 B4=8.3	1967SBd (44953)4031	
Cu++	gl	KNO3	25°C	0.10M	U	I	K1=3.41 B2=6.22 K(CuH-1L+H)=5.5 K(CuL(H-1L)+H)=5.55 K(Cu(H-1L)2+H)=6.36	1965MTa (44954)4032	

Cu++ gl diox/w 25°C 50% U T H 1964LKa (44955)4033
 K(Cu+H-1L)=10.19
 K(Cu+2(H-1L))=19.11
 Med.:50% dioxan. K=10.45(0 C),10.22(15 C); K'=20.02(0 C),19.36(15 C).
 At 25 C:DH=-61 kJ mol-1,DS=163 J K-1 mol-1; By calorimetry:DH=97.4,DS=39.3

Cu++	gl	oth/un	25°C	0.01M	U	K1=9.6	1955LFa (44956)4034
------	----	--------	------	-------	---	--------	---------------------

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
Cu++	gl	KNO3	25°C	0.50M	U		K1=2.46 B2=4.33 B3=5.63	1981LRa (44973)4035	

B4=6.35

Cu++	vlt	NaNO3	20°C	0.50M	U	B2=4.45	1973PEa (44974)	4036	
Cu++	gl	NaNO3	20°C	0.50M	U	K1=2.49 B3=5.8 B4=6.8	1973PEa (44975)	4037	
Cu++	sp	NaNO3	20°C	0.50M	U	K1=2.53	B2=4.40	1973PEa (44976)	4038
Cu++	gl	KNO3	25°C	0.61M	U	K1=2.43 B3=5.0 B4=6	B2=4.17	1967SBd (44977)	4039

C6H7NO L CAS 586-95-8 (1476)
4-(Hydroxymethyl)pyridine; C5H4N.CH2OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KN03	25°C	0.50M	U		K1=2.66 B3=6.03	B2=4.65	1987KLb (44999)4040
Cu++	gl	KN03	25°C	0.61M	U		K1=2.65 B3=5.7 B4=6	B2=4.53	1967SBd (45000)4041

C6H7NO2 HL (4362)
3-Cyanoacetylacetone; CH3.CO.CH(CN).CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	diox/w	25°C	75%	U	I	K1=4.14 K3=3.46	B2=7.92	1968CSa (45031)4042

Medium: 75% dioxan, 0.08 M KCl
I=0.04: K1=4.25, K2=3.88, K3=3.47; I=0.15: K1=4.05, K2=3.68, K3=3.42

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	
Cu++	gl	KNO3	37°C	0.15M	C	M		1980SHb (45036)	4043	
B(CuL(gly))=16.27; B(CuL(his))=18.68; B(CuL(Hhis))=22.58.										
Cu++	gl	KNO3	37°C	0.15M	C		K1=9.35 K(CuL+H)=1.6	B2=16.93	1979SPd (45037)	4044

C6H7NO2 HL CAS 19167-98-7 (5591)
Pyrrole-1-ethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	diox/w	25°C	50%	C	M	K1=2.73 K(Cu(phen)+L)=3.07	1985BSd (45053)	4045

Medium: 50% v/v dioxan/H2O, 0.1 M NaClO4

C6H7N03S	HL	CAS 88-21-1	(7102)
2-Aminobenzenesulfonic acid, Aniline-2-sulfonic acid; H2N.C6H4.S03H			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl	25°C	0.15M	C		B(CuLHis)=17.01	1995LMc (45058)	4046

C6H7N04S	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
Cu++	gl	NaClO4	25°C	0.10M	U		K1=9.43 B2=17.00	1964BGa (45073)	4047

C6H7N04S	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
Cu++	gl	NaClO4	25°C	0.10M	U		K1=7.81 B2=14.79	1964BGa (45078)	4048

C6H7N2Cl	L	(4365)
4-Chloro-1,2-phenylenediamine; Cl.C6H3(NH2)2		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U		K1=3.32 B2=5.76	1971KTa (45091)	4049

C6H7N3O	HL	CAS 71933-05-6	(5375)
Pyridine-2-carboxamide oxime;			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl	25°C	0.10M	C		K(CuHL+HL)=4.72 *K(CuH2L2)=-4.61	19960Sa (45093)	4050

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
Cu++	gl	oth/un	20°C	0.01M	U		K1=12.4 B2=21.5	1956ARd (45096)	4051

C6H7N3O L CAS 553-53-7 (4361)
Pyridine-3-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	KNO3	20°C	0.10M	U		K1=8.89 B2=16.58	1970ZOb	(45102)4052

Cu++	gl	oth/un	20°C	0.01M	U		K1=8.7 B2=16.2	1956ARd	(45103)4053
------	----	--------	------	-------	---	--	----------------	---------	-------------

C6H7N3O L Isonicotinic hy CAS 54-85-3 (1267)
Pyridine-4-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	none	20°C	0.0	U			1992CGc	(45113)4054

K(Cu+HL)=2.16

Cu++	gl	NaCl	37°C	0.15M	C	M	K1=9.08 B(CuHL)=13.44 B(CuH2L)=15.29 B(CuHL2)=22.22 B(CuH2L2)=26.05	1983CMa	(45114)4055
------	----	------	------	-------	---	---	---	---------	-------------

B(Cu(his)L)=18.85, B(CuH(his)L)=23.07, B(CuH2(his)L)=26.88.

Cu++	sp	KNO3	20°C	0.10M	U		K1=8.06 B2=14.61	1970ZOb	(45115)4056
------	----	------	------	-------	---	--	------------------	---------	-------------

Cu++	gl	oth/un	20°C	0.01M	U		K1=8.0	1956ARd	(45116)4057
------	----	--------	------	-------	---	--	--------	---------	-------------

Cu++	sp	oth/un	?	?	U			1953FEa	(45117)4058
------	----	--------	---	---	---	--	--	---------	-------------

K(CuL2(OH)2+2H=Cu+2L)=3.37

C6H7N3O2 L CAS 2411-74-7 (8511)
2-(2-Furanylmethylene)hydrazine carboxamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	non-aq	25°C	100%	C		K1=2.02	2000IBa	(45133)4059

Medium: ethanol.

C6H7N3O2I2 HL (7181)
2,5-Diiodo-histidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.50M	C		K1=7.13	1994WCa	(45135)4060

B(CuH-1L)=2.21

B(CuH-1L2)=6.41

B(CuH-2L2)=-1.42

C6H7N3O4 H2L CAS 54784-33-7 (6082)
 1,3-Dimethyl-5-nitroso-barbituric acid; 1,3-Dimethylvioluric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.50M	C		K1=4.67 B2= 7.95	1984HNb (45143)	4061
Cu++	gl	NaNO3	25°C	0.50M	C	M	K1=4.67 B2=7.95	1980VNa (45144)	4062
Cu++	gl	NaNO3	25°C	0.50M	C		K1=4.66 B2=7.94	1977VNa (45145)	4063

C6H7N3O4 H2L CAS 74003-47-7 (8382)
 Monoethylvioluric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.50M	C		K1=4.42 B2= 7.54	1984HNb (45154)	4064

C6H7N5 L 7-Methyladenine CAS 935-69-3 (4346)
 7-Methyl-6-aminopurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.05M	U		K1=2.7 B4=5.95	1969RWa (45161)	4065

C6H7N5 L CAS 84602-80-2 (5789)
 8-Amino-9-methylpurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	dis	NaClO4	25°C	1.00M	U		K1=2.3	1985AOa (45163)	4066

C6H7N5 HL 9-Methyladenine CAS 700-00-5 (4347)
 9-Methyl-6-aminopurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	dis	NaClO4	25°C	1.00M	U		K1=1.26	1985AOa (45169)	4067

Cu++	sp	NaClO4	25°C	0.05M	U		K1=1.7	1969RWa (45170)	4068
------	----	--------	------	-------	---	--	--------	-----------------	------

C6H7N5O HL 9-Methylguanine CAS 5502-78-3 (6661)
 9-Methyl-2-amino-6-hydroxypurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	M		K1=4.2 K(Cu+HL)=2.37 *K(CuHL)=-7.7	1999SSb (45174)	4069

C6H7O3P H2L CAS 1571-33-1 (521)
Phenylphosphonic acid; C6H5.PO3H2

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

Cu++	gl	KNO3	25°C	0.10M	U		K1=3.18 K(Cu+L=Cu(OH)L+H)=-3.65	1981WNa (45197)	4070
------	----	------	------	-------	---	--	------------------------------------	-----------------	------

C6H7O4P H2L CAS 701-64-4 (5866)
Phenyl phosphoric acid; C6H5O.PO(OH)2

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

Cu++	gl	NaNO3	25°C	0.10M	U	I	K1=2.77	1992MSd (45217)	4071
------	----	-------	------	-------	---	---	---------	-----------------	------

Also data for 20-50% v/v dioxane/H2O, 0.10 M NaNO3.
In 50% dioxane/H2O, 0.10 M NaNO3: K1=4.40.

Cu++	gl	NaCl	25°C	0.15M	C	H	K1=2.611	1991KLa (45218)	4072
------	----	------	------	-------	---	---	----------	-----------------	------

DH(K1)=21.6 kJ mol⁻¹, DS(K1)=122.5 J K⁻¹ mol⁻¹

Cu++	gl	diox/w	25°C	30%	C	I	K1=3.72	1989LCb (45219)	4073
------	----	--------	------	-----	---	---	---------	-----------------	------

Medium: 30% dioxan/H2O, 0.1 M NaNO3. In 0%, K1=2.77; 20%, K1=3.35;
40%, K1=4.12; 50%, K1=4.40

Cu++	gl	NaNO3	25°C	0.10M	C	M	K1=2.77	1989MSd (45220)	4074
------	----	-------	------	-------	---	---	---------	-----------------	------

K(Cu(bpy)+L)=3.11; K(Cu(phen)+L)=3.07

Cu++	gl	NaNO3	25°C	0.10M	C		K1=2.77	1988MSa (45221)	4075
------	----	-------	------	-------	---	--	---------	-----------------	------

C6H8NO3P H2L CAS 80241-43-6 (1502)
4-Pyridylmethylphosphonic acid; C5H4N.CH2.PO3H2

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

Cu++	gl	KNO3	25°C	0.10M	C		K1=7.33 B2=12.98 B(CuH-1L2)=1.91	2000Cmb (45240)	4076
------	----	------	------	-------	---	--	-------------------------------------	-----------------	------

C6H8NO4P H2L (3713)
2-Pyridylmethanephosphoric acid (1'-picolyl phosphate)

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

Cu++	gl	KNO3	25°C	0.10M	U		K1=4.44 B2=6.77	1968MTd (45242)	4077
------	----	------	------	-------	---	--	-----------------	-----------------	------

C6H8NO4P H2L CAS 183016-66-2 (7727)
Hydroxy-2-pyridylmethylphosphonic acid;

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

Cu++ g1 KNO3 25°C 0.10M U K1=4.55 B2=7.72 1971Kta (45265)4085

C6H8N2 L CAS 108-45-2 (6105)

1,3-Diaminobenzene, 1,3-Phenylenediamine; C₆H₄(NH₂)₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO ₃	20°C	0.10M	C T H		K1=3.98 B2=7.16 K3=2.72	19800Ma (45273)	4086
DH(K1)=-57.9 kJ mol ⁻¹ ; DS=-141 J K ⁻¹ mol ⁻¹ ; DH(K2)=-29.8; DS=-57 DH(K3)=-32.1; DS=-71.2. Data up to 32 C									

C ₆ H ₈ N ₂		L						Diaminobenzene CAS 106-50-3 (2869)	
1,4-Phenylenediamine; H ₂ N.C ₆ H ₄ .NH ₂									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO ₃	20°C	0.10M	C T H		K1=3.95 B2=7.41 K3=3.03	19800Ma (45277)	4087
DH(K1)=-38.9 kJ mol ⁻¹ ; DS=-57.0 J K ⁻¹ mol ⁻¹ ; DH(K2)=-36.9; DS=-59.4; DH(K3)=-40.6; DS=-80.9. Data up to 32 C									

C ₆ H ₈ N ₂		L						CAS 31410-01-2 (7717)	
1-Allylimidazole;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO ₃	25°C	0.50M	C		K1=4.15 B2= 7.70 B3=10.62 B4=13.16 B5=14.24	2000KGc (45281)	4088

C ₆ H ₈ N ₂		L						2-Picolylamine CAS 29722-36-9 (502)	
2-(Aminomethyl)pyridine; C ₅ H ₄ N.CH ₂ NH ₂									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO ₃	25°C	0.10M	M		K1=9.69 B2=16.90	2002SKa (45305)	4089
Cu++	cal	NaCl	25°C	0.15M	C H		K1=9.82 B2=17.50	1987ENa (45306)	4090
DH(K1)=-49.6 kJ mol ⁻¹ , DS=22 J K ⁻¹ mol ⁻¹ ; DH(B2)=-100, DS=1									
Cu++	gl	NaNO ₃	20°C	1.00M	C		K1=10.02 B2=18.15 B(Cu ₂ L ₂ (OH) ₂)=36.1 B(CuL ₂ (OH))=19.6 B(CuL(OH) ₂)=18.65	1978CPa (45307)	4091
Cu++	gl	NaNO ₃	20°C	1.00M	C		K1=10.02 B2=18.15	1974CPa (45308)	4092
Alternative methods: Spectrophotometry and Polarography									
Cu++	EMF	NaNO ₃	20°C	0.10M	U		K1=9.40 B2=17.20	1971ANa (45309)	4093
Cu++	gl	NaClO ₄	25°C	0.10M	U M		K1=9.72 B2=17.47	1971HGC (45310)	4094

B(CuLA)=23.57

H2A=catechol

Cu++ gl NaClO4 25°C 0.30M C H K1=9.34 B2=17.27 1967HWa (45311)4095
By calorimetry DH(K1)=-41.5 kJ mol⁻¹, DH(K2)=-41.6

Cu++ vlt diox/w 25°C 50% U H B2=15.47 1966WRb (45312)4096
Medium: 50% dioxan, 0.1 M KNO₃. By glass electrode: B2=15.68
By calorimetry: DH(B2)=-90.3 kJ mol⁻¹, DS=-2.5 J K⁻¹ mol⁻¹

Cu++ gl KNO₃ 25°C 0.10M U K1=9.5 1964LMb (45313)4097

Cu++ gl KNO₃ 25°C 0.10M U K1=9.5 1964LMb (45314)4098

Cu++ gl oth/un 25°C .015M U K1=9.3 B2=17.2 1960HJa (45315)4099

Cu++ gl oth/un 20°C ->0 U T H K1=9.64 B2=17.62 1959GFa (45316)4100
DH(K1)=-40.2 kJ mol⁻¹, DS=46 J K⁻¹ mol⁻¹; DH(K2)=-37.6, DS=25.1
10 C: K1=9.90, K2=8.26; 30 C: K1=9.45, K2=7.80; 40 C: K1=9.17, K2=7.58

C6H8N2 L CAS 1603-40-3 (3648)
2-Amino-3-methylpyridine (2-Amino-3-picoline)

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

Cu++ gl KNO₃ 25°C 0.61M U K1=1.91 1967SBd (45362)4101

C6H8N2 L CAS 2851-95-8 (4349)
2-Methyl-1-vinylimidazole;

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

Cu++ gl KNO₃ 25°C 0.50M C K1=3.20 B2= 5.80 2000KGa (45370)4102
B3=7.80
B4=9.20

C6H8N2 L 3-Picolylamine CAS 3731-51-9 (6095)
3-(Aminomethyl)pyridine;

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

Cu++ gl NaNO₃ 20°C 1.00M C K1=1.97 B2=3.32 1978CPa (45377)4103
By polarography, K1=1.8, B2=3.4

C6H8N2O2 HL CAS 1074-59-5 (3099)
3-(4-Imidazolyl)propanoic acid;

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

Cu++ gl KNO₃ 25°C 0.16M U K1=4.46 B2=8.49 1970MBb (45389)4104

Cu++ gl KNO3 25°C 0.20M U K1=4.56 B2=8.45 1963CCb (45390)4105

C6H8N2O3S HL CAS 20349-92-2 (4399)

d-Tetranorbiotin;

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

Cu++ gl diox/w 25°C 50% U M K1=2.89 1969SMc (45402)4106

K(CuL+bpy)=3.01

Medium: 50% dioxan, 0.1 M NaClO4

C6H8N2O4 H2L (3100)

Cyanomethyliminodiethanoic acid; NC.CH2.N(CH2.COOH)2

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

Cu++ gl KCl 20°C 0.10M U K1=7.45 B2=11.91 1955SAa (45409)4107

C6H8N2O6 H2L (6576)

Oxamide-N,N'-diethanoic acid; HOOC.CH2.NH.CO.CO.NH.CH2.COOH

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

Cu++ gl NaNO3 25°C 0.10M C 1992LSb (45421)4108

K(Cu+H2L)=2.62

K(2Cu+H2L=Cu2L+2H)=-2.18

B(Cu2L)=22.0

C6H8N3O2I HL (7180)

5-Monoiodo-histidine;

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

Cu++ gl NaNO3 25°C 0.50M C K1=9.04 B2=15.90 1994WCa (45428)4109

B(CuH-1L2)=7.10

B(CuH-2L2)=-2.83

C6H8N4B- L (7237)

Bis(pyrazol-1-yl)borate; (C3H3N2)2BH2-

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

Cu++ dis non-aq 25°C 100% U 1996KSa (45434)4110

K(Cu+2HL=CuL2(org)+2H)=6.21

By solvent extraction into CHCl3

C6H8O2 HL CAS 765-70-8 (8322)

3-Methylcyclopentane-1,2-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	30°C	0.10M	U	HM	K1=5.45 B2=10.21 B(Cu(ala)L)=13.23 B(Cu(val)L)=13.17 B(Cu(en)L)=15.63 B(Cu(bpy)L)=13.23	1994RSa (45446)	4111

DH(K1)=-18.3 kJ mol⁻¹, DS=43.9. B(CuAL)=9.73, B(CuBL)=17.37, K(Cu(ala)+L)=5.08, K(Cu(bpy)+L)=5.16, K(CuA+L)=4.91. H2A=oxalic acid, H2B=catechol.

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

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

Cu++	gl	KNO3	25°C	0.10M	C		K1=4.66	1975IPa (45458)	4112
------	----	------	------	-------	---	--	---------	-----------------	------

C6H8O4 H2L CAS 5445-51-2 (69)
Cyclobutane-1,1-dicarboxylic acid; C4H6(COOH)2

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

Cu++	gl	KNO3	25°C	0.10M	U	M	K1=4.98 B2=8.45 B(CuHL)=9.85 B(CuLA)=14.04	1980Gmb (45491)	4113
------	----	------	------	-------	---	---	--	-----------------	------

A=histamine

Cu++	cal	NaClO4	25°C	0.10M	C	H		1977ACa (45492)	4114
------	-----	--------	------	-------	---	---	--	-----------------	------

DH1=10.9 kJ mol⁻¹, DS1=132 J K⁻¹ mol⁻¹, DH(Cu+L+bpy)=-36.4 kJ mol⁻¹

Cu++	gl	NaClO4	25°C	0.10M	C	M		1975BMd (45493)	4115
------	----	--------	------	-------	---	---	--	-----------------	------

B(Cu(bpy)L)=14.28

Cu++	gl	KNO3	25°C	0.10M	U		K1=5.01 B2=8.12	1969PJb (45494)	4116
------	----	------	------	-------	---	--	-----------------	-----------------	------

Cu++	gl	NaClO4	25°C	0.10M	U		K1=5.02 B2=8.49	1966OCb (45495)	4117
------	----	--------	------	-------	---	--	-----------------	-----------------	------

K(Cu+HL)=1.37

C6H8O4Se H2L (3691)

cis-Tetrahydrosephenophene-2,5-dicarboxylic acid; C4H6Se(COOH)2

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

Cu++	gl	NaClO4	25°C	0.10M	U		K1=3.8 B2=7.40	1968SNa (45524)	4118
------	----	--------	------	-------	---	--	----------------	-----------------	------

C6H8O5 H2L (3067)

Dimethyloxosuccinic acid; HOOC.C(CH3)2.CO.COOH

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

Cu++ gl oth/un 25°C ->0 U K1=3.7 1958GHc (45533)4119

C6H8O6 H3L Tricarballic CAS 99-14-9 (1620)
 1,2,3-Propanetricarboxylic acid; HOOC.CH2.CH(COOH).CH2.COOH

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

Cu++	gl	KCl	25°C	0.20M	C		K1=3.35 B(CuHL)=8.03 B(CuH2L)=11.53 B(CuH-1L)=-3.34 B(Cu2L)=4.87	1996KJa (45548)	4120
------	----	-----	------	-------	---	--	--	-----------------	------

Cu++	gl	NaClO4	20°C	0.10M	U		K1=3.70 K(Cu+HL)=2.57 K(Cu+H2L)=1.40 K(Cu+CuL)=1.60	1964COb (45549)	4121
------	----	--------	------	-------	---	--	--	-----------------	------

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

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

Cu++	gl	KNO3	30°C	0.10M	C	M	K(Cu(phen)+L)=8.45 K(Cu(bpy)+L)=8.35 K(Cu(en)+L)=6.57 K(Cu(baea)+L)=7.08	1984BPc (45599)	4122
------	----	------	------	-------	---	---	---	-----------------	------

K(Cu(dipropylenetriamine)+L) = 5.73; baea=bis(aminoethyl)amine

Cu++	kin	NaClO4	25°C	1.00M	U	T	K(Cu+HL)=1.61 K(Cu+H+HL)=4.71	1984DAa (45600)	4123
------	-----	--------	------	-------	---	---	----------------------------------	-----------------	------

Cu++	kin	none	25°C	0.0	C	T H	K(Cu+HL)=1.54	1984Mza (45601)	4124
------	-----	------	------	-----	---	-----	---------------	-----------------	------

Method: stopped flow spectrophotometry. DH(Cu+HL)=30 kJ mol⁻¹.
 Data for 20, 30 and 35 C.

Cu++	gl	KNO3	25°C	0.10M	M		K(Cu+HL)=2.32 K(Cu+H+HL)=3.94 K(2Cu+2HL=Cu2H2L2)=6.33 K(2Cu+2HL=Cu2L2+2H)=0.05	1976JBa (45602)	4125
------	----	------	------	-------	---	--	---	-----------------	------

From kinetics data, K(Cu+HL)=2.4, K(Cu+H+HL)=4.2.

Cu++	gl	KNO3	0°C	0.10M	U		K(Cu+HL)=1.57	1962TAc (45603)	4126
------	----	------	-----	-------	---	--	---------------	-----------------	------

C6H8O6S H3L CAS 99-68-3 (3692)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	30°C	0.10M	M	I	K1=4.90	1985ARc (45674)	4127
Also data for 20-80% dioxane/H2O. For 40% dioxane/H2O, K1=8.98.									
Cu++	gl	NaClO4	30°C	0.10M	U	I	K1=4.90	1983ASa (45675)	4128
Cu++	gl	KN03	20°C	0.10M	U		K1=4.80 K(Cu+HL)=3.25	1977CAd (45676)	4129
Cu++	gl	KN03	25°C	0.05M	M		K1=5.22	1975DPb (45677)	4130

C6H8O7		H3L					Isocitric acid CAS 1637-73-6 (2527)		
2-Hydroxy-3-carboxypentanedioic acid; HOOC.CH(OH).CH(COOH).CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KN03	25°C	0.10M	C	M	K1=5.20 B(CuHL)=8.94 B(CuH-1L)=-0.77 B(CuL(phen))=21.16 B(CuL(bpy))=17.29	1978DAc (45725)	4131

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
Cu++	gl	KCl	25°C	0.20M	C		B(CuHL)=9.29 B(Cu2L2)=14.10 B(Cu2H-1L2)=10.43 B(Cu2H-2L2)=5.71	1996KJa (45853)	4132
Cu++	gl	NaClO4	25°C	0.50M	C		K1=5.67 B(CuH2L)=11.93 B(Cu2H-2L2)=5.61	1995PLa (45854)	4133
Cu++	gl	KN03	25°C	0.10M	M	M	K1=4.532	1993AEa (45855)	4134
Cu++	gl	KN03	25°C	0.1M	U		K(2Cu+L)=8.1	1992MDb (45856)	4135
Cu++	gl	NaNO3	25°C	0.50M	M	M	K(Cu+H3L=CuH-1L+4H)=-5.7 K(2CuH-1L=Cu2H-2L2)=-13.9	1989MAa (45857)	4136
K(UO2+Cu+2H3L=CuUO2H-2L2+8H)=1.41									

Cu++ gl KNO3 25°C 0.10M C T H 1988D0a (45858)4137

B(CuNiH-2L2)=1.58

B(CuZnH-2L2)=1.59

B(CuCdH-2L2)=0.33

Also data at 10, 35 and 45 C. DH(CuNiH-2L2)=39 kJ mol⁻¹, DS=160 J K⁻¹ mol⁻¹
DH(CuZnH-2L2)=64, DS=245; DH(CuCdH-2L2)=52; DS=180.

Cu++ vlt NaCl04 30°C 1.0M C K1=5.93 1988GMb (45859)4138

Method: polarography. Medium pH 5.0.

Cu++ gl KNO3 25°C 0.10M C M 1987DZa (45860)4139

B(CuHL)=9.55

B(Cu2H-1L)=4.92

B(Cu2H-1L2)=10.85

ternary complexes: B(CuLA) DOPA =15.31; Dopamin =15.51; Noradrenalin=14.85
Dhpp = 13.64; B(CuH-1LA) DOPA=24.38; Dopamin =7.85; Noradr=7.36; Dhpp=5.53

Cu++ sp KNO3 25°C 0.10M U M 1984BSc (45861)4140

B(CuNiH-2L2)=1.37

B(CuMgH-2L2)=-1.1

Cu++ gl KNO3 25°C 0.25M C T H 1984D0a (45862)4141

B(CuHL)=9.75

B(Cu2L2)=14.77

B(Cu2H-1L2)=11.36

B(Cu2H-2L2)=6.20

Data for 10-45 C. B(Cu2H-1L)=5.16. DH(CuHL)=8.0 kJ mol⁻¹, DH(Cu2L2)=41,
DH(Cu2H-1L2)=38, DH(Cu2H-2L2)=44, DH(Cu2H-1L)=29.0.

Cu++ ISE NaNO3 25°C 0.10M U 1983OWa (45863)4142

K(2Cu+2HL=Cu2L2+2H)=5.2

Cu++ gl KNO3 25°C 0.10M C 1980SWa (45864)4143

B(Cu2H-2L2)=5.80

B(Cu2H-1L2)=10.82

B(Cu2H-1L)=5.07

Method: pH and pCu measurements.

Cu++ gl KNO3 25°C 0.10M C M 1975D0a (45865)4144

B(CuHL)=9.47

B(Cu2L2)=14.60

B(2Cu+2L+OH=Cu2L2OH)=10.75

B(2Cu+2L+2OH=Cu2L2(OH)2)=6.00

B(CuH2L(bpy))=19.87, B(CuHL(bpy))=17.86, B(CuL(bpy))=14.07.

K(bpy+H)=4.41, K(Hbpy+H)=1.1

Cu++ gl KNO3 25°C 0.10M U 1974FMa (45866)4145

B(CuHL)=9.31

B(Cu2L2)=14.72

B(CuH-1L)=1.61

 Cu++ sp NaNO3 25°C 0.50M C K1=5.949 B2=8.092 1974RKc (45867)4146
 B(CuH2L)=11.340
 B(CuHL)=8.68
 B(CuH-1L)=2.16

Alternative method: Glass electrode

 Cu++ oth NaNO3 25°C 0.50M U K1=5.95 B2=8.09 1973KPb (45868)4147
 B(CuHL)=8.68
 B(CuH2L)=11.34
 K(Cu+L=CuH-1L+H)=2.16

Method: polarimetry

 Cu++ oth KNO3 ? 0.70M U 1970BCa (45869)4148
 K(Cu+H3L=CuHL+2H)=-3.85
 K(CuHL=CuH-1L+2H)=-8.6

Method: zone electrophoresis

 Cu++ gl KNO3 25°C 1.0M U 1967RMb (45870)4149
 B(Cu2L2)=13.2
 K(Cu2(H-1L)2+2H=Cu2L2)=8.03

 Cu++ gl NaCl04 20°C 0.10M U K1=5.90 1964COb (45871)4150
 K(Cu+HL)=3.42
 K(Cu+H2L)=2.26
 K(CuH-1L+H)=4.34
 B(Cu2L)=8.10

K(CuL+Cu=Cu2H-1L+H)=-0.87

 Cu++ gl KNO3 32°C 0.25M U 1960DPa (45872)4151
 K(Cu+H3L=CuHL+2H)=-3.3
 K(CuL+H)=3.4
 K(CuH-1L+H)=4.5

 Cu++ gl KNO3 25°C 2.0M U 1958MSb (45873)4152
 K(Cu+H-1L)=13.22

 Cu++ gl NaCl04 20°C 4.0M U I B2=8.4 1957LEa (45874)4153
 B(CuH2L2)=15
 In 1 M NaCl04 K1=5.2, B(Cu2L2)=12.8, B(Cu2L2(OH)2)=33.2

 Cu++ sp oth/un ? ? U K1=3.09 1956HDa (45875)4154
 By ion exchange K1=3.95

 Cu++ gl NaNO3 5°C 0.10M U T 1953WWa (45876)4155
 K(CuL+2H)=6.12
 K(CuH2L+H=Cu+H3L)=0.7
 K(CuH-1L+H)=4.46
 K(Cu+H-1L)=18

K(Cu+L=CuH-1L+H).30 C: K(CuL+2H)=6.00, K(CuH-1L+H)=4.35, K(Cu+L=CuH-1L+H)=2.15

Cu++ EMF oth/un 25°C ->0 U 1952PDa (45877)4156
K(Cu+HL+H2L=CuH3L2)=7.3
K(Cu+2H2L=CuH3L2+H)=2.3

Cu++ oth oth/un 25°C 0.05M U 1952SUC (45878)4157
K(Cu+H3L=CuHL+2H)=-3.47

Cu++ vlt oth/un 25°C ? U 1950MEa (45879)4158
K(Cu+H2L=CuL+2H)=-3.08
K(Cu+HL=CuL+H)=2.62

Cu++ vlt oth/un 25°C ->0 U K1=14.21? 1950MEb (45880)4159
B(CuL2(OH)2)=19.3

C6H9NO3 L (7130)
1,6-Anhydro-3,4-epimino-b-D-altropyranose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KN03	25°C	0.10M	C		K1=2.36 B2=5.02 B(CuH-1L2)=-0.93	1996JLc (46350)	4160

C6H9NO3 H2L CAS 42346-68-9 (3693)
2-Methyl-5-pyrrolidone-2-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	U		K1=8.04	1965Nca (46352)	4161

C6H9NO6 H3L CAS 41035-84-1 (4367)
N-Carboxymethyl-L-aspartic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KN03	25°C	1.0M	U		K1=9.34 B2=11.39 B(CuHL)=13.82 K(Cu(OH)+L)=12.89	2004Nka (46366)	4162

For 0.5 mol/L KN03 K1=10.34; B2=14.73; B(CuHL)=14.39; K(Cu(OH)+L)=13.29
For 0.1 mol/L KN03 K1=10.98; B2=15.82; B(CuHL)=15.07; K(Cu(OH)+L)=13.71

Cu++	sp	KN03	25°C	0.1M	U		K1=12.80 K(Cu+HL)=10.80	1978GNa (46367)	4163
------	----	------	------	------	---	--	----------------------------	-----------------	------

Cu++	gl	KN03	25°C	0.10M	U	M		1973SAe (46368)	4164
------	----	------	------	-------	---	---	--	-----------------	------

K(CuL+Val)=4.24
K(CuL+D-Val)=4.39
K(CuL=Leu)=4.23
K(CuL+D-Leu)=4.37

C6H9NO6 H3L NTA CAS 139-13-9 (191)
 Nitritotriethanoic acid; N(CH₂.COOH)₃

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

Cu++	oth	NaClO ₄	35°C	0.10M	U	M	K ₁ =8.41 K(CuL+A)=5.28	1998GAc (46458)	4165
------	-----	--------------------	------	-------	---	---	---------------------------------------	-----------------	------

Method: electrophoresis. Medium: 0.10 M HClO₄, 0.01 M H₂L
 H₂A: penicillamine

Cu++	ISE	NaClO ₄	25°C	0.10M	C	I	K ₁ =12.94	1997LBb (46459)	4166
------	-----	--------------------	------	-------	---	---	-----------------------	-----------------	------

K₁=12.18 (I=0.7 M), 12.0 (1.0), 12.17 (2.0), 12.41 (3.0), 13.24 (5.0).

Method: Cu ISE.

Cu++	gl	mixed	25°C	0.5M	U		K ₁ =10.35 B ₂ =14.36 K(Cu+OH+L)=16.59	1997SBb (46460)	4167
------	----	-------	------	------	---	--	--	-----------------	------

Medium 0.5 M NaClO₄ in 0.19 mol parts CH₃CN in H₂O

Cu++	gl	NaNO ₃	25°C	0.10M	M		K ₁ =11.98	1996KSc (46461)	4168
------	----	-------------------	------	-------	---	--	-----------------------	-----------------	------

Cu++	vlt	NaNO ₃	25°C	3.00M	U		K ₁ =13.4 B(CuLOH)=16.9	1994NVa (46462)	4169
------	-----	-------------------	------	-------	---	--	---------------------------------------	-----------------	------

B(CuLOH)=16.3 from spectrophotometric measurements

Cu++	sp	KN03	25°C	0.36M	U	I	K ₁ =11.32 B ₂ =17.34	1993PBb (46463)	4170
------	----	------	------	-------	---	---	--	-----------------	------

In 50% v/v DMSO/H₂O K₁=13.81, B₂=17.34

Cu++	gl	KN03	35°C	0.20M	U	M		1992RKb (46464)	4171
------	----	------	------	-------	---	---	--	-----------------	------

K(CuL+Gly)=5.35
 K(CuL+Ala)=4.96
 K(CuL+Val)=5.24
 K(CuL+Leu)=5.40

K(CuL+Phe)=5.05, K(CuL+Trp)=5.28, K(CuL+Ser)=5.10, K(CuL+Thr)=5.34,
 K(CuL+Met)=5.05, K(CuL+Asp)=5.20

Cu++	gl	KN03	25°C	0.10M	C	M	K ₁ =12.94 K(CuL+A)=5.28 B(CuLA)=18.22	1990DAb (46465)	4172
------	----	------	------	-------	---	---	---	-----------------	------

H₂A: salicylaldehyde

Cu++	gl	KN03	25°C	0.10M	C	M	K ₁ =12.94 K(CuL+A)=4.38 B(CuAL)=17.32	1990DAc (46466)	4173
------	----	------	------	-------	---	---	---	-----------------	------

HL: benzohydroxamic acid

Cu++	gl	KN03	25°C	1.0M	U	M	K ₁ =12.06 K(Cu+H+L)=15.31	1990GSa (46467)	4174
------	----	------	------	------	---	---	--	-----------------	------

Cu++	ix	none	25°C	0.0	U			1989LIb (46468)	4175
------	----	------	------	-----	---	--	--	-----------------	------

K_{1eff}=8.64 at pH 6.8

Cu++	dis	NaClO4	25°C	0.10M	C	K1=12.71	1989MMf (46469)4176
Method: paper electrophoresis. Medium pH=8.5.							
Cu++	gl	KNO3	30°C	0.10M	U	M K1=13.50 K(CuL+A)=5.35 B(CuLA)=18.85 K(CuL+C)=5.88 B(CuCL)=19.38	1989SRd (46470)4177
HA=4-amino-5-mercapto-1,2,4-triazole, HC=4-amino-5-mercapto-3-methyltriazole							
Cu++	oth	NaClO4	35°C	0.10M	C	M K1=12.76 K(CuL+his)=5.61	1985SGc (46471)4178
Method: paper electrophoresis. Medium pH 8.5.							
Cu++	ISE	KNO3	20°C	0.10M	U	T K1=12.96 B2=17.43	1984HKa (46472)4179
Cu++	ISE	KNO3	25°C	0.10M	C	K1=13.23 *K(CuL)=-9.38	1984PDb (46473)4180
Method: Cu ion selective electrode.							
Cu++	oth	NaClO4	35°C	0.10M	U	K1=12.76	1984SYa (46474)4181
Method: paper electrophoresis							
Cu++	gl	KCl	25°C	1.0M	C	M B2=4.14 K(CuL+OH)=4.52 K(CuL+NH3)=3.74 K(CuL+CH3NH2)=4.09 K(CuL+gly)=5.39	1983DNa (46475)4182
Cu++	gl	KNO3	25°C	0.10M	U	T K1=12.94	1983FSa (46476)4183
Cu++	gl	NaNO3	25°C	0.10M	C	M K(CuL+py)=3.03 K(CuL+A)=4.47 K(CuL+NH3)=3.79 K(MnL+CH3COO)=0.32	1981BKb (46477)4184
A=1,3-diazole. K(CuL+HB)=0.61, H3B=H3PO4							
Cu++	gl	KNO3	25°C	0.10M	M	K1=12.80	1981GDa (46478)4185
Cu++	vlt	KNO3	RT	0.25M	C	M B2=17.26	1981RRe (46479)4186
Method: polarography. B(Cu(gly)L)=17.93, B(Cu(ala)L)=17.94, B(Cu(B-ala)L)=17.11.							
Cu++	gl	KNO3	25°C	0.10M	U	T M K(CuL+Gly)=5.28	1981SVa (46480)4187
At 20 C: K(CuL+Gly)=5.40; 30 C: 5.20; 40 C: 4.93							
Cu++	gl	KNO3	25°C	0.10M	C	M	1981WNb (46481)4188

$$K(\text{CuL}+\text{OH})=4.20$$

Cu++ g1 KNO3 25°C 0.10M U M 1980Mcc (46482)4189

$B(\text{CuL}(\text{bpy})) = 12.2$
 $K(\text{CuL}(\text{bpy}) + \text{en}) = 2.8$
 $K(\text{CuL}(\text{bpy}) + \text{pn}) = 3.0$
 $B(\text{CuL}(\text{phen})) = 12.6$

$K(\text{CuL}(\text{phen})+\text{en})=2.4$, $K(\text{CuL}(\text{phen})+\text{pn})=3.0$. pn=1,2-diaminopropane

Cu++ ISE KNO3 25°C 0.10M U T K1=12.97 1980NWa (46483)4190

Cu++ ix KNO3 25°C 0.01M U K1=10.2 1979BKb (46484)4191

Cu++ g1 KNO3 25°C 2.5M M K1=12.68 1979FLc (46485)4192

Cu++ ISE NaNO3 25°C 0.10M C M K1=13.19 1979STb (46486)4193

$$\begin{aligned} K(\text{CuL}+\text{OH}) &= 4.40 \\ K(\text{Cu}(\text{OH})\text{L}+\text{OH}) &= 3.08 \\ K(\text{CuL}+\text{ala}) &= 5.63 \\ K(\text{CuL}+\text{pro}) &= 6.14 \end{aligned}$$

Method: Cu ion selective electrode and glass electrode.

$K(\text{CuL}+\text{NH}_3)=2.55$, $K(\text{CuL}+\text{P3010})=2.5$, $K(\text{CuL}+\text{B-ala})=4.48$, $K(\text{CuL}+\text{arginine})=5.40$

Cu++ ISE KN03 25°C 0.10M U T K1=12.94 1977GNb (46487)4194

$$K(\text{Cu}+\text{HL})=10.38$$

Method: Cu/Hg-electrode

Cu++ gl NaCl04 25°C 0.10M U M 1975VSa (46488)4195

B(CuH-1L(Gly))=5.26
B(CuH-1L(Ala))=5.18
B(CuH-1L(Val))=4.97
B(CuH-1L(Leu))=5.07

Cu++ EMF KNO3 25°C 0.10M U K2=4.39 1974HSa (46489)4196

$$\begin{aligned} K(\text{CuL}+\text{OH}) &= 4.6 \\ K(\text{CuL}+\text{H}) &= 1.95 \end{aligned}$$

Cu++ oth NaClO4 25°C 0.20M U M 1973CBa (46490)4197

$K(\text{CuL}+\text{Gly})=5.61$
 $K(\text{CuL}+\text{Ala})=5.76$
 $K(\text{CuL}+\text{b-Ala})=5.03$

Cu++ ISE oth/un 25°C 0.10M U K1=13.3 1973HAc (46491)4198

Cu++ ISE NaNO3 25°C 0.10M U 1972RGa (46492)4199

$$K(\text{Cu}+\text{HL})=3.39$$

Cu++ ISE NaCl04 25°C 0.10M U M 1972RMb (46493)4200

$$\begin{aligned} K(\text{CuL}+\text{A}) &= 7.35 \\ K(\text{CuL}+\text{B}) &= 5.17 \end{aligned}$$

$$K(\text{CuL}+\text{D})=4.57$$

Cu++ g1 KNO3 25°C 0.10M U T M 1971ICa (46494)4201

$$K(\text{CuL}+\text{Gly})=5.26$$

Cu++ g1 KNO3 25°C 0.10M U T M 1971ICb (46495)4202

HA=piperidine-2-carboxylic acid. 15 C, K=5.56; 50 C, K=4.72; 70 C, K=4.38

Cu++ gl KNO3 25°C 0.10M U T M 1971ICc (46496)4203

$$K(\text{CuL}+\text{A})=5.29$$
$$K(\text{Cu}(\text{OH})\text{L}+\text{H})(15^\circ\text{C})=9.43, (70^\circ\text{C})=8.42; K(\text{CuL}+\text{A})(15^\circ\text{C})=5.62, (70^\circ\text{C})=4.42$$

Cu++ g1 KNO3 25°C 0.10M U T M 1971IVb (46497)4204

$$K(\text{CuL}+\text{A})=5.34$$

$K(\text{CuL}+\text{Sar})(15^\circ\text{C})=5.43$, $(70^\circ\text{C})=4.26$; $K(\text{CuL}+\text{A})(15^\circ\text{C})=5.59$, $(70^\circ\text{C})=4.34$

Cu++ gl KNO3 25°C 0.10M U M 1971TSh (46498)4205

$$K(\text{CuL}+\text{Ala})=5.36$$

Cu++ gl KNO3 25°C 0.10M U M 1970STd (46499)4206

$$K(\text{CuL}+\text{B})=5.62$$
$$K(\text{CuL}+\text{C})=9.51$$

H2A=salicylic acid, H3B=sulfosalicylic acid, H4C=tiron

Cu++ g1 NaCl04 25°C 0.10M U M 1969AIa (46500)4207

$$K(\text{CuL}+\text{Trp})=5.06$$

Cu++ gl NaClO4 25°C 0.10M U M 1969BIa (46501)4208

$$K(\text{CuL}(\text{histamine})+\text{H})=7.58$$

Cu++ vlt NaClO4 25°C 0.10M U K1=13.60 1969VPa (46502)4209

Cu++ gl KN03 25°C 0.05M U M 1968HAa (46503)4210

$$K(\text{CuL}+\text{Gly})=5.46$$
$$K(\text{CuL}+\text{A})=2.88$$
$$K(\text{CuL}+\text{Ala})=5.42$$

A=ethylvalinate. $K(\text{CuL}+\text{Phe})=4.99$; $K(\text{CuL}+\text{Val})=5.10$; $K(\text{CuL}+\text{His})=5.73$;

$K(\text{CuL+B})=3.06$; $K(\text{CuL+C})=3.10$. B=methyl glycinate, C=ethyl alaninate + others

Cu++ gl KNO3 25°C 0.08M U M 1968HAa (46504)4211

$K(\text{CuL+OH})=4.39$

$K(\text{CuL+A})=3.06$

$K(\text{CuL+B})=3.15$

$K(\text{CuL+C})=3.33$

A=methylglycinate, B=ethylglycinate, C=n-butylglycinate. Other amino acid esters also studied

Cu++ gl KNO3 25°C 0.08M U M 1968HAa (46505)4212

$K(\text{CuL+Gly})=5.44$

$K(\text{CuL+Ala})=5.42$

$K(\text{CuL+Phe})=4.99$

$K(\text{CuL+Leu})=5.35$

$K(\text{CuL+Val})=5.10$, $K(\text{CuL+B-Ala})=4.56$. $K(\text{CuL+His})=5.73$ and 4.16. Ternary complexes with picolinic acid

Cu++ gl NaClO4 25°C 0.10M U M 1968ICa (46506)4213

$K(\text{CuL+Arg})=5.22$

$K(\text{CuL+Gly})=5.44$

$K(\text{CuL+Ser})=5.01$

Cu++ gl NaClO4 25°C 0.10M U M 1968ICa (46507)4214

$K(\text{CuL+A})=3.43$

$K(\text{CuL+CuL(OH)+H})=-9.79$

$K(\text{CuL=CuL(OH)+H})=-9.14$

HA=glycylglycine

Cu++ gl NaClO4 ? 0.10M U M 1968ICb (46508)4215

$K(\text{CuL+Asp})=5.31$

$K(\text{CuL+Glu})=5.10$

Cu++ gl KNO3 0.4°C 0.10M U K1=13.11 1967TMf (46509)4216

Cu++ vlt diox/w 25°C 50% U 1966BEb (46510)4217

B3=17.02

Cu++ cal KNO3 20°C 0.10M U H 1964HDa (46511)4218

DH(K1)=-7.7 kJ mol⁻¹, DS=221.5 J K⁻¹ mol⁻¹; DH(B2)=-34.7, DS=230

Cu++ oth KNO3 20°C 0.10M U K1=11.5 B2=14.80 1964JOa (46512)4219

Method: paper electrophoresis

Cu++ gl NaNO3 ? 0.50M U M 1963ISb (46513)4220

$K(\text{CuL+A})=5.32$

$K(\text{CuL+Gly})=5.44$

$K(\text{CuL+B})=6.20$

H2A=salicylic acid, HB=pyridyl carbaldoxime

Cu++ dis NaClO4 20°C 0.10M U K1=13.05 1963STc (46514)4221

Cu++ gl KNO3 25°C 0.10M U T H K1=13.10 1962MFb (46515)4222
K1=13.21(15 C), 13.16(20 C), 13.15(30 C), 13.10(35 C), 13.13(40 C)
DH(K1)=-4.6 kJ mol⁻¹, DS=236 J K⁻¹ mol⁻¹

Cu++ vlt KNO3 20°C 0.10M U T K1=12.96 1956SGa (46516)4223

Cu++ oth oth/un 20°C ? U K1=12.7 1956WJa (46517)4224

Cu++ vlt KCl 20°C 0.10M U T K1=12.96 1955SAa (46518)4225

Cu++ gl KCl 20°C 0.10M U K1=12.68 1951SFa (46519)4226

C6H9N2O3P H2L CAS 333721-08-7 (7991)
Amino-2-pyridinylmethylphosphonic acid;

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

Cu++ gl KNO3 25°C 0.10M C B2=20.42 2001LCa (47137)4227
B(CuHL)=16.09
B(CuH2L2)=30.62
B(CuHL2)=26.25

C6H9N2O3P H2L CAS 101508-76-3 (7726)
Amino-3-pyridylmethylphosphonic acid;

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

Cu++ gl KNO3 25°C 0.10M C K1=7.87 B2=13.75 2000CMB (47139)4228
B(CuHL)=12.47
B(CuHL2)=19.46
B(CuH-1L2)=2.74

C6H9N3O2 HL Histidine CAS 71-00-1 (1)
2-Amino-3-(4'-imidazolyl)propanoic acid; H2N.CH(CH2.C3H3N2)COOH

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

Cu++ sp R4N.X 25°C 0.10M C K1=10.30 B2=18.02 2004AKa (47262)4229
B(CuH-1L)=2.70
B(CuHL)=14.05
B(CuHL2)=23.70

By multivariate curve resolution. Medium: Me4NBr, 0.10 M. By potentiometry
K1=10.12, B2=18.10, B(CuH-1L)=2.65, B(CuHL)=14.16, B(CuHL2)=23.85.

Cu++ gl NaNO3 25°C 0.10M C M K1=10.61 B2=18.62 2004SSa (47263)4230
B(CuH-1L)=5.42
B(CuHL)=14.02
B(CuH-2L)=-1.60

B(CuHL2)=24.25
B(CuLA)=16.36, B(CuHLA)=21.11. HA is 6-aminopenicillanic acid.

Cu++ gl KNO3 25°C 0.10M C M K1=10.50 1999AAa (47264)4231
K(CuL+A)=3.63
B(CuLA)=14.13
K(CuL+B)=3.80
B(CuLB)=14.30

K(CuL+C)=3.53, B(CuLC)=14.03, K(CuL+D)=3.66, B(CuLD)=14.16.
HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.

Cu++ gl KNO3 25°C 0.10M C K1=10.11 1999BIa (47265)4232

Cu++ gl NaClO4 37°C 0.15M U M 1999NNa (47266)4233
B(CuHAL)=22.07
B(CuAL)=17.82
K(CuA+L)=9.81
K(CuL+A)=7.55

K(CuHL+A)=7.69. HA is nicotinic acid.

Cu++ gl NaClO4 37°C 0.15M U M 1997NAb (47267)4234
B(CuAL)=18.46
B(CuH2AL)=26.50
B(CuHAL)=22.79
K(CuL+A)=8.19

H2A is cysteic acid. K(CuA+L)=9.86.

Cu++ gl NaNO3 25°C 0.10M M M K1=10.66 B2=18.96 1997SKc (47268)4235
B(CuAL)=16.08
B(CuH-1AL)=7.22
B(CuHL)=14.86

HA is glycyl-DL-leucine.

Cu++ gl KNO3 25°C 0.10M C K1=9.58 B2=17.87 1996KDa (47269)4236
B(CuHL2)=23.58
B(CuH2L2)=28.09

Cu++ gl NaClO4 37°C 0.15M U M 1995NAc (47270)4237
B(CuLZn)=14.61
B(CuL2Zn)=21.96
B(CuH-1L2Zn)=16.16
B(CuHL2Ni)=27.96

B(CuL2Ni)=23.30, B(CuH-1L2Ni)=16.17, B(CuH-2L2Ni)=8.11.

Cu++ gl KNO3 25°C 0.10M M M K1=10.61 B2=19.08 1995SHc (47271)4238
K(Cu(ada)+L)=4.46
B(CuHL2)=24.34

ada: N-(acetamido)-iminodiethanoic acid. K(H+L)=9.05, K(2H+L)=15.15.

Cu++ gl NaCl 25°C 0.2M C K1=10.26 B2=14.30 1995VZb (47272)4239

Cu++	gl	KNO3	25°C	0.10M	C	M		1994CDb (47273)4240
							B(CuAL)=16.78 B(CuHAL)=22.65 B(CuH2AL)=27.00 B(CuH3AL)=30.9	
A:6-Deoxy-6-N-histamine-b-cyclodextrin								
Cu++	gl	KNO3	25°C	0.10M	C	M		1994CDb (47274)4241
							B(CuAL)=16.70 B(CuHAL)=22.54 B(CuH2AL)=26.96 B(CuH3AL)=30.7	
Ligand: D-His. A:6-Deoxy-6-N-histamine-b-cyclodextrin								
Cu++	gl	NaCl04	37°C	0.15M	U	M		1994NAd (47275)4242
							B(CuAL)=19.30 K(CuL+A)=9.03 K(CuA+L)=9.84	
H2A is aspartic acid.								
Cu++	gl	NaCl04	37°C	0.15M	U	M		1994NAd (47276)4243
							B(CuAL)=19.72 K(CuL+A)=9.45 K(CuA+L)=9.24	
H2A is iminodiethanoic acid.								
Cu++	gl	NaCl04	30°C	0.20M	M		K1=10.5 K(Cu+HL)=8.11 B(Cu2L)=12.67	1994PBb (47277)4244
Cu++	gl	KNO3	25°C	0.10M	C		K1=10.15 B2=18.03 B(CuHL)=14.14 B(CuH2L2)=27.27 B(CuHL2)=23.83	1994RMa (47278)4245
Cu++	gl	NaNO3	25°C	0.50M	C		K1=10.06 B2=17.67 B(CuHL)=14.24 B(CuHL2)=23.70 B(CuH-1L2)=6.48	1994WCa (47279)4246
Cu++	gl	KNO3	35°C	0.20M	C	M	K1=9.76 B(Cu(P207)L)=16.67 B(Cu(P3010)L)=15.57 B(Cu(atp)L)=14.50	1994YVa (47280)4247
Cu++	gl	KNO3	25°C	0.10M	C	M	K1=10.21 B2=18.45 B(CuHL)=14.35 B(CuHL2)=24.17 B(CuH2L2)=27.30	1993KAb (47281)4248

A=famotidine. B(CuLA)=17.44, B(CuH-1LA)=10.56, B(CuH-2LA)=3.31

Cu++ gl NaCl04 37°C 0.15M U M 1993NKb (47282)4249

B(Cu(trp)HL)=22.82

B(Cu(trp)L)=18.15

K(CuHL+trp)=8.44

K(Cu(trp)+L)=9.92

K(CuL+trp)=7.88; B(Cu(glu)HL)=22.78, B(Cu(glu)L)=17.94, K(CuHL+glu)=8.40,

K(Cu(glu)+L)=9.42, K(CuL+glu)=7.67.

Cu++ gl NaCl 25°C 0.20M U B2=18.45 1992TSa (47283)4250

B(CuH-1LA)=10.74

HA=Asp-Ala-His-methylamide

Cu++ gl KNO3 35°C 0.20M C M K1=9.76 1992YKa (47284)4251

B(Cu(edda)L)=19.49

B(Cu(en)L)=18.63

K(Cu(edda)+L)=4.99

K(Cu(en)+L)=8.87

Cu++ gl NaCl 37°C 0.15M U M 1991Hwa (47285)4252

B(CuLA)=15.26

H2A is 7-oxabicyclo-[2,2,1]-hept-5-ene-2,3-dicarboxylic acid

Cu++ gl NaCl04 30°C 0.01M U T H K1=10.18 1991PPa (47286)4253

K(Cu(imidazole)+L)=3.36

K(Cu(Me-imidazole)+L)=3.65

K(Cu(Et-imidazole)+L)=3.65

40 C: K1=9.78, 50 C: K1=9.39. DH(K1)=-68.6 kJ mol⁻¹

Cu++ gl KNO3 35°C 0.10M U M K1=10.13 1989RSb (47287)4254

B(CuL(thiodipropionate))=20.60

K(Cu(TDPA)+L)=8.47

Cu++ gl NaCl 37°C 0.15M C M K1=9.70 B2=17.17 1988CHc (47288)4255

B(CuHL)=13.62

B(CuHL2)=22.75

B(CuH2L2)=25.98

B(Cu2L3)=29.26

B(CuH-1L)= 2.43. Ternary complex with captopril

Cu++ gl NaCl04 37°C 0.15M U M 1988NSa (47289)4256

B(CuHL(Asn))=22.03

B(CuL(Asn))=17.12

B(Cu(Asn)+L)=14.14

B(CuL+Asn)=7.65

Cu++ gl KNO3 35°C 0.20M C M K1=9.76 B2=17.77 1987PRa (47290)4257

Cu++ gl NaCl 37°C 0.15M U K1=9.80 B2=17.50 1986XHa (47291)4258

 Cu++ gl NaCl 37°C 0.15M U K1=9.75 B2=17.40 1985CFb (47292)4259
 B(CuHL)=13.70
 B(CuHL2)=22.96
 B(CuH2L2)=26.16
 B(CuH-1L)=2.4

B(Cu2H-2L2)=7.5

 Cu++ gl KNO3 35°C 0.10M C M K1=10.02 1985RRc (47293)4260
 B(CuL(cytidine))=14.23

 Cu++ gl KNO3 35°C 0.10M C K1=10.02 1985RRh (47294)4261

 Cu++ oth NaCl04 35°C 0.10M C K1=10.35 B2=18.34 1985SGc (47295)4262
 Method: paper electrophoresis. Medium pH 8.5.

 Cu++ gl NaCl 37°C 0.15M C M K1=9.639 B2=17.36 1984ABg (47296)4263
 B(CuHL)=13.587
 B(CuHL2)=22.841
 B(CuH2L2)=26.164
 B(CuH-1L2)=6.676

B(CuAL)=13.241, B(Cu2H-2AL)=3.821. A is cimetidine.

 Cu++ cal KNO3 25°C 0.10M C H 1984ACb (47297)4264
 DH(K1)=-44.3 kJ mol⁻¹, DS=45.6 J K⁻¹ mol⁻¹; DH(B2)=-81.9, DS=71.9;
 DH(CuHL)=-57.7, DS=77.3; DH(CuHL2)=-106.1, DS=100; DH(CuH2L2)=113, DS=142

 Cu++ gl KCl 25°C 0.20M C M 1984KDb (47298)4265
 B(CuHL(DOPA))=33.25
 K(Cu(Adrenaline)+L)=9.41
 B(CuHL(Adrenaline))=32.99
 K(Cu(Noradrenaline)+L)=9.40

B(CuHL(Noradrenaline))=32.39; K(Cu(Dopamine)+L)=9.35, B(CuHL(Dopamine))=33.57
 H3DOPA=3,4-dihydroxyphenylalanine

 Cu++ gl NaCl04 30°C 0.20M C M K1=10.16 B2=17.67 1984PBd (47299)4266
 K(Cu+HL)=8.23
 K(Cu(bpy)+L)=8.36
 K(Cu(bpy)+HL)=7.54

K(Cu(phen)+L)=8.00; K(Cu(phen)+HL)=7.46

 Cu++ gl KCl 25°C 0.10M C TIHM R K1=10.16 B2=18.11 1984PEa (47300)4267
 B(CuHL)=14.11
 B(CuHL2)=23.81
 B(CuH2L2)=27.2
 B(Cu2H-2L2)=7.9

IUPAC evaluation. DH(K1)=-48.4 kJ mol⁻¹, DH(B2)=-89.2
 25 C and 3.00 mol dm⁻³: K1=10.09, B2=19.03, B(MHL)=15.62, B(MHL2)=25.88

 Cu++ gl KNO3 35°C 0.10M C M K1=10.42 1983KSc (47301)4268

$$K(Cu+HB+L)=13.78$$

Cu++ g1 NaNO3 37°C 0.15M U K1=10.190 B2=16.234 1982ESa (47302)4269
B(CuHL)=14.262
B(CuHL2)=22.801

Cu++ gl NaNO3 37°C 0.15M U M 1982ESa (47303)4270

B(CuL(pyridoxamine))=16.387
B(CuHL(pyridoxamine))=25.674
B(CuH2L(pyridoxamine))=31.123
B(CuH3L(pyridoxamine))=35.798
B(CuH4L(pyridoxamine))=38.007, B(CuH3L2(pyridoxamine))=45.129.

Cu++ gl KCl 25°C 0.10M C M T K1=9.893 B2=17.50 1982KBd (47304)4271
B(CuHL)=13.84
B(CuHL2)=23.17
B(CuH2L2)=26.55
B(CuH-2L2)=9.2
B(CuH-1L2)=6.4, B(CuL(histamine))=17.34, B(CuHL(histamine))=22.84,
B(CuH2L(histamine))=26.88. Other models also considered

Cu++	gl	NaClO4	37°C	0.15M	U	M	1982NVa (47305)4272
						B(CuLA)=17.65	
						B(CuHLA)=21.3	
						B(CuLB)=16.51	
						B(CuLC)=16.1	

HA=2-aminobutanoic acid, HB=3-aminobutanoic acid, HC=4-aminobutanoic acid
Also other related ligands

Cu++ gl KNO₃ 25°C 0.10M U HM 1981AAc (47306)4273
DH(CuNiL₂)=-89 kJ mol⁻¹; DH(CuZnL₂)=-78.6; DH(CuCdL₂)=-83.2

Cu++ gl NaCl 37°C 0.15M C K1=9.753 B2=17.40 1981CMc (47307)4274
B(CuHL)=13.70
B(CuHL2)=22.96
B(CuH2L2)=26.16
B(CuH-1L)=2.39
B(CuH-2L2)=7.50.

Cu++ gl NaCl 37°C 0.15M C K1=9.77 B2=17.38 1981JMa (47308)4275
B(CuHL)=13.94
B(CuHL2)=23.12

Cu++ gl KCl 25°C 0.10M U K1=10.39 B2=17.87 1980DMA (47309)4276
B(CuHL)=14.24

Cu++ gl NaNO3 25°C .005M U K1=10.37 B2=18.07 1980JMa (47310)4277
B(CuHL)=14.42

$$B(\text{CuH-1L}) = 2.80$$
$$K(\text{CuA}+\text{L})=10.07$$
$$K(\text{CuHL}2+\text{H})=3.44$$
$$B(\text{CuHL}(\text{Gly})) = 22.23$$
$$B(\text{CuL}(\text{Ala})) = 17.80$$
$$B(\text{CuL}(\text{Gly})) = 17.78$$
$$B(\text{CuL}(\text{Asp})) = 17.03$$
$$B(\text{CuHLA}) = 23.46$$
$$B(\text{CuH}-2\text{L}2)=8.0$$
$$B(\text{CuH}_2\text{L}_2) = 27.56$$
$$B(\text{CuL(en)}) = 19.24$$

B(CuL(oxalate))=16.22

B(CuHL(bpy))=21.62

Also with Gly-Phe, Gly-Val, Val-Val, N-Bz-His

Cu++ gl KNO3 25°C 0.10M C M K1=10.15 B2=18.13 1976DOb (47321)4288

B(CuHL)=14.17

B(CuH2L2)=27.1

B(CuHL2)=23.87

B(CuH-1L)=2.0

B(CuHL(citrate))=19.08; B(CuL(citrate))=14.95; B(CuH-1L(citrate))=6.15

Cu++ gl KNO3 25°C 0.10M C T K1=10.14 B2=18.10 1976PSb (47322)4289

B(CuHL)=14.13

B(CuHL2)=23.92

B(CuH2L2)=27.48

B(CuH-1L)=2.47

B(CuL2H-2)=7.58

Cu++ gl KNO3 25°C 0.10M C K1=10.13 B2=18.12 1976PSb (47323)4290

B(CuHL)=14.07

B(CuHL2)=23.92

B(CuH2L2)=27.63

B(CuH-1L)=2.39

Ligand: D-His. B(CuH-2L2)=7.75

Cu++ gl NaClO4 25°C 3.00M C HM 1975BWA (47324)4291

B(CuL(Asn))=18.597

B(CuHL(Asn))=23.326

B(CuL(Thr))=18.613

DH and DS for ternary complexes

Cu++ gl KNO3 25°C 0.10M U K1=10.22 B2=18.11 1975RIb (47325)4292

K(CuL+H)=3.91

B(CuHL)=14.14

K(CuL2+H)=5.67

B(CuHL2)=23.79

Data for L-histidine. For racemic ligand, K1=10.22, K(CuL+H)=3.91,

B(CuHL)=14.13, B2=18.11, K(CuL2+H)=5.62, B(CuHL2)=23.74.

Cu++ gl none 21°C 0.0 M K1=10.14 B2=17.63 1974YAa (47326)4293

Cu++ gl NaCl 25°C 0.15M U T K1=10.20 B2=18.45 1973KSb (47327)4294

B(CuHL)=14.18

B(CuH2L2)=26.91

B(CuHL2)=24.01

K(Cu+L=CuH-1L+H)=2.00

K(Cu+2L=CuH-1L2+H)=7.71; K(Cu+2L=CuH-2L2+2H)=8.04

Cu++ gl oth/un ? ? U B2=18.91 1972KPd (47328)4295

Cu++ ISE NaCl04 25°C 3.00M U T K1=10.09 B2=19.03 1972WIb (47329)4296
 B(CuHL)=15.62
 B(CuHL2)=25.88
 B(CuH2L2)=30.75
 K(Cu+L=CuH-1L+H)=3.64

 Cu++ cal KNO3 25°C 0.10M C H 1971BPi (47330)4297
 DH(B1)=-63.63 kJ mol-1, For D-His: DH=-83.82, for rac-His: DH=-82.60

 Cu++ gl KCl 25°C 0.10M U M K1=10.22 B2=18.00 1971HMc (47331)4298
 K(Cu+HL)=5.15
 K(Cu+L+HL)=14.13
 B(CuLA)=16.93
 B(CuHLA)=22.28

A=histidine methyl ester

 Cu++ gl KNO3 25°C 0.16M U K1=10.01 B2=18.02 1970MBb (47332)4299
 K(Cu+HL)=4.37
 K(CuHL+L)=10.13

 Cu++ gl KCl 25°C 0.50M U K1=6.45 B2=11.50 1969MMd (47333)4300

 Cu++ gl KNO3 25°C 0.20M U T K1=10.74 B2=19.40 1969Rmb (47334)4301
 K1(15 C)=11.03, K1(40 C)=10.34, K2(15 C)=8.91, K2(40 C)=8.26

 Cu++ gl KNO3 37°C 0.15M U K1=9.79 B2=17.41 1967PSd (47335)4302

 Cu++ cal KNO3 22°C 0.10M U HM 1967SSl (47336)4303
 DH(B2)=-89.0 kJ mol-1, DS=58.1 J K-1 mol-1. Ternary complexes with NTA

 Cu++ gl KCl 40°C 0.25M U T HM K1=10.5 1965AZa (47337)4304
 K1=12.8(0 C), 11.2(15 C) 10.7(25 C). At 15 C: DH(K1)=-114.5 kJ mol-1,
 DH(CuA+L=CuL+A)=-38. A=histidine methyl ester

 Cu++ gl KCl 25°C 0.10M U K1=10.21 B2=18.53 1964DCa (47338)4305

 Cu++ gl KNO3 25°C 0.20M U K1=10.30 1963CCb (47339)4306

 Cu++ gl oth/un 25°C 0.30M U K1=10.3 1961JWa (47340)4307
 Medium: K2SO4. By platinum electrode: K1=10.5

 Cu++ gl oth/un 20°C 1.0M U B2=28.0 1961VAa (47341)4308
 K(Cu+HL+L)=20.0

 Cu++ gl oth/un 25°C 0.01M U K1=10.56 B2=18.81 1959LRa (47342)4309

 Cu++ gl oth/un 20°C ? U B2=18.70 1959PEe (47343)4310

 Cu++ gl oth/un 25°C 0.20M U K1=10.60 B2=18.6 1957Lda (47344)4311

Cu++ gl oth/un 25°C 0.01M U B2=18.33 1950MMa (47345)4312

C6H9N3O2 HL (4366)
Acetone cyanoacetylhydrazone; CH3.CO.CH2.N(CO.CH2.CN).NH2

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

Cu++ sp NaNO3 20°C 0.10M U K1=8.2 B2=15.80 1970Z0a (47633)4313

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

Cu++ gl KNO3 25°C 0.50M U K1=1.32 B2=1.85 1983LWa (47644)4314

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

Cu++ ISE NaClO4 25°C 0.10M U I K1=5.87 B2=10.51 1979PPc (47652)4315
B3=13.62
B4=15.3

Method: Cu elec. In 50% v/v dioxan/H2O: K1=6.49; B2=10.87; B3=14.30; B4=15.7

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

Cu++ gl KNO3 25°C 0.50M U K1=4.25 B2=7.81 1979LBa (47675)4316
B3=10.70
B4=13.10
B5=14.20

C6H10N2 L Tri-Me-Pyrazole CAS 822-90-2 (370)
3,4,5-Trimethyl-1,2-diazole; C4HN2(CH3)3

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

Cu++ sp alc/w 20°C 20% U K1=2.64 B2=4.68 1982KSb (47687)4317

C6H10N2O2 HL Nioxime CAS 492-99-9 (1098)
Cyclohexane-1,2-dione-dioxime; C6H8(:NOH)2

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

Cu++ gl NaNO3 20°C 0.20M U K1=9.99 B2=19.38 1969MVa (47695)4318

Cu++ gl diox/w 25°C 50% U K1=13.2 B2=25.7 1958PBa (47696)4319

C6H10N2O3 HL CAS 32514-11-7 (4318)

dl-Tetranordethiobiotin;

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

Cu++ gl diox/w 25°C 50% U M K1=3.14 1969SMc (47708)4320

K(CuA+bpy)=3.17

Medium: 50% dioxan, 0.1 M NaClO4. d-isomer, K1=3.16

C6H10N2O3S2 HL (7167)

Cysteiny1-cysteine-cyclo(1-2)-disulfide;

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

Cu++ gl KCl 25°C 0.10M C K1=4.66 1994GRc (47712)4321

B(CuH-1L)=-0.75

B(CuH-2L)=-9.77

C6H10N2O4 H2L (8064)

1-Acetyl-2,3-butanedione dioxime;

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

Cu++ gl KNO3 25°C 0.10M U I 1976LUa (47713)4322

K(Cu+HL)=7.75

K(CuHL+HL)=9.40

K(Cu+H2L=CuHL+H)=-2.00

K(Cu+2H2L=Cu(HL)2+2H)=-2.40

Data for 25, 50 and 75% v/v dioxan/H2O. At 50%, K(Cu+HL)=9.55,

K(CuHL+HL)=10.70, K(Cu+H2L=CuHL+H)=-2.25, K(Cu+2H2L=Cu(HL)2+2H)=-3.35

C6H10N2O4 H2L (3695)

N-(Iminomethyl)-2-aminopentanedioic acid;

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

Cu++ gl NaClO4 25°C 0.10M U K1=9.14 B2=16.56 1965Nca (47716)4323

C6H10N2O4 HL CAS 5687-49-8 (3696)

N-Acetylglcylglycine; CH3.CO.NH.CH2.CO.NH.CH2.CO.OH

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

Cu++ gl oth/un 20°C 1.0M U I K2=1.41 1960KFb (47719)4324

K2=2.07(I=0.015)

C6H10N2O4 H2L (7336)

N-Pyruvoylalanine oxime; CH3.C(:NOH).CONH.CH(CH3).COOH

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++       gl  KNO3   25°C 0.10M C          K1=8.64      19950Sa (47721)4325
                                B(CuH-2L)=-7.97
                                B(Cu2H-1L2)=14.20
                                B(Cu2H-2L2)=9.07

```

```

*****
C6H10N2O4      H2L                      CAS 96705-91-8 (3103)
Piperazine-2,5-dicarboxylic acid;
-----

```

```

Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++       gl  KCl    22°C 0.10M U          K1=12.9      1964PCa (47724)4326

```

```

*****
C6H10N2O4      H2L                      (3104)
Piperazine-2,6-dicarboxylic acid;
-----

```

```

Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++       gl  KCl    22°C 0.10M U          K1=8.5       1964PCa (47730)4327

```

```

*****
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
-----
Cu++       gl  KCl    22°C 0.10M U          K1=13.0      1964PCa (47741)4328

```

```

*****
C6H10N2O5      H2L    Asp-Gly      CAS 3790-51-0 (6521)
Aspartyl-glycine; H2N.CH(CH2.COOH)CO.NH.CH2.COOH
-----

```

```

Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++       gl  KCl    25°C 0.20M U          K1=6.52      1993SFa (47756)4329

```

```

                                B(CuHL)=10.00
                                B(CuH-1L)=1.65
                                B(CuH-2L)=-7.80
                                B(CuH-1L2)=4.45
-----

```

```

Cu++       gl  KNO3   25°C 0.20M C          K1=9.11      1987FDc (47757)4330
                                B(CuH-1L)=3.03
                                B(CuH-1L2)=8.04

```

```

*****
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
-----
Cu++       gl  KCl    25°C 1.00M C          1989FKa (47770)4331

```


beta-Aspartyl-glycine; H2N.CH(COOH)CH.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	U			K1=7.90 B2=14.23 B(CuHL)=11.15 B(CuH-1L)=1.56 B(CuH-2L)=-8.31 B(CuH-1L2)=4.33	1993SFa	(47860)4344

C6H10N2O6 H3L (7019)
N,N-Bis(carboxymethyl)aminoacetohydroxamic acid; (HOOCH2)2N.CH2.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	sp	NaClO4	20°C	0.10M	U			K1=14.72 K(Cu+HL)=9.45 K(H+CuL)=4.15	1977KJa	(47862)4345

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
Cu++	gl	KNO3	25°C	0.10M	U			K1=12.55 K(Cu+HL)=10.28 K(Cu+H2L)=6.30	1990GKa	(47865)4346

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
Cu++	sp	KNO3	25°C	0.50M	U			K1=1.08 B2=2.43	1976LWa	(47873)4347

C6H10N4O L CAS 7261-14-9 (4368)
Histidinamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.50M	U			K1=4.53 B2=8.21	1969MMd	(47882)4348

C6H10N4O2 HL CAS 25486-00-4 (2554)
2-Amino-3-(4'-imidazolyl)propanehydroxamic acid, Histidine-hydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C	M		B2=20.14 B(CuH2L)=20.38 B(CuHL)=12.27	2001KBa	(47898)4349

$$B(Cu_2L_2) = 29.54$$

Data available for ternary complexes with dien.

Additional technique: epr. $B(\text{Cu}_2\text{H}-1\text{L}_2)=23.07$, $B(\text{CuH}_2\text{L}_2)=33.53$, $B(\text{CuHL}_2)=27.36$, $B(\text{CuH}-1\text{L}_2)=10.31$

$$B(Cu_2H-1L_2)=27.27$$

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

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

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

C6H10O2 H2L CAS 1069-23-4 (2465)
3,4-Dihydroxyhexa-2,4-diene; CH₃.CH:C(OH).(OH)C:CH.CH₃

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      EMF NaClO4 25°C 0.10M U      K1=4.2    B2=7.7    1984BCa (47935)4356
K1=4.3 and K2=3.4 when Ca/Cm=30. Where Ca/Cm= total ligand/ total metal
ratio. Alternative method: Specific ion electrode or Marinsky's method
*****
C6H10O2      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
-----
Cu++      sp  non-aq 20°C 100% U      M      1971GHa (47939)4357
K(CuL2+py)=0.37
K(CuL2+A)=0.55
K(CuL2+B)=0.00
Medium: benzene. A=4-methylpyridine, B=2-methylpyridine
-----

```

```

-----
Cu++      cal non-aq 20°C 100% U      M      1971GHa (47940)4358
K(CuL2+py)=0.38
Medium: benzene
-----

```

```

-----
Cu++      gl  diox/w 30°C 75% U      K1=13.28 B2=23.63 1962MMb (47941)4359
-----
Cu++      gl  diox/w 20°C 50% U      B2=16.4    1945Cwa (47942)4360
*****
C6H10O2      HL      CAS 1577-22-6 (962)
5-Hexenoic acid; CH2:CH.CH2.CH2.CH2.COOH
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      gl  KNO3 25°C 0.10M C      K1=1.45    1975IPa (47950)4361
*****
C6H10O2S      HL      CAS 29431-24-1 (4369)
(But-1-enylthio)ethanoic acid; CH2:CH.CH2.CH2.S.CH2.COOH
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      ISE KNO3 25°C 0.10M C      K1=2.13    1972FGb (47953)4362
By competition with Ag+ using Ag ISE
*****
C6H10O2S      HL      (4370)
Ethyl thioacetoacetate; CH3.CS.CH2.CO.OCH2.CH3
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      ISE KNO3 25°C 0.10M C      K1=2.02    1972FGb (47958)4363
By competition with Ag+ using Ag ISE
*****
C6H10O2S2      HL      (1224)
-----

```

1,2-Dithiolane-3-propanoic acid, Bisnorlipoic acid; C3H5S2.CH2CH2COOH

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

Cu++	gl	NaCl04	25°C	0.10M	C			K1=3.58	1978SPd (47972)	4364
------	----	--------	------	-------	---	--	--	---------	-----------------	------

C6H10O3		HL						CAS 16841-19-3	(3649)	
---------	--	----	--	--	--	--	--	----------------	--------	--

1-Hydroxycyclopentanecarboxylic acid; HO.C5H8.COOH

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

Cu++	gl	NaCl04	25°C	0.10M	U			K1=2.799 B2=4.58	1967PRb (47980)	4365
------	----	--------	------	-------	---	--	--	------------------	-----------------	------

C6H10O3		HL						CAS 141-97-9	(3068)	
---------	--	----	--	--	--	--	--	--------------	--------	--

Ethyl acetoacetate; CH3.CO.CH2.CO2.C2H5

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

Cu++	gl	diox/w	30°C	50%	U			K1=8.4 B2=14.9	1945Cwa (48005)	4366
------	----	--------	------	-----	---	--	--	----------------	-----------------	------

C6H10O4		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
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

Cu++	ISE	NaCl04	25°C	0.10M	C			K1=1.98	1989COb (48040)	4367
------	-----	--------	------	-------	---	--	--	---------	-----------------	------

Cu++	vlt	KNO3	25°C	1.0M	C			K1=3.08 B2= 3.80	1983GJb (48041)	4368
------	-----	------	------	------	---	--	--	------------------	-----------------	------

Method: polarography.

Cu++	oth	oth/un	40°C	0.10M	U			K1=2.7	1981SSe (48042)	4369
------	-----	--------	------	-------	---	--	--	--------	-----------------	------

Method: Paper electrophoresis.

Cu++	gl	oth/un	25°C	0.10M	U			K1=2.3	1960YYa (48043)	4370
------	----	--------	------	-------	---	--	--	--------	-----------------	------

Cu++	gl	oth/un	25°C	->0	U			K1=3.35	1951PJa (48044)	4371
------	----	--------	------	-----	---	--	--	---------	-----------------	------

C6H10O4		H2L						CAS 597-43-3	(2693)	
---------	--	-----	--	--	--	--	--	--------------	--------	--

2,2-Dimethylbutanedioic acid; HOOC.C(CH3)2.CH2.COOH

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

Cu++	gl	NaCl04	25°C	0.50M	C			K1=3.09	1986LEe (48101)	4372
------	----	--------	------	-------	---	--	--	---------	-----------------	------

B(CuHL)=7.36

C6H10O4		H2L						(3070)		
---------	--	-----	--	--	--	--	--	--------	--	--

Isopropylmalonic acid; HOOC.CH(CH(CH3)2).COOH

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

Cu++ gl alc/w 25°C 25% C I M K1=6.33 B2=10.54 1976D0c (48106)4373
Medium: 25% PrOH/H2O. B(CuL(malonate))=9.99. In 50% PrOH: K1=6.92, K2=4.83

Cu++ gl KNO3 25°C 0.10M C M K1=5.37 B2= 8.96 19730Da (48107)4374
B(Cu(bpy)L)=13.98
K(Cu(bpy)+L)=5.78

Cu++ con oth/un 25°C .001M U K1=5.5 1931IRb (48108)4375

Cu++ ISE oth/un 25°C 0.10M U B2=9 1930RIa (48109)4376

C6H10O4 H2L CAS 616-62-6 (3069)
n-Propylmalonic acid; HOOCH₂CH₂CH₂COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
Cu++ gl KNO3 25°C 0.10M C H K1=4.92 B2=8.14 1989ABa (48113)4377
B(Cu(bpy)L)=13.40
DH(K1)=10.3 kJ mol⁻¹, DH(K2)=4.44, DS(K1)=129 J K⁻¹ mol⁻¹, DS(K2)=76.6

Cu++ con oth/un 25°C .001M U K1=5.15 1931IRb (48114)4378

Cu++ ISE oth/un 25°C 0.10M U B2=8 1930RIa (48115)4379

C6H10O4S H2L CAS 42715-54-8 (986)
2,2'-Thiodipropionic acid; HOOCH₂CH₂SCH₂CH₂COOH

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

Cu++ gl KNO3 25°C 0.10M C K1=3.97 1975LPa (48119)4380
K(Cu+HL)=1.8

C6H10O4S H2L CAS 111-17-1 (139)
3,3'-Thiodipropionic acid; HOOCH₂CH₂SCH₂CH₂COOH

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

Cu++ gl KNO3 35°C 0.10M C M K1=3.35 1999DSb (48145)4381
B(CuAL)=6.19

A is thiamine hydrochloride.

Cu++ gl NaClO4 30°C 0.10M C M 1985SHb (48146)4382
B(CuAL)=7.13
K(CuL+A)=2.18
K(CuA+L)=4.58
B(CuBL)=7.16

K(CuL+B)=2.22, K(CuB+L)=4.61. H2A is ethylmalonic acid, H2B is diethylmalonic acid.

Cu++ gl NaClO4 25°C 0.10M U TIH K1=3.96 1984DBa (48147)4383

Cu++	gl	NaClO4	30°C	0.10M	U	M	1983SHd (48148)4384
							B(CuLA)=6.78
							K(CuL+A)=4.23
							K(CuA+L)=1.65
							B(CuLB)=7.30
H2A is methylmalonic acid, H2B is dimethylmalonic acid.							
K(CuL+B)=4.75, K(CuB+L)=2.48.							

Cu++ gl NaClO4 25°C 3.0M C K1=3.64 1979RWa (48150)4386
B(CuHL)=6.80

Cu++	gl	KN03	25°C	0.10M	C	K1=2.97	1975LPa	(48152)4388
						K(Cu+HL)=1.80		

Cu++ gl NaCl04 25°C 0.10M U K1=3.0 1968SKd (48153)4389

Cu++ gl oth/un 20°C 0.10M U K1=2.53 1961COa (48154)4390
K(Cu+HL)=1.65

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	vlt	KN03	25°C	0.10M	C			K1=5.78	1988ECa (48212)	4391
Method: differential pulse polarography, using anodically generated Hg++ as indicator ion. Medium pH 4.8.										
Cu++	gl	KN03	25°C	0.10M	U			K1=5.33	1971FPa (48213)	4392
Cu++	gl	NaCl04	25°C	0.10M	U			K1=5.68 K(Cu+HL)=3.94	B2=7.7 1971PPb (48214)	4393

Cu++ oth oth/un 25°C 0.10M U K1=6.0 1964PCa (48215)4394

Cu++ gl oth/un 25°C 0.30M U K1=4.8 1961JWa (48216)4395
Medium: K2S04

Cu++ gl oth/un 20°C 0.10M U K1=5.66 1961S0b (48217)4396

$$\begin{aligned} B(\text{CuAL}) &= 6.42 \\ K(\text{CuL} + \text{A}) &= 1.48 \\ K(\text{CuA} + \text{L}) &= 4.81 \\ B(\text{CuBL}) &= 6.54 \end{aligned}$$

$B(\text{CuLA})=5.96$
 $K(\text{CuL}+\text{A})=4.35$
 $K(\text{CuA}+\text{L})=0.83$
 $B(\text{CuLB})=5.82$

$$K(\text{Cu}+\text{HL})=2.54$$
$$K(\text{Cu}+\text{HL})=0.88$$

$$K(\text{Cu}+\text{HL})=2.1$$

$$B(\text{CuL}(\text{bpy})) = 10.83$$
$$B(\text{CuHL}(\text{bpy})) = 14.3$$

C6H10O4Te H2L CAS 2168-91-4 (983)
3,3'-Tellurodipropanoic acid; HOOC.CH2.CH2.Te.CH2.CH2.COOH

Cu++ gl KN03 25°C 0.10M C K1=3.2 1975LPa (48299)4405
K(Cu+HL)=2.7

C6H10O5 H2L CAS 5961-83-1 (981)
3,3'-Oxodipropionic acid; HOOC.CH2.CH2.O.CH2.CH2.COOH

Cu++ gl KN03 25°C 0.10M C K1=2.52 1975LPa (48309)4406
K(Cu+HL)=1.4

C6H10O6 H2L CAS 23243-68-7 (242)
1,2-Bis(carboxymethoxy)ethane; HOOC.CH2.O.CH2.CH2.O.CH2.COOH

Cu++ g1 KN03 25°C 0.10M U K1=3.39 1975MTc (48322)4407

Cu++ gl oth/un 20°C 0.10M U K1=3.15 19610Ca (48323)4408
K(Cu+HL)=2.61

C6H1007	HL	Galacturonic	CAS 685-73-4	(290)
D-Galacturonic acid;				

Cu++	g1	KN03	25°C	? U	K1=1.80	B2=3.00	1991DVa (48371)4409
					B(CuH-1L2)=-3.02		
					B(CuH-2L2)=-10.06		
					B(CuH-4L2)=-29.69		

Cu++ g1 KN03 25°C 0.1M U K1=1.80 B2=3.00 1991DVb (48372)4410
B(CuH-1L2)=-3.02
B(CuH-2L2)=-10.06
B(CuH-4L2)=-29.69

K1=1.80 from polarography; logK(HL)=3.28

Cu++ vlt NaClO4 25°C 0.10M U K1=3.39 B2=5.99 1990DGa (48373)4411
B(CuH-1L)=-2.60

Cu++ ISE KNO3 25°C 0.70M U K1=2.38 1986HAe (48374)4412
Data also for many other mono- and disaccharide acids

Cu++ vlt NaClO4 25°C 0.74M C B2=1.83 1982PMb (48375)4413
Method: polarography. Ligand is alpha-galacturonic acid.

Cu++ cal NaNO3 25°C 1.00M U H K1=1.81 1981ARa (48376)4414

Cu++ gl NaClO4 25°C 1.00M C K1=1.81 1977Mca (48377)4415

C6H10O7 HL Glucuronic acid CAS 6556-12-3 (599)
D-Glucuronic acid;

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

Cu++ ISE KNO3 25°C 0.70M U K1=1.89 1986HAe (48404)4416
Data also for many other mono- and disaccharide acids

Cu++ gl NaClO4 25°C 0.74M U K1=1.01 B2= 4.10 1982PMb (48405)4417
By polarography: B2=4.10.

Cu++ cal NaNO3 25°C 1.00M U H K1=1.48 1981ARa (48406)4418

Cu++ gl NaClO4 25°C 1.00M C K1=1.48 1977Mca (48407)4419

C6H10O8 H2L Mucic acid CAS 526-99-8 (3650)
2,3,4,5-Tetrahydroxyhexanedioic acid, Galactaric acid; HOOC.(CHOH)4.COOH

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

Cu++ gl NaNO3 25°C 0.10M C M K1=3.68 1999SCa (48430)4420
B(CuH-1L)=-1.87
B(CuH-2L)=-7.54
B(CuL(bpy))=12.25
B(CuH-1L(bpy))=6.29
B(CuH-2L(bpy))=-2.27

Cu++ gl NaNO3 25°C 1.0M U 1968BOa (48431)4421
K(Cu+L=CuH-1L+H)=-9.36
K(Cu+L=CuH-2L+2H)=-18.11

C6H10O8 H2L Saccharic acid CAS 87-73-0 (1191)
D-2,3,4,5-Tetrahydroxy-1,6-hexanedioic acid, Glucaric acid; HOOC.(CHOH)4.COOH

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

Cu++ gl NaClO4 25°C 0.10M U K1=3.51 B2= 5.54 1997PPa (48450)4422
K(Cu+H2L=CuL+2H)=-3.86
*K(CuL)=-4.38
*K(CuH-1L)=-6.65

$$K(\text{Cu}+2\text{H}_2\text{L}=\text{CuL}+4\text{H})=-9.20$$

 Cu++ gl NaClO4 25°C 0.10M U M K1=3.86 1997PPc (48451)4423
 $K(\text{Cu}(\text{edta})+\text{L})=3.60$

Cu++ vlt NaNO3 25°C 1.0M C 1977B0d (48452)4424
 Method: polarography. At pH 10.0, $K_{\text{1eff}}=9.41$, $B_{\text{2eff}}=10.44$; at pH 6, $K_{\text{1eff}}=5.84$, $B_{\text{2eff}}=6.85$. At pH 10.0, $K(\text{Cu}+\text{L}+\text{OH})=13.4$, $K(\text{Cu}+2\text{L}+\text{OH})=14.8$.

Cu++ gl KNO3 25°C 1.00M U 1976V0a (48453)4425
 $K(\text{Cu}+\text{H}_2\text{L}=\text{CuH}-1\text{L}+3\text{H})=-13.97$
 $K(\text{Cu}+2\text{H}_2\text{L}=\text{CuL}_2+4\text{H})=-6.13$

Cu++ sp KNO3 25°C 1.0M C B2=6.13 1975V0a (48454)4426
 $K(\text{Cu}+\text{H}-1\text{L})=13.79$

Authors assume that $K(\text{H}-1\text{L}+\text{H})=14.0$.

 C6H11NO2 HL CAS 52-52-8 (3105)
 1-Aminocyclopentanecarboxylic acid; $\text{H}_2\text{N}.\text{C}_5\text{H}_8.\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	20°C	0.10M	U		K1=8.63 B2=15.92	1963IPa (48499)	4427
							$K(\text{CuL}+\text{H})=1.9$		

 C6H11NO2 HL CAS 16258-05-2 (1128)
 2-Amino-hex-5-enoic acid; $\text{CH}_2:\text{CH}.\text{CH}_2.\text{CH}_2.\text{CH}(\text{NH}_2).\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U		K1=8.09 B2=14.90	1975IPb (48507)	4428

 C6H11NO2 HL CAS 37910-65-9 (6018)
 2-Aminocyclopentane-1-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.50M	C		K1=6.944 B2=12.671	1986GGa (48514)	4429
							$B(\text{CuH}-1\text{L})=-0.37$		
							$B(\text{CuH}-1\text{L}_2)=2.52$		

cis isomer. For trans isomer, $K_1=6.866$, $B_2=12.406$

 C6H11NO2 HL Pipicolinic acid CAS 3105-95-1 (1125)
 2-Piperidine carboxylic acid; $\text{C}_5\text{H}_{10}\text{N}.\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	30°C	0.10M	U T HM		K1=7.49	1986RRb (48521)	4430
							40 C: $K=7.39$, 50 C: $K=7.14$. $\text{DH}=-69.3 \text{ kJ mol}^{-1}$, $\text{DS}=85.6 \text{ J K}^{-1} \text{ mol}^{-1}$		

Cu++ gl KNO3 30°C 0.10M U T HM 1986RRb (48522)4431

K(Cu(Gly)+L)=7.68

K(Cu(Ala)+L)=7.64

Gly: 40 C: K=7.40, 50 C:K=7.32. DH=-33.7 kJ mol⁻¹, DS=10.8 J K⁻¹ mol⁻¹

Ala: 40 C: K=5.51, 50 C:K=7.34. DH=-28.1 kJ mol⁻¹, DS=16.2 J K⁻¹ mol⁻¹

Cu++ gl KNO3 30°C 0.10M U T HM 1986RRb (48523)4432

K(Cu(Phe)+L)=7.91

K(Cu(Pro)+L)=8.36

Phe: 40 C: K=7.84, 50 C:K=7.50. DH=-38.4 kJ mol⁻¹, DS=7.5 J K⁻¹ mol⁻¹

Pro: 40 C: K=8.24, 50 C:K=8.00. DH=-33.7 kJ mol⁻¹, DS=14.8 J K⁻¹ mol⁻¹

Cu++ gl KNO3 30°C 0.10M U T HM 1986RRb (48524)4433

K(CuA+L)=7.77

K(CuB+L)=8.18

HA=hydroxyproline. 40 C: K=7.52, 50 C:K=7.40. DH=-34.7 kJ mol⁻¹, DS=10.4

H2B=catachol. 40 C: K=7.96, 50 C: K=7.88. DH=-28.1, DS=19.4 J K⁻¹ mol⁻¹

Cu++ gl KNO3 30°C 0.10M U T HM 1986RRb (48525)4434

K(Cu(phen)+L)=6.84

K(Cu(bpy)+L)=6.84

Phen: 40 C: K=6.73, 50 C:K=6.60. DH=-22.5 kJ mol⁻¹, DS=17.2 J K⁻¹ mol⁻¹

Bpy: 40 C: K=6.71, 50 C: K=6.55. DH=-27.2 kJ mol⁻¹, DS=12.5 J K⁻¹ mol⁻¹

Cu++ gl KNO3 30°C 0.10M U M 1986RRc (48526)4435

K(Cu(Gly)+L)=7.68

B(Cu(Gly)L)=15.91

K(Cu(Ala)+L)=7.64

B(Cu(Ala)L)=15.80

Values for other ternary complexes: Phe: 7.91,15.63. Pro: 8.36,17.23.

picolinic acid: 6.88,13.81. catechol: 8.18,20.48. bpy:6.84,14.89 plus others

Cu++ gl oth/un 30°C 0.10M U H K1=7.49 B2=13.35 1985RRe (48527)4436

DH(K1)=-69 kJ mol⁻¹, DS= 86 J K⁻¹ mol⁻¹, DH(B2)=-161, DS=413

Cu++ gl KNO3 20°C 0.10M U K1=7.5 B2=13.90 1968HLA (48528)4437

C6H11NO2 HL CAS 2044-64-6 (4374)

N,N-Dimethylacetoacetamide; CH3.CO.CH2.CO.N(CH3)2

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

Cu++ gl diox/w 20°C 50% U I K1=10.06 B2=17.89 1970SKd (48540)4438

Medium: 0-60% dioxan, 0.2 M NaClO4

K1(0%)=7.20, K1(60%)=10.57, K2(0%)=6.45, K2(60%)=8.08

C6H11NO2 HL N-Methylproline CAS 91353-48-4 (6133)

N-Methyl-2-pyrrolidinecarboxylic acid;

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

Cu++ gl KCl 25°C 0.10M U K1=7.32 B2=14.44 1977KDa (48545)4439

C6H11NO2Cl2 H2L CAS 2619-97-8 (3123)

N,N-Di(2-chloroethyl)glycine; (Cl.CH₂.CH₂)₂N.CH₂.COOH

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

Cu++	oth	oth/un	?	?	U	K1=4.90	B2=8.20	1957IHb	(48546)4440
------	-----	--------	---	---	---	---------	---------	---------	-------------

C6H11NO2S H2L (3053)

5,5-Dimethylthiazole-4-carboxylic acid;

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

Cu++ ix oth/un ? 0.10M U K1=4.4 B2=8.7 1957WFb (48548)4441

C6H11NO3 HL (6134)

4-Hydroxy-2-(N-methyl)pyrrolidinecarboxylic acid, N-Methyl-4-hydroxyproline;

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

Cu++ gl KCl 25°C 0.10M U K1=6.67 B2=13.23 1977KDa (48550)4442

For D-allo-N-methylhydroxyproline, K1=8.00, K2=14.83

C6H11NO3S H2L CAS 52574-90-0 (1270)

2-Mercaptopropanoyl-beta-alanine; $\text{CH}_3\text{.CH(SH).CO.NH.CH}_2\text{.CH}_2\text{.COOH}$

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

Cu++ g1 KNO3 20°C 0.10M U K1=7.0 1976SHb (48552)4443

$$B(\text{CuH-1L})=0.3$$

C6H11NO3S H2L CAS 65134-68-1 (1325)

3-Mercaptopropanoyl-beta-alanine; HS.CH₂.CH₂.CO.NH.CH₂.CH₂.COOH

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

Cu++ g1 KNO3 20°C 0.10M U K1=6.1 1976SHb (48555)4444

$$B(\text{CuH}-1\text{L}) = -1.5$$

C6H11NO3S2 H2L (2160)

2-Mercaptopropanoyl-cysteine; $\text{CH}_3\text{CH}(\text{SH})\text{CO}\text{NH}\text{CH}(\text{CH}_2\text{SH})\text{COOH}$

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

Cu++ g1 KNO3 20°C 0.10M U K1=14.3 1977SHa (48559)4445

$$K(\text{CuH}-1\text{L}+\text{H})=5.7$$

Cu++ g1 KNO3 20°C 0.10M U K1=14.7 1976SHb (48560)4446

$$K(\text{CuH}-1\text{L}+\text{H})=8.0$$

C6H11N04 H2L (1553)
(3-Aminopropyl)malonic acid; H2N.CH2.CH2.CH2.CH(COOH)2

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

Cu++ gl NaCl 25°C 0.10M U H 1988BCa (48565)4447

$$K(\text{Cu}+\text{HL})=4.11$$

$$K(\text{CuHL}+\text{HL})=2.93$$

$$K(\text{CuHL}+\text{L})=6.62$$

By calorimetry: DH(CuHL)=11.3 kJ mol⁻¹; DS=117. DH(CuH2L2)=2.1; DS=63.

DH(CuHL2)=-29; DS=21.

C6H11N04 H2L (1232)
2,2'-Iminodipropionic acid; HN(CH(CH3)COOH)2

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

Cu++ gl KNO3 25°C 0.10M C K1=10.6 B2=15.00 1987AKa (48567)4448

Cu++ gl KNO3 25°C 0.10M U K1=10.6 B2=15.00 1987BKa (48568)4449

K1 determined by ligand exchange with tris(2-aminoethyl)amine, according to G.Schwarzenbach, E.Freitag, Helv.Chim.Acta, 34, 1147 (1951)

C6H11N04 H2L CAS 59472-26-3 (3699)
2-Amino-2-methylpentanedioic acid; HOOCC(NH2)(CH3).CH2.CH2.COOH

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

Cu++ gl NaClO4 25°C 0.10M U K1=7.97 B2=14.31 1965NCA (48579)4450

C6H11N04 H2L (3106)
Iminodipropionic acid; HN(CH2.CH2.COOH)2

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

Cu++ gl KCl 30°C 0.10M U K1=9.43 B2=13.11 1952CMA (48586)4451

C6H11N04 H2L CAS 103954-11-6 (5805)
N-(1-Carboxyethyl)-alanine; HOOCC(CH3).NH.CH2.CH2.COOH

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

Cu++ gl KNO3 25°C 0.10M C K1=10.68 B2=15.18 1984FVa (48592)4452

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

Cu++ gl NaClO4 25°C 2.00M U K1=5.62 B2=10.10 1980MAc (48617)4453

C6H11NO5 H2L CAS 50825-12-2 (5806)
N-(1-Carboxyethyl)-N-hydroxy-alanine; HOOC.CH(CH3).N(OH).CH2.CH2.COOH

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

Cu++ gl KNO3 25°C 0.10M C K1=8.15 B2=12.45 1984FVa (48623)4454

C6H11NO5 H2L HIMDA CAS 93-62-9 (192)
N-(2-Hydroxyethyl)iminodiethanoic acid; HO.CH2.CH2.N(CH2.COOH)2

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

Cu++ cal KNO3 25°C 0.20M U H 1985VRa (48645)4455
DH1=-23.8 kJ mol⁻¹; DH(B2)=-45.8

Cu++ gl KNO3 25°C 0.10M U K1=11.72 1983FSa (48646)4456

Cu++ sp NaClO4 20°C 0.10M U K1=11.96 B2=15.80 1978KIb (48647)4457

Cu++ gl KNO3 0.4°C 0.10M U K1=12.00 1967TMf (48648)4458

Cu++ oth KNO3 20°C 0.10M U K1=11.2 B2=15.20 1965JMa (48649)4459
Method: electrophoresis

Cu++ vlt KNO3 25°C 0.10M U K1=13.38 B2=15.62 1965VF a (48650)4460

Cu++ gl oth/un 30°C 0.10M U 1957MCA (48651)4461
K(CuL2OH+H)=9.1

Cu++ gl oth/un 20°C 0.05M U 1957PAa (48652)4462
K(CuL2OH+H)=9.15

Cu++ gl KCl 20°C 0.10M U K1=11.86 B2=15.87 1955SAa (48653)4463
K(CuLOH+H)=8.63

Cu++ gl KCl 30°C 0.10M U K1=10 B2=14.2 1952CCa (48654)4464

C6H11NO5 H2L (7174)
N-Carboxymethylthreonine; HOOCCH2NHCH(CH(OH)CH3)COOH

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

Cu++ gl KNO3 25°C 0.10M C K1=10.83 B2=15.71 1995TMa (48821)4465
B(CuH-1L=CuOHL)=1.95
B(CuH-2L=Cu(OH)2L)=-8.25

C6H11NO5 H2L (1238)

N-Hydroxy-3,3'-iminodipropionic acid; HO.N(CH₂.CH₂.COOH)₂

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

Cu++	gl	KNO ₃	25°C	0.10M	U			K1=7.3	1987BKa (48826)	4466
------	----	------------------	------	-------	---	--	--	--------	-----------------	------

C6H11NO ₅		H ₂ L						(1233)		
----------------------	--	------------------	--	--	--	--	--	--------	--	--

N-Hydroxyimino-2,2'-dipropionic acid; HO.N(CH(CH₃)COOH)₂

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

Cu++	gl	KNO ₃	25°C	0.10M	C	H		K1=9.2 B2=12.65	1987AKa (48829)	4467
------	----	------------------	------	-------	---	---	--	-----------------	-----------------	------

Cu++	gl	KNO ₃	25°C	0.10M	U			K1=9.2 B2=12.65	1987BKa (48830)	4468
------	----	------------------	------	-------	---	--	--	-----------------	-----------------	------

K1 determined by ligand exchange with tris(2-aminoethyl)amine, according to G.Schwarzenbach, E.Freitag, Helv.Chim.Acta, 34, 1147 (1951)

C6H11NS ₂		L						CAS 98-99-7	(3108)	
----------------------	--	---	--	--	--	--	--	-------------	--------	--

Piperidine-1-carbodithioic acid;

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

Cu++	sp	alc/w	20°C	89%	U	I		K1=16.2 B2=31.00	1957JAa (48849)	4469
------	----	-------	------	-----	---	---	--	------------------	-----------------	------

Medium: 0-89% EtOH, 0.01 M NaOH. K1=11.9(0%),13.9(51.7%),15.1(75%);

K2=10.5(0%),12.9(51.7%),13.9(75%)

Cu++	sp	alc/w	25°C	75%	U			K1=14.7 B2=28.40	1956JAa (48850)	4470
------	----	-------	------	-----	---	--	--	------------------	-----------------	------

Medium: 0.01 NaOH,75% EtOH

Cu++	sp	alc/w	25°C	75%	U			K1=14.7 B2=28.4	1956JAb (48851)	4471
------	----	-------	------	-----	---	--	--	-----------------	-----------------	------

C6H11N ₃		L						(3071)		
---------------------	--	---	--	--	--	--	--	--------	--	--

3-Methylhistamine, (4-(2-aminoethyl)-3-methylimidazole;

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

Cu++	gl	oth/un	25°C	0.01M	U			K1=9.58 B2=16.14	1960LRc (48859)	4472
------	----	--------	------	-------	---	--	--	------------------	-----------------	------

C6H11N ₃		L						CAS 34392-54-6	(4350)	
---------------------	--	---	--	--	--	--	--	----------------	--------	--

4-(2-Methylaminoethyl)imidazole;

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

Cu++	gl	KCl	25°C	0.10M	U			K1=8.35	1973BDb (48861)	4473
------	----	-----	------	-------	---	--	--	---------	-----------------	------

B(CuHL)=12.98

K(Cu+L=CuL(OH)+H)=1.16

C6H11N ₃		L						CAS 16227-10-4	(8351)	
---------------------	--	---	--	--	--	--	--	----------------	--------	--

4-Butyl-4H-1,2,4-triazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	25°C	0.10M	U	TIH	K1=2.58 B2= 5.12	1981RPb (48866)	4474

Medium: KClO4. Also data for 35 C and for 0.05 M KClO4.
Also DH and DS values.

C6H11N3O L CAS 501-28-0 (4373)
4-(2-Amino-3-hydroxypropyl)imidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	oth/un	25°C	0.15M	U		K1=9.35 B2=15.95	1970WKa (48872)	4475

C6H11N3O4 HL Gly-Asn CAS 1999-33-3 (283)
Glycyl-asparagine; H2N.CH2.CO.NH.CH(CH2.CO.NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaClO4	30°C	0.10M	U	T H	K1=6.46 B(CuH-1L2)=5.12	1986AJb (48878)	4476

DH(K1)=-30.3 kJ mol⁻¹, DS=23.7 J K⁻¹ mol⁻¹, DH(CuH-1L2)=-25.7, DS=13.3

Cu++	gl	KCl	25°C	0.20M	C	HM	K1=5.99 B(CuH-1L)=1.67 B(CuH-2L)=-7.11 B(CuH-3L)=-17.91 B(Cu2H-3L2)=-2.70	1982GFa (48879)	4477
------	----	-----	------	-------	---	----	--	-----------------	------

DH(K1)=-28 kJ mol⁻¹, DS=21 + ternary complexes with many D and L amino acids

Cu++	gl	NaCl	25°C	0.12M	U		K1=5.95 B2= 9.05	1977BSb (48880)	4478
------	----	------	------	-------	---	--	------------------	-----------------	------

C6H11N3O4 HL Gly-Gly-Gly CAS 556-33-2 (415)
Glycyl-glycyl-glycine; H2N.CH2.CO.NH.CH2.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	nmr	KNO3	25°C	1.0M	U		K1=5.19 B2= 9.18 K(Cu+HL)=1.52 B(Cu2L2)=12.18 K(Cu+2HL)=2.30 K(2Cu+HL+L)=8.59	2002ISb (48918)	4479

Method: NMR-relaxation

Cu++	gl	KNO3	25°C	0.20M	U		K1=4.90 B(CuH-1L)=-0.28 B(CuH-2L)=-6.99 B(CuH-3L)=-16.72	1992HHa (48919)	4480
------	----	------	------	-------	---	--	--	-----------------	------

Cu++	gl	NaNO3	30°C	1.00M	U	T M	K(CuL+imidazole)=1.74	1990PPb (48920)	4481
------	----	-------	------	-------	---	-----	-----------------------	-----------------	------

						K(CuL+2-ethylimidazole)=2.85	
Cu++	gl	NaClO4	25°C	0.1M	C	K1=5.12	1981KMc (48921)4482
						B(CuH-1L)=0.01	
						B(CuH-2L)=-6.67	
Cu++	gl	KNO3	25°C	0.10M	C	K1=5.127 B2=9.6	1975BPa (48922)4483
						B(CuH-1L)=-0.046	
						B(CuH-1L2)=2.9	
						B(CuH-2L)=-6.774	
Cu++	gl	KNO3	25°C	0.10M	C	K1=5.08	1975KMe (48923)4484
						K(Cu+HL)=2.36	
						K(CuL+H)=5.02	
						*K(CuL)=-5.16	
						*K(CuH-1L)=-11.5	
						K(CuH-2L+H)=6.74	
Cu++	gl	KNO3	25°C	0.10M	C	K1=5.08	1974KMc (48924)4485
						K(Cu+HL)=2.36	
						K(CuH-1L+H)=5.16	
						K(CuH-2L+H)=6.74	
						K(CuH-2LOH+H)=11.5	
Cu++	gl	KNO3	25°C	0.10M	U	K1=5.25	1973YNa (48925)4486
						K(Cu+HL)=1.7	
						K(CuL+H)=4.4	
						K(CuH-1L+H)=5.23	
						K(CuH-2L+H)=6.73	
Cu++	gl	KNO3	25°C	0.10M	U	K1=5.24	1972SGd (48926)4487
						K(CuH-1L+H)=5.22	
						K(CuH-2L+H=CuH-1L)=6.60	
Cu++	gl	NaClO4	25°C	0.10M	U M		1972SGd (48927)4488
						K(CuA+bpy)=4.87	
						B(CuL(bpy))=12.87	
						K(CuH-1L(bpy))+H=8.17	
Cu++	gl	NaClO4	25°C	0.10M	U M	K1=5.12	1971HBb (48928)4489
						K(Cu+L=CuH-1L+H)=0.01	
						K(Cu+L=CuH-2L+2H)=-6.67	
						K(Cu+L=CuH-2LOH+3H)=-18.7	
						B(CuLA)=18.92	
						A=diethylenetriamine. B(CuL(en))=14.88. K(Cu+L+en=CuH-1L(en)+H)=8.05	
Cu++	sp	NaClO4	25°C	0.10M	U		1971HBb (48929)4490
						K(CuH-2LOH+H=CuH-2L)=12.0	
Cu++	gl	NaClO4	25°C	1.00M	U		1971MMc (48930)4491

$$B(\text{CuHL}) = 9.65$$

Cu++ gl NaCl04 25°C 1.00M U M K1=5.30 B2=9.66 1971MMc (48931)4492
 K(Cu+L=CuH-1L+H)=-0.18
 K(Cu+L=CuH-2L+2H)=-6.97
 K(Cu+2L=CuH-1L2+H)=3.34
 K(Cu+2L=CuH-2L2+2H)=-4.62

B(CuL(Gly))=12.36, K(Cu+L+Gly=CuH-1L(Gly)+H)=5.97

Cu++ ISE NaCl04 25°C 3.00M U B2=10.23 19700Sa (48932)4493

Cu++ gl NaClO₄ 25°C 0.10M U H K₁=5.04 1968BLc (48933)4494
K(CuH-1L+H)=5.06
K(CuH-2L+H)=6.78

By calorimetry: $\Delta H(K1) = -26.3 \text{ kJ mol}^{-1}$, $\Delta S = 7.9 \text{ J K}^{-1} \text{ mol}^{-1}$;
 $\Delta H(\text{CuH-1L+H}) = -31.4$, $\Delta S = -8.4$; $\Delta H(\text{CuH-2L+H}) = -30.9$, $\Delta S = 26$

Cu++ ISE NaClO4 25°C 3.0M U K1=5.66 B2=10.17 19680Sc (48934)4495
B(CuHL)=10.13
B(CuH2L2)=19.0
B(Cu2L2)=13.12
B(Cu2HL2)=17.3

$B(\text{Cu}_2\text{H}_2\text{L}_2)=21.0$, $K(\text{CuH}-1\text{L}+\text{H})=5.79$, $K(\text{CuH}-2\text{L}+\text{H})=6.73$, $K(\text{CuH}-1\text{L}_2+\text{H})=6.26$, $K(\text{CuH}-2\text{L}_2+\text{H})=8.72$, $K(\text{Cu}_2\text{H}-2\text{L}_2+2\text{H})=11.7$, $K(\text{Cu}_2\text{H}-4\text{L}_2+2\text{H})=14.8$

Cu++	gl	KNO ₃	25°C	0.10M U	K ₁ =5.5	1966KMa	(48935)4496
					K(CuH-1L+H)=5.4		
					K(CuH-2L+H)=6.63		
					K(CuH-2LOH+H)=10.9		

Cu++	gl	oth/un	25°C	0.16M	U	K1=4.80	1963KR	a (48936)4497
						K(CuLOH+H)=5.10		
						K(CuL(OH)2+H)=6.89		
						K(CuL(OH)3+H)=11.9		
						K(CuLOH+L)=3.50		

Cu++ gl KCl 25°C .058M U T B2=11.02 1957LYa (48937)4498
B2=11.58(0 C)

Cu++ gl KCl 30°C 0.09M U T H K₁=5.51 1957MMa (48938)4499
K(CuL(OH)₂+H)=6.94
K(CuLOH+H)=5.52

0.35 C: $K_1=5.74$, $K(\text{CuL}(\text{OH})_2+\text{H})=7.32$, $\text{DH}=-16.7 \text{ kJ mol}^{-1}$, $\text{DS}=75$; $K(\text{CuLOH}+\text{H})=6.02$, $\text{DH}=-18.8$, $\text{DS}=46$. 48.8 C: $K_1=5.51$, $K(\text{CuLOH})=4.83$

Cu++ gl oth/un 20°C 0.0 U 1955DKa (48939)4500

K(CuH-1L+L)=3.6
K(CuH-1L+H)=5.2
K(CuH-2L+H)=7.0
K(Cu(H-1L)2+H)=8.6

```

-----
Cu++      gl  none   20°C  0.0  U      K1=5.3      1955DKb (48940)4501
-----
Cu++      gl  none   25°C  0.0  U      K1=5.41    B2=10.56    1955EMa (48941)4502
*****
C6H11N3S          L    Amthamine          (7531)
2-(2-Amino-4-methyl-1,3-thiazolyl-5-yl-ethylamine; CH3.C3NS(NH2)CH2CH2NH2
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      gl  KNO3   25°C  0.10M C      K1=5.15      1998MDa (48993)4503
Analogue without the Me group (C5H9N3S): B(CuHL2)=19.56, B2=12.84
B(CuH-1L2)=3.20
*****
C6H11N9          L          (7008)
Di(2-(5-tetrazolyl)ethyl)amine; ((CHN4)CH2.CH2)2NH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      gl  NaNO3   20°C  0.10M U      K1=9.55      1981ESa (48996)4504
-----
Cu++      gl  NaNO3   20°C  0.1M  U      K1=9.55      1979ESa (48997)4505
*****
C6H12NO5P          H3L          (6966)
N-(Phosphonomethyl)proline;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      gl  KCl     25°C  0.20M C      K1=13.23    B2=18.36    1994JKa (49029)4506
B(CuHL)=16.88
B(CuH-1L)=3.29
B(CuH2L2)=32.2
B(CuHL2)=27.64
*****
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
-----
Cu++      sp  non-aq  20°C  100%  U      K(CuA+L)=2.34
1986MBc (49038)4507
In CHCl3. CuA=cofacial binuclear bis(beta-diketone) copper(II) complex
*****
C6H12N2O2          HL          CAS 4883-72-1 (1076)
N-Cyclohexyl-N-nitrosohydroxylamine; C6H11.N(N:O).OH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      EMF non-aq  25°C  100%  U      K1=7.13    B2=11.90    1986RPa (49045)4508
Medium: 4-Methyl-2-pentanone,data from numerical method:7.23(.1),12.00(.08)

```

C6H12N2O2S2 L (2821)
N,N'-Dihydroxyethyl-dithiooxamide; HO.C2H4.NH.CS.CS.NH.C2H4.OH

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

Cu++	sp	none	25°C	0.0	U		K1=7.06	1976AMc (49048)	4509
------	----	------	------	-----	---	--	---------	-----------------	------

C6H12N2O3 HL B-Ala-B-Ala CAS 34322-87-7 (2118)
3-Alanyl-3-alanine; H2N.CH2.CH2.CO.NH.CH2.CH2.COOH

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

Cu++	gl	NaCl04	25°C	0.10M	M	M	K1=5.76	1981SPd (49056)	4510
							K(Cu+H2L=CuL+2H)=-7.91		
							K(Cu+H2L=CuLOH+3H)=-14.73		
							K(CuLOH+H)=6.82		

K(Cu(bpy)+L)=5.22; K(CuH-1L(bpy)+H)=6.8

Cu++	gl	KNO3	25°C	0.10M	U		K1=5.5	1969YHa (49057)	4511
							K(CuH-1L+H)=6.8		

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

Cu++	gl	KNO3	25°C	0.10M	C	T	K1=7.05	2000RNB (49085)	4512
------	----	------	------	-------	---	---	---------	-----------------	------

Data for 35 and 45 C.

Cu++	gl	KCl	25°C	0.10M	C	M	K1=5.44	1997BLb (49086)	4513
							B(CuH-1L)=1.75		
							B(CuH-2L)=-7.48		
							B(CuH-3L)=-18.87		
							B(CuH-1L2)=4.61		

Tenary complexes with 1,13-dioxa-4,7,10,16,19,23-haxaazacyclotetracosane (A)
K(Cu2A+L)=6.18, K(Cu2A+HL)=4.79, K(Cu2AL=Cu2H-1AL+H)=-7.34 etc.

Cu++	sp	KCl	25°C	0.10M	C		K1=5.31	1996DPa (49087)	4514
							B(CuH-1L)=1.74		
							B(CuH-2L)=-7.66		
							B(Cu2H-3L2)=-3.74		

Method: ultraviolet circular dichroism.

Cu++	gl	KCl	20°C	0.20M	U			1981KRa (49088)	4515
------	----	-----	------	-------	---	--	--	-----------------	------

K(Cu+HL=CuL+H)=-2.78
K(Cu+HL=CuH-1L+2H)=-6.65
K(Cu+HL=CuH-2L+3H)=-16.07
K(Cu+2HL=CuL2+2H)=-5.92

K(Cu+2HL=CuH-1L2+3H)=-11.89; K(Cu+2HL=CuH-2L2+4H)=-21.90

```

-----
Cu++      cal KCl      25°C 0.20M C   H   K1=5.33      1977GNa (49089)4516
          B(CuH-1L)=1.43
          B(CuH-2L)=-8.01
          B(CuH-1L2)=4.13
          B(Cu2H-3L2)=4.39
DH and DS values for all complexes. DH(K1)=-28 kJ mol-1, DS=7 J K-1 mol-1
-----
Cu++      gl  KNO3     25°C 0.10M U           K1=5.31      1977KMb (49090)4517
          K(CuH-1L+L)=2.96
          K(CuH-1L+CuH-1LOH)=2.36
          K(CuH-1L+H)=3.58
-----
Cu++      gl  KCl      25°C 0.20M C   H   K1=5.33      1976GNb (49091)4518
          B(CuH-1L)=1.43
          B(CuH-2L)=-8.01
          B(CuH-1L2)=4.13
          B(Cu2H-3L2)=-4.39
Calorimetry: DH(K1)=-28.3 kJ mol-1, DS=7J K-1 mol-1; DH(CuH-1L)=5.0, DS=44
DH(CuH-2L)=48.9, DS=11; DH(CuH-1L2)=-21.8, DS=6; DH(Cu2H-3L2)=41.0, DS=53
-----
Cu++      gl  NaCl04   25°C 0.10M U           K1=5.38      1975SIa (49092)4519
          K(Cu(bpy)+L)=5.06
-----
Cu++      gl  KNO3     25°C 0.10M U           K1=5.37      1972BBc (49093)4520
          K(CuH-1L+H)=3.61
*****
C6H12N2O3          HL      D-Ala-Ala          CAS 1115-78-2 (2138)
D-Alanyl-L-alanine; H2N.CH(CH3).CO.NH.CH(CH3).COOH
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Cu++      gl  KNO3     25°C 0.10M U           K1=5.60      1977KMb (49113)4521
          K(CuH-1L+L)=3.08
          K(CuH-1L+CuH-1L(OH))=2.36
          K(CuH-1L(OH)+H)=9.45
          K(CuH-1L+H)=4.04
*****
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
-----
Cu++      gl  KCl      25°C 0.10M U           M   K1=5.92      1988YMa (49120)4522
          K(CuH-1L+H)=4.76
          B(CuL(ATP))=8.78
-----
Cu++      nmr KCl      20°C 0.20M U           K1=5.72      1983KRa (49121)4523
          B(CuH-1L)=1.24
          B(CuH-2L)=-8.26

```


[illegible]

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KN03	25°C	0.10M	U		K1=5.66 K(CuH-1L+H)=6.62	1971LNa (49135)	4525

C6H12N2O3			HL				CAS 627-74-7	(3110)	
Glycylglycine ethyl ester; H2N.CH2.CO.NH.CH2.CO.OCH2.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	oth/un	25°C	0.02M	U			K1=4.66 B2=9.24	1956DRb	(49139)4526

C6H12N2O3			L					CAS 51513-59-8	(4381)	
Glycylsarcosine methyl ester; H2N.CH2.CO.N(CH3).CH2.CO.OCH3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.05M	U			K1=5.18 B2=9.09	1973NAa	(49143)4527

C6H12N2O3			HL					CAS 3544-43-2	(3109)	
N,N-Dimethylglycylglycine; (CH3)2N.CH2.CO.NH.CH2.COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	oth/un	25°C	0.02M	U			K1=4.75 K(CuLOH+H)=3.85 K(CuL(OH)2+H)=9.19	1956DRb	(49145)4528

C6H12N2O3			HL		Sar-Sar			CAS 38082-70-1		(3114)
Sarcosylsarcosine; CH3.NH.CH2.CO.N(CH3).CH2.COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	oth/un	25°C	0.01M	U			K1=6.01 B2=11.18	1959DLb	(49148)4529

C6H12N2O3S			HL	Gly-S-Me-Cys				CAS 61587-01-7	(2389)	
Glycyl-S-methylcysteine; H2N.CH2.CO.NH.CH(CH2.S.CH3).COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl04	25°C	0.10M	U	M	K1=5.70 K(Cu(bpy)+L)=5.65	1977SNa (49160)	4530

 C6H12N2O3S HL S-Me-Cys-Gly CAS 61587-05-1 (2390)
 S-Methylcysteinyglycine; H2N.CH(CH2.S.CH3).CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl04	25°C	0.10M	U	M	K1=5.00 K(Cu(bpy)+L)=4.24	1977SNa (49162)	4531

 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
Cu++	gl	KNO3	35°C	0.20M	C		K1=14.50 B2=19.45	1992YKa (49186)	4532

Cu++	gl	KNO3	25°C	0.10M	U		K1=16.2	1983FSa (49187)	4533
------	----	------	------	-------	---	--	---------	-----------------	------

Cu++	gl	KNO3	25°C	0.10M	U	M	K1=15.90	1975ITa (49188)	4534
------	----	------	------	-------	---	---	----------	-----------------	------

Cu++	gl	NaNO3	25°C	0.10M	U		K1=17.47 B(CuHL)=20.87 B(CuH-1L)=6.34 B(Cu2L)=20.9	1974SJa (49189)	4535
------	----	-------	------	-------	---	--	---	-----------------	------

Cu++	vlt	NaCl04	25°C	0.20M	U		B2=19.8	1973NHb (49190)	4536
------	-----	--------	------	-------	---	--	---------	-----------------	------

Cu++	gl	KNO3	25°C	0.10M	U	M	K(CuL+Gly)=4.64	1972IVb (49191)	4537
------	----	------	------	-------	---	---	-----------------	-----------------	------

Cu++	gl	KNO3	25°C	0.10M	U	M	K(CuL+en)=6.66	1970DNa (49192)	4538
------	----	------	------	-------	---	---	----------------	-----------------	------

Cu++	gl	KCl	30°C	0.10M	U		K1=16.2	1952CMc (49193)	4539
------	----	-----	------	-------	---	--	---------	-----------------	------

 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
Cu++	gl	KCl	20°C	0.10M	U		K1=15.90 K(CuLOH+H)=9.27	1955SAa (49291)	4540

 C6H12N2O4 HL DL-Ala-DL-Ser CAS 3062-19-9 (3701)
 DL-Alanyl-DL-serine; H2N CH(CH3).CO.NH.CH(CH2.OH).COOH

$$K(\text{CuH-1L2}=\text{CuH-1LOH}+\text{L}+\text{H})=-11.96; \quad K\text{B}(\text{CuH-1L2}=\text{CuH-21L2}+\text{H})=-10.41$$

C6H12N2O4S2 H2L Cystine CAS 923-32-0 (1404)
DL-Dithio-bis(2-amino-3-propanoic acid); (HOOC.CH(NH2).CH2.S)2

IUPAC evaluation

Cu++	gl	NaCl	37°C	0.15M	U	T	1985CFb (49353)4551
						B(Cu ₂ LL ₂)=27.803	
						B(CuHL)=15.788	
						B(Cu ₂ L)=14.61	

Cu++	gl	NaCl04	37°C	0.15M	C	T	1981BKd	(49355)4553
						B(CuHL)=16.081		
						B(Cu2L)=14.86		
						B(Cu2L2)=28.241		

C6H12N2O5 H2L (4384)
N-(Carboxymethyl)-N-(2-hydroxyethyl)aminoacethydroxamic acid;

Cu++ gl NaClO₄ 20°C 0.10M U K₁=12.56 1970MKa (49368)4556
K(Cu+HL)=6.72
B(CuL(OH))=19.5

B(CuL(OH)2)=23.6

C6H12N2S2 L CAS 35840-78-9 (2824)
Tetramethyl-dithiooxamide; (CH3)2N.CS.CS.N(CH3)2

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

Cu++ sp none 25°C 0.0 U K1=8.89 1976AMc (49373)4557

C6H12N4 L Methenamine CAS 100-97-0 (619)
Hexamethylenetetramine;

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

Cu++ sp KNO3 25°C 1.00M U K1=-0.34 1970GHc (49379)4558

C6H12N4O3 HL CAS 35790-47-7 (1135)
Glycyl-glycyl-glycinamide; H2N.CH2.CO.NH.CH2.CO.NH.CH2.CO.NH2

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

Cu++ gl NaClO4 25°C 0.10M U K1=4.77 1975DBa (49388)4559

B(CuH-1L)=-0.51

B(CuH-2L)=-7.50

B(CuH-3L)=-16.19

C6H12N4O3 L CAS 4862-18-4 (4382)
Nitrilotriacetamide; N(CH2.CO.NH2)3

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

Cu++ sp KCl ? 0.25M U K1=3.68 1970PRa (49390)4560

C6H12N4O6 H3L (2677)
Nitrilotriacetohydroxamic acid; N(CH2.CO.NH.OH)3

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

Cu++ gl NaClO4 25°C 0.10M C K1=18.66 B2=26.92 1979LSc (49396)4561

B(CuH3L)=32.41

B(CuH2L)=29.58

B(CuHL)=23.99

B(CuH-1L)=9.53

Cu++ gl NaClO4 20°C 0.10M U K1=21.1 1975KAe (49397)4562

K(Cu+HL)=14.25

K(CuL+H)=4.80

K(Cu+H3L)=5.50

C6H12N6S2 H2L (2765)

Diacetyl-bis(thiosemicarbazone); CH₃.C(:N.NH.CS.NH₂).C(:N.NH.CS.NH₂).CH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	EMF	KNO ₃	25°C	0.10M	U		K ₁ =23.48	1974WBa (49403)	4563
Competition with diaminoethane. Other thiosemicarbazones also studied									

C6H12O ₂		HL		4-Me-valeric			CAS 646-07-1	(5862)	
4-Methylpentanoic acid; (CH ₃) ₂ CH.CH ₂ .CH ₂ .COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO ₃	25°C	0.10M	C	I M	K ₁ =1.73 K(Cu(phen)+L)=1.85	1988LTc (49413)	4564
Data also for 50% v/v EtOH/H ₂ O, and 50% v/v Dioxan/H ₂ O mixtures									

C6H12O ₂		HL					CAS 142-62-1	(964)	
Hexanoic acid; CH ₃ .(CH ₂) ₄ .COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	dis	non-aq	25°C	100%	C	I		2000NYa (49420)	4565
							K(Cu+2HA(o)=CuL ₂ (o)+2H)=-8.06		
Method: distribution from 0.10 M NaClO ₄ into pentan-1-ol. Also data for hexan-1-ol, heptan-1-ol and octan-1-ol. K(2Cu+4HA(o)=Cu ₂ L ₄ (o)+4H)=-14.17									
Cu++	gl	KNO ₃	25°C	0.10M	C		K ₁ =1.51	1975IPa (49421)	4566
Cu++	sol	oth/un	25°C	->0	U		K ₁ =2.05	1951LWa (49422)	4567

C6H12O ₂ S		HL					CAS 22683-64-3	(4376)	
(1-Methylpropylthio)ethanoic acid; CH ₃ .CH ₂ .CH(CH ₃).S.CH ₂ .COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	diox/w	30°C	50%	U		K ₁ =3.6 B ₂ =6.40	19710Ta (49434)	4568
Medium: 50% dioxan, 1 M KNO ₃									

C6H12O ₂ S		HL					CAS 20600-62-8	(4377)	
(2-Methylpropylthio)ethanoic acid; CH ₃ .CH(CH ₃).CH ₂ .S.CH ₂ .COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	diox/w	30°C	50%	U		K ₁ =3.5 B ₂ =6.30	19710Ta (49437)	4569
Medium: 50% dioxan, 1 M KNO ₃									

C6H12O ₂ S		HL					CAS 20600-61-7	(4375)	
(Butylthio)ethanoic acid; CH ₃ .(CH ₂) ₃ .S.CH ₂ .COOH									

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

Cu++ ISE KNO3 25°C 0.10M C K1=1.95 1972FGb (49441)4570
By competition with Ag+ using Ag ISE

Cu++ gl diox/w 30°C 50% U K1=3.6 B2=6.50 19710Ta (49442)4571
Medium: 50% v/v dioxan, 1 M KNO3

C6H12O2S HL CAS 24310-22-3 (4378)
(t-Butylthio)ethanoic acid; (CH3)3C.S.CH2.COOH

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

Cu++ gl NaClO4 25°C 1.00M U K1=2.49 B2=4.92 1971SAb (49448)4572
B3=4.81

C6H12O2S2 HL CAS 35088-67-6 (2829)
1-Ethylthio-2-thiocarboxymethylethane; C2H5.S.CH2.CH2.S.CH2.COOH

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

Cu++ gl NaClO4 25°C 1.0M C K1=3.11 B2= 5.97 1980PPd (49449)4573
By spectrophotometry, K1=2.05

C6H12O2Se HL (4379)
(Butylseleno)ethanoic acid; C4H9.Se.CH2.COOH

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

Cu++ ISE KNO3 25°C 0.10M C K1=1.95 1972FGb (49453)4574
By competition with Ag+ using Ag ISE

C6H12O6 L D-Fructose CAS 57-48-7 (1561)
D-Fructose

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

Cu++ ISE KNO3 25°C 0.70M U K1=-0.59 1986HAe (49533)4575

C6H12O6 L D-Galactose CAS 59-23-4 (1559)
D-Galactose

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

Cu++ ISE KNO3 25°C 0.70M U K1=-0.62 1986HAe (49555)4576

C6H12O6 L D-Glucose CAS 492-62-6 (1560)
D-Glucose

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

Cu++ ISE KNO3 25°C 0.70M U K1=-0.82 1986HAe (49572)4577

 C6H12O6 L D-Mannose CAS 3458-28-4 (1562)
 D-Mannose

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

 Cu++ ISE KNO3 25°C 0.70M U K1=-0.27 1986HAe (49596)4578

 C6H12O6 L Sorbose CAS 87-79-6 (930)
 L(-)-Sorbose;

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

 Cu++ ISE KNO3 25°C 0.70M U K1=-0.55 1986HAe (49609)4579

 C6H12O6 L Inositol CAS 87-89-8 (2285)
 myo-Inositol, meso-Inositol;

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

 Cu++ ISE KNO3 25°C 0.70M U K1=-0.54 1986HAe (49633)4580

 C6H12O7 HL Galactonic acid (6942)
 2R,3S,4S,5R,6-Pentahydroxy-hexanoic acid, D-Galactonic acid;

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

 Cu++ gl NaClO4 25°C 0.10M C K1=2.57 B2= 4.88 1998GGa (49643)4581
 B(CuH-1L2)=-1.20
 B(CuH-2L2)=-8.38
 B(Cu2H-3L2)=-8.08
 B(Cu2H-4L2)=-16.94
 B(CuH-3L)=-21.76

 Cu++ gl NaNO3 20°C 0.10M C K1=3.04 B2= 4.84 1992ESa (49644)4582
 K(CuL=CuH-2L+2H)=-11.33
 B(Cu2H-3L2)=-7.54
 *K(CuH-2L)=-10.86

 C6H12O7 HL Gluconic acid CAS 526-95-4 (904)
 D-Gluconic acid, 2,3,4,5,6-Pentahydroxyhexanoic acid; HO.CH2(CHOH)4.COOH

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

 Cu++ gl NaClO4 25°C 0.10M C K1=2.51 B2= 4.59 1998GGa (49664)4583
 B(CuH-1L2)=-0.60
 B(CuH-2L2)=-8.28
 B(Cu2H-3L2)=-7.25
 B(Cu2H-4L2)=-15.46

B(CuH-3L)=-20.96

Cu++ gl NaNO3 20°C 0.10M C K1=3.02 B2= 6.08 1992ESa (49665)4584
K(CuL=CuH-2L+2H)=-11.96
B(Cu2H-3L2)=-6.58
*K(CuL2)=-5.55

Cu++ ISE KNO3 25°C 0.70M U K1=2.41 1986HAe (49666)4585
Data also for many mono- and disaccharide acids

Cu++ ISE KNO3 25°C 0.50M C 1985BSb (49667)4586
B(Cu2H-4L2)=-13.7

By combined pM, pH measurements.

Cu++ gl NaClO4 25°C 1.00M U K1=2.15 B2=3.60 1983VIa (49668)4587
B(CuH-1L)=-3.47
B(CuH-2L)=-8.82
B(CuH-1L2)=-1.64
B(Cu2H-3L)=-9.7

Additional method: copper amalgam electrode

Cu++ gl KCl 25°C 0.20M U K1=2.57 1981FDb (49669)4588

Cu++ gl oth/un ? ? U 1976PPd (49670)4589
K(Cu+H2L=CuHL+H)=-1.88
K(CuL+H)=4.80

Cu++ vlt oth/un 25°C 0.20M U 1955PJa (49671)4590
K(Cu+L+2.50H)=18.3
K(Cu+2L+2.50H)=19.6

C6H12O7 HL Gulonic acid CAS 526-97-6 (7555)
Gulonic acid, xylosecarboxylic acid;HOCH2(CHOH)4COOH

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

Cu++ gl NaClO4 25°C 0.10M C K1=2.47 B2= 4.55 1998GGa (49777)4591
B(CuH-1L2)=-0.74
B(CuH-2L2)=-8.32
B(Cu2H-3L2)=-6.98
B(Cu2H-4L2)=-14.98

L-Isomer. B(CuH-3L)=-20.08. Identical values for D-Gluconic acid

C6H12S3 L (6863)
1,4,7-Trithiacyclononane;

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

Cu++ vlt oth/un ? ? U M 1993SKd (49779)4592
K=7.77

Method:Cyclic voltammetry

K: Cu(II)+2Cu(I)L+Cu(II)(Cu(I)L)₂=Cu(I)(Cu(I)L)₂+Cu(II)L₂.

C6H13N L CAS 108-91-8 (314)

Cyclohexylamine; C6H11.NH₂

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

Cu++ gl NaClO₄ 37°C 0.15M C K1=7.67 1974MWb (49797)4593

C6H13N L MePiperidine CAS 626-67-5 (1254)

N-Methylpiperidine; C5H10N.CH₃

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

Cu++ gl diox/w 30°C 50% U K1=17.90 B2=34.58 1979Nwa (49808)4594

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

Cu++ gl NaNO₃ 25°C 0.10M C M K1=8.20 B2=15.06 2004SSa (49846)4595

B(CuH-1L)=1.13

B(CuH-2L)=-9.62

B(CuLA)=13.75

B(CuHLA)=18.25

B(CuH-1LA)=6.35. HA is 6-aminopenicillanic acid.

Cu++ gl alc/w 25°C 40% C K1=9.21 B2=16.88 2003DKa (49847)4596

B(CuHL)=7.89

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

Cu++ gl NaNO₃ 25°C 0.10M M M K1=8.23 B2=15.27 2002SKa (49848)4597

B(CuAL)=17.73

A is picolylamine

Cu++ gl KNO₃ 25°C 0.10M U M K1=8.16 B2=15.02 1998SYa (49849)4598

B(CuAL)=11.71

B(CuH-1AL)=5.44

HA is 2,3,4-trihydroxybutanoic acid (threonic acid).

Cu++ gl KNO₃ 25°C 0.10M U M 1997LZa (49850)4599

B(CuLA)=22.78

B(CuHLA)=28.25

HA=6-(2'-Hydroxybenzyl)-1,4,8,11-tetraazacyclotetradecane-5,7-dione. Data for 3'-methoxy-, 3',5'-dibromo- and 5'-bromo-2'-hydroxybenzyl- derivatives

Cu++ gl NaNO₃ 25°C 0.10M M M K1=8.46 B2=15.54 1997SKc (49851)4600

B(CuAL)=13.67

$$B(\text{CuH-1AL})=5.80$$

HA is glycyl-DL-leucine.

Cu++ gl KNO3 25°C 0.20M U T HM K1=7.90 1996JLd (49852)4601

$$K(\text{Cu(bpy)+L})=7.58$$

Data for 25-45 C. DH(K1)=-7.1 kJ mol⁻¹, DS(K1)=175 J K⁻¹ mol⁻¹;

DH(Cu(bpy)L)=-8.8, DS(Cu(bpy)L)=116.

Cu++ gl NaClO4 25°C 0.20M U T M K1=8.49 B2=16.01 1993PPa (49853)4602

$$K(\text{CuA+L})=7.36$$

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Cu++ gl KCl 25°C 0.10M C TIH T K1=8.27 B2=15.32 1993SKa (49854)4603

IUPAC evaluation

Cu++ vlt NaNO3 25°C 1.0M C M K1=8.20 B2=15.45 1992KMa (49855)4604

$$B(\text{CuL(tartrate)})=11.65$$

Method: polarography. Medium: pH 8.0.

Cu++ vlt NaNO3 25°C 1.0M C 1992KMa (49856)4605

$$K_{\text{leff}}=8.20$$

$$B_{\text{2eff}}=15.45$$

Method: differential pulse polarography. Medium: pH 8.0

Cu++ vlt NaClO4 25°C 1.0M U B2=15.26 1990CSc (49857)4606

$$K(\text{Cu+HL})=1.36$$

$$K(\text{Cu+2HL})=2.26$$

Method: polarography.

Cu++ vlt NaClO4 25°C 1.0M C 1990SRc (49858)4607

$$B(\text{Cu(gly)L})=15.64$$

Method: polarography.

Cu++ gl NaClO4 25°C 0.10M C M K1=8.16 B2=15.02 1988CLa (49859)4608

$$B(\text{CuL(acetylglycinate)})=10.51$$

Cu++ cal NaClO4 25°C 0.10M C H 1988LGa (49860)4609

DH(K1)=-28.9 kJ mol⁻¹, DH(K2)=-28.7 kJ mol⁻¹. For HA=N-acetylglycine,

DH(B(CuAL))=-26.6 kJ mol⁻¹, DS(B(CuAL))=112 J K⁻¹ mol⁻¹.

Cu++ ISE KNO3 25°C 0.10M C M K1=8.38 B2=15.41 1984PDb (49861)4610

$$K(\text{Cu(nta)+L})=5.45$$

Method: Cu ion selective electrode.

Cu++ gl NaNO3 25°C 0.10M U T K1=8.50 B2=15.79 1981ISb (49862)4611

K values for D, L and DL isomers. For the allo isomer, K1=8.09, K2=6.95

Cu++ vlt KNO3 30°C 1.00M C M T K1=8.30 B2=15.30 1980SGc (49863)4612

Cu++ gl KNO3 30°C 1.00M U M K1=8.30 B2=15.30 1980SGd (49864)4613

B(CuL(malonate))=12.30

B(CuL(oxalate))=12.90

Cu++ cal NaNO3 25°C 0.10M C H 1978ISc (49865)4614

For L-Ile: DH(K1)=-26.2 kJ mol⁻¹, DS(K1) =75 J K⁻¹ mol⁻¹; DH(K2)=-18.3,
DS(K2)=78. For D-allo-Ile: DH(K1)=-24.0, DS(K1)=74; DH(K2)=-18.0, DS=73

Cu++ vlt oth/un 25°C 1.10M U T K1=8.4 B2=15.4 1965VZa (49866)4615

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

Cu++ gl alc/w 25°C 40% C K1=9.20 B2=16.57 2003DKa (49970)4616
B(CuHL)=6.84

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

Cu++ gl alc/w 37°C 40% C M K1=7.66 B2=14.02 1998AAa (49971)4617
B(CuLA)=12.66

K(CuL+A)=5.10

K(CuA+L)=6.11

B(CuLC)=12.54

HC:2[o-hydroxyphenylazo]-2-cyanomethyl benzimidazole. 40% EtOH/H2O, I=0.15

H2A:5-[o-hydroxyphenylazo] barbituric acid. K(CuL+C)=4.88, K(CuC+L)=7.02.

Cu++ gl alc/w 37°C 40% C K1=7.66 B2=14.02 1997AAb (49972)4618

Medium: 40% v/v EtOH/H2O, 0.15 M NaClO4.

Cu++ gl NaNO3 25°C 0.10M U K1=7.20 1997ISd (49973)4619

Cu++ gl KNO3 25°C 0.20M U T HM K1=7.22 1996JLd (49974)4620

K(Cu(bpy)+L)=6.42

Data for 25-45 C. DH(K1)=-17.6 kJ mol⁻¹, DS(K1)=79 J K⁻¹ mol⁻¹;

DH(Cu(bpy)L)=-14.2, DS(Cu(bpy)L)=80.

Cu++ gl KNO3 25°C 0.10M M M K1=8.39 B2=15.54 1995SHc (49975)4621
K(Cu(ada)+L)=6.19

ada: N-(acetamido)-iminodiethanoic acid. K(H+L)=9.51.

Cu++ gl KNO3 25°C 0.10M C M 1994CDb (49976)4622

B(CuAL)=14.89

B(CuHAL)=19.3

B(CuH2AL)=23.7

A:6-Deoxy-6-N-histamine-b-cyclodextrin. Data also for D-isomer

Cu++ gl NaClO4 25°C 0.20M U T M K1=8.58 B2=15.87 1993PPa (49977)4623
K(CuA+L)=7.99

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Cu++ gl KCl 25°C 0.10M C TIH T K1=8.26 B2=15.20 1993SKa (49978)4624
IUPAC evaluation. DH(K1)=-23.3 kJ mol⁻¹, DH(B2)=-50

Cu++ gl KNO3 35°C 0.20M C M K1=8.04 1992YKa (49979)4625
B(Cu(edda)L)=18.89
B(Cu(en)L)=17.60
K(Cu(edda)+L)=4.39
K(Cu(en)+L)=8.56

Cu++ gl KNO3 25°C 0.10M C H 1990BPa (49980)4626
B(CuL(L-His))=17.79
B(CuHL(L-His))=21.4
B(CuL(D-His))=17.74
B(CuHL(D-His))=21.3
DH(CuL(L-His))=-64.9, DH(CuL(D-His))=-63.3 kJ mol⁻¹.

Cu++ gl KNO3 25°C 0.10M U I K1=8.34 B2=14.48 1990Rab (49981)4627
Data also for 10% w/w EtOH/H2O (B1=8.62; B2=15.17) and 25% (9.31; 15.93)

Cu++ gl alc/w 30°C 40% M M K1=9.10 B2=15.70 1988ARb (49982)4628
K(CuA+L)=7.91
B(CuAL)=17.41

Medium: 40% EtOH/H2O, 0.05 M KNO3. HA=acetylacetone

Cu++ gl KNO3 25°C 0.10M C M T K1=8.19 B2=15.10 1988ZZa (49983)4629
ternary complexes: B(CuHL(DOPA))=24.90; B(CuL(DOPA))=18.45;
B(CuL(Dopamine))=18.21

Cu++ gl KNO3 35°C 0.20M C M T K1=8.04 B2=14.77 1987PMa (49984)4630

Cu++ ISE KNO3 25°C 0.10M U M K1=7.59 1986DVa (49985)4631
K(CuL+salicylate)=10.04

Cu++ gl NaCl04 37°C 0.15M C M T K1=7.902 B2=14.533 1984BPd (49986)4632
B(CuH-1L)=2.324
B(CuL(His))=17.183

Cu++ ISE KNO3 25°C 0.10M C M K1=8.41 B2=15.13 1984PDb (49987)4633
K(Cu(nta)+L)=5.29

Method: Cu ion selective electrode.

Cu++ sp NaCl 20°C 0.15M U M 1983VDa (49988)4634
K(CuA+L)=6.83

H2A=orotic acid (C5H4N2O4), 2,4-(1H,3H)-pyrimidinedione-6-carboxylic acid

Cu++ gl diox/w 25°C 10% C I K1=8.39 B2=15.53 1983ZRa (49989)4635
Data at 0% dioxan (K1=8.19, K2=6.94), 20%, 30%, 40% (K1=9.11, K2=8.13),
50%, 60% and 70% (K1=10.01, K2=8.47)

Cu++ gl NaCl04 25°C 0.10M C M T 1980FSa (49990)4636

B(Cu(bpy)L)=16.03
 K(Cu(bpy)+L)=8.03
 B(CuL(phen))=17.22
 K(Cu(phen)+L)=7.97

 Cu++ gl KNO3 25°C 0.10M U M R K1=8.276 B2=15.17 1977BP a (49991)4637
 B(CuLA)=17.66
 B(CuL(His))=17.69
 B(CuHL(His))=22.20

HA=D-His

 Cu++ oth KNO3 20°C 0.10M U M K1=8.6 B2=15.60 1964JO a (49992)4638
 Method: paper electrophoresis. Ternary complexes with NTA

 Cu++ gl oth/un 25°C 0.01M U K1=7.00 B2=15.35 1959DL b (49993)4639
 K1 < K2 ?

 Cu++ vlt oth/un 25°C 0.40M U I K1=7.78 1958BR c (49994)4640
 At I=1.5 M K1=7.77; I=3 M: K1=7.55, B2=15.00. By spectrophotometry B2=14.97

 Cu++ sp oth/un 25°C 3.0M U K1=7.55 B2=14.98 1957BR c (49995)4641

 Cu++ ISE oth/un 25°C 0.10M U K1=8.11 B2=15.84 1957BR c (49996)4642

 Cu++ gl oth/un 25°C 0.01M U T K1=7.89 B2=14.34 1949MM a (49997)4643

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

 Cu++ gl KCl 25°C 0.10M C TIH T K1=8.18 B2=14.88 1993SK a (50137)4644
 IUPAC evaluation

 Cu++ sp NaCl 20°C 0.15M U M 1983VD a (50138)4645
 K(CuA+L)=6.70
 H2A=orotic acid (C5H4N2O4), 2,4-(1H,3H)-pyrimidinedione-6-carboxylic acid

 Cu++ gl KNO3 30°C 0.10M U M 1980MS b (50139)4646
 K(Cu(His)+L)=4.45

 Cu++ gl KNO3 25°C 0.10M C T K1=8.18 B2=14.88 1975IP b (50140)4647

 Cu++ EMF oth/un 25°C 0.16M U I K1=8.46 1958BR c (50141)4648
 At I=0 K1=8.71

 Cu++ vlt oth/un 25°C 0.10M U B2=15.2 1954LD a (50142)4649
 Medium: 0.1 M KH2PO4

 Cu++ gl oth/un 20°C 0.01M U B2=15.5 1950AL a (50143)4650

C6H13NO2 HL N-Methylvaline CAS 104883-54-7 (6131)
3-Methyl-2-(N-methylamino)butanoic acid; CH3.NH.CH(CH(CH3)2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.10M	U		K1=7.32 B2=13.86	1977KDa	(50202)4651

C6H13NO2 HL CAS 1606-01-5 (2907)
N,N'-Diethylglycine; (C2H5)2N.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl04	21°C	0.10M	M T		K1=7.34 B2=13.70 B(CuHL)=12.06 B(CuH-1L2)=3.03	1984L0b	(50231)4652

Cu++	sp	non-aq	25°C	100%	U		K1=3.60 B2=6.26	1980LZc	(50232)4653
------	----	--------	------	------	---	--	-----------------	---------	-------------

Medium: MeCN

Cu++	gl	NaCl04	25°C	0.10M	U		K1=6.88 B2=12.86	1954BCb	(50233)4654
------	----	--------	------	-------	---	--	------------------	---------	-------------

C6H13NO2 HL CAS 3182-81-8 (3112)
N-Butylglycine; CH3.CH2.CH2.CH2.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaCl04	25°C	0.10M	U		K1=7.32 B2=13.52	1954BCb	(50238)4655

C6H13NO2 L CAS 4070-48-8 (8658)
Valine methyl ester;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	M	M		1997SKc	(50242)4656

K(CuH-1A+L)=1.62

HA is glycyl-DL-leucine.

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
Cu++	gl	KNO3	35°C	0.20M	C	M	K1=7.54	1987PMa	(50252)4657

Cu++	gl	KNO3	25°C	0.10M	U		K1=8.43	1964LMa	(50253)4658
------	----	------	------	-------	---	--	---------	---------	-------------

C6H13NO3 HL CAS 28120-18-5 (1896)
2-Aminooxy-4-methyl-pentanoic acid; CH3.CH(CH3).CH2.CH(O.NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	U		K1=4.07	1985WTa (50270)	4659

C6H13NO3		HL					CAS 4383-88-4	(1895)	
2-Aminooxyhexanoic acid; CH3.CH2.CH2.CH2.CH(O.NH2).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.50M	U		K1=4.09	1985WTa (50274)	4660

C6H13NO3		HL					(3113)		
N-Ethyl-N-2-hydroxyethylglycine; (HO.CH2.CH2)(CH3.CH2)N.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	oth/un	20°C	0.05M	U			1957PAa (50280)	4661
							K(CuL2(OH)+H)=9.69		

C6H13NO4		L					CAS 73285-50-4	(7138)	
1-Deoxynojirimycin; glucosidase inhibitor									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.10M	C		K1=3.46	1996CDb (50282)	4662
							B(CuH-1L)=-0.04		
							B(CuH-2L2)=-7.44		
							B(CuH-3L2)=-19.14		

C6H13NO4		HL					CAS 150-25-4	(2124)	
N,N-Bis(2-hydroxyethyl)glycine; (HO.CH2.CH2)2N.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	KNO3	25°C	1.00M	U	M	K1=8.24	1992CSb (50302)	4663
							K(Cu(ATP)+L)=6.57		

Cu++	gl	KNO3	25°C	0.10M	C		K1=8.07 B2=13.47	1991KNa (50303)	4664
							K(CuH-1L+H)=7.09		
							K(CuH-2L+H)=10.40		
							K(CuH-1L+H+L)=12.36		

Cu++	gl	KNO3	30°C	0.10M	U	M	K1=8.08	1984GHb (50304)	4665
							K(CuH-1L+H)=7.07		
							K(Cu(phen)+L)=5.90		

Cu++	vlt	NaClO4	25°C	0.20M	U		K1=10.3 B2=13.5	1971NTa (50305)	4666
							B3=15.1		
							B(CuL(OH))=15.9		
							B(CuL2(OH))=17.5		

$$B(\text{Cu}(\text{L}2(\text{OH})_2))=20.1, \quad B(\text{CuL}(\text{OH})_3)=20.7$$

By paper electrophoresis

Cu++ g1 KCl 30°C 0.10M U K1=8.15 B2=13.35 1957FCa (50308)4669

Cu++ gl oth/un 30°C 0.10M U 1957Mca (50309)4670
K(CuL(OH)+H)=6.8

Cu++ gl KCl 30°C 0.10M U K1=8.15 B2=13.35 1953CCa (50310)4671

C6H13NO5 L D-Mannosamine CAS 5505-63-5 (6426)
2-Amino-2-deoxy-D-mannose;

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

Cu++ gl KNO₃ 25°C 0.10M C B2=9.68 1990KBa (50435)4672
B(CuH-1L2)=2.72
B(CuH-2L2)=-3.66
B(CuH-3L2)=-13.0

For the methyl- α -glycoside: $K_1=4.81$, $B(\text{CuH-1L2})=2.91$, $B(\text{CuH-2L2})=-4.29$.
For ab-GalN-OMe: $K_1=4.40$, $B_2=8.40$, $B(\text{CuH-2L2})=2.27$, $B(\text{CuH-2L2})=-5.18$

Cu++ vlt NaClO4 25°C 0.15M C K1=7.00 B2=10.43 1990UKb (50436)4673

Method: polarography.

C6H13NO5 L D-Glucosamine CAS 3416-24-8 (565)
2-Amino-2-deoxyglucose;

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

Cu++ gl KNO₃ 25°C 0.10M C M B₂=9.02 1993BDa (50447)4674
B(CuH-2L₂)=-5.26

$B(\text{CuLA})=8.16$, $B(\text{CuH-1LA})=2.28$, $B(\text{CuH-2LA})=-5.18$, $B(\text{CuH-3LA})=-13.14$
HA=D-lactobionic acid

Cu++ vlt NaClO4 25°C 0.15M C K1=5.12 B2= 8.85 1988UKa (50448)4675

Method: d.c. polarography.

Cu++ gl NaCl 37°C 0.15M U M K1=3.54 1986A1c (50449)4676

$$\begin{aligned} K(\text{Cu}+\text{L}+\text{OH}) &= 11.56 \\ B(\text{Cu}(\text{OH})_2\text{L}_2) &= 20.96 \\ K(\text{Cu}+\text{L}+2\text{OH}) &= 18.50 \end{aligned}$$

Cu++ gl NaCl 25°C 0.15M U B2=9.02 1986LDC (50450)4677
B(CuH-2L2)=-5.26
B(CuH-3L2)=-13.77

Cu++ g1 NaCl 25°C 0.15M U K1=3.06 B2= 8.76 1985MDb (50452)4679
B(CuH-1L2)=0.83
B(CuH-2L2)=-5.82
B(CuH-3L2)=-15.08

Cu++ gl NaNO3 30°C 0.10M U K1=4.8 1979MNa (50454)4681

C6H13N05	L	(7132)
6-Amino-6-deoxy-D-glucose;		

Cu++ gl KN03 25°C 0.10M C 1996JCa (50467)4682
B(Cu²⁺H-2L₂)=0.03
B(Cu²⁺H-3L₂)=-6.87
B(Cu²⁺H-4L₂)=-15.64

C6H13NO5 L D-Galactosamine CAS 1772-03-8 (2553)
D-Galactosamine, 2-Amino-2-deoxy-D-galactopyranose. chondrosamine;

Cu++	g1	NaCl	25°C	0.15M	U	K1=4.20	B2=9.13	1988Rkb	(50469)4683
						B(CuH-1L2)=2.37			
						B(CuH-2L2)=-5.21			
						B(CuH-3L2)=-15.44			

C6H13NO5	HL	Tricine	CAS 5704-04-1	(1239)
N-(Tris(hydroxymethyl)methyl)glycine; (HO.CH2)3C.NH.CH2.COOH				

Cu++ gl KNO3 25°C 0.10M U TIH K1=7.70 2004EAa (50482)4685
Data for 5-45 C. DH(K1)=-41.17 kJ mol⁻¹, DS=-9.29 J K⁻¹ mol⁻¹. Values for
0.02 -0.15 M KNO3 and 60-75% v/v acetone, 75% EtOH and 75% dioxane/H2O

Cu++ vlt NaCl04 30°C 0.20M C K1=10.6 B2=12.40 1984KKd (50484)4687
K(Cu+OH+L)=14.0
K(Cu+OH+2L)=16.80
K(Cu+2OH+L)=18.6
K(Cu+2OH+2L)=20.35

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaCl04	25°C	0.10M	C			K1=8.12 B(CuHL)=11.1 B(CuH2L2)=22.81 B(CuH-1L2)=5.23 B(CuH-2L2)=-4.94 B(Cu2H-3L2)=-3.22, B(Cu2H-4L2)=-13.03.	1998GGa	(50518)4688

HA=D-galacturonic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.20M	C			K1=6.41 B(CuHL)=12.30 B(CuH-1L)=-1.26 B(CuH-1L(OH))=-11.19 B(Cu2H-2L2(OH))=-9.89	1989KF	(50539)4691

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	23°C	0.50M	U		K1=4.54	1968KZa	(50550)4692

$K(\text{CuH-1L}+\text{H})=4.92$
 $K(\text{CuOH}(\text{H-1L})+\text{H})=8.44$
 $K(\text{CuOH}(\text{H-2L})+\text{H})=10.31$
 $K(\text{CuH-1L}+\text{CuOH}(\text{H-1L}))=2.94$

C6H13N3O3 HL Citrulline (579)
 2-Amino-5-ureidovaleric acid; $\text{H}_2\text{N.CO.NH.CH}_2.\text{CH}_2.\text{CH}_2.\text{CH}(\text{NH}_2).\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	35°C	0.20M	C	M		K1=7.46 B2=13.89	1987PRa (50560)	4693
Cu++	ISE	diox/w	25°C	20%	U			K1=8.29 B2=15.19	1980YTa (50561)	4694
Cu++	gl	KNO3	25°C	0.10M	U			K1=7.92 B2=14.39	1970CMc (50562)	4695

C6H13N5O L CAS 7420-18-0 (4385)
 N,N-Anhydrobis(beta-hydroxyethyl)biguanide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	sp	KCl	?	0.10M	U			K1=9.70 B2=17.82	1971KLa (50592)	4696

C6H13O3N HL (7070)
 NN-Dimethylthreonine; $(\text{CH}_3)_2\text{N.CH}(\text{CH}(\text{OH})\text{CH}_3)\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.10M	C			K1=5.50 B2=9.80	1994BPb (50594)	4697
								$B(\text{CuH-1L})=-2.10$		
								$B(\text{CuH-1L}_2)=1.6$		
								$B(\text{CuH-2L}_2)=-8.2$		

C6H13O3P H2L CAS 1005-23-8 (520)
 Cyclohexylphosphonic acid; $\text{C}_6\text{H}_{11}.\text{PO}_3\text{H}_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U			K1=3.97	1981WNa (50598)	4698

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
Cu++	gl	NaCl	25°C	0.15M	C	H		K1=2.736	1991KLa (50613)	4699
								$B(\text{CuH-1L})=-4.080$		
								$B(\text{CuH-2L})=-11.026$		

DH(K1)=21.8 kJ mol⁻¹, DS(K1)=125.5 J K⁻¹ mol⁻¹

C6H14NO2P HL (6465)

Piperidinemethylphosphinic acid; C5H10N.CH2.PO2H2

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

Cu++ gl NaClO4 25°C 0.10M C K1=4.91 1992LBa (50629)4700

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

Cu++ vlt NaClO4 25°C 0.50M C K1=10.48 B2=12.91 1986RVa (50637)4701
B3=14.43

Method: polarography.

Cu++ gl KCl 25°C 0.20M U K1=6.75 B2=12.63 1982FGa (50638)4702
K(Cu+2(H-1L))=18.0

C6H14N2 L (4351)

1,1-Di(aminomethyl)cyclobutane; C4H6(CH2.NH2)2

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

Cu++ gl oth/un 25°C dil U K1=9.76 B2=16.98 1972NBa (50645)4703

C6H14N2 L (6517)

1,5-Diazacyclooctane;

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

Cu++ gl NaNO3 25°C 0.10M U K1=10.51 B2=17.95 1990HNa (50648)4704

C6H14N2 L CAS 7154-73-6 (3078)

2,2'-Aminoethylpyrrolidine; C4H8N.CH2.CH2.NH2

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

Cu++ gl oth/un 30°C ->0 U K1=8.77 B2=14.82 1961RFa (50651)4705

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

Cu++ gl oth/un 25°C 0.10M U K1=10.61 B2=19.97 1970ABc (50662)4706
meso isomer

Cu++ gl oth/un 20°C ->0 U T H K1=10.91 B2=20.60 1958BFa (50663)4707
DH(K1)=-48.5 kJ mol⁻¹, DS=42 J K⁻¹ mol⁻¹; DH(K2)=-50.2, DS=13. 10 C: K1=11.20,

K2=9.99; 30 C: K1=10.72, K2=9.40; 40 C: 10.33, 9.10

Cu++ gl KCl 20°C 0.10M U K1=10.87 B2=20.54 1956SBa (50664)4708

C6H14N2 L CAS 21436-03-3 (2456)

trans-1,2-Diaminocyclohexane; C6H10(NH2)2

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

Cu++ sp KCl 25°C 0.10M C K1=11.07 B2=20.68 1996DPa (50678)4709

Method: ultraviolet circular dichroism.

Cu++ gl KCl 25°C 0.20M U M K1=11.82 B2=21.64 1990BMa (50679)4710

B(CuL(Ala))=18.316

B(CuL(D-Ala))=18.307

Alternative method: ESR

Cu++ gl NaCl04 25°C 0.00 C I M K1=11.20 B2=20.83 1979TIa (50680)4711

Cu++ gl oth/un 25°C 0.10M U K1=10.94 B2=20.35 1970ABc (50681)4712

DL, D and L isomers

Cu++ gl oth/un 20°C ->0 U T H K1=11.22 B2=20.95 1958BFa (50682)4713

DH(K1)=-56.9 kJ mol⁻¹, DS=21 J K⁻¹ mol⁻¹; DH(K2)=-51.5, DS=13. 10 C: K1=11.55,
K2=10.11; 30 C: 10.96, 9.54; 40 C: 10.56, 9.19

Cu++ gl KCl 20°C 0.10M U K1=11.13 B2=20.93 1956BFd (50683)4714

C6H14N2O L (2357)

1-Oxa-4,7-diazacyclononane; Cyclo(-((CH2)2.NH)2(CH2)2.O.-)

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

Cu++ gl KNO3 25°C 0.10M U K1=10.80 B2=19.60 1990CCa (50699)4715

Cu++ gl NaNO3 25°C 0.10M U K1=10.86 B2=19.54 1986TSa (50700)4716

Cu++ gl NaNO3 25°C 0.01M U K1=10.85 B2=19.49 1982HTa (50701)4717

C6H14N2O L CAS 2038-03-1 (3115)

4,2'-Aminoethylmorpholine; C4H8ON.CH2.CH2.NH2

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

Cu++ gl KNO3 30°C 1.00M U K1=6.60 B2=10.56 1956HFb (50716)4718

C6H14N2O L (4388)

Glycine-N,N-diethylamide; NH2.CH2.CO.N(C2H5)2

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

$$K(\text{Cu}+\text{HL})=6.18$$

$$K(\text{CuHL}+\text{HL})=5.12$$

C6H14N2O L CAS 10466-61-2 (3116)

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

2,6-Diaminohexanoic acid; $\text{H}_2\text{N} \cdot (\text{CH}_2)_4 \cdot \text{CH}(\text{NH}_2)\text{COOH}$

$B(\text{CuHL}) = 18.17$
 $B(\text{CuH}_2\text{L}_2) = 35.18$
 $B(\text{CuHL}_2) = 25.27$
 $K(\text{Cu} + \text{HL}) = 7.54$

$$\begin{aligned} B(\text{CuHL}) &= 18.232 \\ B(\text{CuH}_2\text{L}_2) &= 35.322 \\ B(\text{CuHL}_2) &= 25.464 \end{aligned}$$
$$\begin{aligned} K(\text{Cu(ada)}+\text{L}) &= 5.30 \\ B(\text{CuHL}) &= 20.08 \end{aligned}$$
$$\begin{aligned} B(\text{CuHL}) &= 18.349 \\ B(\text{CuHL}_2) &= 25.647 \\ B(\text{CuH}_2\text{L}_2) &= 35.547 \end{aligned}$$
$$\begin{aligned} B(\text{CuHL}_2) &= 25.348 \\ B(\text{CuHL}) &= 18.239 \\ B(\text{CuH}_2\text{L}_2) &= 35.318 \end{aligned}$$

HA=L-phospho-serine: B(CuHLA)=26.066, B(CuH2LA)=31.40; B(CuHL(Ser))=25.217
HB=L-phospho-tyrosine: B(CuHLB)=26.119, B(CuLB)=16.026; B(CuHL(Tyr))=25.747

Cu++	gl	NaClO4	25°C	0.10M	C		B2=14.83 B(CuHL)=18.33 B(CuH2L2)=35.58 B(CuHL2)=26.23	1987LMa (50773)4727
Cu++	gl	KNO3	35°C	0.20M	C	M	K(Cu+HL)=7.76	1987PRa (50774)4728
Cu++	gl	NaCl	37°C	0.15M	U		K1=10.37 B2=14.18 B(CuHL)=17.682 B(CuHL2)=24.50 B(CuH2L2)=34.16 B(CuH-1L)=0.78	1985CFb (50775)4729
Cu++	gl	KNO3	25°C	0.10M	C	M	B2=15.01 B(CuHL)=18.20 B(CuHL2)=25.42 B(CuH2L2)=35.21 B(CuHLA)=27.64	1984DAb (50776)4730
H2A=Noradrenaline								
Cu++	ISE	KNO3	25°C	0.10M	C	M	K1=7.65 B2=14.09 K(Cu(nta)+L)=5.10	1984PDb (50777)4731
Method: Cu ion selective electrode.								
Cu++	gl	NaClO4	37°C	0.15M	C	M	K1=10.850 B(CuHL)=17.985 B(CuH2L)=20.640 B(CuHL2)=25.623 B(CuH2L2)=34.797 B(CuHL(Histamine))=26.5; B(CuL(Histamine))=16.908	1981BKd (50778)4732
Cu++	gl	KNO3	30°C	1.00M	U	M	K1=7.40 B2=13.70 B(CuL(malonate))=13.70 B(CuL(oxalate))=12.10	1980SGd (50779)4733
Cu++	vlt	KNO3	30°C	1.00M	U	M	K1=7.4 B2=13.7 B(CuL(oxalate))=12.1	1980SSe (50780)4734
Cu++	gl	KCl	25°C	0.20M	C		B2=14.81 B(CuHL)=18.33 B(CuH2L2)=35.40 B(CuHL2)=25.32	1978GFa (50781)4735
Cu++	gl	KNO3	25°C	0.10M	U	M	B2=15.07 B(CuHL)=18.46 B(CuH2L2)=35.63 B(CuHL2)=25.64 B(CuH(Asp)L)=26.32	1978SYa (50782)4736

B(M(Asp)L) = 15.82

Cu++ gl KNO3 25°C 0.10M U M 1977BP a (50783)4737

B(CuHLA)=27.78
B(CuHL(His))=27.88
B(CuLA)=17.12
B(CuL(His))=17.12

HA=D-His

Cu++ gl KCl 25°C 0.20M C M 1977NG a (50784)4738

B(CuH-1LA)=4.96
B(CuH-1LB)=5.09
B(CuH-1LC)=4.72
K(CuH-1L2+A=CuH-1LA+L)=0.50

K(CuH-1L2+B=CuH-1LB+L)=0.45, K(CuH-1L2+C=CuH-1LC+L)=0.54

HA: glycylglycine; HB: glycyl-DL-alanine; HC: DL-alanyl-DL-alanine

Cu++ gl KNO3 25°C 0.10M C B2=15.05 1976BP b (50785)4739

B(CuHL)=18.29
B(CuH2L2)=35.45
B(CuHL2)=25.52

Cu++ gl NaClO4 25°C 1.00M C B2=15.646 1975NM b (50786)4740

B(CuHL)=19.045
B(CuH2L2)=36.851
B(CuHL2)=26.49

Cu++ gl KNO3 20°C 0.10M U K1=7.56 B2=14.02 1968HL a (50787)4741

Cu++ gl NaClO4 25°C 0.10M U B2=13.90 1965NC a (50788)4742

Cu++ gl oth/un 20°C 0.01M U B2=13.7 1952AL a (50789)4743

Cu++ vlt oth/un 25°C 0.10M U B2=13.6 1952LD a (50790)4744

Medium: 0.1 M KH2PO4

C6H14N2O2 HL (7229)

2-Amino-N-hydroxy-3-methylpentanamide; CH3CH2CH(CH3)CH(NH2)CONHOH

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

Cu++ gl KCl 25°C 0.50M C K1=10.36 B2=19.85 1993LE b (50842)4745

B(CuH-1L2)=10.29

C6H14N2O2 HL CAS 69749-17-3 (1546)

2-Amino-N-hydroxyhexanamide; CH3.(CH2)3.CH(NH2).CO.NH.OH

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

Cu++ gl KCl 25°C 0.50M U K1=10.32 B2=19.67 1991LE b (50847)4746

Cu++ gl KCl 25°C 0.50M C K1=10.29 B2=19.70 1988LEa (50848)4747
B(CuH-1L2)=9.877
B(Cu2H-1L2)=20.767

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.50M	C	M	K1=10.46 B2=19.32 B(CuH-1L2)=9.36 B(Cu2H-1L2)=20.37 B(CuLA)=17.80 B(CuH-1LA)=7.97	1998DFe	(50856)4748
B(CuLB)=17.77, B(CuH-1LB)=8.16; B(CuLC)=19.08, B(CuH-1LC)=8.11; B(CuLD)=18.35, B(CuH-1LD)=8.30. HA: val; HB:phe; HC: Pro; HD: trp.									

Cu++ gl KCl 25°C 0.50M U K1=10.626 B2=19.21 1991LNb (50857)4749
B(CuH-1L2)=9.175
B(Cu2H-1L2)=20.592

Cu++ gl NaClO₄ 25°C 0.10M C K1=10.83 B2=19.51 1987KKb (50858)4750
B(Cu₂H-1L2)=21.09
B(CuH-1L2)=9.98

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C			B2=16.29 B(CuHL)=17.38 B(CuH2L2)=34.01 B(CuHL2)=25.92 B(CuH-1L2)=5.88	1998CKa (50862)	4751

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	NaNO3	25°C	0.15M	C T	HM		K1=9.75 B(CuHL)=17.040 B(CuHL2)=24.04 B(CuH2L2)=32.95 B(Cu2H-1L2)=14.85	1989DZa	(50865)4752

Also $B(\text{Cu}_2\text{H}-2\text{L}_2)=7.80$; $B(\text{Cu}_3\text{H}-2\text{L}_2)=12.28$. Also data at 18, 37 and 47 C, and derived DH and DS values. $B(\text{CuNiH}-2\text{L}_2)=2.83$. $B(\text{Cu}_2\text{NiH}-2\text{L}_2)=10.44$.

 Cu++ gl NaClO4 25°C 0.10M U K1=7.46 B2=13.75 1965Nca (50866)4753

C6H14N2O4 HL CAS 31918-44-2 (4383)
 N,N-Bis(2-hydroxyethyl)aminoacethydroxamic acid;

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

Cu++ sp NaClO4 20°C 0.10M U K1=10.44 B2=16.25 1971KMc (50874)4754
 $K(\text{CuL}_2+\text{OH}=\text{CuL}(\text{OH})+\text{L})=1.35$

C6H14N2S L (5635)

1-Thia-4,7-diazacyclononane;

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

Cu++ gl KNO3 25°C 0.10M C H K1=12.66 B2=22.91 1992WLb (50878)4755
 $K(2\text{CuL}+2\text{OH}=\text{Cu}_2\text{L}_2(\text{OH})_2)=16.43$

DH(K1)=-50.2 kJ mol⁻¹, TDS=22; DH(K2)=-108.8 kJmol⁻¹, TDS=22

 Cu++ gl NaNO3 25°C 0.10M U K1=12.42 B2=22.29 1983HBb (50879)4756

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

Cu++ gl diox/w RT 50% C I K1=4.252 B2= 6.25 1993BKe (50898)4757
 $B(\text{CuHL})=6.223$
 $B(\text{CuHL}_2)=8.956$

Medium: 50% v/v dioxane/H2O. Data for 10-60% v/v dioxane/H2O and DMF/H2O.
 Temperature not stated.

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

Cu++ gl KCl 25°C 0.50M C K1=7.68 1982BZa (50914)4758
 $B(\text{Cu}_2\text{L}_2)=18.84$
 $K(\text{Cu}+\text{HL}=\text{CuHL})=5.13$
 $K(\text{CuHL}+\text{HL}=\text{CuL}_2\text{H}_2)=4.15$
 $B(\text{CuH}-2\text{L})=-6.37$

 Cu++ gl KNO3 25°C 0.10M U K1=7.50 1969BMc (50915)4759
 $K(2\text{CuL}=\text{CuH}-2\text{L}_2+2\text{H})=-9.2$
 $K(2\text{CuH}-1\text{L}=(\text{CuH}-2\text{L})_2+2\text{H})=-18.40$
 $K(\text{CuH}-2\text{L}+2\text{H})=13.8$

 Cu++ gl NaCl04 37°C 0.15M U K1=7.17 B2=15.25 1982NSa (50965)4770
 B(CuH-1L)=3.99

Cu++ gl KNO3 25°C 0.10M U M 1978SYa (50966)4771
 B(CuHL)=19.55
 B(CuH2L2)=37.91
 B(CuHAL)=27.43

H2A=aspartic acid

 Cu++ gl KNO3 25°C 0.10M U M 1977BPa (50967)4772
 B(CuHLA)=29.12
 B(CuHL(His))=29.25

HA=D-His

 Cu++ gl KNO3 25°C 0.10M C 1976BPb (50968)4773
 B(CuHL)=19.63
 B(CuH2L2)=38.15

Cu++ sp NaCl04 25°C 0.15M U K1=7.49 B2=13.59 1975PTd (50969)4774

 Cu++ gl KNO3 25°C 0.10M U K1=7.93 B2=14.57 1970CMc (50970)4775

Cu++ gl KNO3 25°C 0.10M U 1970CMc (50971)4776
 K(CuH-1L+H)=7.5
 K(Cu+H-1L)=11.9
 K(CuH-2L2+H)=11

Cu++ gl oth/un 25°C ? U T K1=7.34 B2=13.76 1960PEd (50972)4777
 17 C: K1=7.53, K2=6.54; 30 C: 7.23, 6.32; 35 C: 7.12, 6.23; 40 C: 7.02, 6.14

Cu++ gl oth/un 20°C 0.01M U B2=13.90 1952ALa (50973)4778

Cu++ vlt oth/un 25°C 0.06M U B2=13.74 1952Lda (50974)4779
 Medium: 0.06 M KH2PO4

C6H14N4O2 L (3704)
 N,N'-Bis(2-aminoethyl)oxamide; H2N.CH2.CH2.NH.CO.CO.NH.CH2.CH2.NH2

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

Cu++ gl KNO3 25°C 0.10M C K1=9.17 1996CHe (51023)4780
 B(Cu2H-2L)=1.451
 B(Cu2H-3L)=-6.859
 B(Cu2H-4L)=-16.45
 B(Cu2H-2L2)=7.612

B(CuH-2L)=-5.860

 Cu++ gl KNO3 22°C 0.10M U K1=9.41 1968GFb (51024)4781
 K(CuH-1L+H)=7.51

K(CuH-2L+H)=8.10
K(CuH-2L+Cu)=7.37

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
Cu++	gl	KCl	25°C	0.20M	C			1992FKa (51029)	4782
							B(CuHL)=22.46 B(Cu2L2)=39.87		

C6H14O2Si HL (134)
3-(Trimethylsilyl)propanoic acid; (CH3)3Si.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	NaNO3	35°C	0.10M	U	M	K1=1.80 B(Cu(phen)L)=10.8 B(Cu(bpy)L)=9.57	1979MIa (51040)	4783

C6H14O6 L D-Dulcitol CAS 608-66-2 (3663)
D-Galactitol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ISE	KNO3	25°C	0.70M	U		K1=-0.08	1986HAe (51057)	4784

C6H14O6 L D-Mannitol CAS 69-65-8 (3664)
D-Mannitol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ISE	KNO3	25°C	0.70M	U		K1=-0.15	1986HAe (51065)	4785

C6H14O6 L Glucitol CAS 50-70-4 (2878)
D-Sorbitol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ISE	KNO3	25°C	0.70M	U		K1=-0.11	1986HAe (51092)	4786

C6H14S L Isopropyl sulfi CAS 625-80-9 (5674)
2,2'-Thiodipropene, diisopropyl sulfide; (CH3)2CH-S-CH(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	ISE	non-aq	25°C	100%	U		K1=0.84 B2=1.51 B3=1.73 B4=2.03	1986MMb (51133)	4787

Medium: acetone, Bu4NC104

C6H15N L Triethylamine CAS 121-44-8 (1340)
N,N,N-Triethylamine; (C2H5)3N

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

Cu++ vlt NaCl04 20°C 0.70M C K1=7 1991CSa (51170)4788

Method: differential pulse polarography.

C6H15NO L CAS 100-37-8 (3117)
N,N-Diethyl-2-aminoethanol; (CH3.CH2)2N.CH2.CH2.OH

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

Cu++ vlt KNO3 25°C 1.0M C 1983AAb (51189)4789

K(Cu+20H+L)=13.9

K(Cu+20H+2L)=15.8

Method: polarogrraphy. Medium pH >11

Cu++ vlt KNO3 25°C ? C B2=8.21 1980AAb (51190)4790

B3eff=13.90

Cu++ oth oth/un ? ? U 1968HGa (51191)4791

B(CuL2(OH)2)=19.5

Cu++ gl oth/un 25°C 0.10M U K1=4.9 B2=9.00 1965DOb (51192)4792

K3=3.2

K4=2.4

C6H15NO2 L CAS 110-97-4 (944)
Di-isopropanolamine; CH3.CH(OH).CH2.NH.CH2.CH(OH).CH3

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

Cu++ vlt KNO3 25°C 0.50M U 1971HSa (51204)4793

B(CuL(OH)3)=20.6

B(CuL2(OH)2)=20.8

C6H15NO2 L CAS 139-87-7 (3707)
N-Ethyl-2,2'-iminodiethanol; CH3.CH2.N(CH2.CH2.OH)2

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

Cu++ vlt KNO3 30°C 0.50M U 1967FHa (51208)4794

B(CuL(OH)2)=17.4

B(CuL2(OH)2)=19.0

C6H15NO3 Triethanolamine CAS 102-71-6 (447)
Tris-(2-hydroxyethyl)amine; L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	oth/un	25°C	1.5M	U	M	K1=4.14	1998SPa	(51234)4795
Madium: Na2SO4; the same data measured by sp.:K1=3.87									
Cu++	gl	oth/un	25°C	1.5M	U		K1=4.14	1998SPb	(51235)4796
The same measured spectrophotometrically: 3.87									
Medium: Na2SO4									
Cu++	nmr	KNO3	25°C	1.00M	U		K1=4.3 B(CuH-1L)=-1.9 B(CuH-2L)=-9.7 B(Cu2H-2L2)=-1.1 B(Cu2H-3L2)=-8.2	1990CIId	(51236)4797
B(Cu2H-4L2)=-16.6									
Cu++	sp	KNO3	25°C	1.00M	U		K1=4.37 B(CuH-1L)=-1.73 B(CuH-2L)=-9.45 B(Cu2H-2L2)=-1.42 B(Cu2H-3L2)=-9.02	1989CGa	(51237)4798
Also B(Cu2H-4L2)=-17.02; B(Cu2H-5L2)=-28.50; B(CuH-2L2)=-8.57.									
Cu++	gl	KNO3	25°C	1.0M	U	M	K1=4.3 B(CuH-1L)=-1.9 B(CuH-2L)=-9.7 B(Cu2H-2L2)=-1.1 B(Cu2H-3L2)=-8.2	1986CTa	(51238)4799
B(Cu2H-4L2)=-16.6. B(CuAL)=15.4, B(CuAH-1L)=8.4. H2A is salicylic acid									
Cu++	nmr	oth/un	25°C	1.00M	U		K1=4.3 B(CuH-1L)=-1.9 B(CuH-2L)=-9.7 B(Cu2H-2L2)=-1.1 B(Cu2H-3L2)=-8.2	1985TCa	(51239)4800
Medium: D2O. B(Cu2H-4L2)=-16.6									
Cu++	gl	NaNO3	25°C	0.10M	U		K1=4.07 K(CuL+OH)=8.37 K(CuLOH+L)=1.99	1984HNa	(51240)4801
Cu++	gl	oth/un	25°C	0.50M	C		K1=4.22 B(CuH-1L)=-6.42 K(2CuL=Cu2L2(OH)2)=3.15	1981BAa	(51241)4802
Medium: 0.5 M (HL,K)NO3									
Cu++	vlt	KNO3	30°C	2.00M	U	M	B(CuL2(OH))=14.40	1971SSe	(51242)4803
Data also obtained by e.m.f. with redox electrode									

Cu++	gl	oth/un	20°C	dil	U	K1=4.03 K(CuH-1L+H)=6.40 K(CuH-2L+H)=8.43 K(CuH-3L+H)=11.4	1968DPa (51243)4804		

Cu++	vlt	KN03	30°C	0.50M	U	B(CuL(OH))=11.9 B(CuL(OH)2)=18.3 B(CuL(OH)3)=20.7 B(CuL2(OH)2)=18.6	1967FHa (51244)4805		

Cu++	gl	oth/un	25°C	0.43M	U	K1=4.44 B2=7.58 K3=2.14	1966SKe (51245)4806		
Medium: CH2OHCH2.NH3NO3									

Cu++	gl	oth/un	25°C	0.10M	U	K1=3.9 B2=6.00	1965DOb (51246)4807		

Cu++	ISE	NaCl04	?	2.0M	U	K1=4.79 B(Cu2L2(OH)2)=27.9 B(Cu2L2(OH)4)=40.3 B(Cu4L4(OH)5)=63.4 B(Cu2L(OH)2)=20.4	1963CAc (51247)4808		

Cu++	vlt	KN03	30°C	0.50M	U	B(CuL(OH)2)=18.4 B(CuL(OH)3)=20.7	1962FHa (51248)4809		

Cu++	gl	oth/un	?	var	U	K1=4.7	1957GIa (51249)4810		

Cu++	sp	oth/un	25°C	0.03M	U	K1=4.30	1953BHa (51250)4811		

Cu++	gl	KN03	25°C	0.50M	U	K1=4.23	1947BRa (51251)4812		

C6H15N06P2		H4L		(6891)					
Piperidine-N-Methylenedi(phosphonic acid); C5H10N.CH(P03H2)2									

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

Cu++	gl	KCl	25°C	0.10M	U		K1=12.21 K(Cu+HL)=9.22	1978GMf (51318)4813	

C6H15N06S		HL		TES		CAS 7365-44-8 (2787)			
N-Tris(hydroxymethyl)methyl-2-aminoethanesulfonic acid;									

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

Cu++	gl	KN03	20°C	0.05M	U		K1=3.74 B(CuH-1L)=1.09	1986VGa (51332)4814	

Cu++ gl KNO3 20°C 0.05M U K1=3.74 1986VGb (51333)4815
B(CuH-1L)=2.65

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

Cu++ gl NaCl04 20°C 0.10M U TI K1=15.90 1986NDb (51348)4816

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

Cu++ gl NaCl04 25°C 0.10M C H K1=11.1 1998IHa (51359)4817

K(Cu+HL)=6.7

*K(CuL)=-8.2

DH(K1)=-40.9 kJ mol⁻¹, DS=69.3 J mol⁻¹ K⁻¹.

Cu++ gl mixed 25°C 0.20M C I K1=6.38 1982SKa (51360)4818

B(Cu3L2)=22.56

K(Cu+HL)=4.26

K(Cu+H2L)=2.98

Medium: 0.2 M Na2S04, 1% CH3CN

Cu++ cal NaCl04 25°C 0.10M U H 1980FMa (51361)4819

DH1=-40.2, DS1=69.9, DH(K2)=-4.6, DS(K2)=75.3, DH(CuL+OH=CuLOH)=-32.2 kJ mol⁻¹, DS=4 J K⁻¹ mol⁻¹

Cu++ gl KCl 25°C 0.10M U K1=10.55 1971Cwa (51362)4820

K(CuL+OH)=6.08

Cu++ gl KCl 20°C 0.10M U 1962BSb (51363)4821

K(Cu+HL)=6.7

K(CuL+H)=7.0

K(CuLOH+H)=8.7

K(CuL(OH)2+H)=11.3

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

Cu++ kin NaCl04 50°C 0.10M C 1999HMa (51381)4822

K(2Cu(H2O)2L=dimer)=4.11

Reaction is 2Cu(H2O)L=CuL(OH)2CuL+2H, pH=9.2.

Cu++ gl NaCl04 25°C 0.10M C K1=15.6 1998IHa (51382)4823

*K(CuL)=-7.7

 Cu++ gl KNO3 20°C 0.10M U T H K1=15.55 1997BAa (51383)4824
 At 32 C, K1=14.60. DH(K1)=-128.3 kJ mol-1, DS(K1)=421 J K-1 mol-1.

Cu++ gl KNO3 25°C 0.50M M K1=17.50 B2=31.51 1979Rka (51384)4825
 K(2CuL+2OH=Cu2L2(OH)2)=15.04

Cu++ cal KNO3 25°C 0.10M U H 1977FZa (51385)4826
 DH(K1)=-59.4 kJ mol-1; DS=97.8 J K-1 mol-1

Cu++ vlt KCl 25°C 0.20M U H K1=16.2 1977KKb (51386)4827
 DH(K1)=-54.3 kJ mol-1, DS=127.4 J K-1 mol-1

Cu++ gl KNO3 25°C 0.10M M K1=15.5 1976YZa (51387)4828

Cu++ gl KNO3 25°C 0.10M U K1=15.6 1975DDa (51388)4829

Cu++ gl KNO3 25°C 0.10M U K1=15.1 B2=27.20 1973AHc (51389)4830
 K(Cu(OH)L+H)=7.9

 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
Cu++	gl	KCl	25°C	0.20M	C		B2=20.22 B(CuHL)=20.72 B(CuH2L2)=40.06 B(CuHL2)=30.62 B(CuH-1L2)=9.30	19960Ga (51417)	4831
							B(Cu2HL2)=40.95		
Cu++	gl	KCl	25°C	0.50M	C		B(CuHL)=20.26 B(CuH2L2)=40.56 B(CuHL2)=33.33 B(Cu2HL2)=41.53	1993LEa (51418)	4832

C6H15N3O2	HL	DTMA					CAS 55682-20-7 (2334)		
N,N-Bis(2-aminoethyl)glycine; (H2N.CH2.CH2)2N.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C	M	K(CuL+OH)=4.25	1981WNb (51431)	4833

Cu++	gl	KNO3	25°C	0.10M	C		K1=18.07 K(CuL+H)=2.90 K(CuLOH+H)=9.22	1975MMe (51432)	4834

C6H15N3O3 L (6613)
1,3,5-Triamino-1,3,5-trideoxy-cis-inositol,5-Amino-5-deoxy-streptamine;

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

Cu++ gl KNO3 25°C 0.10M C K1=12.09 B2=18.79 1992HGa (51442)4835
B(CuHL2)=24.60
K(Cu2L2=Cu2L2(OH)2+2H)=12.0

C6H15N5 L CAS 40953-58-8 (3079)
Diethylbiguanide; CH3.CH2.NH.C(:NH).NH.C(:NH).NH.CH2.CH3

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

Cu++ sp oth/un 32°C ? U K1=6.05 B2=12.72 1960RAb (51459)4836

Cu++ gl oth/un 32°C 0.05M U K1=7.98 B2=14.31 1956SRb (51460)4837

C6H15N5O L (3118)
Methoxypropylbiguanide; CH3O.NH.C(:NH).NH.C(:NH).NH.CH2.CH2.CH3

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

Cu++ sp KCl 30°C 0.20M U K1=9.52 B2=16.93 1960SRa (51462)4838

C6H15N5O2 L CAS 5699-67-2 (6357)
2-Amino-5-((Aminoiminomethyl)amino)-N-hydroxypentanamide, Arginine hydroxamic acid;

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

Cu++ gl KCl 25°C 0.20M C K1=10.26 B2=18.98 19960Ga (51466)4839
B(CuH-1L2)=9.01
B(Cu2H-1L2)=19.82

Cu++ gl KCl 25°C 0.50M C K1=10.15 B2=18.87 1991LNa (51467)4840
B(CuH-1L2)=9.16
B(Cu2H-1L2)=19.88

C6H15N5O2 L (2713)
3,3'-Iminobis(propanamidoxime); HN(CH2.CH2.C(:NOH)NH2)2

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

Cu++ gl NaCl 25°C 1.00M M K1=10.92 19890Ka (51474)4841
B(Cu2H-2L2)=12.02

C6H15ON3 HL (2937)
N,N-Diethyl-2-aminoacetamidoxime; (C2H5)2N.CH2.C(:NOH)NH2

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

Cu++ gl NaClO4 25°C 0.10M U K1=10.45 B2=12.68 1981ATa (51601)4848

Cu++ cal NaClO4 25°C 0.50M U H 1975BFa (51602)4849
DH1=-34.3; DH(K2)=-30.5; DH(CuLOH)=-22.6 kJ mol⁻¹. DS1=56.4; DS(K2)=8;
DS(CuLOH)=29

Cu++ gl oth/un 25°C 0.0 U I M 1964NMa (51603)4850
K(2CuOHL=Cu₂(OH)₂L₂)=3.58
B(Cu(OH)L)=15.01

In I M NaClO4: K(CuOHL+H)=7.77+1.018SQRTI/(1+SQRTI). Ternary complexes with
en, 1,2-pn and 1,3-pn. K(Cu₂(OH)₂L₂+2H=2CuL)=11.96+1.018SQRTI/(1+SQRTI)

Cu++ gl NaClO4 25°C var U 1963NMb (51604)4851
K1=8.79+0.580I-0.064I^(3/2)-0.024I⁽²⁾. When I=0: K2=5.57

Cu++ cal KNO3 0°C 0.50M U H K1=9.30 B2=15.62 1954BMa (51605)4852
DH(B2)=-73.2 kJ mol⁻¹, DS=87.8 J K⁻¹ mol⁻¹. At 0 C: K1=10.84, K2=7.85

C6H16N2 L Tetrameen CAS 110-18-9 (124)
N,N,N',N'-Tetramethyl-1,2-diaminoethane; (CH₃)₂N.CH₂.CH₂.N(CH₃)₂

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

Cu++	gl	NaClO4	25°C	0.20M	M		K1=7.324 B(CuLA)=16.10	1989PBa (51624)	4853
------	----	--------	------	-------	---	--	---------------------------	-----------------	------

H2A=pyridine-2,6-dicarboxylic acid

Cu++	gl	KNO3	25°C	0.10M	C	M	K1=7.622 B(CuH-1L)=1.489 B(CuL(Ala))=15.349 B(CuL(Val))=15.052 B(CuL(Phe))=15.119	19840Ya (51625)	4854
------	----	------	------	-------	---	---	---	-----------------	------

B(CuL(Trp))=15.499; B(CuL(Tyr))=15.676; B(CuHL(Tyr))=25.116; B(CuLA)=14.848;
B(CuHLB)=25.988. HA=O-Me-tyrosine, H2B=5-hydroxytryptophan.

Cu++	gl	KCl	25°C	0.20M	C	M	K1=7.45 B(CuL(Gly))=15.22 B(CuL(en))=16.47 B(Cu(OH)L)=0.47 B(Cu ₂ (OH) ₂ L ₂)=2.52	1976GSd (51626)	4855
------	----	-----	------	-------	---	---	--	-----------------	------

Cu++	gl	KCl	25°C	0.20M	C		K1=7.45 B(CuH-1L)=0.47 B(Cu ₂ H-2L ₂)=2.52	1976SGa (51627)	4856
------	----	-----	------	-------	---	--	---	-----------------	------

Cu++	gl	KCl	25°C	0.20M	C	M	B(Cu(gly)L)=15.22 K(CuL+gly)=7.77 K(Cu(gly)+L)=7.15	1976SGa (51628)	4857
------	----	-----	------	-------	---	---	---	-----------------	------

 Cu++ cal NaClO4 25°C 0.50M U H 1975BFa (51653)4866
 DH1=-29.49; DH(K2)=-25.94; DH(CuLOH)=-25.9 kJ mol-1. DS1=61;DS(K2)=21;
 DS(CuLOH)=29

Cu++ sp oth/un 25°C 0.10M U 1973Y0a (51654)4867
 K(Cu+CuL2=2CuL)=1.99 pH 5.9

Cu++ nmr alc/w var 50% U H 1973Y0a (51655)4868
 K(Cu+CuL2=2CuL)=2.86
 Method: esr. pH=5.9. DH=-9.4 kJ mol-1, DS=5.0 J K-1 mol-1

Cu++ gl oth/un 25°C 0.0 U 1964NMb (51656)4869
 K(2CuOHL=Cu2(OH)2L2)=3.18
 B(Cu(OH)L)=14.74
 In I M NaClO4: K(CuOHL+H)=7.30+1.018SQRTI/(1+SQRTI)
 K(Cu2(OH)2L2+2H=2CuL)=11.42+1.018SQRTI/(1+SQRTI)

Cu++ gl NaClO4 25°C var U I 1963NMc (51657)4870
 K1=8.05+0.576I-0.117I^(3/2)+0.021I^(2)
 K2=5.47+0.537I+0.192I^(3/2)-0.129I^(2)

Cu++ gl KCl 25°C 0.10M U K1=8.17 B2=13.72 1954IGa (51658)4871

 C6H16N2 L CAS 19522-69-1 (3080)
 N-Butylethylenediamine; CH3.CH2.CH2.CH2.NH.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	0°C	0.50M	U T H		K1=10.47 B2=19.29	1952BMa (51663)	4872
DH(K1)=-33.5 kJ mol-1,DS=80 J K-1 mol-1; DH(K2)=-34.3,DS=50. 25 C: K1=9.94, K2=8.27									

Cu++ gl KNO3 13°C 0.50M U H 1952BMb (51664)4873
 0-25 C. At 0 C: DH(K1)=-33.4 kJ mol-1, DS=79.4 J K-1 mol-1; DH(K2)=-34.3,
 DS=50.2

 C6H16N2OS L (3128)
 3-Oxa-6-thiaoctane-1,8-diamine; H2N.CH2.CH2.O.CH2.CH2.S.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	none	20°C	0.0	U T H		K1=9.18	1959LBb (51668)	4874
K1=9.54(10 C), 8.86(30 C), 8.57(40 C). DH(K1)=-54.8 kJ mol-1, DS=-13 ***** C6H16N2O2 L CAS 3197-06-6 (7963) 2-Amino-N,N-bis(2-hydroxyethyl)ethylamine;									

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

DS(K2)=-24 J K⁻¹ mol⁻¹

C6H16N2S L (1869)
1,5-Diaza-8-thianonane; H2N.CH2.CH2.CH2.NH.CH2.CH2.S.CH3

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

Cu++ gl KNO3 25°C 0.50M U H K1=11.009 1979HGa (51715)4883
K(CuL+OH)=5.147

DH1=-55.1 kJ mol⁻¹ DS1=26 J K⁻¹ mol⁻¹ DH(K2)=-12.1 kJ mol⁻¹

DS(K2)=57J K⁻¹ mol⁻¹

C6H16N2S L (1873)
1,7-Diamino-3-thiaheptane; H2N.CH2.CH2.S.CH2.CH2.CH2.CH2.NH2

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

Cu++ gl KNO3 25°C 0.50M U K1=9.490 1979HGb (51718)4884
K(CuL+H)=5.99

C6H16N2S L CAS 13643-20-4 (1856)
1,7-Diamino-4-thiaheptane; H2N.CH2.CH2.CH2.S.CH2.CH2.CH2.NH2

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

Cu++ gl KNO3 25°C 0.50M U K1=9.792 1979HGb (51722)4885

C6H16N2S L (1297)
2-Aza-2'-methyl-5-thia-7-amino-heptane; CH3.N(CH3).(CH2)2.S.(CH2)2.NH2

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

Cu++ cal KNO3 25°C 0.50M C H K1=7.24 1983HHc (51727)4886
K(Cu+HL)=3.70

DH(K1)=-28.8 kJ mol⁻¹. DH(Cu+HL)=-19 kJ mol⁻¹.

Cu++ gl KNO3 25°C 0.50M U K1=7.24 1981HGa (51728)4887
K(Cu+HL)=3.70

C6H16N2S L (1298)
2-Aza-5-thia-8-amino-octane; CH3.NH.(CH2)2.S.(CH2)3.NH2

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

Cu++ gl KNO3 25°C 0.50M U K1=9.601 1981HGa (51733)4888
K(Cu+HL)=4.46

C6H16N2S L (6464)
5-Thia-2,8-diazanonane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C	H	K1=8.12	1992WLB (51736)	4889
DH=-34.3 kJ mol ⁻¹ ; TDS=12.0 kJmol ⁻¹									

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
Cu++	gl	NaClO4	25°C	0.10M	U		K1=10.70 B(CuHL)=15.11	1977ASg (51747)	4890
Cu++	gl	none	20°C	0.0	U	T H	K1=10.80	1959MBa (51748)	4891
K1=11.16(10 C), 10.43(30 C), 10.01(40 C). DH(K1)=-65 kJ mol ⁻¹ , DS=-15									
Cu++	gl	none	30°C	0.0	U		K1=10.44	1954GFa (51749)	4892
Cu++	gl	KNO3	30°C	1.0M	U		K1=11.32	1954GFa (51750)	4893

C6H16N10		L					(4261)		
Ethylenebisbiguanide; (H2N.C(:NH).NH.C(:NH).NH.CH2.)2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	sp	KCl	30°C	0.25M	U		B2=21.85	1959RRb (51764)	4894
Cu++	gl	oth/un	32°C	0.05M	U		B2=21.66	1956SRb (51765)	4895

C6H16O3SSi		HL					CAS 2039-96-5 (133)		
3-(Trimethylsilyl)propane sulfonic acid; (CH3)3Si.CH2.CH2.CH2.HSO3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	nmr	NaNO3	35°C	0.10M	U	I M		1979MIa (51778)	4896
K(Cu(phen)+L)=0.8									

C6H16O6P2		H4L					CAS 4721-22-6 (3708)		
Hexane-1,6-diphosphonic acid; H2O3P(CH2)6PO3H2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KCl	25°C	0.10M	U			1967KLa (51785)	4897
K(Cu+HL)=6.05									
B(Cu2L)=11.09									

C6H17NO6P2							CAS 5995-28-8 (1339)		
N-t-Butyliminobis(methylenephosphonic) acid; (CH3)3CN(CH2PO3H2)2									
H4L									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

K(CuHL+HL)=7.16

K(CuL+OH)=4.42

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
Cu++	gl	KNO3	20°C	0.10M	C	M		K1=13.71 B2=18.48 B(CuHL)=18.87 B(CuH-1L)=3.14 B(CuAH2L)=29.96 B(CuBH2L)=28.40	2000GLa (51864)	4907

B(CuBH4L)=39.71. H2A is adenosine 5'-monophosphoric acid, H2B is cytidine 5'-monophosphoric acid.

Cu++	gl	KNO3	20°C	0.10M	C	M		K1=13.71 B2=18.48 B(CuHL)=18.87 B(CuH-1L)=3.14 B(Cu(en)L)=22.71 B(CuH(en)L)=30.34	1997LBc (51865)	4908
------	----	------	------	-------	---	---	--	---	-----------------	------

B(CuH-1(en)L)=2.51. B(CuHAL)=27.54, B(CuH2AL)=34.91. A: 2,3-diamino-propanoic acid. B(CuHBL)=27.94, B(CuH2BL)=36.59; B: 1,3-diaminopropane.

Cu++	gl	NaClO4	20°C	0.10M	C	M		K1=13.71 B2=18.48 B(CuHL)=18.87 B(CuH-1L)=3.14 B(CuAL)=16.37 B(CuH-2AL)=-3.96	1996LGa (51866)	4909
------	----	--------	------	-------	---	---	--	---	-----------------	------

HA=adenosine

Cu++	gl	NaClO4	25°C	0.20M	U	M			1996UBa (51867)	4910
------	----	--------	------	-------	---	---	--	--	-----------------	------

B(Cu(catecholate)L)=25.26
B(Cu(oxalate)L)=17.08
B(Cu(malonate)L)=17.48
B(Cu(gly)L)=20.05

B(Cu(beta-Ala)L)=20.05, B(Cu(en)L)=21.05, B(Cu(1,3-pn)L)=21.75, B(Cu(2-aminophenol)L)=20.00, B(Cu(o-phenylenediamine)L)=15.24.

Cu++	gl	NaClO4	20°C	0.10M	U			K1=13.71 B2=18.48 B(CuHL)=18.87 B(CuH-1L)=3.14	1991WBa (51868)	4911
------	----	--------	------	-------	---	--	--	--	-----------------	------

Cu++	gl	diox/w	30°C	50%	U	M		K1=14.68 K(CuA+L)=12.16 K(CuB+L)=12.02 K(Cu(bpy)+L)=10.67 K(Cu(phen)+L)=10.71	1987PCb (51869)	4912
------	----	--------	------	-----	---	---	--	---	-----------------	------

K(Cu(dipyridylamine)+L)=10.76; K(Cu(2-(2'-pyridyl)imidazoline)+L)= 9.87
A=5-nitrophenanthroline, B=2-(2'-pyridyl)benzimidazole

Cu++	gl	NaCl	25°C	0.10M	C		K1=14.09 K(CuL+OH)=4.19	1975KHa (51870)	4913
Cu++	gl	KNO3	40°C	1.00M	C T H		K1=13.85 K(CuL+OH)=4.11	1974DFa (51871)	4914
DH(K1)=-16.2, DH(CuLOH)=-2.5 kJ mol ⁻¹ (40 C). At 25 C: K1=14.45, K(CuL+OH)=4.21									
Cu++	gl	KNO3	25°C	0.10M	U		K1=14.3	B2=17.90 1973AHc (51872)	4915
Cu++	cal	KCl	25°C	0.10M	U	H		1966PNa (51873)	4916
DH(K1)=-67.3 kJ mol ⁻¹ , DS=46.0 J K ⁻¹ mol ⁻¹ ; DH(CuL+OH)=-9.6, DS=46									
Cu++	gl	KCl	25°C	0.10M	U		K1=14.20 K(CuL+OH)=4.1	1966VAa (51874)	4917
Cu++	gl	KNO3	30°C	1.0M	U T H		K1=14.25 DH(K1)=-67 kJ mol ⁻¹ , DS=50 J K ⁻¹ mol ⁻¹ . K1=15.75(0 C), 13.66(50 C)	1956HFb (51875)	4918

C6H17N3 L CAS 24229-52-6 (4355)									
4-Methyl-1,4,7-triazaoctane; H2N.CH2.CH2.N(CH3).CH2.CH2.NH.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.13M	U		K1=15.11 K(CuL+OH)=4.79	1971AAa (51907)	4919
Cu++	gl	KNO3	25°C	0.11M	U	M	K(CuL+Gly)=4.68 K(CuL+Val)=4.22 K(CuL+Ser)=3.79 K(CuL+b-Ala)=3.29	1971AAa (51908)	4920

C6H17N3 L CAS 38977-99-0 (1067)									
7-Methyl-1,4,7-Azaoctane; H2N.CH2.CH2.NH.CH2.CH2.N(CH3).CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.13M	U		K1=14.33 K(CuL+OH)=5.32	1971AAa (51912)	4921
Cu++	gl	KNO3	25°C	0.11M	U	M	K(CuL+Gly)=4.38 K(CuL+Val)=3.96 K(CuL+Ser)=3.10 K(CuL+b-Ala)=2.89	1971AAa (51913)	4922
Cu++	gl	KNO3	25°C	0.13M	U		K1=14.33 K(CuL+OH)=5.32	1971AAa (51914)	4923

Cu++ gl oth/un 25°C 0.10M U K1=19.64 1976MDa (51937)4931
K(Cu+HL)=12.99
K(Cu+H2L)=8.73

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	KN03	25°C	0.10M	C			K1=17.8 K(CuL+H)=5.64 K(CuL+OH)=3.0 K(CuHL+H)=3.7	2001DSa	(51957)4932

C6H18N3OP L HMPA CAS 680-31-9 (603)
Hexamethylphosphoramide, Tris-(dimethylamino)phosphine oxide;((CH3)2N)3PO

Medium: CCl₄. Metal: Bis(hexafluoroacetylacetonato)copper(II), (Cu(hfac)₂).
DH=-42.3 kJ mol⁻¹.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Cu++	gl	R4N.X	25°C	0.10M	C			K1=20.24 K(CuL+H)=3.55 K(Cu(OH)L+H)=9.2	1997DQa	(52017)4935

Cu++ gl NaClO4 25°C 0.15M U M K1=20.1 1995GCa (52018)4936
K(CuL+H)=3.5
K(CuL+OH)=3.2

By spectrophotometry: $K(\text{CuL}+\text{I})=0.23$, $K(\text{CuL}+\text{Br})=0.0$, $K(\text{CuL}+\text{F})=-0.40$,
 $K(\text{CuL}+\text{N}_3)=-0.2$.

Cu++	gl	NaCl	25°C	0.15M	C	K1=20.323 B(CuHL)=23.437 B(CuH-1L)=8.61	1989JKa (52019)4937
Cu++	ISE	KNO3	20°C	0.10M	U	K1=20.4	1984HKa (52020)4938
Cu++	gl	KNO3	25°C	1.00M	C H	K1=20.90 B(CuHL)=24.12	1982ABc (52021)4939
By calorimetry: DH1=-89.5 kJ mol ⁻¹ , DS1=100.4							
Cu++	gl	NaCl	25°C	0.15M	U	K1=20.01 B2=22.87 B(CuHL)=23.76 B(CuH-1L)=9.39 B(CuH3L2)=48.52 B(CuH4L2)=52.78	1977LSa (52022)4940
Cu++	sp	oth/un	25°C	0.10M	U	K1=20.1	1977TSa (52023)4941
Cu++	vlt	alc/w	25°C	40%	U	B2=22.28 B3=24.85	1974MIa (52024)4942
Cu++	gl	alc/w	25°C	65%	U I	K1=20.7	1972Rba (52025)4943
Medium: 40-99% MeOH, 0.1 M NaClO4. K1(40%)=19.31; K1(99%)=23.26							
Cu++	cal	KNO3	25°C	0.10M	U H		1965WHa (52026)4944
DH(K1)=-89.4 kJ mol ⁻¹ , DS=87.8 J K ⁻¹ mol ⁻¹							
Cu++	cal	KCl	25°C	0.10M	U H		1961SPb (52027)4945
DG(K1)=-114.53 kJ mol ⁻¹ , DH=-90.2, DS=81.6 J K ⁻¹ mol ⁻¹							
Cu++	gl	oth/un	25°C	0.10M	U	K(Cu(OH)L+H)=10.8	1959CGb (52028)4946
Cu++	vlt	oth/un	30°C	?	U H	K1=20.7	1957JBb (52029)4947
DH(K1)=-92.5 kJ mol ⁻¹							
Cu++	gl	oth/un	20°C	?	U	K1=20.5	1957Mca (52030)4948
Cu++	gl	KCl	25°C	0.10M	U	K1=20.1	1957RSb (52031)4949
Cu++	gl	KNO3	35°C	1.0M	U H		1952JHa (52032)4950
Medium: 1(KNO3+KCl). DH(K1)=-92.0 kJ mol ⁻¹							
Cu++	gl	oth/un	30°C	1.0M	U T	K1=20.62	1952JHa (52033)4951
40 C: K1=20.08							
Cu++	gl	KCl	20°C	0.10M	U	K1=20.4 K(Cu+HL)=14.0	1950SCa (52034)4952

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
Cu++	gl	NaCl04	25°C	0.25M	C		K1=18.86 *K(CuL(H2O))=-9.59	2001MLa (52148)	4953
Cu++	gl	NaCl04	25°C	1.00M	C		K1=19.58 K(Cu+HL)=13.22	1994AGa (52149)	4954
Cu++	gl	oth/un	25°C	0.10M	C		K1=18.5 K(CuLOH+H)=9.17	1982MMb (52150)	4955
Cu++	gl	KNO3	25°C	0.10M	C	M	K(CuL+OH)=4.44	1981WNb (52151)	4956
Cu++	gl	KNO3	25°C	0.10M	U		K1=18.86 B(CuH-1L)=-9.01	1975APc (52152)	4957
Cu++	gl	R4N.X	25°C	0.10M	C		K1=18.77	1975JTa (52153)	4958
Cu++	oth	KNO3	20°C	0.10M	U		K1=19.22	1971AWa (52154)	4959
Cu++	cal	KCl	25°C	0.10M	U	H	DG(K1)=107.43 kJ mol-1, DH=-85.4, DS=75 J K-1 mol-1	1960PCa (52155)	4960
Cu++	gl	oth/un	20°C	->0	U T H		K1=18.71 DH(K1)=-65.7 kJ mol-1, DS=134 J K-1 mol-1. K1=19.09(10 C), 18.40(30 C), 17.91(40 C)	1958BFb (52156)	4961
Cu++	gl	KCl	20°C	0.10M	U		K1=19.1	1953WSa (52157)	4962
Cu++	gl	KCl	20°C	0.10M	U		K1=18.8	1950PSa (52158)	4963

C6H19N2O9P3 H6L (8063)
 N-Methylethylenediamine-N,N',N'-trimethylenetrakis(phosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C		K1=24.0 K(CuL+H)=6.15 K(CuH2L+H)=3.62 K(CuHL+H)=4.65 K(CuH3L+H)=1.8 K(CuL+OH)=1.7	2001DSa (52229)	4964
Cu++	gl	KNO3	25°C	0.10M	C		K1=24.0 K(CuL+H)=6.15 K(CuHL+H)=4.65	2001DSa (52230)	4965

K(CuH2L+H)=3.62

K(CuH3L+H)=1.8

K(CuL+OH)=1.7

C6H20N208P4 H4L CAS 938-16-3 (4402)

Ethylenediaminetetra(methylenephosphonous acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	U		K1=9.75	1971MMh (52243)	4966

C6H20N2012P4 H8L EDTPA CAS 1429-50-1 (434)

Ethane-1,2-bis(iminobis(methylenephosphonic acid)); ((H203PCH2)2NCH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	KNO3	25°C	0.10M	C		K1=23.2	2001DSa (52270)	4967

K(CuL+H)=7.73

K(CuH2L+H)=4.67

K(CuHL+H)=6.10

K(CuH3L+H)=3.8

K(CuL+OH)=1.7

Cu++	gl	KNO3	25°C	0.10M	C		K1=23.2	2001DSa (52271)	4968
------	----	------	------	-------	---	--	---------	-----------------	------

K(CuL+H)=7.73

K(CuHL+H)=6.10

K(CuH2L+H)=4.67

K(CuH3L+H)=3.8

K(CuL+OH)=1.7

Cu++	gl	NaCl	37°C	0.15M	C		K1=16.20	1995JWa (52272)	4969
------	----	------	------	-------	---	--	----------	-----------------	------

K(CuL+H)=9.91

K(CuH2L+H)=4.89

K(CuHL+H)=6.34

K(CuH3L+H)=4.15

Cu++	gl	KNO3	25°C	0.10M	U		K1=18.67	1980ZRa (52273)	4970
------	----	------	------	-------	---	--	----------	-----------------	------

K(Cu+HL)=16.77

K(Cu+H2L)=13.87

K(Cu+H3L)=10.42

K(Cu+H4L)=7.34

Cu++	gl	KNO3	25°C	0.10M	C		K1=23.21	1976MMa (52274)	4971
------	----	------	------	-------	---	--	----------	-----------------	------

K(CuL+H)=7.56

K(CuHL+H)=5.99

K(CuH2L+H)=4.62

K(CuH3L+H)=3.74

Cu++	gl	oth/un	25°C	0.10M	U			1971MMb (52275)	4972
------	----	--------	------	-------	---	--	--	-----------------	------

K(CuL+H)=7.99

Cu++	gl	KCl	25°C	0.10M	U	K1=18.95	1967KDa	(52276)4973
						K(Cu+HL)=14.82		
						K(Cu+H2L)=11.14		
						K(Cu+H3L)=8.31		
						K(Cu+H4L)=5.67		
						K(Cu+H5L)=3.28		

```
-----
Cu++      gl  oth/un 25°C 0.10M U      K1=>10      1956WMe (52278)4975
*****
C7H4N2O6      HL      CAS 2460-59-5  (3139)
3,5-Dinitrosalicylaldehyde; HO.C6H2(NO2)2.CHO
```

[illegible]

 Cu++ gl KCl 25°C 0.0 C T H K1=7.69 1975DNd (52431)4984
 DH(K1)=21.75 kJ mol⁻¹, DS=220.2 J mol⁻¹ K⁻¹. Calculated from 0.1 M KCl by
 the Davies equation. Values also at 35 and 45 C

Cu++ gl NaClO4 30°C 0.10M U K1=6.70 B2=10.65 1975JKa (52432)4985

Cu++ gl NaClO4 30°C 0.10M U M K1=6.70 B2=11.65 1975SJa (52433)4986
 B(CuL(phthalate))=7.63
 B(CuL(4-OH-Salicylate))=13.36

Cu++ EMF NaClO4 30°C 0.10M U K1=6.70 B2=11.65 1972JKa (52434)4987

Cu++ gl KNO3 35°C 0.10M U K1=7.0 1970DDa (52435)4988

C7H4O2Br2 HL CAS 90-59-7 (3744)
 2-Hydroxy-3,5-dibromobenzaldehyde (3,5-dibromosalicylaldehyde)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	EMF	diox/w	20°C	50%	U		K1=4.6 B2=8.20	1963CCa (52519)	4989

Medium: 50% dioxan, 0.3 M NaClO4

C7H4O2Cl2 HL CAS 90-60-8 (3743)
 2-Hydroxy-3,5-dichlorobenzaldehyde (3,5-dichlorosalicylaldehyde)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	EMF	diox/w	20°C	50%	U		K1=4.6 B2=7.60	1963CCa (52521)	4990

Medium: 50% dioxan, 0.3 M NaClO4

C7H4O2I2 HL CAS 2631-77-8 (3745)
 2-Hydroxy-3,5-di-iodobenzaldehyde (3,5-di-iodosalicylaldehyde)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	EMF	diox/w	20°C	50%	U		K1=5.0 B2=8.90	1963CCa (52529)	4991

Medium: 50% dioxan, 0.3 M NaClO4

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
Cu++	gl	NaClO4	25°C	0.10M	U	T	K1=8.4 B2=14.0	1982DJa (52535)	4992

Cu++	gl	NaClO4	30°C	0.10M	U	T	K1=8.41 B2=14.01	1975JKa (52536)	4993
------	----	--------	------	-------	---	---	------------------	-----------------	------

Cu++	gl	diox/w	30°C	75%	U		K1=14.39 B2=24.06	1974KJa (52537)	4994
------	----	--------	------	-----	---	--	-------------------	-----------------	------

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
Cu++	gl	NaClO4	25°C	0.10M	U	T	K1=8.4 B2=14.0	1982DJa	(52549)4995
Cu++	gl	NaClO4	30°C	0.10M	U	T	K1=8.35 B2=13.90	1975JKa	(52550)4996

 C7H4O3I2 H2L CAS 133-91-5 (4431)
 3,5-Iodosalicylic acid; I2.C6H2.(OH)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	alc/w	26°C	75%	U		K1=8.97 B2=16.23	1969SGd	(52558)4997

Medium: 75% EtOH, 0.05 M NaClO4

 C7H5NO HL Salicylnitrile CAS 611-20-1 (3746)
 2-Cyanophenol; H0.C6H4.CN

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	diox/w	30°C	75%	U		K1=5.94	1964JVa	(52573)4998

Medium: 75% dioxan, 0.1 M NaClO4

 C7H5NOS HL CAS 7405-23-4 (3177)
 4-Hydroxybenzothiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu++	gl	diox/w	25°C	50%	U		K1=9.28 B2=17.43	1960FFa	(52585)4999

REFERENCES

- 2005MBa L Mendez De Leo,R Fernandez-Prini; J.Chem.Thermodyn.,37,499 (2005)
- 2005TBa E Tsurko, N Bondarev et al; Koord. Khim. 31, 311 (2005)
- 2004AKa A Abbaspour,M Kamyabi; Anal.Chim.Acta,512,257 (2004)
- 2004DKb H Demirelli,F Koseoglu,N Kavak; J.Solution Chem,33,1467 (2004)
- 2004EAa O El-Roudi,S Abdel-Latif; J.Chem.Eng.Data,49,1193 (2004)
- 2004NKA V Nikolskii,N Knyazeva,I Gorelov; Zh.Neorg.Khim.,49,874 (2004)
- 2004SSa M Shehata,M Shoukry,M Bakarar; J.Coord.Chem.,57,1369 (2004)
- 2004TDa M Tegoni,F Dallavalle,B Belosi; J.Chem.Soc.,Dalton Trans.,1329 (2004)
- 2004YYa F Yilmaz,V Yilmaz,S Topcu; J.Coord.Chem.,57,525 (2004)
- 2003CDa M Careri,F Dallavalle,M Tegoni,I Zagnoni; J.Inorg.Biochem.,93,174 (2003)
- 2003DFa J de Miranda,J Felcman; Polyhedron,22,225 (2003)
- 2003DKa A Dogan,E Kilic; Indian J.Chem.,42A,1632 (2003)
- 2003DZa P Deschamps,N Zerrouk,A Tomas; Inorg.Chim.Acta,353,22 (2003)
- 2003GRb J Gao,J Reibenspies,A Martell; Inorg.Chim.Acta,346,67 (2003)
- 2003MYa H Marafie,H Youngo,M El-Ezaby; J.Coord.Chem.,56,579 (2003)
- 2003SBC S Sobek,B Boduszek,H Kozlowski; Inorg.Chim.Acta,355,462 (2003)

2003SFa J da Silva, J Felcman, A Merce, A Mangrich; *Inorg.Chim.Acta*, 356, 155 (2003)
 2003SIa R Samant, V Ijeri, A Srivastava; *J.Chem.Eng.Data*, 48, 203 (2003)
 2002BMA A Boraie, N Mohamed; *J.Chem.Eng.Data*, 47, 987 (2002)
 2002ECa E Enyedy, H Csoka, I Lazar, E Farkas; *J.Chem.Soc., Dalton Trans.*, 2632 (2002)
 2002FGb A Fernandez-Botello, R Gomez-Coca, H Sigel; *Inorg.Chim.Acta*, 331, 109 (2002)
 2002HTc B Hacht, H Tayaa, A Benayad, M Mimouni; *J.Solution Chem.*, 31, 757 (2002)
 2002ISb V Ilakin, V Styrlin, A Zakharov, A Kon'kin; *Zh.Obshch.Khim.*, 72, 377 (2002)
 2002KBa D Kroczevska, K Bogusz, B Kurzak; *Polyhedron*, 21, 295 (2002)
 2002KSa N Korotchenko, N Skorik; *Zh.Neorg.Khim.*, 47, 790 (2002)
 2002KSb L Kapinos, H Sigel; *Inorg.Chim.Acta*, 337, 131 (2002)
 2002MGB M Masoud, A Ghonaim, R Ahmed, S El-Enein; *J.Coord.Chem.*, 55, 79 (2002)
 2002MSa A Mokhir, J Swiatek-Kozłowska, E Petkova; *Inorg.Chim.Acta*, 329, 113 (2002)
 2002SKa M Shoukry, E Khairy, A El-Sherif; *Transition Met.Chem.*, 27, 656 (2002)
 2002Yoa T Yajima, M Okajima, A Odani, O Yamauchi; *Inorg.Chim.Acta*, 339, 445 (2002)
 2002ZLa V Zorin, A Lundin; *Zh.Fiz.Khim.*, 76, 1780(E:1612) (2002)
 2001AAa Z Anwar, H Azab; *J.Chem.Eng.Data*, 46, 34 (2001)
 2001ABb W Alves, I Bagatin, A Da Costa Ferreira; *Inorg.Chim.Acta*, 321, 11 (2001)
 2001BMA J Brugger, D McPhail, J Black, L Spiccia; *Geochim.Cosmo.Acta*, 65, 2691 (2001)
 2001BRa M Babu, G Rao, K Ramana, M Rao; *Indian J.Chem.*, 40A, 1334 (2001)
 2001BTa A Boraie, F Taha, A Mohamed; *J.Chem.Eng.Data*, 46, 267 (2001)
 2001CGa F Cecconi, C Ghilardi, A Vacca; *J.Chem.Soc., Dalton Trans.*, 211 (2001)
 2001CKb A Crouch, L Khotseng, M Polhuis; *Anal.Chim.Acta*, 448, 231 (2001)
 2001DFd F Dallavalle, G Folesani, A Sabatini; *Polyhedron*, 20, 103 (2001)
 2001DSa W Duan, K Satoh, K Sawada; *Bull.Chem.Soc.Jpn.*, 74, 487 (2001)
 2001DSb V Dobarkina, N Skorik; *Zh.Neorg.Khim.*, 46, 1994 (2001)
 2001FSa J Fang, X Shen, J Wang; *Electroanalysis*, 13, 1115 (2001)
 2001GJb A Gasowska, R Jastrzab, L Lomozik; *Polyhedron*, 20, 2305 (2001)
 2001HJa D Hollender, T Jakusch, S Buhsina, T Kiss; *J.Inorg.Biochem.*, 85, 245 (2001)
 2001IKa M Inamo, N Kamiya, S Funahashi; *Inorg.Chem.*, 40, 5636 (2001)
 2001KBa B Kurzak, K Bogusz, D Kroczevska; *Polyhedron*, 20, 2627 (2001)
 2001KSa D Kuppert, J Sander, K Hegetschweiler; *Eur.J.Inorg.Chem.*, 2525 (2001)
 2001LCa R Lipinski, L Chruscinski, H Kozłowski; *Inorg.Chim.Acta*, 322, 157 (2001)
 2001LGa N Lah, G Giester, J Lah, P Segedin, I Leban; *New J.Chem.*, 25, 753 (2001)
 2001LKa M Lukas, M Kyvala, I Lukes; *J.Chem.Soc., Dalton Trans.*, 2850 (2001)
 2001MLa Z-W Mao, G Liehr, R van Eldik; *J.Chem.Soc., Dalton Trans.*, 1593 (2001)
 2001Pra K Popov, H Ronkkomaki, L Lajunen; *Pure & Appl.Chem.*, 73, 1641 (2001)
 2001PSb R Patel, R Shrivastava, N Singh, S Kumar; *Indian J.Chem.*, 40A, 361 (2001)
 2001SAA T Szabo-Planka, Z Arkosi, A Rockenbauer; *Polyhedron*, 20, 995 (2001)
 2001SRa B Song, J Reuber, C Ochs, C Orvig; *Inorg.Chem.*, 40, 1527 (2001)
 2001TRa L Trevani, J Roberts, P Tremaine; *J.Solution Chem.*, 30, 585 (2001)
 2001XLa J Xia, S Li, Y Shi, W Tang; *J.Chem.Soc., Dalton Trans.*, 2109 (2001)
 2001ZKa A Zimmer, D Kuppert, K Hegetschweiler et; *Chem.Eur.J.*, 7, 917 (2001)
 2000ADA H Azab, F Deghaidy, A Orabi; *J.Chem.Eng.Data*, 45, 709 (2000)
 2000BAa V Belevantsev, V Aseeva, A Ryzhikh; *Koord.Khim.*, 26, 77 (2000)
 2000CCc C Conato, A Contino, G Maccarrone; *Thermochim.Acta*, 362, 13 (2000)
 2000CMB L Chruscinski, P Mlynarz, H Kozłowski; *Inorg.Chim.Acta*, 303, 47 (2000)
 2000FEa E Farkas, E Enyedy, G Micera, E Garribba; *Polyhedron*, 19, 1727 (2000)
 2000FEC E Farkas, E Enyedy, H Csoka; *J.Inorg.Biochem.*, 79, 205 (2000)
 2000GLa A Gasowska, L Lomozik, R Jastrzab; *J.Inorg.Biochem.*, 78, 139 (2000)
 2000IBa G Ibrahim, G Bouet, I Hall, M Khan; *J.Inorg.Biochem.*, 81, 29 (2000)

2000KGa K Kurdziel, T Glowiak, J Jezierska; J.Chem.Soc., Dalton Trans., 1095 (2000)
 2000KGc K Kurdziel, T Glowiak; Polyhedron, 19, 2183 (2000)
 2000KHb M Khalil; J.Chem.Eng.Data, 45, 837 (2000)
 2000KKb M Kurihara, T Kawashima, K Ozutsumi; Z.Naturforsch., 55B, 277 (2000)
 2000KSb N Korotchenko, N Skorik; Zh.Neorg.Khim. 45, 2099 (2000)
 2000MAB G Mukherjee, A Das; J.Indian Chem.Soc., 77, 62 (2000)
 2000MOa T Murakami, Z Orihashi, Y Yukawa; Inorg.Chim.Acta, 303, 148 (2000)
 2000MSa G Mukherjee, H Sahu; J.Indian Chem.Soc., 77, 209 (2000)
 2000NDA M Nair, S David; J.Indian Chem.Soc., 77, 220 (2000)
 2000NYa T Naito, H Yamada, H Wada; Bull.Chem.Soc.Jpn., 73, 107 (2000)
 2000PSb J Pauly, J Sander, K Hegetschweiler; Chem.Eur.J., 6, 2830 (2000)
 2000RNb P Reddy, K Nightingale; Indian J.Chem., 39A, 1157 (2000)
 2000SDa K Sawada, W Duan, M Ono, K Satoh; J.Chem.Soc., Dalton Trans., 919 (2000)
 2000SFa J Swiatek-Kozłowska, I Fritsky, A Dobosz; J.Chem.Soc., Dalton Trans., 4064 (2000)
 2000SSd S Singh, R Singh, P Babbar, U Singh; Transition Met.Chem., 25, 9 (2000)
 2000TMA N Tsierkezos, I Molinou; J.Chem.Eng.Data, 45, 819 (2000)
 1999AAa Z Anwar, H Azab; J.Chem.Eng.Data, 44, 1151 (1999)
 1999AVb R Al-Farawati, C Van den Berg; Marine Chem., 63, 331 (1999)
 1999BGa M Birus, M Gabricevic, R van Eldik; Inorg.Chem., 38, 4064 (1999)
 1999BIa A Boraie, S Ibrahim, A Mohamed; J.Chem.Eng.Data, 44, 907 (1999)
 1999CCb S Canepari, V Carunchio, R Schina; Polyhedron, 18, 3263 (1999)
 1999CRb S Chadwell, D Rickard, G Luther; Aquatic Geochem., 5, 29 (1999)
 1999DDa A Dobosz, N Dudarenko, I Fritsky; J.Chem.Soc., Dalton Trans., 743 (1999)
 1999DSb A Devi, S Satanarayana; Indian J.Chem., 38A, 624 (1999)
 1999HEa W Hosney, S El-Medani, M Shoukry; Talanta, 48, 913 (1999)
 1999HEb L Hidmi, M Edwards; Environ.Sci.Technol., 33, 2607 (1999)
 1999HMA E Hegg, S Mortimore, J Burstyn; Inorg.Chem., 38, 2961 (1999)
 1999KAa M Khalil, A Attia; J.Chem.Eng.Data, 44, 180 (1999)
 1999NDA M Nair, S David, M Anbu; Indian J.Chem., 38A, 823 (1999)
 1999NKB M Nair, G Kalalakshmi, M Pillai; J.Indian Chem.Soc., 76, 310 (1999)
 1999NNA M Nair, M Neelakantan, S Sunu; Indian J.Chem., 38A, 1307 (1999)
 1999OFa E O'Brien, E Farkas, A Rockenbauer, K Noian; J.Inorg.Biochem., 77, 135 (1999)
 1999PGa R Patel, P Gokhale, K Pandeya; J.Indian Chem.Soc., 76, 475 (1999)
 1999PPa R Patel, H Pandey, K Pandeya; Indian J.Chem., 38A, 850 (1999)
 1999SCa M Saladini, M Candini, D Iacopino; Inorg.Chim.Acta, 292, 189 (1999)
 1999SMA N Shuaib, H Marafie, O Al-Fulaij; J.Chem.Eng.Data, 44, 1348 (1999)
 1999SSb B Song, H Sigel, B Lippert; Chem.Eur.J., 5, 2374 (1999)
 1998AAa A Amrallah, N Abdalla, E El-Haty; Talanta, 46, 491 (1998)
 1998ABa I Ahmed, A Boraie, O El-Roudi; J.Chem.Eng.Data, 43, 459 (1998)
 1998ACb G Arena, C Conato, A Contino, F Pulidori; Ann.Chim.(Rome), 88, 1 (1998)
 1998CKa E Chruscinska, K Kaczmarek, G Micera; Inorg.Chim.Acta, 269, 279 (1998)
 1998DFa A Dobosz, I Fritsky, H Kozłowski; J.Chem.Soc., Dalton Trans., 1089 (1998)
 1998DFe F Dallavalle, G Folesani, E Leporati; J.Coord.Chem., 44, 225 (1998)
 1998FKa E Farkas, E Kozma, M Petho, K Herlihy; Polyhedron, 17, 3331 (1998)
 1998GAc V Gupta, I Ali; Talanta, 46, 197 (1998)
 1998GGa T Gajda, B Gyurcsik, K Burger; Inorg.Chim.Acta, 275/276, 130 (1998)
 1998HCB M Hynes, E Clarke; J.Chem.Soc., Perkin Trans.II, 1263 (1998)
 1998IHa T Itoh, H Hisada, Y Fujii; Inorg.Chim.Acta, 283, 51 (1998)
 1998ISa Y Inada, Y Sugimoto, S Funahashi; Inorg.Chem., 37, 5519 (1998)

- 1998ISb V Isayeva,V Sharnin et al; Koord.Khim.24,149 (1998)
- 1998KKc B Kurzak,A Kamecka,K Kurzak; Polyhedron,17,4403 (1998)
- 1998KMa B Kurzak,E Matczak-Jon,M Hoffmann; J.Coord.Chem.,43,243 (1998)
- 1998KRa M Khalil,A Radalla; Talanta,46,53 (1998)
- 1998KSa L Kapinos,B Song,H Sigel; Inorg.Chim.Acta,280,50 (1998)
- 1998MCb G Mukherjee,S Chatterjee; J.Indian Chem.Soc.,75,341 (1998)
- 1998MDa A Moreeuw,P Decock,H Kozlowski et al; J.Inorg.Biochem.,70,107 (1998)
- 1998MSd L Menabue,M Saladini,A Ostuni; Inorg.Chim.Acta,268,205 (1998)
- 1998MSe G Mukherjee,H Sahu; J.Indian Chem.Soc.,75,143 (1998)
- 1998SDa T Sliva,A Dobosz,L Jerzykiewicz; J.Chem.Soc.,Dalton Trans.,1863 (1998)
- 1998SPa M S Shapnik,T Petrova,L Safina; Koord.Khim.,24,145 (1998)
- 1998SPb M Shanina,T Petrova,L Safina; Koord.Khim.24,145 (1998)
- 1998SSb B Song,S Sajadi,H Sigel; Inorg.Chim.Acta,273,101 (1998)
- 1998SYa X-D Sun,X-C Yin,S-R Zhu,H-K Lin; Chem.J.of Chin.Univ.,19,849 (1998)
- 1998TEa B Tewari; J.Indian Chem.Soc.,75,91 (1998)
- 1998TGa I Torok,T Gajda,B Gyurcsik,G Toth; J.Chem.Soc.,Dalton Trans.,1205 (1998)
- 1998TSa I Torok,P Surdy,A Riockenbauer,T Gajda; J.Inorg.Biochem.,71,7 (1998)
- 1998VZa V Vasil'ev,G.Zaitseva et al.; Zh.Neorg.Khim.43(10)1651 (1998)
- 1998XKb Y-S Xie,F-P Kou,R-S Lin,H-X Zong; Chem.J.of Chin.Univ.,19,676 (1998)
- 1998ZMa A Zimmer,I Muller,K Hegetschweiler; Eur.J.Inorg.Chem.,2079 (1998)
- 1998ZYa F Zhang,T Yajima,O Yamauchi; Inorg.Chim.Acta,278,136 (1998)
- 1998ZZa R-L Zhang,J-J B Zhu,G-C Zhao,H-Y Chen; Chem.J.of Chin.Univ.,19,1368 (1998)
- 1997AAb A Amrallah,N Abdalla,E El-Haty; Monatsh.Chem.,128,1073 (1997)
- 1997BAa A Belal,L Abdel-Rahman,A Amrallah; J.Chem.Eng.Data,42,1075 (1997)
- 1997BDa B Boduszek,M Dyba,H Kozlowski; J.Chem.Soc.,Dalton Trans.,973 (1997)
- 1997BKb P Buglyo,T Kiss,M Dyba,H Kozlowski; Polyhedron,16,3447 (1997)
- 1997BLb M Bordignon-Luiz,B Szpoganicz et al; Inorg.Chim.Acta,254,345 (1997)
- 1997BSb M Babu,J Sukumar,G Rao,K Ramana,M Rao; J.Indian Chem.Soc.,74,452 (1997)
- 1997CSa R Cini,A Sabatini,A Vacca,F Zanobini; Can.J.Chem.,75,212 (1997)
- 1997DBa K Davarski,P Berberova et al; Zh.Obshch.Khim.,67,7 (1997)
- 1997DBb V Deluchat,J-C Bollinger et al; Talanta 44,897 (1997)
- 1997DFc C Daughney,J Fein; Geochim.Cosmo.Acta,61,719 (1997)
- 1997DQa R Delgado,S Quintino,M Teixeira; J.Chem.Soc.,Dalton Trans.,55 (1997)
- 1997DSb P Daniele,C de Stefano,E Prenesti et al; Talanta,45,425 (1997)
- 1997FAa Y Fadeev,V Sharnin,V Shormanov; Zh.Neorg.Khim.,42(7)1224 (1997)
- 1997ISd N Ismail; J.Indian Chem.Soc.,74,396 (1997)
- 1997KAa S Khaleif,G Anderegg; Inorg.Chim.Acta,257,225 (1997)
- 1997LBb B Li,R Byrne; Aquatic Geochem.,3,99 (1997)
- 1997LBc L Lomozik,L Bolewski,R Dworczak; J.Coord.Chem.,41,261 (1997)
- 1997LZa H-K Lin,S-R Zhu,K Appolin; Acta Chimica Sinica,55,991 (1997)
- 1997MBA H Miche,V Brumas,G Berthon; J.Inorg.Biochem.,68,27 (1997)
- 1997MGa G Mukherjee,T Ghosh; J.Indian Chem.Soc.,74,538 (1997)
- 1997MLa V Markhaeva,S Linnikov,Y Kiryanov; Zh.Neorg.Khim.,42,638 (1997)
- 1997NAb M Nair,P Arasu,M Neelakantan; Indian J.Chem.,36A,879 (1997)
- 1997PPa S Patnaik,C Panda; J.Indian Chem.Soc.,74,216 (1997)
- 1997PPc S Patnaik,C Panda; J.Indian Chem.Soc.,74,330 (1997)
- 1997PSb M Padmavathi,S Satyanarayana; Indian J.Chem.,36A,1001 (1997)
- 1997RFa G Repkin,L Filatova et al; Zh.Neorg.Khim.,42,1370 (1997)
- 1997RRd E Ramaiah,K Ram; J.Indian Chem.Soc.,74,90 (1997)

- 1997RSb A de Robertis,C de Stefano,C Foti et al.; Talanta,44,1839 (1997)
- 1997SBb Y Sal'nikov,G Boos; Koord.Khim.23,127 (1997)
- 1997SDb T Sliva,A Duda,T Glowiak,I Fritsky et al; J.Chem.Soc.,Dalton Trans.,273 (1997)
- 1997SJa S Sjoberg; Pure & Appl.Chem.,69,1549 (1997)
- 1997SKa I Sovago,A Kiss,E Farkas,D Sanna et al.; J.Inorg.Biochem.,65,103 (1997)
- 1997SKc M Shoukry,E Khairy,R Khalil; Transition Met.Chem.,22,465 (1997)
- 1997WZb M Wang,Y Zhang,M Muhammed; Hydrometallurgy,45,53 (1997)
- 1997ZTa M Zachariou,I Traverso et al; Anal.Chem.(USA),69,813 (1997)
- 1996AEa I Ahmed,O El-Roudi,A Boraie; J.Chem.Eng.Data,41,386 (1996)
- 1996BCa G Bates,E Cole,D Parker,R Kataky; J.Chem.Soc.,Dalton Trans.,2693 (1996)
- 1996CBa D Chakraborty,P Bhattacharya; Indian J.Chem.,35A,37 (1996)
- 1996CDb M Jezowska-Bojczuk,W Bal,K Kasprzak; J.Inorg.Biochem.,64,231 (1996)
- 1996CHd S Cattoir,G Herman,A Goeminne; J.Coord.Chem.,40,83 (1996)
- 1996CHE S Cattoir,G Herman,A Goeminne; J.Coord.Chem.,38,245 (1996)
- 1996CHF C Christov; Coll.Czech.Chem.Comm.,61,507 (1996)
- 1996DJa M Dyba,M Jezowska-Bojczuk,E Kiss,T Kiss; J.Chem.Soc.,Dalton Trans.,1119 (1996)
- 1996DPa P Daniele,E Prenesti,G Ostacoli; J.Chem.Soc.,Dalton Trans.,3269 (1996)
- 1996DSa C Doona,D Stanbury; Inorg.Chem.,35,3210 (1996)
- 1996EMa N Esina,A Molodkin,E Tapakanova; Zh.Neorg.Khim.,41,1874 (1996)
- 1996FSa M Fernandez-Trujillo,B Szpoganicz; Polyhedron,15,3511 (1996)
- 1996JCa M J-Bojczuk,E Chruscinska,T Trnka et al; J.Inorg.Biochem.,63,231 (1996)
- 1996JLc M Jezowska-Bojczuk,S Lamotte,T Trnka; J.Inorg.Biochem.,61,213 (1996)
- 1996JLd R Jain,S Limaye,M Saxena; J.Indian Chem.Soc.,73,319 (1996)
- 1996KDa M Kubiak,A Duda,M Ganadu,H Kozlowski; J.Chem.Soc.,Dalton Trans.,1905 (1996)
- 1996KJa E Kiss,M Jezowska-Bojczuk,T Kiss; J.Coord.Chem.,40,157 (1996)
- 1996KSa H Kokusen,Y Sohrin,M Matsui,Y Hata et al; J.Chem.Soc.,Dalton Trans.,195 (1996)
- 1996KSc E Khairy,M Shoukry,M Khalil; Transition Met.Chem.,21,176 (1996)
- 1996LGa L Lomozik,A Gasowska,L Bolewski; J.Inorg.Biochem.,63,191 (1996)
- 1996LGb L Lomozik,A Gasowska; J.Inorg.Biochem.,62,103 (1996)
- 1996LRb G Luther,D Rickard,S Theberge; Environ.Sci.Technol.,30,671 (1996)
- 1996MMb T Murakami,K Murata,Y Ishikawa; Inorg.Chim.Acta,244,51 (1996)
- 1996MMc D Michalska,B Morzyk,W Wojciechowski; J.Coord.Chem.,38,101 (1996)
- 1996OGa P O'Sullivan,J Glennon,E Farkas,T Kiss; J.Coord.Chem.,38,271 (1996)
- 1996OSa M Orama,H Saarinen; Acta Chem.Scand.,50,1087; 1168 (1996)
- 1996RLa J Rohovec,I Lukes,P Vojtisek et al; J.Chem.Soc.,Dalton Trans.,2685 (1996)
- 1996SGa S Singh,A Ghose; J.Indian Chem.Soc.,73,650 (1996)
- 1996SSa A Saha,N Saha,L Ji; J.Biol.Inorg.Chem.,1,231 (1996)
- 1996UBa M Ullah,P Bhattacharya; Polyhedron,15,4025 (1996)
- 1996ZSa J Zhao,B Song,N Saha,A Saha; Inorg.Chim.Acta,250,185 (1996)
- 1995AKa G Anderegg,S Kholeif; Talanta,42,1067 (1995)
- 1995BEa G Berthon; Pure & Appl.Chem.,67,1117 (1995)
- 1995CDc A Casale,A De Robertis,S Sammartano; Thermochim.Acta,255,109 (1995)
- 1995DSa V Deluchat,B Serpaud,Caullet,J Bollinger; Phosphorus,Sulfur & Silicon,104,81 (1995)
- 1995FAa J Fan; Talanta,42,317 (1995)

- 1995FFa G Feroci,A Fini,G Fazio,P Zuman; Anal.Chem.(USA),67,4077 (1995)
- 1995GCa G Golub,H Cohen,P Paoletti,D Meyerstein; J.Am.Chem.Soc.,117,8353 (1995)
- 1995HLa P Hermann,I Lukes,P Vojtisek,I Cisarova; J.Chem.Soc.,Dalton Trans.,2611 (1995)
- 1995ISa K Idriss,M Saleh,H Azab,E Hashem; Bull.Polish Acad.Sci.,Chem.,43,67 (1995)
- 1995JKb M Jezowska-Bojczuk,H Kozlowski et al; J.Chem.Soc.,Dalton Trans.,2657 (1995)
- 1995JWa N Jarvis,J Wagener,G Jackson; J.Chem.Soc.,Dalton Trans.,1411 (1995)
- 1995KBb S Kryatov,L Budarin; Koord.Khim.,21,554 (1995)
- 1995KKb T Kowalik-Jankowska,H Kozlowski; Transition Met.Chem.,20,23 (1995)
- 1995LBb L Loginova,V Bazilyanskaya; Anal.Chim.Acta,315,55 (1995)
- 1995LMc S Laurie,E Mohammed; J.Chem.Soc.,Dalton Trans.,129 (1995)
- 1995LWa X-Y Le,F-H Wu,F-Y Song,L-N Ji; Chem.J.of Chin.Univ.,16,1500 (1995)
- 1995NAa N Nakasuka,K Azuma,M Tanaka; Inorg.Chim.Acta,238,83-87 (1995)
- 1995NAC M Nair,P Arasu,S Mansoor,P Shenbagavalli; Indian J.Chem.,34A,365 (1995)
- 1995NVA E Norkus,A Vaskelis,R Vaitkus et al; J.Inorg.Biochem.,60,299 (1995)
- 1995ONa M Oberholzer,M Neuberger,T Kaden; Helv.Chim.Acta,78,505 (1995)
- 1995OSa C Onindo,T Sliva,L Pettit,T Kiss et al; J.Chem.Soc.,Dalton Trans.,3911 (1995)
- 1995PBb P Patel,P Bhattacharya; Indian J.Chem.,34A,196 (1995)
- 1995PLa J Piispanen,L Lajunen; Acta Chem.Scand.,49,235; 241 (1995)
- 1995SHc M Shoukry,W Hosny,M Khalil; Transition Met.Chem.,20,252 (1995)
- 1995Sia M Saleh,K Idriss,H Azab,E Hashem; Bull.Fac.Sci.,Assiut Univ.,24,31 (1995)
- 1995STa H Srivastava,D Tiwari; Indian J.Chem.,34A,550 (1995)
- 1995TMa J Tercero,A Matilla,J Niclos et al; J.Coord.Chem.,34,139 (1995)
- 1995VZb V Vasil'ev,G Zaitseva,L Garfutdinova; Zh.Fiz.Khim.,66,506 (1995)
- 1995ZWa H Zainal,W Wolf; Transition Met.Chem.,20,225 (1995)
- 1994AGa G Anderegg,V Gramlich; Helv.Chim.Acta,77,685 (1994)
- 1994AKa M Abu-Bakr,M Khalil,H Sedaira; Indian J.Chem.,33A,644 (1994)
- 1994BOa G Borge,M Olazabal,R Castano,J Madariaga; J.Solution Chem.,23,1213 (1994)
- 1994BPb B Blagovic,N Paulic,N Raos,V Simeon; Monatsh.Chem.,125,1893 (1994)
- 1994BSc A El-Bindary,I Shehatta,E Mabrouk; Monatsh.Chem.,125,373 (1994)
- 1994CDB R Corradini,A Dossena et al; J.Am.Chem.Soc.,116,10267 (1994)
- 1994DFb F Dallavalle,G Folesani,R Marchelli +; Helv.Chim.Acta,77,1623 (1994)
- 1994DMb F Djabi,J Meullemestre,F Vierling et al; Bull.Soc.Chim.Fr.,131,53 (1994)
- 1994FGa C Foti,A Gianuzza,F Licastro; Ann.Chim.(Rome),84,295 (1994)
- 1994GOa I Grabec,B Ogorevc,V Hudnik; Electroanalysis,6,908 (1994)
- 1994GRc B Grgas,N Raos,S Horvat,D Pavkovic et al; J.Coord.Chem.,31,249 (1994)
- 1994IMa S Ibrahim,M Mahmoud,M Saleh; Transition Met.Chem.,19,494 (1994)
- 1994JKa M Jezowska-Bojczuk,T Kiss,H Kozlowski; J.Chem.Soc.,Dalton Trans.,811 (1994)
- 1994KNa A Kumbhar,S Narasimhan,P Mathur; Anal.Chim.Acta,294,103 (1994)
- 1994KNd A Kumbhar,S Narasimhan,P Mathur; Indian J.Chem.,33A,47 (1994)
- 1994MFa S Mikheev,Y Fadeev et al; Zh.Neorg.Khim.,39,1502 (1994)
- 1994MGB M Mahmoud,A Gaber,A Boraie; Transition Met.Chem.,19,435 (1994)
- 1994MGC G Mukherjee,T Ghosh; Indian J.Chem.,33A,869 (1994)

- 1994MGd G Mukherjee, T Ghosh; *J. Indian Chem. Soc.*, 71, 249 (1994)
- 1994NAb M Nair, P Arasu, P Thilagavathi; *Indian J. Chem.*, 33A, 429 (1994)
- 1994NAC M Nair, P Arasu, P Sutherson, M Pillai; *Asian J. Chem.*, 6, 72 (1994)
- 1994NAd M Nair, P Arasu, M Pillai, J Thavaseeli; *Asian J. Chem.*, 6, 151 (1994)
- 1994NHa M Niazi, M Hussain; *J. Chem. Eng. Data*, 39, 48 (1994)
- 1994NVa E Norkus, A Vaskelis; *Polyhedron*, 13, 3041 (1994)
- 1994OSa M Orama, H Saarinen, J Korvenranta; *Acta Chem. Scand.*, 48, 127 (1994)
- 1994PBb P Patel, P Bhattacharya; *J. Inorg. Biochem.*, 54, 187 (1994)
- 1994PBC P Patel, P Bhattacharya; *J. Inorg. Biochem.*, 53, 57 (1994)
- 1994PMB D Powell, A Merbach, I Fabian et al; *Inorg. Chem.*, 33, 4468 (1994)
- 1994RMA M Remelli, C Munerato, F Pulidori; *J. Chem. Soc., Dalton Trans.*, 2049 (1994)
- 1994RSA C Reddy, Shivaraj, M Reddy; *J. Indian Chem. Soc.*, 71, 59 (1994)
- 1994SCa B Song, D Chen, M Bastian, R Martin, H Sigel; *Helv. Chim. Acta*, 77, 1738 (1994)
- 1994THa R Thompson, G Helz; *Geochim. Cosmo. Acta*, 58, 2971 (1994)
- 1994WCa J Wang, E Collange, D Aymes et al; *Bull. Soc. Chim. Fr.*, 131, 30 (1994)
- 1994YVa D Yogi, P Venkataaiah, M Mohan; *Indian J. Chem.*, 33A, 407 (1994)
- 1994ZMa J-Z Zhang, F Millero; *Anal. Chim. Acta*, 284, 497 (1994)
- 1993ABa G Arena, M Bindoni, E Rizzarelli et al; *J. Inorg. Biochem.*, 50, 31 (1993)
- 1993ADb R Ahuja, K Dwivedi; *Asian J. Chem.*, 5, 54 (1993)
- 1993AEa H Azab, A E-Nady et al; *Monatsh. Chem.*, 124, 637 (1993)
- 1993AEb H Azab, A El-Nady, A Hassan, R Azkal; *J. Chem. Eng. Data*, 38, 502 (1993)
- 1993AGa J de Andrade, O Guimaraes; *Anal. Chim. Acta*, 271, 149 (1993)
- 1993ARB M Abu-Bakr, H Rageh, E Hashem, M Moustafa; *Bull. Fac. Sci., Assiut Univ.*, 22, 77 (1993)
- 1993BAa V Brumas, N Alliey, G Berthon; *J. Inorg. Biochem.*, 52, 287 (1993)
- 1993BAB A Boraie, E Abd Alla; *J. Indian Chem. Soc.*, 70, 197 (1993)
- 1993BCg M Bastian, D Chen, F Gregan, G Liang, H Sigel; *Z. Naturforsch.*, 48B, 1279 (1993)
- 1993BDa S Bouhsina, P Decock, G Micera et al; *J. Coord. Chem.*, 28, 217 (1993)
- 1993BKe A Babu, D Krishna, R Rao; *Indian J. Chem.*, 32A, 1064 (1993)
- 1993CBb D Chen, M Bastian, F Gregan, A Holy, H Sigel; *J. Chem. Soc., Dalton Trans.*, 1537 (1993)
- 1993CGa D Chen, F Gregan, A Holy, H Sigel; *Inorg. Chem.*, 32, 5377 (1993)
- 1993CIc L Ciavatta, M Iuliano, R Porto; *Ann. Chim. (Rome)*, 83, 19 (1993)
- 1993DLa M Dhansay, P Linder; *J. Coord. Chem.*, 28, 133 (1993)
- 1993FBa E Farkas, D Brown, R Cittaro, W Glass; *J. Chem. Soc., Dalton Trans.*, 2803 (1993)
- 1993GBb H Gibadullina, G Boos, Y Salnikov; *Zh. Neorg. Khim.*, 38, 1036 (1993)
- 1993JCa L Ji, N Corfu, H Sigel; *Inorg. Chim. Acta*, 206, 215 (1993)
- 1993KAb H Kozlowski, A Anouar, T K-Jankowska et al; *Inorg. Chim. Acta*, 207, 223 (1993)
- 1993KNa B Kurzak, L Nakonieczna, G Rusek et al; *J. Coord. Chem.*, 28, 17 (1993)
- 1993KRa H Kozlowski, B Radomska, T Kiss et al; *J. Coord. Chem.*, 30, 215 (1993)
- 1993LEa E Leporati; *J. Coord. Chem.*, 28, 173 (1993)
- 1993LEb E Leporati; *Bull. Chem. Soc. Jpn.*, 66, 421 (1993)
- 1993LGa L Lomozik, A Gasowska; *Monatsh. Chem.*, 124, 109 (1993)
- 1993LJa W Linert, R Jameson, A Tahj; *J. Chem. Soc., Dalton Trans.*, 3181 (1993)
- 1993LMc Y Li, A Martell; *Inorg. Chim. Acta*, 214, 103 (1993)
- 1993MLb S Mikheev, S Ledenkov et al; *Koord. Khim.*, 10, 800 (1993)
- 1993MOa H Masuda, A Odani, T Yamazaki et al; *Inorg. Chem.*, 32, 1111 (1993)
- 1993NAd M Nair, P Arasu, T Fernando; *Indian J. Chem.*, 32A, 807 (1993)
- 1993NKb M Nair, L Kamakshi, P Arasu, M Pillai; *Asian J. Chem.*, 5, 381 (1993)

- 1993PBb N Porfireva, G Boos, Y Salnikov; *Koord.Khim.*, 19, 651 (1993)
- 1993PPa M Patel, N Patel, M Patel, J Joshi; *J.Indian Chem.Soc.*, 70, 569 (1993)
- 1993RRd E Ramaiah, S Raj, K Ram, M Reddy; *Oriental J.Chem.*, 9, 23 (1993)
- 1993SAa M Saleh; *J.Indian Chem.Soc.*, 70, 202 (1993)
- 1993SFa I Sovago, E Farkas, T Jankowska, Kozlowski; *J.Inorg.Biochem.*, 51, 715 (1993)
- 1993SKa I Sovago, T Kiss, A Gergely; *Pure & Appl.Chem.*, 65, 1029 (1993)
- 1993SKc K Saawada, T Kanda, Y Naganuma, T Suzuki; *J.Chem.Soc., Dalton Trans.*, 2557 (1993)
- 1993SKd Sanaullah, K Kano et al; *J.Am.Chem.Soc.*, 115, 592 (1993)
- 1993SPb J Slavtscheva, E Popova, G Gospodinov; *Monatsh.Chem.*, 124, 1115 (1993)
- 1993SSb T Sugimori, K Shibakawa, H Masuda et al; *Inorg.Chem.*, 32, 4951 (1993)
- 1992AAc J Alvarez Salgado, J Antelo, F Arce; *An.Quim.*, 88, 167 (1992)
- 1992ASa A Abd E-Gaber, M Saleh, I Ahmed; *J.Indian Chem.Soc.*, 69, 17 (1992)
- 1992BKb P Buglyo, T Kiss, G Micera, H Kozlowski; *J.Inorg.Biochem.*, 46, 49 (1992)
- 1992BKd J Balla, T Kiss, R Jameson; *Inorg.Chem.*, 31, 58 (1992)
- 1992BKe E Bentouhami, M Khan, J Meullemestre; *Polyhedron*, 11, 2179 (1992)
- 1992CGc B Cardillo, E Giorgini et al; *Monatsh.Chem.*, 123, 231 (1992)
- 1992CJa I Castro, M Julve, G de Munno et al; *J.Chem.Soc., Dalton Trans.*, 1739 (1992)
- 1992CSa I Castro, J Sletten, J Faus, M Julve; *J.Chem.Soc., Dalton Trans.*, 2271 (1992)
- 1992CSb N Corfu, B Song, L Ji; *Inorg.Chim.Acta*, 192, 243 (1992)
- 1992ESa G Escandar, L Sala; *Can.J.Chem.*, 70, 2053 (1992)
- 1992Fka E Farkas, E Kozma, T Gunda; *Polyhedron*, 11, 3069 (1992)
- 1992GLa F Gaizer, J Lazar, J Kiss, E Poczik; *Polyhedron*, 11, 257 (1992)
- 1992GMa L Gasque, R M-Esoarza, L Ramiriz; *J.Inorg.Biochem.*, 48, 121 (1992)
- 1992HGa K Hegetschweiler, V Gramlich et al; *Inorg.Chem.*, 31, 2341 (1992)
- 1992HHa S Hadweh, J Huet, M Jouini, G Lapluye; *J.Chim.Phys.*, 89, 1973 (1992)
- 1992HRA P Hankare, R Rampure, A Manikshete; *J.Indian Chem.Soc.*, 69, 220 (1992)
- 1992KMa H Killa, E Mabrouk, M Ghoneim; *Transition Met.Chem.*, 17, 59 (1992)
- 1992Lba I Lukes, K Bazakas, P Hermann, P Vojtisek; *J.Chem.Soc., Dalton Trans.*, 939 (1992)
- 1992LCb G Liang, D Chen et al; *J.Am.Chem.Soc.*, 114, 7780 (1992)
- 1992LSb F Lloret, J Sletten, R Ruiz et al; *Inorg.Chem.*, 31, 778 (1992)
- 1992MDb N Miloserdova, N Dobrynina et al.; *Zh.Neorg.Khim.*, 37, 2741 (1992)
- 1992MMb R Motekaitis, A Martell; *Inorg.Chem.*, 31, 5534 (1992)
- 1992MMd H Marafie, M Makhyoun, M El-Ezaby; *Electroanalysis*, 4, 661 (1992)
- 1992MSd M Magalhaes, H Sigel; *J.Indian Chem.Soc.*, 69, 437 (1992)
- 1992NAa M Nair, P Arasu et al; *Indian J.Chem.*, 31A, 865 (1992)
- 1992OMa A Odani, H Masuda et al; *J.Am.Chem.Soc.*, 114, 6294 (1992)
- 1992OSb M Orama, H Saarinen, J Korvenranta et al; *Acta Chem.Scand.*, 46, 1083 (1992)
- 1992RAc P Rajathirumoni, P Arasu, M Nair; *Indian J.Chem.*, 31A, 760 (1992)
- 1992RBa J Rodriguez Placeres, T Borges Miguel; *Talanta*, 39, 613 (1992)
- 1992REa G Rabai, I Epstein; *Inorg.Chem.*, 31, 3239 (1992)
- 1992REb J Roper, H Elias; *Inorg.Chem.*, 31, 1202, 1210 (1992)
- 1992RKb A Rao, G Kumar et al; *Indian J.Chem.*, 31A, 256 (1992)
- 1992SBb P Sahu, N Bannerjee, S Sengupta; *J.Indian Chem.Soc.*, 69, 184 (1992)
- 1992SCa H Sigel, D Chen et al; *Helv.Chim.Acta*, 75, 2634 (1992)
- 1992SKa B Sekhon, J Kaur; *J.Indian Chem.Soc.*, 69, 582 (1992)
- 1992SPc A Fridman, E Kozlovskii et al.; *Zh.Neorg.Khim.*, 37, 1611 (1992)
- 1992SRA M Sanz Alaejos, J Rodriguez Placeres; *Coll.Czech.Chem.Comm.*, 57, 1405 (1992)

- 1992TSa M Tabata, N Sarkar; *J. Inorg. Biochem.*, 45, 93 (1992)
- 1992WLb D Wambecke, W Lippens, G Herman et al; *Polyhedron*, 11, 2989 (1992)
- 1992YKa D Yogi, G Kumar, M Mohan, Y Kumari; *Proc. Indian Acad. Sci.*, 104, 443 (1992)
- 1992Y0a O Yamauchi, A Odani, H Masuda; *Inorg. Chim. Acta*, 198-200, 749 (1992)
- 1992ZJb S Ziemniak, M Jones, K Combs; *J. Solution Chem.*, 21, 179 (1992)
- 1991CAa J Cole, L Avigliano et al; *J. Am. Chem. Soc.*, 113, 9080 (1991)
- 1991CBa D Chakraborty, P Bhattacharya; *J. Inorg. Biochem.*, 41, 57 (1991)
- 1991CCb C Chang, C Chung; *J. Chem. Soc., Dalton Trans.*, 1685, 1965 (1991)
- 1991CFa I Castro, J Faus, M Julve, A Gleizes; *J. Chem. Soc., Dalton Trans.*, 1937, 2533 (1991)
- 1991CSa M Correia dos Santos, M Simoes Goncalves; *Electroanalysis*, 3, 131 (1991)
- 1991DAC A Das; *Transition Met. Chem.*, 16, 108 (1991)
- 1991DBa S Dali, F Benghanem, M Khan, F Vierling et; *Polyhedron*, 10, 2529 (1991)
- 1991DGA S Deiana, C Gessa, P Piu, R Seeber; *J. Chem. Soc., Dalton Trans.*, 1237 (1991)
- 1991DVA B Dubois, B Vandorpe, I Olivier; *Bull. Soc. Chim. Fr.*, 128, 184 (1991)
- 1991DVb B Dubois, B Vandorpe, I Olivier; *Bull. Soc. Chim. Fr.*, 128, 184 (1991)
- 1991FGc I Fabian, G Gordon; *Inorg. Chem.*, 30, 3785 (1991)
- 1991FKb A Fridman, E Kozlovskii, T Volkova; *Zh. Neorg. Khim.* 36, 1231 (1991)
- 1991GBa G Gavioli, M Borsari, L Menabue et al; *J. Chem. Soc., Dalton Trans.*, 2961 (1991)
- 1991Hwa Z-X Huang, Y-H Wang, X-Y Dai, J Chen; *Chem. J. of Chin. Univ.*, 12, 148 (1991)
- 1991JKa M Jezowska-Bojczuk, H Kozlowski et al; *Polyhedron*, 10, 2331 (1991)
- 1991KFb B Kurzak, E Farkas, T Glowiak et al; *J. Chem. Soc., Dalton Trans.*, 163 (1991)
- 1991KJa T Kiss, M J-Bojczuk, H Kozlowski et al; *J. Chem. Soc., Dalton Trans.*, 2275 (1991)
- 1991KLb U K-Schnabel, P Linder; *Inorg. Chem.*, 30, 1248 (1991)
- 1991KMc A Katkov, T Matkovskaya et al; *Zh. Neorg. Khim.*, 36, 693 (1991)
- 1991KNa C Krishnamoorthy, R Nakon; *J. Coord. Chem.*, 23, 233 (1991)
- 1991KSa T Kiss, I Sovago, A Gergely; *Pure & Appl. Chem.*, 63, 597 (1991)
- 1991LEb E Leporati; *J. Chem. Res. (S)*, 308 (1991)
- 1991LMa F Lloret, M Mollar, J Faus, M Julve et al; *Inorg. Chim. Acta*, 189, 195 (1991)
- 1991LNa E Leporati, G Nardi; *Gazz. Chim. Ital.*, 121, 147 (1991)
- 1991LNb E Leporati, G Nardi; *Bull. Chem. Soc. Jpn.*, 64, 2488 (1991)
- 1991MBb V Manjula, P Bhattacharya; *J. Inorg. Biochem.*, 41, 63 (1991)
- 1991MCb G Mukherjee, S Chattopadhyay; *J. Indian Chem. Soc.*, 68, 639 (1991)
- 1991MGB G Mukherjee, T Ghosh; *J. Indian Chem. Soc.*, 68, 194 (1991)
- 1991MSd R Morales Gonzalez, M Sanz Alaejos; *An. Quim.*, 87, 638 (1991)
- 1991NSa E Nabirkina, V Solov'ev et al.; *Izv. Akad. Nauk USSR*, (3) 570 (1991)
- 1991PPa K Pandeya, R Patel; *Indian J. Chem.*, 30A, 193 (1991)
- 1991SRb M Sanz Alaejos, J Rodriguez Placeres; *Coll. Czech. Chem. Comm.*, 56, 1405 (1991)
- 1991STb R Sindhu, S Tikku, S Bansal; *J. Indian Chem. Soc.*, 68, 289 (1991)
- 1991UBa M Ullah, P Bhattacharya; *Indian J. Chem.*, 30A, 976 (1991)
- 1991VKa V Vasil'ev, E Kozlovskii et al.; *Zh. Fiz. Khim.*, 65, 2905 (1991)
- 1991VRa V Veter, R Romagnoli; *Analyst*, 116, 937 (1991)
- 1991WBa A Wojciechowska, L Bolewski, L Lomazik; *Monatsh. Chem.*, 122, 131 (1991)
- 1991YNa Y Yamada, N Nakasuka, M Tanaka; *Inorg. Chim. Acta*, 185, 49 (1991)
- 1991YNb H Yamashita, T Nozaki, Y Fukuda; *Bull. Chem. Soc. Jpn.*, 64, 697 (1991)
- 1990APa M Ali, R Patnaik; *J. Indian Chem. Soc.*, 67, 503 (1990)
- 1990ARA G Anderegg, M Raber; *J. Chem. Soc., Chem. Comm.*, 1194 (1990)

1990BCa R Barbucci, M Casolaro, A Fini; J.Chem.Soc., Dalton Trans., 207 (1990)
 1990BDa M J-Bojczuk, P Decock, L Colombo et al; J.Chem.Res.(S), 370 (1990)
 1990BJc J Balla, M J-Bojczuk, H Kozlowski, K M-Jon; J.Inorg.Biochem., 40, 37 (1990)
 1990BMa M Branca, G Micera, T Kiss, M Sinibaldi; J.Chem.Res.(S), 392 (1990)
 1990BMD M Branca, G Micera, T Kiss, M Sinibaldi; J.Chem.Res.(S), 392 (1990)
 1990BP a G Borghesani, F Pulidori et al; J.Chem.Soc., Dalton Trans., 2095 (1990)
 1990BSb M Bastian, H Sigel; Inorg.Chim.Acta, 178, 249 (1990)
 1990CBa D Chakraborty, P Bhattacharya; J.Chem.Soc., Dalton Trans., 3325 (1990)
 1990CBb D Chakraborty, P Bhattacharya; J.Inorg.Biochem., 39, 1 (1990)
 1990CCa M Cabral, J Costa, R Delgado et al; Polyhedron, 9, 2847 (1990)
 1990CFa I Castro, J Faus, M Julve et al; J.Chem.Soc., Dalton Trans., 2207 (1990)
 1990CIa E Casassas, A I-Ridorsa, R Tauler; J.Inorg.Biochem., 39, 327 (1990)
 1990CId E Casassas, A Izquierdo, R Tauler; J.Chem.Soc., Dalton Trans., 2341 (1990)
 1990CSc V Castro-Aleman, J Rodriguez-Placeres; Electrochim.Acta, 35, 999 (1990)
 1990CSd Z Chen, Z Shen, S Huang, S He; Wuli Huaxue Xuebao, 6, 51 (1990)
 1990DAb A Das; Transition Met.Chem., 15, 75 (1990)
 1990DAc A Das; Transition Met.Chem., 15, 399 (1990)
 1990DGa S Deiana, C Gessa, B Manunza, P Piu, Seeber; J.Inorg.Biochem., 39, 25 (1990)
 1990DKa D Dyrssen, K Kremling; Marine Chem., 30, 193 (1990)
 1990DNa A Davis, P Nunn, P O'Brien, L Pettit, G Wang; J.Inorg.Biochem., 39, 209 (1990)
 1990DSc S Das, M Srivastava; Indian J.Chem., 29A, 707 (1990)
 1990FBb S Ferrer, J Borrás et al; J.Inorg.Biochem., 39, 297 (1990)
 1990FKb E Farkas, B Kurzak; J.Coord.Chem., 22, 145 (1990)
 1990FTa I Filipovic, M Tkalcec, B Grabaric; Inorg.Chem., 29, 1092 (1990)
 1990GKa G Gross, B Costisella, K Schwartz et al; Zh.Obshch.Khim., 60, 749 (1990)
 1990GLa L.Guo, C-Y Liang, J-Z.Yang et al.; J.Coord.Chem., 21, 43 (1990)
 1990GSa E Gogolashvili, V Shtyrilin, A Zakharov; Zh.Neorg.Khim., 35, 1753 (1990)
 1990HNa R Hancock, M Ngwenya, A Evers et al; Inorg.Chem., 29, 264 (1990)
 1990ISb I Isayev, S Tverdokhlebov et al.; Zh.Neorg.Khim. 35, 2034 (1990)
 1990KBa H Kozlowski, P Decock, G Micera, A Pusino; Carbohydrate Res., 197, 109 (1990)
 1990KKc Z Khatoon, K-ud-Din; Transition Met.Chem., 15, 217 (1990)
 1990KMa M Khan, J Meullemestre, M Schwing et al; Polyhedron, 9, 2613 (1990)
 1990KNa A Kumbhar, S Narasimhan; Anal.Chim.Acta, 229, 149 (1990)
 1990Kwa G Kura, H Waki; Polyhedron, 9, 511 (1990)
 1990Mca V Manjula, D Chakraborty, P Bhattacharya; Indian J.Chem., 29A, 577 (1990)
 1990MCb G Mukherjee, S Chattopadhyay; J.Indian Chem.Soc., 67, 941 (1990)
 1990MOF C Monk; J.Chem.Soc., Dalton Trans., 173 (1990)
 1990MPa J Morphy, D Parker, R Kataký et al; J.Chem.Soc., Perkin Trans.II, 573 (1990)
 1990NAa R Nagar; J.Inorg.Biochem., 40, 349 (1990)
 1990Nca M Nair, E Chellam et al; Indian J.Chem., 29A, 1233 (1990)
 1990NKb K Nakamura, M Koshinuma, K Tajima; Bull.Chem.Soc.Jpn., 63, 335 (1990)
 1990NP a E Almeida Neves, M Peters; Polyhedron, 9, 1257 (1990)
 1990NTa T Nakashima, H Tanaka, G Sugihara, H Waki; Polyhedron, 9, 2609 (1990)
 1990NTb M Nair, S Theodore, D Manickam, P Arasu; Proc.Indian Acad.Sci., 102, 731
 (1990)
 1990OSa M Orama, H Saarinen, J Korvenranta; J.Coord.Chem., 22, 183 (1990)
 1990PPb K Pandeya, R Patel et al; Indian J.Chem., 29A, 602 (1990)
 1990RAB F Rey, J Antelo, F Arce, F Penedo; Polyhedron, 9, 665 (1990)
 1990RSd G Reddy, S Satyanarayana, K Reddy; Indian J.Chem., 29A, 500 (1990)
 1990RSe P Reddy, K Sudhakar; Indian J.Chem., 29A, 1182 (1990)

1990SAa Sadiq,M; Marine Chem.,31,285 (1990)
 1990SHb S Sallam,S Haggag,M Masoud; Thermochim.Acta,168,1 (1990)
 1990SKh S Stepanchikova,G Kolonin; Izv.Sib.Otdel.Akad.Nauk.SSSR,6,96 (1990)
 1990SMe S Stepanchikova,K Morgunov; Izv.Sib.Otdel.Akad.Nauk.SSSR,6,101 (1990)
 1990SRc M Sanz Alaejos,J Placeres,F Montelongo; Indian J.Chem.,29A,393 (1990)
 1990TRA R Tauler,B Rode; Inorg.Chim.Acta,173,93 (1990)
 1990UBb M Ullah,P Bhattacharya; Indian J.Chem.,29A,150 (1990)
 1990UBc M Ullah,P Bhattacharya; Bull.Chem.Soc.Jpn.,64,3659 (1990)
 1990UKb J.Urbanska,H Koslowski; J.Coord.Chem.,21,175 (1990)
 1990VBa V Vasil'ev,V Borodin; Zh.Neorg.Khim.,35,259 (146) (1990)
 1990VKb V Vasil'ev,T Khochenkova; Zh.Neorg.Khim.,35,2581 (1467) (1990)
 1990Waa S Wasylkiewicz; Fluid Phase Equilibria,57,277 (1990)
 1990YTa K Yatsimirskii,L Tsymbal,E Sinyavskaya; Zh.Neorg.Khim.,35,(1)117 (1990)
 1989ABa P Amico,R Bonomo,R Cali et al; Inorg.Chem.,28,3555 (1989)
 1989ACa M Antonelli,V Caranchio et al; J.Inorg.Biochem.,37,201 (1989)
 1989AHa H Azab,A Hassan; Bull.Soc.Chim.Fr.,I,599 (1989)
 1989APb A Albourine,M Petit-Ramel,G Thomas-David; Can.J.Chem.,67,959 (1989)
 1989BBg J Bisht,N Bisht,S Singh; Indian J.Chem.,28A,812 (1989)
 1989BFb E Bottari,M Festa,R Jasionowska; Polyhedron,8,1019 (1989)
 1989BVa V Brumas,M Venturini,M Filella et al; J.Inorg.Biochem.,37,309 (1989)
 1989CDd C Cazorla,C del Valle,F Martinez,J Orte; An.Quim.,85,310 (1989)
 1989CGa E Casassas,L Gustems,R Tauler; J.Chem.Soc.,Dalton Trans.,569 (1989)
 1989COb C Coetzee; Polyhedron,8,1239 (1989)
 1989DAa A Das; Transition Met.Chem.,14,200 (1989)
 1989DAb A Das; Transition Met.Chem.,14,66 (1989)
 1989DFa F Dallavalle,E Fisicaro,R Corradini; Helv.Chim.Acta,72,1479 (1989)
 1989DYa D Dyrssen; Marine Chem.,28,241 (1989)
 1989DZa P Daniele,O Zerbinati et al; J.Chem.Soc.,Dalton Trans.,1745 (1989)
 1989EHa A Evers,R Hancock,A Martell et al; Inorg.Chem.,28,2189 (1989)
 1989FKa E Farkas,T Kiss; Polyhedron,8,2463 (1989)
 1989FNa M Foresti,L Nyholm; J.Electroanal.Chem.,269,41 (1989)
 1989FPa R Fournaise,C Petitfaux; J.Chem.Res.(S),38 (1989)
 1989FSa E Farkas,J Szoke,T Kiss,H Kozlowski, Bal; J.Chem.Soc.,Dalton Trans.,2247 (1989)
 1989GAb M Ghandour,H Azab,A Hassan et al; Polyhedron,8,189 (1989)
 1989GMc M Ghandour,H Mansour,M Khodary; J.Indian Chem.Soc.,66,76 (1989)
 1989IOd H Imai,H Ochiai,H Tamura; Nippon Kagaku Kaishi,12,2022 (1989)
 1989IPa M Iuliano,R Porto,E Vasca; Ann.Chim.(Rome),79,439 (1989)
 1989IPb M Iuliano,R Porto,E Vasca; Ann.Chim.(Rome),79,439 (1989)
 1989ISa S Ishiguro,H Suzuki et al; Bull.Chem.Soc.Jpn.,62,39 (1989)
 1989JKa G Jackson,M Kelly; J.Chem.Soc.,Dalton Trans.,2429 (1989)
 1989KCa E Kozlovskii,G Chistiakova,V Vasil'ev; Zh.Neorg.Khim.,34,853(478) (1989)
 1989KFa T Kiss,E Farkas,H Kozlowski,Z Siatecki +; J.Chem.Soc.,Dalton Trans.,1053 (1989)
 1989KFb T Kiss,E Farkas,H Kozlowski; Inorg.Chim.Acta,155,281 (1989)
 1989KMb M Khan,J Meullemestre et al; Inorg.Chem.,28,3306 (1989)
 1989KUa A Kurganov,I Ulanovskii et al; Koord.Khim.,15(5)628 (1989)
 1989LCb G Liang,N Corfu,H Sigel; Z.Naturforsch.,44B,538 (1989)
 1989LEa E Leporati; J.Chem.Soc.,Dalton Trans.,1299 (1989)
 1989LEc E Leporati; Inorg.Chem.,28,3752 (1989)

1989LEd E Leporati; Gazz.Chim.Ital.,119,183 (1989)
 1989LIb Y Liu,J Ingle; Talanta,36,185 (1989)
 1989LKc B Lenarcik,K Kurdziel,R Czopek; J.Chem.Res.(S),240 (1989)
 1989LSa G Liang,H Sigel; Z.Naturforsch.,44B,1555 (1989)
 1989LTa G Liang,R Tribolet,H Sigel; Inorg.Chim.Acta,155,273 (1989)
 1989LWc L Lomozik,A Wojciechowska; Polyhedron,8,2645 (1989)
 1989MAa E Manzurola,A Apelblat et al; J.Chem.Soc.,Faraday Trans.I,85,373 (1989)
 1989MBb S Mallick,B Behera; J.Electrochem.Soc.India,38,203 (1989)
 1989MMF S Mishra,A Mishra,K Yadava; Rev.Roumaine Chim.,34,1877 (1989)
 1989MPa R M'Boungou,M Petit-Ramel,G Thomas-David; Can.J.Chem.,67,973 (1989)
 1989MSd S Massoud,H Sigel; Inorg.Chim.Acta,159,243 (1989)
 1989NDb J Nepal,S Dubey; J.Indian Chem.Soc.,66,469 (1989)
 1989NIb E Nabirkina,T Ignateva et al; Izv.Akad.Nauk(USSR),11,2482(2278) (1989)
 1989NOa P Nunn,P O'Brien,L Pettit et al; J.Inorg.Biochem.,37,175 (1989)
 1989NOc T Nozaki,Y Oka,H Yamashita; Nippon Kagaku Kaishi,4,697 (1989)
 1989OFa M Oms,R Forteza,V Cerda; Thermochim.Acta,138,1 (1989)
 1989OKa M Orama et al; Finn.Chem.Lett.,16,85 (1989)
 1989PBa J du Preez,B van Brecht; J.Chem.Soc.,Dalton Trans.,253 (1989)
 1989PVa K Prasad,P Venkataiah,M Mohan; Indian J.Chem.,28A,325 (1989)
 1989RSb G Reddy,S Satyanarayana,K Reddy; Indian J.Chem.,28A,337 (1989)
 1989SAa K Sawada,T Araki,T Suzuki,K Doi; Inorg.Chem.,28,2687 (1989)
 1989SBa R Smith,S Bale,S Westcott et al; Analyst,114,771 (1989)
 1989SBc A Sherry,R Brown et al; Inorg.Chem.,28,620 (1989)
 1989SGa V Shtirlin,E Gogolashvili et al; J.Chem.Soc.,Dalton Trans.,1293 (1989)
 1989SHb D Shea,G Helz; Geochim.Cosmo.Acta,53,229 (1989)
 1989SHc M Shoukry,W Hosny; Transition Met.Chem.,14,69 (1989)
 1989Sia H Suzuki,S Ishiguro,H Ohtaki; J.Chem.Soc.,Faraday Trans.I,85,2587 (1989)
 1989Smb B Schwederski,D Margerum; Inorg.Chem.,28,3472 (1989)
 1989SOa H Saarinen,M Orama,J Korvenranta; Acta Chem.Scand.,43,834 (1989)
 1989SRc S Satyanarayana,K Reddy; Indian J.Chem.,28A,169 (1989)
 1989SRd M Sharkar,K Ram,M Reddy; Indian J.Chem.,28A,437 (1989)
 1989SRe S Satyanarayana,K Reddy; Indian J.Chem.,28A,630 (1989)
 1989SVb M Shapnik,G Vishnevskaya et al; Koord.Khim.,15(8)1054 (1989)
 1989VKb V Vasilev,E Kozlovskii et al; Zh.Neorg.Khim.,34,376(210) (1989)
 1989WIa M Wisniewski; Pol.J.Chem.,63,3 (1989)
 1989WLa A Wojciechowska,L Lomozik,S Zielinski; Pol.J.Chem.,63,653 (1989)
 1989YKa K Yatsimirskii,M Konstantinovskaya et al; Zh.Neorg.Khim.,34,2217(1262) (1989)
 1989YTa K Yatsimirskii,L Tsimbal et al; Zh.Neorg.Khim.,34,112(63) (1989)
 1988ARb Y Anjaneyulu,N Rao et al; Indian J.Chem.,27A,555 (1988)
 1988BCa R Barbucci,M Casolaro et al; J.Chem.Soc.,Dalton Trans.,1273 (1988)
 1988BCc J Balman,G Christie,J Duffield,Williams; Inorg.Chim.Acta,152,81 (1988)
 1988BFa E Bottari,M Festa,R Jasionowska; J.Coord.Chem.,17,245 (1988)
 1988BSc S Bajpai,M Saxena; J.Indian Chem.Soc.,65,677 (1988)
 1988CFb E Casassas,G Fonrodona; Polyhedron,7,689 (1988)
 1988CHc G Christie,M Hughes,S Rees,D Williams; Inorg.Chim.Acta,151,215 (1988)
 1988CHd M Conklin,M Hoffmann; Environ.Sci.Technol.,22,883 (1988)
 1988CLa Chen Rongdi,Lin Huakuan; Acta Chimica Sinica,808 (1988)
 1988CTa E Casassas,R Tauler,G Fonrodona; Polyhedron,7,1335 (1988)
 1988DFb F Dallavalle,E Fisicaro et al; Helv.Chim.Acta,72,1479 (1988)

- 1988DOa M Dahlund,A Olin; Acta Chem.Scand.,A42,273 (1988)
- 1988ECa M Esteban,E Casassas,L Fernandez; J.Electroanal.Chem.,241,113 (1988)
- 1988GMB M Ghandour,H Mansour,M El-Wafa,M Khodary; J.Indian Chem.Soc.,65,827 (1988)
- 1988KJa B Kurzak,J Jezierska; Inorg.Chim.Acta,153,193 (1988)
- 1988KKb B Kurzak,D Kroczevska,J Jezierska; Transition Met.Chem.,13,297 (1988)
- 1988KLa J Kulig,B Lenarcik; Pol.J.Chem.,62,351 (1988)
- 1988KOa T Kohzuma,A Odani,Y Morita et al; Inorg.Chem.,27,3854 (1988)
- 1988Lda I Lukes,I Dominak; Chem.Papers 42,311 (1988)
- 1988LEa E Leporati; J.Chem.Soc.,Dalton Trans.,421 (1988)
- 1988LEb E Leporati; J.Chem.Soc.,Dalton Trans.,953 (1988)
- 1988Lga H-K Lin,Z-X Gu,X-M Chen,Y-T Chen; Thermochim.Acta,123,201 (1988)
- 1988LIa S Licht; J.Electrochem.Soc.,135,2971 (1988)
- 1988Lma P Laubry,G Mousset et al; J.Chem.Soc.,Faraday Trans.I,84,3175 (1988)
- 1988LTc G Liang,R Tribolet,H Sigel; Inorg.Chem.,27,2877 (1988)
- 1988MAa M Masoud,B Adbel-Nabby; Thermochim.Acta,128,75 (1988)
- 1988MCb G Mukherjee,S Chatterjee,A Sen,S Sarkar; J.Indian Chem.Soc.,65,749 (1988)
- 1988MOB T Morimoto,S Ochiai,T Sekine; Anal.Sci.Jpn.,4,255 (1988)
- 1988MSa S Massoud,H Sigel; Inorg.Chem.,27,1447 (1988)
- 1988Nda J Nepal,S Dubey; J.Indian Chem.Soc.,65,795 (1988)
- 1988Nkb T Nozaki,T Kabata,H Yamashita; Nippon Kagaku Kaishi,7,1017 (1988)
- 1988NSa M Nair,B Sivasankar,K Rengaraj; Indian J.Chem.,27A,48 (1988)
- 1988NSb G Narayana,S Swamy et al; Indian J.Chem.,27A,613 (1988)
- 1988NSc R Nagar,R Sharma; J.Indian Chem.Soc.,65,240 (1988)
- 1988Rkb B Radomska,H Kozlowski,P Decock et al; J.Inorg.Biochem.,33,153 (1988)
- 1988SBc M Shoonen,H Barnes; Geochim.Cosmo.Acta,52,649 (1988)
- 1988SGa H Strzelecki,W Grzybkowski; Polyhedron,7,2473 (1988)
- 1988SHA D Shea,G Helz; Geochim.Cosmo.Acta,52,1815 (1988)
- 1988SKd M Shoukry,E Khairy,A Saeed; Transition Met.Chem.,13,379 (1988)
- 1988SSa K Satoh,T Suzuki,K Sawada; J.Chem.Soc.,Dalton Trans.,591 (1988)
- 1988TGd R Tripathi,R Ghose et al; Indian J.Chem.,27A,1100 (1988)
- 1988UKa J Urbanska,H Kozlowski,A Delannoy; Anal.Chim.Acta,207,85 (1988)
- 1988YMa K Yatsimirskii,P Manorik et al; Koord.Khim.,14(3)311 (1988)
- 1988YZa Yu Huaqiang,Zhou Bensheng; Chem.J.of Chin.Univ.,960 (1988)
- 1988ZMa M Zaky,M Moawad,S Stefan; Oriental J.Chem.,4,247 (1988)
- 1988ZZa V Zelano,O Zerbinati,G Ostacoli; Ann.Chim.(Rome),78,273 (1988)
- 1987AKa G Anderegg,E Koch,E Bayer; Inorg.Chim.Acta,127,183 (1987)
- 1987ARb R Aruga; Transition Met.Chem.,7,318 (1987)
- 1987ASa A Asmirov,Z Saprykova; Zh.Obshch.Khim.,57,1526(1359) (1987)
- 1987Bdc G Baranov,L Deiko et al; Koord.Khim.,13(5)592 (1987)
- 1987Bfb E Bottari,M Festa,R Jasionowska; Ann.Chim.(Rome),77,837 (1987)
- 1987Bka E Bayer,E Koch,G Anderegg; Angew.Chem.Int.Ed.Eng.,26,545 (1987)
- 1987BPb G Baranov,V Perekalin et al; Koord.Khim.,13(6)741 (1987)
- 1987CCa J-W Chen,C-C Chang,C-S Chung; Inorg.Chem.,26,335 (1987)
- 1987Dza P Daniele,O Zerbinati,G Negro et al; Ann.Chim.(Rome),77,879 (1987)
- 1987ENa E G-Espana,F Nuzzi,A Sabatini,A Vacca; Gazz.Chim.Ital.,117,275; 115,607 (1987)
- 1987Fdc B Fan,A Demaret,A Ensueque,G Lapluye; J.Chim.Phys.,84,439 (1987)
- 1987FYa Y Fujii,H Yamada,M Mizuta; Polyhedron,6,1203 (1987)

1987GAa H Gampp; J.Chem.Soc.,Faraday Trans.I,83,1719 (1987)
 1987GAb H Gampp; Anal.Chem.(USA),59,2456 (1987)
 1987GFb E Gotsis,D Fiat; Polyhedron,6,2037,2053 (1987)
 1987IOb S Ishiguro,K Ozutsumi,L Nagy et al; Bull.Chem.Soc.Jpn.,60,1691 (1987)
 1987IOc S-I Ishiguro,H Ohtaki; J.Coord.Chem.,15,237 (1987)
 1987KBb T Kiss,J Balla,G Nagy,H Kozlowski et al; Inorg.Chim.Acta,138,25 (1987)
 1987KKb B Kurzak,K Kurzak,J Jezierska; Inorg.Chim.Acta,130,189 (1987)
 1987KLb J Kulig,B Lenarcik,M Rzepka; Pol.J.Chem.,61,735 (1987)
 1987Ksa T Kiss,C Simon,Z Vachter; J.Coord.Chem.,16,225 (1987)
 1987LEa E Leporati; J.Chem.Soc.,Dalton Trans.,435 (1987)
 1987LEc P Lehtonen; Finn.Chem.Lett.,14,21 (1987)
 1987LGa H-K Lin,Z-X Gu,Y-T Chen; Gazz.Chim.Ital.,117,23 (1987)
 1987Lma A Lekchiri,M Morcellet,M Wozniak; Polyhedron,6,633 (1987)
 1987LYa Liang Chunyu,Yang J Z,Liu Q T,Yang X Q; Acta Chimica Sinica,760 (1987)
 1987MDc E Mironov,E Dalanyan et al; Koord.Khim.,13(12)1593 (1987)
 1987MGa J Maslowska,E Gasinska; Pol.J.Chem.,61,581 (1987)
 1987MPa R Bounvou, M Petit-Ramel,G Thomas-David +; Can.J.Chem.,65,1479 (1987)
 1987MSd G Mukherjee,A Sen; J.Indian Chem.Soc.,64,325 (1987)
 1987MTa A Molodkin,E Tarakanova,N Esina; Zh.Neorg.Khim.,32,2299(1344) (1987)
 1987Nda J Nepal,S Dubey; Indian J.Chem.,26A,269 (1987)
 1987PCb S Patel,U Chudasama; Indian J.Chem.,26A,795 (1987)
 1987PEa R Petrola; Ann.Acad.Sci.Fennicae,215 (1987)
 1987PGc M Pilarczyk,W Grzybowski et al; Polyhedron,6,1399 (1987)
 1987Pma K Prasad,M Mohan; J.Coord.Chem.,16,1 (1987)
 1987Pra K Prasad,A Rao,M Mohan; J.Coord.Chem.,16,251 (1987)
 1987RSb B Rao,Shivraj et al; Indian J.Chem.,26A,1076 (1987)
 1987SEb A Simeu,G Ermolina,A Molodkin; Zh.Neorg.Khim.,32,2295(1341) (1987)
 1987SHA B Spiess,E Harraka,D Wencker et al; Polyhedron,6,1247 (1987)
 1987SIb M Sato,M Ikeda,M Fukuda,T Ikeda,J Nakaya; Inorg.Chim.Acta,136,47 (1987)
 1987Snc M Nair,B Sivasankar,K Rengaraj; Indian J.Chem.,26A,52 (1987)
 1987SPa I Sovago,G Petocz; J.Chem.Soc.,Dalton Trans.,1717 (1987)
 1987THa K Trogmayer-Malik,I Horvath,K Burger; Inorg.Chim.Acta,138,155 (1987)
 1987USa N Ulakhovich,L Shaidarova,G Boudnikov; Zh.Neorg.Khim.,32,679(381) (1987)
 1987WRa D Whitmoyer,D Rillema; Inorg.Chem.,26,2012 (1987)
 1986Aic A Agranovich,E Isayeva et al; Zh.Neorg.Khim.,31,409 (1986)
 1986Ajb B Arbad,D Jahagirdar; Indian J.Chem.,25A,253 (1986)
 1986BCa R Bucci,V Carunchio,A Girelli; Inorg.Chim.Acta,111,1 (1986)
 1986BHa G Berthon,B Hacht,M-J Blais,P May; Inorg.Chim.Acta,125,219 (1986)
 1986BTa P Bhargava,M Tyagi; Indian J.Chem.,25A,193 (1986)
 1986CLb Chen Rongdi,Lin Huakuan; Acta Chimica Sinica,449 (1986)
 1986CTa E Casassas,R Tauler; J.Chim.Phys.,83,409 (1986)
 1986DNA S Dubey,J Nepal; J.Indian Chem.Soc.,63,842 (1986)
 1986DRa C Devi,M Reddy; Indian J.Chem.,25A,600 (1986)
 1986DRb C Devi,M Reddy; Proc.Indian Acad.Sci.,96,297 (1986)
 1986Dva R Diez-Caballero et al; Bull.Soc.Chim.Fr.,I,375 (1986)
 1986Eba N Emanuel,P Bhattacharya; Indian J.Chem.,25A,561 (1986)
 1986FPa R Fournaise,C Petitfaux,J Emond; J.Chem.Res.(S),372 (1986)
 1986FTa E Farkas,J Tozser,A Gergely; Magyar Kem.Foly.,92,49 (1986)
 1986Gga F Gaizer,G Gondos,L Gera; Polyhedron,5,1149 (1986)
 1986GPa W Grzybowski,M Pilarczyk; J.Chem.Soc.,Faraday Trans.I,82,1745 (1986)

1986GUa A Gundareva; Zh.Neorg.Khim.,31,1211 (1986)
 1986HAD P Hakkinen; Finn.Chem.Lett.,13,85 (1986)
 1986HAe J Haas; Marine Chem.,19,299 (1986)
 1986HKa T Hirotsu,S Katoh,K Sugasaka et al; J.Chem.Soc.,Dalton Trans.,1609 (1986)
 1986KKd B Kurzak,K Kurzak,J Jezierska; Inorg.Chim.Acta,125,77 (1986)
 1986KMa S Kida,I Murase,C Harada et al; Bull.Chem.Soc.Jpn.,59,2595 (1986)
 1986KRd G Kala,M Reddy; Indian J.Chem.,25A,752 (1986)
 1986KUc G Kura; Polyhedron,5,2097 (1986)
 1986KZa B Khan,S Zakeeruddin; Inorg.Chim.Acta,124,5 (1986)
 1986LDc J Lerivrey,B Dubois,P Decock et al; Inorg.Chim.Acta,125,187 (1986)
 1986LEa E Leporati; J.Chem.Soc.,Dalton Trans.,199 (1986)
 1986LEb E Leporati; J.Chem.Soc.,Dalton Trans.,2587 (1986)
 1986LEc P Lehtonen; Finn.Chem.Lett.,13,41 (1986)
 1986LEe P Lehtonen; Finn.Chem.Lett.,13,141 (1986)
 1986LJa P Lehtonen,P Jyske; Finn.Chem.Lett.,13,33 (1986)
 1986LLa Li Changhua,Li Zheng; Anal.Chem.(China),1 (1986)
 1986MBc A Maverick,S Buckingham et al; J.Am.Chem.Soc.,108,7430 (1986)
 1986MMb V Maistrenko,Y Mourinov et al; Zh.Neorg.Khim.,31,417(236) (1986)
 1986NDa J Nepal,S Dubey; Indian J.Chem.,25A,485 (1986)
 1986NDb J Nepal,S Dubey; Indian J.Chem.,25A,1163 (1986)
 1986NIa V Novikov,T Ignateva,O Raevskii; Zh.Neorg.Khim.,31,1474(842) (1986)
 1986NKa I Nizova,V Krasnov et al; Koord.Khim.,12(10)1321 (1986)
 1986NVa E Norkus,A Vashkylis,I Reklaitis; Zh.Neorg.Khim.,31,2318 (1986)
 1986RAa R Ramette; Inorg.Chem.,25,2481 (1986)
 1986RPa G Rauret,L Pineda,M Ventura,R Compano; Talanta,33,141 (1986)
 1986RRb S Rebello,M Reddy; Indian J.Chem.,25A,696 (1986)
 1986RRc S Rebello,M Reddy; Indian J.Chem.,25A,1137 (1986)
 1986RRe P Reddy,B Reddy; Polyhedron,5,1947 (1986)
 1986RVa A Romero,J Vera,Y Martinez Ortiz; An.Quim.,82,355 (1986)
 1986SAa J Siefker,R Aroz; Talanta,33,768 (1986)
 1986SAb Z Saprykova,R Amirov,R Akhmetova; Koord.Khim.12,784 (1986)
 1986SDa P Singh,H Dahiya,V Sharma; Indian J.Chem.,25A,116 (1986)
 1986SIc T Sekine,K Inaba,T Morimoto; Anal.Sci.Jpn.,2,535 (1986)
 1986SMb M Sato,S Matsuki,M Ikeda,J-I Nakaya; Inorg.Chim.Acta,125,49 (1986)
 1986SNa I Sanemasa,Y Nishimoto,A Tananka; Bull.Chem.Soc.Jpn.,59,1459 (1986)
 1986SOB H Saarinen,M Orama et al; Acta Chem.Scand.,A40,396 (1986)
 1986TCa R Tauler,E Casassas,B Rode; Inorg.Chim.Acta,114,203 (1986)
 1986TRa R Tauler,M Rainer,B Rode; Inorg.Chim.Acta,123,75 (1986)
 1986TSa V Thom,S Shaikjee,R Hancock; Inorg.Chem.,25,2992 (1986)
 1986VAa L Var'yash; Geochem.Int.,23,82 (1986)
 1986VGa A Vanni,D Gastaldi; Ann.Chim.(Rome),76,75 (1986)
 1986VGB A Vanni,D Gastaldi; Ann.Chim.(Rome),76,375 (1986)
 1986XHa Xu Xiliang,Huang Zhongxian; Acta Chimica Sinica,1005 (1986)
 1986ZMb I Ziogas,I Moumtzis,G Papanastasiou; Ann.Chim.(Rome),76,143 (1986)
 1985ABb L Ashton,J Bullock,P Simpson; Polyhedron,4,1323 (1985)
 1985AJb L Abello,M Jouini,M Oualaalou,R Poisson; J.Chim.Phys.,82,1001 (1985)
 1985AMB G Arena,S Musemeci,E Rizzarelli; Transition Met.Chem.,10,399 (1985)
 1985AOa J Arpalahti,E Ottoila; Inorg.Chim.Acta,107,105 (1985)
 1985ARC B Arbad; J.Indian Chem.Soc.,62,566 (1985)

1985BBd J Barner, P Brekke, N Bjerrum; *Inorg.Chem.*, 24, 2162 (1985)
 1985BCc S Balzamo, V Carunchio, R Galvani et al; *Inorg.Chim.Acta*, 97, 13 (1985)
 1985BCd R Bucci, V Carunchio, A Girelli, A Messina; *Polyhedron*, 4, 1433 (1985)
 1985BCf Y Bizri, M Cromer, I Lamy, J Scharff; *Analisis*, 13, 128 (1985)
 1985BMb R Byrne, W Miller; *Geochim.Cosmo.Acta*, 49, 1837 (1985)
 1985BPb A Bianchi, P Paoletti; *Inorg.Chim.Acta*, 96, L37 (1985)
 1985BSb K Blomqvist, E Still; *Anal.Chem.(USA)*, 57, 749 (1985)
 1985BSd R M-Balakrishnan, K Scheller, U Haering; *Inorg.Chem.*, 24, 2067 (1985)
 1985CEa E Casassas, M Esteban; *J.Electroanal.Chem.*, 194, 11 (1985)
 1985CFb A Cole, C Furnival, Z-X Huang, D Jones; *Inorg.Chim.Acta*, 108, 165 (1985)
 1985CTb E Casassas, R Tauler; *J.Chim.Phys.*, 82, 1067 (1985)
 1985DYa D Dyrssen; *Marine Chem.*, 15, 285 (1985)
 1985GLa M Gabryszewski, B Lenarcik; *Pol.J.Chem.*, 59, 129 (1985)
 1985GMA H Gamp, M Maeder, C Meyer, A Zuberbuhler; *Talanta*, 32, 257 (1985)
 1985HAB P Hakkinen; *Finn.Chem.Lett.* 56 (1985)
 1985IJa S Ishiguro, B Jeliaskova, H Ohtaki; *Bull.Chem.Soc.Jpn.*, 58, 1749 (1985)
 1985KIa H Killa; *J.Chem.Soc., Faraday Trans.I*, 81, 2659 (1985)
 1985KSc C Krishnamoorthy, S Sunil, K Ramalingam; *Polyhedron*, 4, 1451 (1985)
 1985KVa V Kornev, V Valyaeva; *Koord.Khim.*, 11(3) 336, 1339 (1985)
 1985LEa E Leporati; *J.Chem.Soc., Dalton Trans.*, 1605 (1985)
 1985LSc L Lajunen, S Sjoberg; *Acta Chem.Scand.*, A39, 341 (1985)
 1985LWb L Lomozik, A Wojciechowska; *Monatsh.Chem.*, 116, 719 (1985)
 1985LYa Liu Qitao, Yang Ming; *Acta Chimica Sinica*, 126 (1985)
 1985MDa G Micera, S Deiana, A Dessi, P Decock et al; *Inorg.Chim.Acta*, 107, 45 (1985)
 1985MDB G Micera, S Deiana, A Dessi, P Decock; *Rev.Port.Quim.*, 27, 345 (1985)
 1985MGA G Mei, C Gutsche; *J.Am.Chem.Soc.*, 107, 7959 (1985)
 1985MLc B Miller, D Leussing; *J.Am.Chem.Soc.*, 107, 7146 (1985)
 1985MMA F Mulla, F Marsicano, B Nakani et al; *Inorg.Chem.*, 24, 3076 (1985)
 1985NAC A Nair; *Indian J.Chem.*, 24A, 717 (1985)
 1985NSd N Nigam, P Sinha, M Gupta, N Shrivastava; *Indian J.Chem.*, 24A, 893 (1985)
 1985OSa M Orama, H Saarinen et al; *Acta Chem.Scand.*, A39, 493 (1985)
 1985PDA P David; *Polyhedron*, 4, 437 (1985)
 1985RDb C Rigano, A De Robertis, S Sammartano; *Transition Met.Chem.*, 10, 1 (1985)
 1985RRc P Reddy, V Rao; *Polyhedron*, 4, 1603 (1985)
 1985RRe C Rebello, M Reddy; *Indian J.Chem.*, 24A, 765 (1985)
 1985RRh P Reddy, M Reddy; *J.Chem.Soc., Dalton Trans.*, 239 (1985)
 1985RSe J Rodriguez Placeres, M Sanz Alaejos; *An.Quim.*, 81, 348 (1985)
 1985SGc S Singh, D Gupta, K Yadava; *Electrochim.Acta*, 30, 223 (1985)
 1985SGd N Schmelzer, M Grigo, B Zorn, J Einfeldt; *Naturwissenschaft*, 34, 25 (1985)
 1985SHb D Shelke; *Bull.Chem.Soc.Jpn.*, 58, 374 (1985)
 1985SKc J Symes, D Kester; *Marine Chem.*, 16, 189 (1985)
 1985SMf H Sigel, R Malini-Balakrishnan et al; *J.Am.Chem.Soc.*, 107, 5137 (1985)
 1985SNa S Shinkai, S Nakamura, M Nakashima et al; *Bull.Chem.Soc.Jpn.*, 58, 2340 (1985)
 1985SRc N Shekar, G Reddy, K Omprakash, M Reddy; *Indian J.Chem.*, 25A, 394 (1985)
 1985STb H Sigel, R Tribolet, K Scheller; *Inorg.Chim.Acta*, 100, 151 (1985)
 1985TCa R Tauler, E Casassas, M Rainer, B Rode; *Inorg.Chim.Acta*, 105, 165 (1985)
 1985TGA R Tripathi, R Ghose, A Ghose; *Indian J.Chem.*, 24A, 565 (1985)
 1985VRa V Vasilev, L Ramenskaya, M Lubavina; *Zh.Neorg.Khim.*, 30, 3093(1707 (1985)
 1985VSA M Vyas, S Singh, S Tripathi, K Yadava; *Ann.Chim.(Rome)*, 75, 377 (1985)

- 1985WTa Z Warnke,C Trojanowska,A Liwo; J.Coord.Chem.,14,31 (1985)
- 1985YOa O Yamauchi,A Odani; J.Am.Chem.Soc.,107,5938 (1985)
- 1984ABg F Akkrivos,M Blais,J Hoffelt,G Berthon; Agents Actions,15,649 (1984)
- 1984ACb G Arena,R Cali,V Cucinotta,E Rizzarelli; J.Chem.Soc.,Dalton Trans.,1651 (1984)
- 1984AOa N Al-Ani,A Olin; Chemica Scripta,23,161 (1984)
- 1984BBa G Berthon,M-J Blais,M Piktas et al; J.Inorg.Biochem.,20,113 (1984)
- 1984BCa Y Bizri,M Cromer,A Ezzat,J-P Schraff; J.Chem.Res.(S),306 (1984)
- 1984BEa C van den Berg; Geochim.Cosmo.Acta,48,2613 (1984)
- 1984BPc G Berthon,M Piktas,M-J Blais; Inorg.Chim.Acta,93,117 (1984)
- 1984BPd P Bizunok,M Pyartman,A Belousov; Zh.Neorg.Khim.,29,720 (1984)
- 1984BSb K Blomqvist,E Still; Inorg.Chem.,23,3730 (1984)
- 1984BSc K Blomqvist,E Still; Inorg.Chim.Acta,82,141 (1984)
- 1984CFa J Calataud,P Falco,P Blasco; Bull.Soc.Chim.Fr.,I,123 (1984)
- 1984COa R Contant; J.Chem.Res.(S),120 (1984)
- 1984DAa M Davies; Inorg.Chim.Acta,92,141 (1984)
- 1984DAb P Daniele,P Amico,G Ostacoli; Ann.Chim.(Rome),74,105 (1984)
- 1984DBa S Dubey,R Baweja,D Puri; J.Indian Chem.Soc.,61,701 (1984)
- 1984DHa E Dubler,U Haring,K Scheller,H Sigel; Inorg.Chem.,23,3785 (1984)
- 1984DMc N Davidenko,P Manorik,E Lopatina; Koord.Khim.,10,187 (1984)
- 1984DOa P Daniele,G Ostacoli,C Rigano; Transition Met.Chem.,9,385 (1984)
- 1984EBa N Emanuel,P Bhattacharya; Indian J.Chem.,23A,596 (1984)
- 1984FVa J Felcman,M Vaz et al; Inorg.Chim.Acta,93,101 (1984)
- 1984GHb R Ghose; Indian J.Chem.,23A,493 (1984)
- 1984GLb J Gulens,K Leeson,L Seguin; Anal.Chim.Acta,156,19 (1984)
- 1984GMa M Genchev,S Manolov,S Zekov; Koord.Khim.,10,168 (1984)
- 1984GMc M Ghandour,H Mansour,M Khodary; J.Indian Chem.Soc.,61,862 (1984)
- 1984HAb P Hakkinen; Finn.Chem.Lett.9 (1984)
- 1984HDa R Hancock,E Darling et al; Inorg.Chim.Acta,90,L83 (1984)
- 1984HKa A Hulanicki,T Krawczyk et al; Anal.Chim.Acta,158,343 (1984)
- 1984HNa R Hancock,B Nakani; J.Coord.Chem.,13,309 (1984)
- 1984HNb G Huyge-Tiprez, J Nicole,Y Vandewalle; Anal.Chim.Acta,166,335 (1984)
- 1984IOa S Ishiguro,Y Oka,H Ohtaki; Bull.Chem.Soc.Jpn.,57,391 (1984)
- 1984ISf M Ionina,T Sherstneva,P Shanina; Termodinamika i sroenie rastvorov,108 (1984)
- 1984JMa S Jain,R Malkani,G Bakore; J.Indian Chem.Soc.,61,135 (1984)
- 1984KDb T Kiss,G Deak,A Gergely; Inorg.Chim.Acta,91,269 (1984)
- 1984KKd J Kishan,R Kapoor; Indian J.Chem.,23A,355 (1984)
- 1984KMc H Killa,E Mercer,R Philp; Anal.Chem.(USA),56,2401 (1984)
- 1984LOa Y-C Liang,A Olin; Acta Chem.Scand.,A38,247 (1984)
- 1984LOb L Lomozik; Monatsh.Chem.,115,261 (1984)
- 1984LOf Y-C Liang,A Olin,G Wikmark; Acta Chem.Scand.,B38,327 (1984)
- 1984LSb J Labuda,M Skatulokova,M Nemeth, Gergely; Chem.Zvesti,38,597 (1984)
- 1984MEa H Marafie,M El-Ezaby,M Rashad,N Moussa; Polyhedron,3,787 (1984)
- 1984MMg R Miotekaitis,A Martell; J.Coord.Chem.,13,265 (1984)
- 1984MZA P Martinez,J Zuluaga; An.Quim.,80,179 (1984)
- 1984NDa I Nagypal,F Debreczeni; Inorg.Chim.Acta,81,69 (1984)
- 1984NEa E Neher-Neumann; Acta Chem.Scand.,A38,517 (1984)
- 1984NKA R Nakon,C Krishnamoorthy; J.Am.Chem.Soc.,106,5193 (1984)
- 1984Nkb I Nizova,V Krasnov et al; Koord.Khim.,10(2)157 (1984)

19840Ya A Odani, O Yamauchi; *Inorg.Chim.Acta*, 93, 13 (1984)
 1984PAa P Paoletti; *Pure & Appl.Chem.*, 56, 491 (1984)
 1984PBd V Patel, P Bhattacharya; *Inorg.Chim.Acta*, 92, 199 (1984)
 1984PCa E Paniago, S Carvalho; *Inorg.Chim.Acta*, 92, 253 (1984)
 1984PDb J Pingarron Carrazon,; *An.Quim.*, 80, 141 (1984)
 1984PEa L Pettit; *Pure & Appl.Chem.*, 56, 247 (1984)
 1984PGb S Prasad, J Ghosh; *Indian J.Chem.*, 23A, 409 (1984)
 1984SGd R Saxena, A Gupta; *J.Indian Chem.Soc.*, 61, 210 (1984)
 1984SJa B Singh, R Jain, M Jain, R Ghosh; *Thermochim.Acta*, 78, 175 (1984)
 1984SKb J Symes, D Kester; *Geochim.Cosmo.Acta*, 48, 2219 (1984)
 1984SYa S Singh, H Yadava, P Yadava et al; *Bull.Soc.Chim.Fr.*, I, 349 (1984)
 1984VSA G Venkatnarayana, S Swamy et al; *Indian J.Chem.*, 23A, 501 (1984)
 1984WRA E Werner, B Rode; *Inorg.Chim.Acta*, 91, 217 (1984)
 1984WRb E Werner, B Rode; *Inorg.Chim.Acta*, 93, 27 (1984)
 1984ZXA Zhou Xuya, Xu Xiliang, Zhang Hualin; *Acta Chimica Sinica*, 867 (1984)
 1983AAb J Antelo, F Arce, J Casado, A Varela; *J.Chem.Res.(S)*, 1983, 324 (1983)
 1983ACb G Arena, R Cali, V Cucinotta et al; *J.Chem.Soc., Dalton Trans.*, 1271 (1983)
 1983ADa P Amico, P Daniele, G Ostacoli et al; *Ann.Chim.(Rome)*, 73, 253 (1983)
 1983ADc V Acevedo, J De Moran, L Sales; *Can.J.Chem.*, 61, 267 (1983)
 1983ALa J Arpalahiti, H Lonnberg; *Inorg.Chim.Acta*, 78, 63 (1983)
 1983ALb J Arpalahiti, H Lonnberg; *Inorg.Chim.Acta*, 80, 25 (1983)
 1983AOa N Al-Ani, A Olin; *Chemica Scripta*, 22, 105 (1983)
 1983APb A Aggarwal, K Pandeya, R Singh; *J.Electroanal.Chem.*, 156, 129 (1983)
 1983ARa R Aruga; *Transition Met.Chem.*, 8, 56 (1983)
 1983ASa B Arbad, D Shelke, D Jahagirdar; *Indian J.Chem.*, 22A, 124 (1983)
 1983AZa A Avdeef, J Zabronsky, H Stuting; *Anal.Chem.(USA)*, 55, 298 (1983)
 1983BJa E Bottari, R Jasionowska, R Porto; *Ann.Chim.(Rome)*, 73, 15 (1983)
 1983BSa L Bologni, A Sabatini, A Vacca; *Inorg.Chim.Acta*, 69, 71 (1983)
 1983BVa G Bagiyan, A Valeev et al; *Zh.Neorg.Khim.*, 28, 2016(1142) (1983)
 1983BWA R Byrne, C V-D-Weijden et al; *J.Solution Chem.*, 12, 581 (1983)
 1983CMA A Cole, P May, D Williams; *Agents Actions*, 13, 91 (1983)
 1983DBa P Djurdjevic, J Bjerrum; *Acta Chem.Scand.*, A37, 881 (1983)
 1983DNA F Debreczeni, I Nagypal; *Inorg.Chim.Acta*, 72, 61 (1983)
 1983DPa F Debreczeni, J Polgar, I Nagypal; *Inorg.Chim.Acta*, 73, 195 (1983)
 1983ERA M El-Ezaby, M Rashad, N Moussa; *Polyhedron*, 2, 245 (1983)
 1983FSA J Felcman, J da Silva; *Talanta*, 30, 565 (1983)
 1983GDb M Goncalves, M Dos Santos; *J.Electroanal.Chem.*, 143, 397 (1983)
 1983GJb J Garg, D Jain, P Verma; *J.Electrochem.Soc.India*, 32, 193 (1983)
 1983GWA M Gabryszewski, M Wisniewski; *Pol.J.Chem.*, 57, 1161 (1983)
 1983HBB S Hart, J Boeyens et al; *J.Chem.Soc., Dalton Trans.*, 1601 (1983)
 1983HHc C Huys, G Herman, A Goeminne; *J.Coord.Chem.*, 13, 71 (1983)
 1983HNB A Hamburg, M Nemeth, D Margerum; *Inorg.Chem.*, 22, 3535 (1983)
 1983HOB M Hynes, M O'Shea; *J.Chem.Soc., Dalton Trans.*, 331 (1983)
 1983HTa C Huys, J Tombeux, A Goeminne; *Thermochim.Acta*, 63, 191 (1983)
 1983JOa E John; *Pol.J.Chem.*, 57, 1119 (1983)
 1983KJb R Karliceck, V Jokl; *Chem.Zvesti*, 37, 191 (1983)
 1983KRa W Kittl, B Rode; *J.Chem.Soc., Dalton Trans.*, 409 (1983)
 1983KSA M Khan, S Satyanarayana, M Jyoti et al; *Indian J.Chem.*, 22A, 357, 364 (1983)
 1983KSc M Khan, S Satyanarayana; *Indian J.Chem.*, 22A, 584 (1983)
 1983LKa D Leggett, S Kelly, L Shiue, K Kadish; *Talanta*, 30, 579 (1983)

1983LRc E Lance,C Rhodes,R Nakon; Anal.Biochem.,133,492 (1983)
 1983LTa P Linder,R Torrington et al; Talanta,30,295 (1983)
 1983LTb B-F Liang,Y-K Tsay,C-S Chung; J.Chem.Soc.,Dalton Trans.,995 (1983)
 1983LWa B Lenarcik,M Wisniewski; Pol.J.Chem.,57,735 (1983)
 1983LWb L Lomozik,A Wejciechowska et al; Monatsh.Chem.,114,1185 (1983)
 1983MBa M Mohan D Bancroft,E Abbott; Inorg.Chem.,22,714 (1983)
 1983OWa A Olin,B Wallen; Anal.Chim.Acta,151,65 (1983)
 1983PRa M Petit-Ramel,G de Rycke; Can.J.Chem.,61,2151 (1983)
 1983PYa P Prasad,H Yadav,S Singh,P Yadava; J.Electrochem.Soc.India,32,377 (1983)
 1983RFa R Ramette,G Fan; Inorg.Chem.,22,3323 (1983)
 1983RIa O Raevskii,T Ignateva et al; Izv.Akad.Nauk(USSR),5,1098 (1983)
 1983RKa P Ramesh,B Kumar,M Reddy; Indian J.Chem.,22A,822 (1983)
 1983SBa L Solomon,A Bond,J Bixler et al; Inorg.Chem.,22,1644 (1983)
 1983SHa D Shelke; Inorg.Chim.Acta,80,255 (1983)
 1983SHd D Shelke; J.Chem.Res.(S),92 (1983)
 1983SKa R Sridharan,C Krishnamoorthy; J.Coord.Chem.,12,231 (1983)
 1983SSg R Saxena,M Sharma; J.Indian Chem.Soc.,60,543 (1983)
 1983SVa R Stella,G Valentini; Anal.Chim.Acta,152,191 (1983)
 1983TMa E Timofeeva,T Maryenkova et al; Koord.Khim.,9,1640 (1983)
 1983TSa R Tribolet,H Sigel,K Trefzer; Inorg.Chim.Acta,79,278 (1983)
 1983VDa N Vlasova,N Davidenko; Koord.Khim.,9,1470 (1983)
 1983VIa M Vicedomini; J.Coord.Chem.,12,307 (1983)
 1983ZKa R Zuehelke,D Kester; Marine Chem.,13,203 (1983)
 1983ZRa V Zelano,E Roletto,A Vanni; Ann.Chim.(Rome),73,113 (1983)
 1982ABc G Anderegg,P Blauenstein; Helv.Chim.Acta,65,162 & 913 (1982)
 1982ABe G Arena,R Bonomo,S Musumeci;; Transition Met.Chem.,7,29 (1982)
 1982AKa A Avdeef,D Kearney,J Brown et al; Anal.Chem.(USA),54,2322 (1982)
 1982APa R Arnek,I Puigdomenech,M Valiente; Acta Chem.Scand.,A36,15 (1982)
 1982ARb R Aruga; Transition Met.Chem.,7,318 (1982)
 1982BBb K Burkov,E Busko,L Lilich et al; Zh.Neorg.Khim.,27,1455(819) (1982)
 1982BGB F Belski,I Goryunova et al; Izv.Akad.Nauk(USSR),4,103(93) (1982)
 1982BKc G Berthon,A Kayali; Agents Actions,12,398 (1982)
 1982BZa M Briellmann,A Zuberbuhler; Helv.Chim.Acta,65,46 (1982)
 1982CMB V Carunchio,A Messina,R Bucci,A Girelli; Ann.Chim.(Rome),72,107 (1982)
 1982CSc M Cromer-Morin,J Scharff,R Martin; Analisis,10,92 (1982)
 1982DDb R Das,G Dixit,K Zutshi; J.Indian Chem.Soc.,59,700 (1982)
 1982DJa C Dhat,D Jahagirdar; Indian J.Chem.,21A,792 (1982)
 1982DKa H Doe,T Kitagawa; Inorg.Chem.,21,2272 (1982)
 1982DKb A Dadgar,D Khorsandi,G Atkinson; J.Phys.Chem.,86,3829 (1982)
 1982DRa P Daniele,C Rigano,S Sammartano; Transition Met.Chem.,7,109 (1982)
 1982EMa M Elleb,J Meullemestre et al; Inorg.Chem.,21,1477 (1982)
 1982ESa M El-Ezaby,F A-Sogair; Polyhedron,1,791 (1982)
 1982FGa Y Fridman,S Gorokhov,L Ilyasova; Koord.Khim.,8,362 (1982)
 1982GAa J Garg,L Agarwal,P Verma,D Jain; J.Electrochem.Soc.India,31,153 (1982)
 1982GFa A Gergely,E Farkas; J.Chem.Soc.,Dalton Trans.,381 (1982)
 1982GHa C Gerard,R Hugel; Compt.Rend.,295,Ser.II,175 (1982)
 1982GKa M Gabryszewski,J Kulig,B Lenarcik; Pol.J.Chem.,56,55 (1982)
 1982GLa M Gabryszewski,B Lenarcik; Pol.J.Chem.,56,1237 (1982)
 1982GSd H Gampp,H Sigel,A Zuberbuhler; Inorg.Chem.,21,1190 (1982)
 1982GVa J Garg,P Verma,D Jain; Indian J.Chem.,21A,1142 (1982)

1982HFa Z Huang, J Duffield, P May, D Williams +; Polyhedron, 1, 153 (1982)
 1982HTa R Hancock, V Thom; J. Am. Chem. Soc., 104, 291 (1982)
 1982KBd A Kayali, G Berthon; Polyhedron, 1, 371 (1982)
 1982KJa S Khanna, A Jain, G Chaturvedi; Indian J. Chem., 21A, 206 (1982)
 1982KMc G Kubala, A Martell; Inorg. Chem., 21, 3007 (1982)
 1982KMe H Kalra, J Malik, V Gera; J. Indian Chem. Soc., 59, 1427 (1982)
 1982KPc Z Kralj, N Paulic, N Raos, V Simeon; Croat. Chem. Acta, 55, 337 (1982)
 1982KSb K Kostka, M Strawiak; Pol. J. Chem., 56, 895 (1982)
 1982LBa F Lafuma, J Boue, R Audebert; Inorg. Chim. Acta, 66, 167 (1982)
 1982LKB B Lenarcik, K Kurdziel; Pol. J. Chem., 56, 3 (1982)
 1982LPa W Libus, R Pastewski, T Sadowska; J. Chem. Soc., Faraday Trans. I, 78, 377 (1982)
 1982MAd H Marafie, M El-Azaby, N Kittaneh; Transition Met. Chem., 7, 227 (1982)
 1982MMb R Motekaitis, A Martell, J-M Lehn et al; Inorg. Chem., 21, 4253 (1982)
 1982MPc E Michand, G Pivert, G Duc, M P-Ranol et al; Can. J. Chem., 60, 1063 (1982)
 1982NAa M Nair; J. Chem. Soc., Dalton Trans., 561 (1982)
 1982NDa I Nagypal, F Debreczeni; Inorg. Chim. Acta, 58, 207 (1982)
 1982NDb I Nagypal, F Debreczeni, F Ersosi; Inorg. Chim. Acta, 57, 125 (1982)
 1982NSa M Nair, M Santappa; Indian J. Chem., 21A, 58 (1982)
 1982NSd M Nair, M Santappa, P Murugan; Inorg. Chem., 21, 142 (1982)
 1982NVa M Nair, K Venkatachalapathi et al; J. Chem. Soc., Dalton Trans., 55 (1982)
 1982NVb M Nair, K Venkatachalapathi et al; Inorg. Chem., 21, 2418 (1982)
 1982PBc N Piacquadio, M Blesa; Polyhedron, 1, 437 (1982)
 1982PMb R Payne, R Magee; Proc. Indian Acad. Sci., 91, 31 (1982)
 1982PNa B Peshchevitskii, N Nykolayeva et al; Zh. Neorg. Khim., 27, 2285(1290) (1982)
 1982PPb P Patel, V Patel, P Bhattacharya; Inorg. Chem., 21, 3163 (1982)
 1982RRa M Reddy, M Reddy; Indian J. Chem., 21A, 853 (1982)
 1982SAa Y Sasaki; Bunseki Kagaku, 31, E107 (1982)
 1982SBa B Shcherbakov, F Belski et al; Izv. Akad. Nauk(USSR), 3, 560(498) (1982)
 1982SKa Z Szeverenyi, U Kopp, A Zuberbuhler; Helv. Chim. Acta, 65, 2529 (1982)
 1982SLc J Stary, J Liljenzin; Pure & Appl. Chem., 54, 2557 (1982)
 1982SSa N Saha, H Sigel; J. Am. Chem. Soc., 104, 4100 (1982)
 1982SYb J Sircar, K Yadava; J. Chem. Eng. Data, 27, 231 (1982)
 1982SZa V Shtirlin, A Zakharova et al; Koord. Khim., 8, 931 (1982)
 1982SZb V Shtirlin, A Zakharova, Y Shtirlin; Zh. Neorg. Khim., 27, 2828(1602) (1982)
 1982TBa I Tatyana, A Borysova et al; Zh. Neorg. Khim., 27, 118(67) (1982)
 1982TSa M Taqui-Khan, S Satyanarayana; Indian J. Chem., 21A, 913 (1982)
 1982VRa V Vasilev, L Romanova; Zh. Neorg. Khim., 27, 1734(978) (1982)
 1982WLa Wu Zongmin, Lin Silan; Acta Chimica Sinica, 407 (1982)
 1982ZBa A Zakharov, G Boos et al; Zh. Neorg. Khim., 27, 949(532) (1982)
 1981AAC P Amico, G Arena, P Daniele et al; Inorg. Chem., 20, 772 (1981)
 1981AHA K Ashurst, R Hancock; J. Chem. Soc., Dalton Trans., 245 (1981)
 1981ARA R Aruga; Bull. Chem. Soc. Jpn., 54, 1233 (1981)
 1981ARB R Aruga; Australian J. Chem., 34, 501 (1981)
 1981ARC R Aruga; J. Inorg. Nucl. Chem., 43, 1859 (1981)
 1981ARD R Aruga; J. Inorg. Nucl. Chem., 43, 2459 (1981)
 1981ATA M Aihara, Y Terasaki; J. Inorg. Nucl. Chem., 43, 323 (1981)
 1981BAa J Bjerrum, B Agarwala et al; Acta Chem. Scand., A35, 685 (1981)
 1981BDa A Braibanti, F Dallavalle, G Mori; Ann. Chim. (Rome), 71, 223 (1981)
 1981BKb D Banerjee, T Kaden, H Sigel; Inorg. Chem., 20, 2586 (1981)

1981BKd M Blais,A Kayali,G Berthon; Inorg.Chim.Acta,56,5 (1981)
 1981BPc P Buev,N Pechurova; Zh.Neorg.Khim.,26,133(69) (1981)
 1981BPd E Breet,H Potgieter,J Smit; S.Afr.J.Chem.,34,61 (1981)
 1981CKb T Chandrashekar,V Krishnan; J.Inorg.Nucl.Chem.,43,3287 (1981)
 1981CMc A Cole,P May,D Williams; Agents Actions,11,296 (1981)
 1981CPb M Claude,M Paris,J Schraff et al; J.Chem.Res.(S),222 (1981)
 1981DAa P Daniele,P Amico,G Ostacoli; Ann.Chim.(Rome),71,347 (1981)
 1981Dac P Daniele,P Amico,G Ostacoli; J.Inorg.Nucl.Chem.,43,2183 (1981)
 1981EBa M Emara,A Baghlaf,S Basahel; J.Indian Chem.Soc.,58,583 (1981)
 1981ESa M Ermakova,I Shikina,N Latosh; Zh.Obshch.Khim.,51,174 (1981)
 1981FDb Y Fridman,N Dolgashova,G Rustemova; Zh.Neorg.Khim.,26,2775(1485) (1981)
 1981FMb T Field,W McBryde; Can.J.Chem.,59,555 (1981)
 1981GDa R Ghose,K Dey; Acta Chim.Acad.Sci.Hung.,108,9 (1981)
 1981GSb V Gupta,J Sthapak,D Sharma; J.Inorg.Nucl.Chem.,43,3019 (1981)
 1981Gva R Gowda,M Venkatappa; J.Electrochem.Soc.India,30,336 (1981)
 1981HAa R Hancock; Inorg.Chim.Acta,49,145 (1981)
 1981HGa C Huys,A Goeminne,Z Eeckhaut; J.Inorg.Nucl.Chem.,43,3269 (1981)
 1981ISb N Ivicic,V Simeon; J.Inorg.Nucl.Chem.,43,2581 (1981)
 1981JMa G Jackson,P May,D Williams; J.Inorg.Nucl.Chem.,43,825 (1981)
 1981JOa E John; J.Inorg.Nucl.Chem.,43,325 (1981)
 1981JOb E John; Microchem.J.,26,174 (1981)
 1981KBb L Kulvinova,V Blokhin et al; Koord.Khim.,7,201 (1981)
 1981KCa N Kole,A Chaudhuri; J.Inorg.Nucl.Chem.,43,2471 (1981)
 1981KMc C Koval,D Margerum; Inorg.Chem.,20,2311 (1981)
 1981KPa R Karlicek,M Polasek,V Jokl; Coll.Czech.Chem.Comm.,46,1107 (1981)
 1981KRa W Kittl,B Rode; Inorg.Chim.Acta,55,21 (1981)
 1981LDa D Lalart,G Dodin,J Dubois; J.Inorg.Nucl.Chem.,43,2429 (1981)
 1981LGa W Libus,W Grzybkowski,R Pastewski; J.Chem.Soc.,Faraday Trans.I,77,147
 (1981)
 1981LGc D Lalart,J Guillerez,G Dodin; J.Chem.Soc.,Perkin Trans.II,1057 (1981)
 1981LKa B Lenarcik,K Kurdziel; Pol.J.Chem.,55,737 (1981)
 1981LMb B Lenarcik,W Maciejewski; Pol.J.Chem.,55,31 (1981)
 1981Lra B Lenarcik,M Rzepka; Pol.J.Chem.,55,503 (1981)
 1981LTa P Lumme et al; Finn.Chem.Lett.11 (1981)
 1981Mfa T Matusinovic,I Filipovic; Talanta,28,199 (1981)
 1981MOd M Mohan; Indian J.Chem.,20A,252 (1981)
 1981NMa N Nakasuka,K Makimura,H Kajiura; Bull.Chem.Soc.Jpn.,54,3749 (1981)
 1981NSa M Nair,M Santappa; J.Chem.Soc.,Dalton Trans.,992 (1981)
 1981NSb M Nair,M Santappa; Indian J.Chem.,20A,990 (1981)
 1981Pbb O Prakash,S Bhasin,D Jain; J.Electrochem.Soc.India,30,152 (1981)
 1981Pla C Placeres,J Leon et al; J.Inorg.Nucl.Chem.,43,1681 (1981)
 1981REb D Reddy; Indian J.Chem.,20A,1038 (1981)
 1981Rka V Ramanujam,U Krishnan; J.Inorg.Nucl.Chem.,43,3407 (1981)
 1981Rkb V Ramanujam,U Krishnan; J.Indian Chem.Soc.,58,425 (1981)
 1981RPb S Randhawa,B Pannu,S Chopra; J.Indian Chem.Soc.,58,437 (1981)
 1981RRb M Reddy,M Reddy; Indian J.Chem.,20A,1134 (1981)
 1981RRe V Ramanujam,M Rajalakshmi,B Sivasankar; Indian J.Chem.,20A,531 (1981)
 1981RSd V Ramanujam,V Selvarajan; J.Indian Chem.Soc.,58,1131 (1981)
 1981RSe V Ramanujam,V Selvarajan; J.Indian Chem.Soc.,58,125 (1981)
 1981SHd P Sharrock,R Haran; J.Coord.Chem.,11,117 (1981)

1981SJd D Shelke,D Jahagirdar; J.Indian Chem.Soc.,58,580 (1981)
 1981SPd H Sigel,B Prijs,R Martin; Inorg.Chim.Acta,56,45 (1981)
 1981SSc N Shah,J Shah; J.Inorg.Nucl.Chem.,43,1583 (1981)
 1981SSe R Singh,J Sircar,J Yadava et al; Electrochim.Acta,26,395 (1981)
 1981SVa J da Silva,M Vaz; J.Inorg.Nucl.Chem.,43,213 (1981)
 1981TRA J Tummavuori,M Repo; Finn.Chem.Lett.59 (1981)
 1981TSa M Taqui-Khan,S Satyanarayana; Indian J.Chem.,20A,814 (1981)
 1981WNa M Wozniak,G Nowogrocki; J.Chem.Soc.,Dalton Trans.,2423 (1981)
 1981WNb J Walker,R Nakon; Inorg.Chim.Acta,55,135 (1981)
 1981YSa J Yadav,J Sircar,K Yadava; Electrochim.Acta,26,391 (1981)
 1981YYa H Yokoyama,H Yamatera; Bull.Chem.Soc.Jpn.,54,2286 (1981)
 1980AAb J Antelo,F Arce,J Casado,A Varela; Bull.Soc.Chim.Fr.,I,423 (1980)
 1980ABd S Ahrland,P Blauenstein et al; Acta Chem.Scand.,A34,265 (1980)
 1980ACb G Arena,R Cali,V Cucinotta; Transition Met.Chem.,5,30 (1980)
 1980AIa B Agarwala,L Ilcheva et al; Acta Chem.Scand.,A34,725 (1980)
 1980APa S Ahrland,I Persson; Acta Chem.Scand.,A34,645 (1980)
 1980ASb B Arbad,D Shelke,D Jahagirdar; Inorg.Chim.Acta,46,L17 (1980)
 1980AVc A Avdeef; Inorg.Chem.,19,3081 (1980)
 1980BAa J Bjerrum,B Agarwala; Acta Chem.Scand.,A34,475 (1980)
 1980BAB S Bandopadhyay,S Aditya; J.Indian Chem.Soc.,57,76 (1980)
 1980BDb A Braibanti,F Dallavalle,G Mori; Inorg.Chim.Acta,40,X70 (1980)
 1980BDe B Bhuyan,S Dubey; J.Indian Chem.Soc.,57,560 (1980)
 1980BVa S Banerjee,C Vaz; Indian J.Chem.,19A,387 (1980)
 1980CDa M Chanda,K Driscall,G Rempel; J.Catalysis,61,533 (1980)
 1980CKb R Claridge,J Kilpatrick et al; Australian J.Chem.,33,2757 (1980)
 1980DAb P Daniele,P Amico,G Ostacoli; Ann.Chim.(Rome),70,255 (1980)
 1980DMA N Davidenko,P Manorik,K Yatsimirskii; Zh.Neorg.Khim.,25,883(491) (1980)
 1980FMA L Fabbriizzi,M Micheloni,P Paoletti; J.Chem.Soc.,Dalton Trans.,1055
 (1980)
 1980FSa B Fischer,H Sigel; J.Am.Chem.Soc.,102,2998 (1980)
 1980GCa R Ghose,M Chattopadhyaya et al; Indian J.Chem.,19A,783 (1980)
 1980GMB M Grasso,S Musumeci,E Rizzarelli et al; Ann.Chim.(Rome),70,193 (1980)
 1980GPa W Gozybkowski,R Pastewski; Electrochim.Acta,25,279 (1980)
 1980GSb S Grobler,S Suri; J.Inorg.Nucl.Chem.,42,51 (1980)
 1980JMa J Jozefonovicz,D Muller,M Petit; J.Chem.Soc.,Dalton Trans.,76 (1980)
 1980JOa L Johansson; Acta Chem.Scand.,A34,495 (1980)
 1980JOb L Johansson; Acta Chem.Scand.,A34,507 (1980)
 1980KPa S Krzewska,H Podsiadly,L Pajdowski; J.Inorg.Nucl.Chem.,42,89 (1980)
 1980Kwa U Koch,F Wolf; Z.Chem.,20,66 (1980)
 1980Lba B Lenarcik,B Barszcz; J.Chem.Soc.,Dalton Trans.,24 (1980)
 1980LEa D Leggett; Talanta,27,787 (1980)
 1980Lpc W Libus,M Pilarczyk,T Szuchnicka; Electrochim.Acta,25,1033 (1980)
 1980LPd W Libus,D Puchalska,R Pastewski; Electrochim.Acta,25,1591 (1980)
 1980LTa P Linder,R Torrington; S.Afr.J.Chem.,33,55 (1980)
 1980Lza Liu Weitao,Zhou Bensheng,Yu Huajiang; Acta Chimica Sinica,38,127 (1980)
 1980Lzc L Lomozik,S Zielinski; Monatsh.Chem.,111,1067 (1980)
 1980MAC C Makni,M Aplincourt,R Hugel; J.Chem.Res.(S),354 (1980)
 1980Mcc A Misra,G Chaturvedi; Indian J.Chem.,19A,1197 (1980)
 1980MJa D Muller,J Jozefonovicz,H Petit; J.Inorg.Nucl.Chem.,42,1665 (1980)
 1980MKb R Medancic,I Kruhac,B Mayer et al; Croat.Chem.Acta,53,419 (1980)

1980MPb B Mali, L Pethe; Indian J.Chem., 19A, 243 (1980)
 1980MSb G Malik, S Singh; Indian J.Chem., 19A, 922 (1980)
 1980NAd R Nayan; Indian J.Chem., 19A, 786 (1980)
 1980NOb E Almeida Neves, E Oliveria et al; Talanta, 27, 609 (1980)
 1980NSa M Nair, M Santappa, P Natarajan; J.Chem.Soc., Dalton Trans., 2138 (1980)
 1980NSb M Nair, M Santappa, P Natarajan; J.Chem.Soc., Dalton Trans., 1312 (1980)
 1980NSc M Nair, M Santappa et al; Indian J.Chem., 19A, 672, 1106 (1980)
 1980NSd K Narasimhulu, U Sessaiah; Indian J.Chem., 19A, 1027 (1980)
 1980Nwa G Nakagawa, H Wada, T Sako; Bull.Chem.Soc.Jpn., 53, 1303 (1980)
 1980Oma F Ordax, J de la Fuente; Bull.Soc.Chim.Fr., I, 61 (1980)
 1980OTa M Orama, P Tilus; Finn.Chem.Lett. 50 (1980)
 1980PKb A Paulson, D Kester; J.Solution Chem., 9, 269 (1980)
 1980PPd L Pitombo, M Peters, M Medeiros; Talanta, 27, 617 (1980)
 1980Rka V Ramanujam, U Krishnan; Indian J.Chem., 19A, 779 (1980)
 1980RSd V Ramanujam, K Rengaraj, B Sivasankar; Indian J.Chem., 19A, 240 (1980)
 1980SAC P Srivastava, S Adhya, B Banerjee; J.Indian Chem.Soc., 57, 985 (1980)
 1980SGc S Shah, C Gupta; Chemica Scripta, 16, 134 (1980)
 1980SGd S Shah, C Gupta; Talanta, 27, 823 (1980)
 1980SHb H Stunzi, R Harris, D Perrin et al; Australian J.Chem., 33, 2207 (1980)
 1980SKb R Sandhu, R Kalia; Ann.Chim.(Rome), 70, 625 (1980)
 1980SPa M Shapnik, T Petrova; Zh.Neorg.Khim., 25, 1414(786) (1980)
 1980SSa H Sigel, K Scheller et al; J.Chem.Soc., Dalton Trans., 1022 (1980)
 1980SSe S Shah, K Suyanand, C Gupta; Talanta, 27, 455 (1980)
 1980Sua M Szpakowska, I Uruska; Pol.J.Chem., 54, 1661 (1980)
 1980Sva A Sabatini, A Vacca; J.Chem.Soc., Dalton Trans., 519 (1980)
 1980Swa E Still, P Wikberg; Inorg.Chim.Acta, 46, 147, 153 (1980)
 1980VNa Y Vandewalle, J Nicole; Bull.Soc.Chim.Fr., I, 97 (1980)
 1980YTa O Yamauchi, T Takaba, T Sakurai; Bull.Chem.Soc.Jpn., 53, 106 (1980)
 1980ZRa M Zaki, E Rizkalla; Talanta, 27, 423 (1980)
 1980ZRC M Zaki, E Rizkalla et al; Talanta, 27, 715 (1980)
 1980ZYb Zhong Shan, Yang Weida; Chem.J.of Chin.Univ., 1, 29 (1980)
 1979ACa A Alberts, D Cram; J.Am.Chem.Soc., 101, 3545 (1979)
 1979APa E Aksenova, I Pimenova, E Timofeeva et al; Koord.Khim., 5, 1629 (1979)
 1979ARA R Aruga; Australian J.Chem., 32, 709 (1979)
 1979ARb G Arena et al; Ann.Chim.(Rome), 68, 535 (1979)
 1979BCa R Bonomo, R Cali, F Rigg et al; Inorg.Chem., 18, 3417 (1979)
 1979BEc M-J Blais, O Enea, G Berthon; Thermochim.Acta, 30, 37; 45 (1979)
 1979BKb C van den Berg, J Kramer; Anal.Chim.Acta, 106, 113 (1979)
 1979BSa G Boos, T Soloveva, A Zakharov; Zh.Neorg.Khim., 24, 1914(1060) (1979)
 1979CRa R Cali, E Rizzarelli, S Sammartano et al; J.Chem.Res.(S), 340 (1979)
 1979DDb J Degorre, A Delannoy, J Hennion, J Nicole; Bull.Soc.Chim.Fr., I-471, 477 (1979)
 1979DHa A Delannoy, J Hennion, J-C Bavay, J Nicole; Compt.Rend., 289C, 401 (1979)
 1979DZb N Dzyuba, G Zegzda; Zh.Neorg.Khim., 24, 978(542) (1979)
 1979DZc N Davidenko, N Zinich; Zh.Neorg.Khim., 24, 1608(891) (1979)
 1979DZe N Davidenko, N Zinich; Koord.Khim., 5, 3 (1979)
 1979EDa M El-Ezaby, M El-Dessouky et al; J.Inorg.Nucl.Chem., 41, 1765 (1979)
 1979EFb M Emara, N Farid; Egypt.J.Chem., 22, 77 (1979)
 1979EHa M El-Ezaby, J Al-Hassan et al; Can.J.Chem., 57, 104 (1979)
 1979EOa R A-Eittah A Osman, G Arata; J.Inorg.Nucl.Chem., 41, 555 (1979)

1979ESa M Ermakova,I Shikhova et al; Zh.Obshch.Khim.,49,1387 (1979)
 1979FHa B Fischer,U Haring,R Tribolet,H Sigel; Eur.J.Biochem.,94,523 (1979)
 1979FLc Y Fridman,G Sycheva,Y Afanas'ev; Koord.Khim.,5,1132 (1979)
 1979GBd V Gupta,A Bhat; Indian J.Chem.,18A,342 (1979)
 1979GCa J Gal,C Calleri,L Elegant,M Azzaro; Bull.Soc.Chim.Fr.,I,311 (1979)
 1979GRa D Garcia,A Ramirez,M Ceba; Talanta,26,215 (1979)
 1979HGa G Herman,A Goeminne; J.Coord.Chem.,8,231 (1979)
 1979HGb G Herman,A Goeminne,Z Eeckhaut; J.Coord.Chem.,9,1 (1979)
 1979HGD G Herman,A Goeminne,H De Brabander; Thermochim.Acta,32,27 (1979)
 1979KBF A Kayali,G Berthon; J.Electroanal.Chem.,104,337 (1979)
 1979KGa T Kiss,A Gergely; Inorg.Chim.Acta,36,31 (1979)
 1979KRa I Khalil,M Petit-Ramel; J.Inorg.Nucl.Chem.,41,711 (1979)
 1979LBa B Lenarcik,B Barszcz; Pol.J.Chem.,53,963 (1979)
 1979LGa B Lenarcik,M Gabryszewski,M Wisniewski; Pol.J.Chem.,53,2429 (1979)
 1979LRA B Lenarcik,M Rzepka,J Glowacki; Pol.J.Chem.,53,2199 (1979)
 1979LSc L Lajunen et al; Finn.Chem.Lett.186 (1979)
 1979MBa M Mohan,D Bancroft,E Abbott; Inorg.Chem.,18,2468 (1979)
 1979MBb M Mohan,D Bancroft,E Abbott; Inorg.Chem.,18,344 (1979)
 1979MBe M Mohan,D Bancroft,E Abbot; Inorg.Chem.,18,1527 (1979)
 1979MFa M Melardi,G Ferroni,J Galea; Rev.Chim.Minerale,16,223 (1979)
 1979MIa P Mitchell; J.Chem.Soc.,Dalton Trans.,771 (1979)
 1979MMh M Molina,C Melios,J Tognalli; J.Electroanal.Chem.,105,237 (1979)
 1979MNa M Miyazaki,S Nishimura,A Yoshida; Chem.Pharm.Bull.,27,532 (1979)
 1979MTc V Movchan,F Tulyupa,E Baibarova; Zh.Neorg.Khim.,24,1603(889) (1979)
 1979NAb R Nakon; Anal.Biochem.,95,527 (1979)
 1979NSa T Nozaki,M Sakamoto et al; Nippon Kagaku Kaishi,891 (1979)
 1979Nwa H Nelson,G Watt; J.Inorg.Nucl.Chem.,41,99 (1979)
 1979PDa S Poddar,A Das; Indian J.Chem.,18A,429 (1979)
 1979PKc G Prik,B Kozer,T Tselyanina; Zh.Fiz.Khim.,53,872 (1979)
 1979PPb D Puchalska,E K-Piotrouicz,W Libus; Electrochim.Acta,24,381 (1979)
 1979PPc J Podlahova,J Podlaha; Coll.Czech.Chem.Comm.,44,321,1346 (1979)
 1979PZa S Pathak,D Zutshi; Indian J.Chem.,18A,84 (1979)
 1979RKa T Riedo,T Kaden; Helv.Chim.Acta,62,1089. (1979)
 1979RPb S Randhawa,B Pannu,S Chopra; Thermochim.Acta,32,111 (1979)
 1979RWa F Rossotti,R Whewell; J.Chem.Soc.,Dalton Trans.,257 (1979)
 1979SBa P Srivastava,B Banerjee; Indian J.Chem.,17A,583 (1979)
 1979Sdb R Sylva,M Davidson; J.Chem.Soc.,Dalton Trans.,232 (1979)
 1979SGf R Stella,M Ganzerli-Valentini; Anal.Chem.,51,2148 (1979)
 1979SHA G Sposito,K Holtzclaw; Soil Sci.Soc.Am.J.,43,47 (1979)
 1979SJa D Shelke,D Jahagirdar; J.Inorg.Nucl.Chem.,41,925 (1979)
 1979SPb H Stunzi,D Perrin; J.Inorg.Biochem.,10,309 (1979)
 1979SPd H Stunzi,D Perrin,T Teitei et al; Australian J.Chem.,32,21 (1979)
 1979SRa H Sigel,V Rheinberger,B Fischer; Inorg.Chem.,18,3334 (1979)
 1979SSc N Sachan,S Shan et al; Indian J.Chem.,17A,622 (1979)
 1979STb E Still; Anal.Chim.Acta,107,105 (1979)
 1979TIa P Tilus; Finn.Chem.Lett.76 (1979)
 1979WNa M Wozniak,G Nowogrocki; Talanta,26,381 (1979)
 1979WNb M Wozniak,G Nowogrocki; Talanta,26,1135 (1979)
 1979Ysa O Yamauchi,T Sakurai,A Nakahara; J.Am.Chem.Soc.,101,4164 (1979)
 1979ZPa B Zhadanov,I Polyakova et al; Koord.Khim.,5,1614 (1979)

1979ZRa V Zelano, E Roletto, A Vanni; Ann.Chim.(Rome), 69, 73 (1979)
 1978ABe G Arena, R Bonomo, M Grasso; Ann.Chim.(Rome), 68, 599 (1978)
 1978AMb G Arena, S Musumeci, E Rizzarelli et al; Inorg.Chim.Acta, 27, 31 (1978)
 1978BBd A Basak, D Banerjea; J.Indian Chem.Soc., 55, 853 (1978)
 1978CPa Y Couturier, C Petitfaux; Bull.Soc.Chim.Fr., I, 121, 453 (1978)
 1978DAC P Daniele, P Amico, G Ostacoli; Ann.Chim.(Rome), 68, 675 (1978)
 1978DDa N Delannoy, A Delannoy, J Hennion, J Nicole; Compt.Rend., 287C, 527 (1978)
 1978DOc P Daniele, G Ostacoli; Ann.Chim.(Rome), 68, 129 (1978)
 1978FDa I Filipovic, B B-Dragutinovic et al; Thermochim.Acta, 27, 151 (1978)
 1978FMb T Field, W McBryde; Can.J.Chem., 56, 1202 (1978)
 1978FMc L Fabbrizzi, M Micheloni, P Paoletti; Inorg.Chem., 17, 494 (1978)
 1978GCa G Arena, R Cali, E Rizzarelli et al; J.Chem.Soc., Dalton Trans., 1090 (1978)
 1978GFa A Gergely, E Farkas, I Nagypal, E Kas; J.Inorg.Nucl.Chem. 40, 1709 (1978)
 1978GGb N Gensmantel, E Gowling, M Page; J.Chem.Soc., Perkin Trans.II, 335 (1978)
 1978GMF G Gross, T Medved et al; Zh.Obshch.Khim., 48, 1914 (1978)
 1978GNa I Gorelov, V Nikolskii, A Kapustnikov; Zh.Obshch.Khim., 48, 2596 (1978)
 1978ISc N Ivicic, V Simeon; Thermochim.Acta, 25, 299 (1978)
 1978ITa E Ivashkovich, G Tovt; Zh.Neorg.Khim., 23, 425(237) (1978)
 1978KCa A Kereichuk, I Churikova, V Tikhomirov; Zh.Neorg.Khim., 23, 2436(1345)
 (1978)
 1978KHa D Karweik, C Huber; Anal.Chem.(USA), 50, 1209 (1978)
 1978KIb B Karadakov, H Ivanova; Koord.Khim., 4, 1365 (1978)
 1978KJa M Khan, M Jyoti; J.Inorg.Nucl.Chem., 40, 1731 (1978)
 1978KL a J Kulig, B Lenarcik; Pol.J.Chem., 52, 477 (1978)
 1978KMa M Kabachnik, T Medved et al; Izv.Akad.Nauk(USSR), 2, 433(374) (1978)
 1978KNb S Khurana, I Nigam; J.Inorg.Nucl.Chem., 40, 159 (1978)
 1978KPc I Khalil, M Petit-Ramel et al; Can.J.Chem., 56, 1919 (1978)
 1978KPD R Karliceck, M Palasek, V Jokl; Coll.Czech.Chem.Comm., 43, 2897 (1978)
 1978KUa B Kuznik; Pol.J.Chem., 52, 3 (1978)
 1978LCa H Lundager, H Christensen et al; Acta Chem.Scand., A32, 79 (1978)
 1978LEb N Latosh, M Ermakova, I Shikhova; Zh.Obshch.Khim., 48, 1913 (1978)
 1978LKc B Lenarcik, J Kulig; Pol.J.Chem., 52, 2089 (1978)
 1978LKf L Lajunen, R Kivekas; Z.Naturforsch., 33B, 59 (1978)
 1978LMb A Lappin, A McAuley; J.Chem.Soc., Dalton Trans., 1606 (1978)
 1978LNa B Lenarcik, K Nabialek, M Gabryszewski; Pol.J.Chem., 52, 401 (1978)
 1978LRa B Lenarcik, M Rzepka; Pol.J.Chem., 52, 1629 (1978)
 1978LRb B Lenarcik, M Rzepka; Pol.J.Chem., 52, 447 (1978)
 1978MAb M Mohan, E Abbott; J.Coord.Chem., 8, 175 (1978)
 1978MAc M Mohan, E Abbott; Inorg.Chem., 17, 2203 (1978)
 1978MAd M Mohan, E Abbott; Inorg.Chem., 17, 3083 (1978)
 1978Mca R Mittal, CM Chandra, A Dey; Monatsh.Chem., 109, 953 (1978)
 1978MCb R Mittal, M Chandra, A Dey; Monatsh.Chem., 109, 853 (1978)
 1978MMe R Murmann, B Monzyk; Inorg.Chem., 17, 2461 (1978)
 1978MYa M Munakata, K Yamada; Bull.Chem.Soc.Jpn., 51, 3500 (1978)
 1978NSa T Nozaki, M Sakamoto, K Goto, N Higake; Nippon Kagaku Kaishi, 976 (1978)
 1978RZa E Roletto, V Zelano; Ann.Chim.(Rome), 68, 631 (1978)
 1978SHa M Sugawara, M Hiroto, T Kambara; Fresenius' Z.Anal.Chem., 293, 302 (1978)
 1978SKa I Sovago, T Kiss, A Gergely; J.Chem.Soc., Dalton Trans., 964 (1978)
 1978SKf R Saxena, G Khandelwal; Electrochim.Acta, 23, 953 (1978)
 1978SKj R Sanena, G Khandelwal; J.Indian Chem.Soc., 55, 117 (1978)

1978SPd H Sigel,B Prijs,D McCormick,J Shih; Arch.Biochem.Biophys.,187,208 (1978)
 1978SYa T Sakurai,O Yamauchi,A Nakahara; Bull.Chem.Soc.Jpn.,51,3203 (1978)
 1978TPa J Tummavuori,M Pulkkinen; Finn.Chem.Lett.179 (1978)
 1978VNa Y Vandewalle,J Nicole; Bull.Soc.Chim.Fr.,I,363 (1978)
 1978WIa H Wada,K Ikuta,G Nakagawa; Bull.Chem.Soc.Jpn.,51,2916 (1978)
 1978WNb M Wozniak,G Nowogrocki; Talanta,25,643 (1978)
 1977ACa G Arena,R Cali,E Rizzarelli et al; J.Chem.Soc.,Dalton Trans.,581 (1977)
 1977AHa K Ashurst,R Hancock; J.Chem.Soc.,Dalton Trans.,1701 (1977)
 1977AHb N Al-Niami,H Hamid; J.Inorg.Nucl.Chem.,39,849 (1977)
 1977ANb G Anderegg; Z.Naturforsch.,32B,547 (1977)
 1977ARA R Aruga; J.Inorg.Nucl.Chem.,39,2159 (1977)
 1977ASa N Al-Shatti,M Segal,A Sykes; J.Chem.Soc.,Dalton Trans.,1766 (1977)
 1977ASd S Abbasi,R Singh,M Chattopadhyaya; Roczn.Chem.51,1821 (1977)
 1977ASg F Arnaud-Neu,M Schwing-Weill; Inorg.Nucl.Chem.Lett.,13,17 (1977)
 1977BMf E Bottari,R Montali; Monatsh.Chem.,108,1033 (1977)
 1977Bod M Banon,J Ortega,J Sancho; J.Electroanal.Chem.,78,173 (1977)
 1977BPa G Brookes,L Pettit; J.Chem.Soc.,Dalton Trans.,1918 (1977)
 1977BSa J Bjerrum,L Skibsted; Acta Chem.Scand.,A31,673 (1977)
 1977BSb A Borisova,I Savich; Zh.Fiz.Khim.,51,641 (1977)
 1977CAD E Casassas,J Arias-Leon; J.Chim.Phys.,74,324 (1977)
 1977Cwa I-S Chang,C Willis; Can.J.Chem.,55,2465 (1977)
 1977DOa P Daniele,G Ostacoli; Ann.Chim.(Rome),67,311 (1977)
 1977EEa M El-Ezaby,M El-Dessouky et al; Can.J.Chem.,55,2613 (1977)
 1977EKa E Kwiatkowski; J.Inorg.Nucl.Chem.,39,1611 (1977)
 1977Fza L Fabbriizzi,L Zompa; Inorg.Nucl.Chem.Lett.,13,287 (1977)
 1977GAa O Godinho,L Aleixo; J.Coord.Chem.,6,245 (1977)
 1977GKa A Gergely,T Kiss; J.Inorg.Nucl.Chem.,39,109 (1977)
 1977GNa A Gergely,I Nagypal; J.Chem.Soc.,Dalton Trans.,1104 (1977)
 1977GNb I Gorelov,V Nikolskii; Zh.Obshch.Khim.,47,1696 (1977)
 1977GPb J Gal,F Persin; Bull.Soc.Chim.Fr.,1005 (1977)
 1977HGa G Herman,A Goeminne,Z Eeckhaut; J.Coord.Chem.,7,53 (1977)
 1977JOa J Joshi; Indian J.Chem.,15A,57 (1977)
 1977KDa A Kurganov,V Davankov et al; Koord.Khim.,3,667 (1977)
 1977KFb T Koneva,V Fedorov,G Trofimov; Zh.Fiz.Khim.,51,641 (1977)
 1977KFa T Koneva,V Federov; Zh.Fiz.Khim.,51,793 (1977)
 1977KJa R Karlicek,V Jokl; Collec.Czech.Chem.Comm.,42,637 (1977)
 1977KKb M Kodama,E Kimura; J.Chem.Soc.,Dalton Trans.,1473 (1977)
 1977KMb A Kaneda,A Martell; J.Am.Chem.Soc.,99,1586 (1977)
 1977KSb M Khan,M Schwing-Weill; Bull.Soc.Chim.Fr.,399 (1977)
 1977LBb B Lenarcik,B Barszcz; Roczn.Chem.,51,1849 (1977)
 1977LGa B Lenarcik,M Gabryszewski; Roczn.Chem.51,855 (1977)
 1977LKa B Lenarcik,J Kulig; Roczn.Chem.51,637 (1977)
 1977LSa S Laurie,B Sarkar; J.Chem.Soc.,Dalton Trans.,1822 (1977)
 1977LWa B Lenarcik,M Wisniewski; Roczn.Chem.,51,1625 (1977)
 1977Mca C Makridou,M Cromer-Morin,J-P Scharff; Bull.Soc.Chim.Fr.,59 (1977)
 1977MSc M Micheloni,A Sabatini,A Vacca; Inorg.Chim.Acta,25,41 (1977)
 1977MTb G Morpurgo,A Tomlinson; J.Chem.Soc.,Dalton Trans.,744 (1977)
 1977NGa I Nagypal,A Gergely; J.Chem.Soc.,Dalton Trans.,1109 (1977)
 1977PSb L Pettit,J Swash; J.Chem.Soc.,Dalton Trans.,697 (1977)
 1977SHA Y Sugiura,Y Hirayama; J.Am.Chem.Soc.,99,1581 (1977)

1977SJd S Sjoberg; Acta Chem.Scand.,A31,729 (1977)
 1977SJf S Sjoberg; Acta Chem.Scand.,A31,729 (1977)
 1977SKg T Sato,T Kato; J.Inorg.Nucl.Chem.,39,883 (1977)
 1977SMd B Singhvi,R Mehta; Indian J.Chem.,15A,471 (1977)
 1977SMe T Sekine,R Murai,K Takahashi,S Iwahori; Bull.Chem.Soc.Jpn.,50,3415 (1977)
 1977SNa H Sigel,C Naumann,B Prijs et al; Inorg.Chem.,16,790 (1977)
 1977STd K Shimizu,N Tsuchihashi,Y Kondo; Rev.Phys.Chem.Japan,47,80 (1977)
 1977TIa V Temkina,S Ivaschenko,N Tsirulnikova; Zh.Obshch.Khim.,47,2596 (1977)
 1977TSa I Tabushi,N Shimizu,T Sugindo et al; J.Am.Chem.Soc.,99,7100 (1977)
 1977VMa J Vuceta,J Morgan; Limnol.Oceanography,22,742 (1977)
 1977VNa Y Vandewalle,J Nicole; Bull.Soc.Chim.Fr.,593,829 (1977)
 1976ACb G Arena,R Cali,E Rizzarelli et al; Thermochim.Acta,16,315 (1976)
 1976AGb L-T Ang,D Graddon; Australian J.Chem.,29,565 (1976)
 1976AMc L Antolini,L Menabue et al; Anal.Chim.Acta,83,337 (1976)
 1976BBd R Barbucci,M Budini; J.Chem.Soc.,Dalton Trans.,1321 (1976)
 1976BBE A Basak,D Banerjea; Indian J.Chem.,14A,184 (1976)
 1976BFa J Beattie,D Fenson,H Freeman; J.Am.Chem.Soc.,98,500 (1976)
 1976BMb R Bonomo,S Musumeci et al; Talanta,23,253 (1976)
 1976BMe A Braibanti,G Mori,F Dallavalle; J.Chem.Soc.,Dalton Trans.,826 (1976)
 1976BPb G Brookes,L Pettit; J.Chem.Soc.,Dalton Trans.,42 (1976)
 1976Cwd B Carlsson,G Wettermark; J.Inorg.Nucl.Chem.,38,1525 (1976)
 1976DOb P Daniele,G Ostacoli; Ann.Chim.(Rome),66,387 (1976)
 1976DOc P Daniele,G Ostacoli; Ann.Chim.(Rome),66,511 (1976)
 1976FJa G Fazakerly,G Jackson et al; J.Inorg.Nucl.Chem.,38,1397 (1976)
 1976GFa B Grabaric,I Filipovic; Croat.Chem.Acta,48,17 (1976)
 1976GKc A Gergely,T Kiss; Inorg.Chim.Acta,16,51 (1976)
 1976GNb A Gergely,I Nagypal; Magyar Kem.Foly.,82,442 (1976)
 1976GPb M Gold,H Powell; J.Chem.Soc.,Dalton Trans.,230 (1976)
 1976GPd H Girdhar,S Parveen,M Puri; Indian J.Chem.,14A,1021 (1976)
 1976GSd A Gergely,I Sovago; Inorg.Chim.Acta,20,19,27 (1976)
 1976HBd B Hurnik,E Banaszak; Rocz.Chem.50,2035 (1976)
 1976HEa A El-Hilaly,M El-Ezaby; J.Inorg.Nucl.Chem.,38,1533 (1976)
 1976IBa L Ilcheva,J Bjerrum; Acta Chem.Scand.,A30,343 (1976)
 1976JBa R Jameson,N Blackburn; J.Chem.Soc.,Dalton Trans.,534 (1976)
 1976KBa L Kulvinova,V Blokhin,V Mironov; Zh.Fiz.Khim.,50,1287(773) (1976)
 1976KFb T Koneva,V Federov; Zh.Neorg.Khim.,21,1132 (1976)
 1976KGa I Kruhac,B Grabaric,I Filipovic et al; Croat.Chem.Acta,48,119 (1976)
 1976KIa B Karadakov,C Ivanova; Zh.Neorg.Khim.,21,106(56) (1976)
 1976KIc T Kotani,I Ichimoto,C Tatsumi,T Fujita; Agr.Biol.Chem.,40,765 (1976)
 1976KKg R Karlsson,L Kullberg; Chemica Scripta,9,54 (1976)
 1976KSc M Khan,M Schwing-Weill; Inorg.Chem.,15,2202 (1976)
 1976Kta E Kwiatkowski,J Trojanowski; J.Inorg.Nucl.Chem.,38,131 (1976)
 1976Lkb B Lenarcik,J Kulig,B Barszcz; Rocz.Chem.50,183 (1976)
 1976LMb Z Libus,W Maciejewski; Rocz.Chem.50,1661 (1976)
 1976LUa D Linke,E Uhlig; Z.Anorg.Allg.Chem.,422,243 (1976)
 1976LWa B Lenarcik,M Wisniewski,M Gabryszewski; Rocz.Chem.50,407 (1976)
 1976MDa T Medved,N Dyatlova et al; Izv.Akad.Nauk(USSR),5,1018(992) (1976)
 1976MDb D McMillin,R Drago,J Nusz; J.Am.Chem.Soc.,98,3120 (1976)
 1976MMA R Motekaitis,I Murase,A Martell; Inorg.Chem.,15,2303 (1976)

1976NGd I Nagypal,A Gergely; Magyar Kem.Foly.,82,448 (1976)
 1976PPb J Pinart,C Petitfaux,A Roy; Bull.Soc.Chim.Fr.,683 (1976)
 1976PPd C Panda,R Patnaik; Indian J.Chem.,14A,446 (1976)
 1976PSa L Pettit,J Swash; J.Chem.Soc.,Dalton Trans.,2416 (1976)
 1976PSb L Pettit,J Swash; J.Chem.Soc.,Dalton Trans.,588 (1976)
 1976RLa N Raghavan,D Leussing; J.Am.Chem.Soc.,98,723 (1976)
 1976RRb K Rengaraj,V Ramanujam; Indian J.Chem.,14A,451 (1976)
 1976SGa I Sovago,A Gergely; Inorg.Chim.Acta,20,27 (1976)
 1976SHb Y Sugiura,Y Hirayama; Inorg.Chem.,15,679 (1976)
 1976SOa H Sakurai,H Okumutu,S Takeshima; Yakugaku Zasshi,96,242 (1976)
 1976TIa V Temkina,S Ivaschenko et al; Zh.Obshch.Khim.,46,501 (1976)
 1976VOa J Velasco,J Ortega,J Sancho; J.Inorg.Nucl.Chem.,38,889 (1976)
 1976WAa Z Warnke; Roczn.Chem.50,1801 (1976)
 1976WVa C Watkins,G Vigee; J.Phys.Chem.,80,83 (1976)
 1976YGa P Yadava,A Glose,K Yadava,A Dey; Chromatogr.,9,410 (1976)
 1976YZa R Yang,L Zompa; Inorg.Chem.,15,1499 (1976)
 1975ADa H Asawa,L Dhoot; Z.Phys.Chem.,256,841 (1975)
 1975APc G Anderegg,N Podder et al; J.Coord.Chem.,4,267 (1975)
 1975ARa R Aruga; J.Chem.Soc.,Dalton Trans.2534 (1975)
 1975BAa R Barbucci; Inorg.Chim.Acta,12,113 (1975)
 1975BFa C Bianchini,L Fabbriizzi,P Paoletti; J.Chem.Soc.,Dalton Trans.1036 (1975)
 1975BGb E Bottari,G Goretti; Monatsh.Chem.,106,1337 (1975)
 1975BMa A Braibanti,G Mori et al; J.Chem.Soc.,Dalton Trans.1319 (1975)
 1975BMb P Brignac,C Mo; Anal.Chem.(USA),47,1465 (1975)
 1975BMD R Bonomo,S Musumeci,E Rizzarelli et al; Inorg.Chim.Acta,14,251 (1975)
 1975BPa G Brookes,L Pettit; J.Chem.Soc.,Dalton Trans.2106 (1975)
 1975BPd R Barbucci,P Paoletti,A Vacca; Inorg.Chem.,14,302 (1975)
 1975BWA A Baxter,D Williams; J.Chem.Soc.,Dalton Trans.1757 (1975)
 1975DBa T Dorigatti,E Billo; J.Inorg.Nucl.Chem.,37,1515 (1975)
 1975DBd U Doraswamy,P Bhattacharya; Indian J.Chem.,13,1069 (1975)
 1975DDa M DeRonde,D Driscoll et al; Inorg.Nucl.Chem.Lett.,11,521 (1975)
 1975DNa A Das,V Nair; J.Inorg.Nucl.Chem.,37,991 (1975)
 1975DNc A Das,V Nair; J.Inorg.Nucl.Chem.,37,2121 (1975)
 1975DND A Das,V Nair; J.Inorg.Nucl.Chem.,37,2125 (1975)
 1975DOa P Daniele,G Ostacoli,A Vanni; Ann.Chim.(Rome),65,465 (1975)
 1975DPb K Dubey,M Puri; Rev.Chim.Minerale,12,255 (1975)
 1975EaA P Ernst H Allen,K Mancy; Water Research,9,969 (1975)
 1975FPa I Filipovic,I Piljac et al; Anal.Chim.Acta,76,224 (1975)
 1975FSc S Feltch,J Stuehr,G Tin; Inorg.Chem.,14,2175 (1975)
 1975GCa M Gennaro,E Campi; Ann.Chim.(Rome),65,549 (1975)
 1975GHa C Gerard,R Hugel; Bull.Soc.Chim.Fr.,2404 (1975)
 1975GMA B Grabaric,B Mayer,I Piljac,I Filipovic; Electrochim.Acta,20,799 (1975)
 1975GNa A Gergely,I Nagypal,E Farkas; J.Inorg.Nucl.Chem.,37,551 (1975)
 1975GTa B Grabaric,M Tkalcec,I Piljak; Anal.Chim.Acta,74,147 (1975)
 1975HMc M Hariharan,R Motekaitis,A Martell; J.Org.Chem.,40,470 (1975)
 1975HSb H Henning,K Schulze,M Muhlstadt; Z.Anorg.Allg.Chem.,412,10 (1975)
 1975IPa M Israeli,L Pettit; J.Chem.Soc.,Dalton Trans.414 (1975)
 1975IPb M Israeli,L Pettit; J.Inorg.Nucl.Chem.,37,999 (1975)
 1975ITa S Ivaschenko,V Temkina et al; Koord.Khim.,1,520(420) (1975)
 1975JBb J Joshi,P Bhattacharya; Indian J.Chem.,13,88 (1975)

1975JKa D Jahagirdar,D Khanolkar; Indian J.Chem.,13,168 (1975)
 1975JLb L Johansson,R Larsson; Chemica Scripta,7,67 (1975)
 1975JOa L Johansson; Chemica Scripta,7,102 (1975)
 1975JPa T Janjic,L Pfendt; Bull.Soc.Chim.Beograd,40,221 (1975)
 1975JTa R Jellish,L Thompson; J.Coord.Chem.,4,199 (1975)
 1975KAe R Karlicek; Collec.Czech.Chem.Comm.,40,3825 (1975)
 1975KHa R Keen,D House,H Powell; J.Chem.Soc.,Dalton Trans.688 (1975)
 1975KMe A Kaneda,A Martell; J.Coord.Chem.,4,137 (1975)
 1975KNa S Khurana,I Nigam et al; Australian J.Chem.,28,1617 (1975)
 1975KTa E Kwiatkowski,J Trojanowski; J.Inorg.Nucl.Chem.,37,979 (1975)
 1975LAa L Lajunen; Finn.Chem.Lett.1 (1975)
 1975LPa D Laing,L Pettit; J.Chem.Soc.,Dalton Trans.2297 (1975)
 1975LRa C -T Lin,D Rorabacher et al; Inorg.Chem.,14,919 (1975)
 1975MJa A Maheshwari,D Jain,J Gaur; J.Inorg.Nucl.Chem.,37,805 (1975)
 1975MJc A Maheshwari,D Jain,J Gaur; Monatsh.Chem.,106,1033 (1975)
 1975MMe G McLendon,D MacMillan et al; Inorg.Chem.,14,2322 (1975)
 1975MNa S Morozova,L Nikitina,N Dyallova et al; Zh.Neorg.Khim.,20,413 (1975)
 1975MSa Y Makashev,M Shalaevskaia et al; Zh.Fiz.Khim.,49,837 (1975)
 1975MTc M Miyazaki,K Toei; Talanta,27,929 (1975)
 1975NMB N Nakasuka,R-P Martin,J-P Scharff; Bull.Soc.Chim.Fr.,1973 (1975)
 1975Nwa G Nakagawa,H Wada,T Hayakawa; Bull.Chem.Soc.Jpn.,48,424 (1975)
 1975ODa G Ostacoli,P Daniele,A Vanni; Ann.Chim.(Rome),65,197 (1975)
 1975PBb P Parkish,P Bhattacharya; Indian J.Chem.,13,190 (1975)
 1975PGa I Piljac,B Grabaric,M Tkalec et al; Croat.Chem.Acta,47,105 (1975)
 1975PTd C Phan,L Tosi,A Garnier; J.Inorg.Nucl.Chem.,37,2385 (1975)
 1975RIb J Ritsma; Rec.Trav.Chim.,94,210 (1975)
 1975RPa V Romano,T Pizzino et al; Inorg.Nucl.Chem.Lett.,11,177 (1975)
 1975RSa V Rheinberger,H Sigel; Naturwissenschaft,4,182 (1975)
 1975SDa J Smith,V Doctor; J.Inorg.Nucl.Chem.,37,775 (1975)
 1975SIa H Sigel; Inorg.Chem.,14,1535 (1975)
 1975SJa E Sase,D Jahagirdar; J.Inorg.Nucl.Chem.,37,985 (1975)
 1975SPa M M-Santos,J Pinto et al; J.Solution Chem.,4,31 (1975)
 1975SPb H Sigel,B Prijs; Chimia,29,134 (1975)
 1975SSb R Sanyal,P Srivastava et al; J.Inorg.Nucl.Chem.,37,343 (1975)
 1975SSd I Sostaric,V Simeon; Monatsh.Chem.,106,169 (1975)
 1975TAa R Tamamushi; Bull.Chem.Soc.Jpn.,48,705 (1975)
 1975TQa P Tedesco,J Gonzalez-Quintana; J.Inorg.Nucl.Chem.,37,1798 (1975)
 1975VOa J Velasco,J Ortega,J Sancho; An.Quim.,71,706 (1975)
 1975Vsa H Verma,M Srivastava; J.Inorg.Nucl.Chem.,37,601 (1975)
 1975WTb N Watanabe,S Takamoto; Bull.Chem.Soc.Jpn.,48,2211 (1975)
 1975YYa H Yokoyama,H Yamatera; Bull.Chem.Soc.Jpn.,48,2708,2719 (1975)
 1974ARc R Aruga; Ann.Chim.(Rome),64,439 (1974)
 1974ARd R Aruga; Ann.Chim.(Rome),64,659 (1974)
 1974BFb R Barbucci,L Fabbrizzi,P Paoletti; J.Chem.Soc.,Dalton Trans.,2403 (1974)
 1974BJa E Bottari R Jasionowska et al; Ann.Chim.(Rome),65,69 (1974)
 1974Bma E Belousov,V Mironov et al; Zh.Fiz.Khim.,48,1521(892) (1974)
 1974BRa V Blokhin,L Razmyslova,Y Makashev et al; Zh.Fiz.Khim.,48,152(E:82) (1974)
 1974BRb V Blokhin,L Razmyslova et al; Zh.Fiz.Khim.,48,469(E:275) (1974)
 1974BVa R Barbucci,A Vacca; J.Chem.Soc.,Dalton Trans.,2363 (1974)

1974BWa A Baxter,D Williams; J.Chem.Soc.,Dalton Trans.,1117 (1974)
 1974CPa Y Couturier,C Petitfaux; Bull.Soc.Chim.Fr.,855 (1974)
 1974DFa E Dazzi,M Falqui; Gazz.Chim.Ital.,104,589 (1974)
 1974DGa D Dakternieks,D Graddon; Australian J.Chem.,27,1351 (1974)
 1974FMa T Field,J McCourt,W McBryde; Can.J.Chem.,52,3119 (1974)
 1974GCa S Gifford,W Cherry et al; Inorg.Chem.,13,1434 (1974)
 1974GMB B Grabaric,B Mayner,I Piljac et al; J.Inorg.Nucl.Chem.,36,3809 (1974)
 1974GNa F Gronlund,S Noer; J.Electrochem.Soc.,121,25 (1974)
 1974GNc A Gergely,I Nagypal,T Kiss,R Kiraly; Acta Chim.Acad.Sci.Hung.,82,257
 (1974)
 1974GNe A Gergely,I Nagypal,T Kiss,R Kiraly; Magyar Kem.Foly.,80,181 (1974)
 1974GNf A Gergely,I Nagypal,E Farkas; Magyar Kem.Foly.,80,25 (1974)
 1974GOB D Graddon,W Ong; Australian J.Chem.,27,741 (1974)
 1974GVA P Gans,A Vacca; Talanta,21,45 (1974)
 1974HGa A Hulanicki,M Galus,B Taboryska; Roczn.Chem.48,573 (1974)
 1974HSA L Harju,R Sara; Anal.Chim.Acta,73,129 (1974)
 1974HTa F Herring,R Tapping; J.Phys.Chem.,78,316 (1974)
 1974ILa M Israeli,D Laing,L Pettit; J.Chem.Soc.,Dalton Trans.,2194 (1974)
 1974JOa E John; Roczn.Chem.48,1809 (1974)
 1974KJa V Khanolkar,D Jahagirdar et al; Indian J.Chem.,12,870 (1974)
 1974KKa M Taqui-Khan,C Krishnamoorthy; J.Inorg.Nucl.Chem.,36,711 (1974)
 1974KMc A Kaneda,A Martell; J.Coord.Chem.,4,137 (1974)
 1974KUa L Kullberg; Acta Chem.Scand.,A28,829 (1974)
 1974KZa T Kaden,A Zuberbuhler; Helv.Chim.Acta,57,286 (1974)
 1974LKa B Lenarcik,J Kulig,P Laidler; Roczn.Chem.48,1151 (1974)
 1974LVA P Lumme,P Virtanen; Acta Chem.Scand.,A28,1055 (1974)
 1974MAa S Misumi,M Aihara et al; Bull.Chem.Soc.Jpn.,47,127 (1974)
 1974MIa P Migal,E Ivanova; Zh.Neorg.Khim.,19,558(302) (1974)
 1974MId M Mihailov; J.Inorg.Nucl.Chem.,36,107 (1974)
 1974MSd G Makovskaya,V Spivakovskii; Zh.Neorg.Khim.,19,585(E:316) (1974)
 1974MSe Y Makashev,M Shalaevskaya et al; Zh.Fiz.Khim.,48,2066(E:1219) (1974)
 1974MWA G Makar,D Williams; J.Inorg.Nucl.Chem.,36,1675 (1974)
 1974MWb G Makar,D Williams; J.Chem.Soc.,Dalton Trans.,1121 (1974)
 1974NBb R Nakon,E Beadle,R Angelici; J.Am.Chem.Soc.,96,719 (1974)
 1974NDa R Nanda,A Dash; J.Inorg.Nucl.Chem.,36,1595 (1974)
 1974NGa I Nagypal A Gergely,E Farkas; J.Inorg.Nucl.Chem.,36,699 (1974)
 1974NKA L Nikitina,L Karmasina,N Dyatlova; Zh.Neorg.Khim.,19,3058(1671) (1974)
 1974OVA M Ohlsson,N-G Vannerberg; Acta Chem.Scand.,A28,1021 (1974)
 1974PBB P Parikh,P Bhattacharya; Indian J.Chem.,12,402 (1974)
 1974PPa B Palmer,H Powell; J.Chem.Soc.,Dalton Trans.,2089 (1974)
 1974RKC M Petit-Ramel,I Khalil; Bull.Soc.Chim.Fr.,1255 (1974)
 1974SCa L Schischkova; Compt.Rend.Acad.Bulg.Sci.,27,1545 (1974)
 1974SJa K Schroder,B Johnsen; Talanta,21,671 (1974)
 1974WAb Z Warnke; Roczn.Chem.48,1205 (1974)
 1974WBA D Winkelmann,J Bermke,D Petering; Bioinorg.Chem.,3,261 (1974)
 1974WNB M Wozniak,G Nowogrocki; Bull.Soc.Chim.Fr.,435. (1974)
 1974WPa J Williams,S Pettrucci et al; Inorg.Chem.,13,1968 (1974)
 1974WYA H Waki K Yoshimura,S Ohashi; J.Inorg.Nucl.Chem.,36,1337 (1974)
 1974YAA A Yokoyama,H Aiba,H Tanaka; Bull.Chem.Soc.Jpn.,47,112 (1974)
 1974YKA T Yano,H Kobayashi,K Ueno; Bull.Chem.Soc.Jpn.,47,3033 (1974)

1973AHc T Arishima,K Hamada,S Takamoto; Nippon Kagaku Kaishi,1119 (1973)
 1973AMc N Arkhipova,A Muftakhov,K Rakhimov; Zh.Neorg.Khim.,18,331;336 (1973)
 1973BCb A Bellomo,A Casale et al; Talanta,20,335 (1973)
 1973BDdb A Braibanti,F Dallavalle,E Leporati; J.Chem.Soc.,Dalton Trans.,2539 (1973)
 1973BDd N Barkhanova,N Dyatlova,A Fridman; Zh.Neorg.Khim.,18,432;1489 (1973)
 1973BFa R Barbucci,L Fabbriizzi,P Paoletti; Inorg.Chim.Acta,7,157 (1973)
 1973BFd N Barkhanova,A Fridman,N Dyatlova; Zh.Neorg.Khim.,18,2,432 (1973)
 1973BKd E Belousov,K Konstantinova et al; Zh.Fiz.Khim.,47,1869(E:1053) (1973)
 1973CAa E Chiacchierini,G D'Angelis et al; Gazz.Chim.Ital.,103,387;413 (1973)
 1973CBa M Chidambaran,P Bhattacharya; Acta Chim.Acad.Sci.Hung.,75,123 (1973)
 1973CLa G Cauquis,D Lachenal; J.Electroanal.Chem.,46,41 (1973)
 1973CPa Y Couturier,C Petitfaux; Bull.Soc.Chim.Fr.,439;445 (1973)
 1973CSb R Chawla,R Singh; Microchem.J.,18,646 (1973)
 1973DFa A Diamond,A Fanelli,S Petrucci; Inorg.Chem.,12,611 (1973)
 1973FDa Y Fridman,N Dolgashova,D Sarbaev et al; Zh.Neorg.Khim.,18,176 (1973)
 1973FRa V Fedorov,I Robov,I Shmydko et al; Zh.Neorg.Khim.,18,342(E:180) (1973)
 1973GGa H Gamsjager,F Gerber,O Antonsen; Chimia,27,94 (1973)
 1973GSb A Gergely,I Sovago; J.Inorg.Nucl.Chem.,35,4355 (1973)
 1973HAc L Harju; Suomen Kem.,B46,199 (1973)
 1973HHb M Hutchinson,W Higginson; J.Chem.Soc.,Dalton Trans.,1247 (1973)
 1973HPa G Hedwig,H Powell; J.Chem.Soc.,Dalton Trans.,793;798;1942 (1973)
 1973HRA E Hansen,J Ruzicka; Talanta,20,1105 (1973)
 1973IVa J Israeli,R Volpe; Bull.Soc.Chim.Fr.,43 (1973)
 1973KDD V Kalibabchuk,V Didkovsky et al; Zh.Obshch.Khim.,4,6,1226 (1973)
 1973KKc F Karczynski,G Kupryszewski et al; Roczn.Chem.,47,1151 (1973)
 1973KPb I Khalil,M Petit-Ramel; Bull.Soc.Chim.Fr.,1908 (1973)
 1973KSb T Kruck,B Sarkar; Can.J.Chem.,51,3549;3555 (1973)
 1973LIa Z Libus; Inorg.Chem.,12,2972 (1973)
 1973MSd M Mittal,R Saxena,A Pandey; J.Inorg.Nucl.Chem.,35,1691 (1973)
 1973NAa R Nakon,R Angelici; Inorg.Chem.,12,1269 (1973)
 1973NGa I Nagypal,A Gergely,E Farkas; Magyar Kem.Foly.,79,303 (1973)
 1973NHb T Nozaki,T Hashimoto; Nippon Kagaku Kaishi,1794 (1973)
 1973NMB T Nozaki,T Mise,K Torii; Nippon Kagaku Kaishi,2030 (1973)
 1973ODa G Ostacoli,P Daniele,A Vanni; Ann.Chim.(Rome),63,815 (1973)
 1973PBa N Parthasarathy,J Buffle et al; Chimia,27,368 (1973)
 1973PEa C Petitfaux; Ann.Chim.,(France),8,33 (1973)
 1973POa H Powell; J.Chem.Soc.,Dalton Trans.,1947 (1973)
 1973RAC R Romanetti,G Antonetti,J Galea; J.Chim.Phys.,70,1709 (1973)
 1973RMA S Ramamoorthy,P Manning; J.Inorg.Nucl.Chem.,35,1279 (1973)
 1973SAe R Snyder,R Angelici; J.Inorg.Nucl.Chem.,35,523;528 (1973)
 1973SCc M Schwing-Weill; Bull.Soc.Chim.Fr.,823 (1973)
 1973SHA H Sigel,P Huber,R Griesser,B Prijs; Inorg.Chem.,12,1198 (1973)
 1973SIA T Suarez,R Iwamoto,J Kleinberg; Inorg.Chim.Acta,7,292 (1973)
 1973SJa S Sjoberg; Acta Chem.Scand.,27,3721 (1973)
 1973SKb G Sergeev,I Koshunov; Radiokhim.,15,4,618;621 (1973)
 1973SSE M Singh,M Srivastava; J.Inorg.Nucl.Chem.,35,2433 (1973)
 1973SSH Z Sheka,E Sinyavskaya et al; Ukr.Khim.Zh.,39,454 (1973)
 1973TKa M Taqui-Khan,C Krishnamoorthy; J.Inorg.Nucl.Chem.,35,1285 (1973)
 1973TRA M Taqui-Khan,P Reddy; J.Inorg.Nucl.Chem.,35,179 (1973)

1973TRC P Tedesco,V Rumi et al; J.Inorg.Nucl.Chem.,35,285;287 (1973)
 1973TSb R Tewari,M Srivastava; J.Inorg.Nucl.Chem.,35,2441;3044 (1973)
 1973VNa S Vassershtein,N Nam; Zh.Neorg.Khim.,18,4,1028 (1973)
 1973WIa D Williams; J.Chem.Soc.,Dalton Trans.,1064 (1973)
 1973YBa O Yamauchi,H Benno,A Nakahara; Bull.Chem.Soc.Jpn.,46,3458 (1973)
 1973YNa O Yamauchi,Y Nakao,A Nakahara; Bull.Chem.Soc.Jpn.,46,2119 (1973)
 1973YNb O Yamauchi,Y Nakao,A Nakahara; Bull.Chem.Soc.Jpn.,46,3749 (1973)
 1973YOa H Yokoi,M Otagiri,T Isobe; Bull.Chem.Soc.Jpn.,46,442 (1973)
 1973ZGa V Zolotukhin,Z Galanets,V Korotya; Ukr.Khim.Zh.,39,1059 (1973)
 1972ADb H Asawa,L Dhoot; Z.Phys.Chem.,250,180 (1972)
 1972AGc R Aliev,M Guseinov,A Kuliev; Zh.Fiz.Khim.,46,2657(E:1520) (1972)
 1972AMa N Arkhipova,A Muftakhov et al; Zh.Neorg.Khim.,17,11,2952 (1972)
 1972APa E Arenare,P Paoletti,A Dei,A Vacca; J.Chem.Soc.,Dalton Trans.,736 (1972)
 1972AUa W Achilles,E Uhlig; Z.Anorg.Allg.Chem.,390,225 (1972)
 1972BBc A Brunetti,E Burke,M Lim,G Nancollas; J.Solution Chem.,1,153 (1972)
 1972BFa R Barbucci,L Fabbriizzi,P Paoletti; J.Chem.Soc.,Dalton Trans.,1099 (1972)
 1972BFb R Barbucci,L Fabbriizzi,P Paoletti et al; J.Chem.Soc.,Dalton
 Trans.,740;745 (1972)
 1972BFd N Barkhanova,A Fridman,N Dyatlova; Zh.Neorg.Khim.,17,11,2982 (1972)
 1972BHc A Bond,G Hefter; J.Inorg.Nucl.Chem.,34,603 (1972)
 1972BPc R Barbucci,P Paoletti,L Fabbriizzi; J.Chem.Soc.,Dalton Trans.,2593 (1972)
 1972BVa E Bottari,M Vicedomini; Gazz.Chim.Ital.,102,902 (1972)
 1972CMc S Chang,J Ma,J Wang,N Li; J.Coord.Chem.,2,31 (1972)
 1972DCa A Davis,C Chong; Inorg.Chem.,11,1891 (1972)
 1972DFa D Dyrssen,K Falk,E Ivanova; Acta Chem.Scand.,26,3865 (1972)
 1972DTa G Duc,G Thomas; Bull.Soc.Chim.Fr.,4439 (1972)
 1972FDC A Foll,M le Demezset,J Courtot-Coupez; J.Electroanal.Chem.,35,41 (1972)
 1972FGb G Ford,P Gans,L Pettit,C Sherrington; J.Chem.Soc.,Dalton Trans.,1763
 (1972)
 1972GHb M Galus,A Hulanicki; Chem.Anal.(Warsaw),17,739 (1972)
 1972GKb J Gross,C Keller; J.Inorg.Nucl.Chem.,34,725 (1972)
 1972GMB A Gergely,J Mojzes,Z Kassai-Bazsa; J.Inorg.Nucl.Chem.,34,1277 (1972)
 1972GSc A Gergely,I Sovago,I Nagypal,R Kiraly; Inorg.Chim.Acta,6,435 (1972)
 1972HJa J Hall,E Joseph,M Gum; J.Electroanal.Chem.,34,529 (1972)
 1972IJb R Izatt,H Johnson,J Christensen; J.Chem.Soc.,Dalton Trans.,1152 (1972)
 1972INa T Ii,G Nancollas; Inorg.Chem.,11,2414 (1972)
 1972IVa J Israeli,R Volpe; Bull.Soc.Chim.Fr.,1277 (1972)
 1972IVb J Israeli,R Volpe; Bull.Soc.Chim.Fr.,1681 (1972)
 1972IVc J Israeli,R Volpe; Inorg.Chim.Acta,6,5 (1972)
 1972JKA D Jahagirdar,D Khanolkar; J.Indian Chem.Soc.,49,1105 (1972)
 1972JPa T Janjic,L Pfendt; Glas.Hem.Drus.,Beograd,37,233 (1972)
 1972JWa R Jameson,M Wilson; J.Chem.Soc.,Dalton Trans.,2607;2610/4/7 (1972)
 1972KKd E Kassierer,A Kertes; J.Inorg.Nucl.Chem.,34,3209;3221 (1972)
 1972KMB R Karlicek,J Majer; Collec.Czech.Chem.Comm.,37,151 (1972)
 1972KPd F Karczynski,M Puscasu; Roczn.Chem.,46,1489 (1972)
 1972LPb P Lumme,K Ponkala; Suomen Kem.,B45,52 (1972)
 1972LRa L Listova,A Ryabinina; Geokhim.,1380 (1972)
 1972LUC P Lumme; Suomen Kem.,B45,27 (1972)
 1972NBa M Newman,D Busch,G Chesney,C Gustafson; Inorg.Chem.,11,2890 (1972)
 1972NSa E Almeida Neves,P Senise; J.Inorg.Nucl.Chem.,34,1915 (1972)

19720Ka H Ohtaki, T Kawai; Bull.Chem.Soc.Jpn., 45, 1735 (1972)
 19720Sa M Osman; Helv.Chim.Acta, 55, 239 (1972)
 1972PBd M Petit-Ramel, C Blanc; J.Inorg.Nucl.Chem., 34, 1241 (1972)
 1972PEb S Pelletier; J.Chim.Phys., 69, 751 (1972)
 1972PFa C Petitfaux, R Fournaise; Bull.Soc.Chim.Fr., 914 (1972)
 1972PIa K Pitzer; J.Chem.Soc., Faraday Trans.II, 68, 101 (1972)
 1972PPc M Petit-Ramel, M Paris, C Blanc; J.Inorg.Nucl.Chem., 34, 1253 (1972)
 1972PSc G Prokhorova, L Shpigun, E Vinogradova; Zh.Anal.Khim., 27, 780 (1972)
 1972Rba D Rorabacher, B Blencoe, D Parker; Anal.Chem., 44, 2339 (1972)
 1972RGa S Ramamoorthy, C Guarnaschelli; J.Inorg.Nucl.Chem., 34, 1651 (1972)
 1972Rma S Ramamoorthy, P Manning; J.Inorg.Nucl.Chem., 34, 1977; 1989 (1972)
 1972Rmb S Ramamoorthy, P Manning, C Guarnaschelli; J.Inorg.Nucl.Chem., 34, 3443 (1972)
 1972RVh E Roletto, A Vanni, G Ostacoli; J.Inorg.Nucl.Chem., 34, 2817 (1972)
 1972SCa J Scharff; Bull.Soc.Chim.Fr., 413 (1972)
 1972SDc D Sokolskii, Y Dortman, N Evtikov; Zh.Fiz.Khim., 46, 3118(E:1779) (1972)
 1972SGa H Sigel, R Griesser, D McCormick; Inorg.Chim.Acta, 6, 559 (1972)
 1972SGb R Swaroop, Y Gupta; J.Chem.Soc., Dalton Trans., 851 (1972)
 1972SGd H Sigel, R Griesser, B Prijs; Z.Naturforsch., 27B, 353 (1972)
 1972SJa S Sjöberg; Acta Chem.Scand., 26, 3400 (1972)
 1972SLa V Sharma, D Leussing; Inorg.Chem., 11, 138 (1972)
 1972Snd P Senise, E Almeida Neves; J.Inorg.Nucl.Chem., 34, 1923 (1972)
 1972Sob K Sawada, H Ohtaki, M Tanaka; J.Inorg.Nucl.Chem., 34, 3455 (1972)
 1972Soc K Sawada, H Ohtaki, M Tanaka; J.Inorg.Nucl.Chem., 34, 625 (1972)
 1972SSa J Savic, M Savic, I Filipovic; Croat.Chem.Acta, 44, 305 (1972)
 1972UCa M Urdaneta, M Collados; An.Quim., 68, 235 (1972)
 1972WIb D Williams; J.Chem.Soc., Dalton Trans., 790 (1972)
 1972WNa M Wozniak, J Nicole, G Tridot; Analusis, 1, 498 (1972)
 1972WNb M Wozniak, J Nicole, G Tridot; Bull.Soc.Chim.Fr., 4445 (1972)
 1972YIa A Yingst, R Izatt, J Christensen; J.Chem.Soc., Dalton Trans., 1199 (1972)
 1972YSa H Yokoi, M Sai, T Isobe; Bull.Chem.Soc.Jpn., 45, 1100 (1972)
 1971AAa J Allison, R Angelici; Inorg.Chem., 10, 2233; 2238 (1971)
 1971ACa S Andreev, A Chaiko; Zh.Neorg.Khim., 16, 1965(E:1045) (1971)
 1971AGa S Ajayi, D Goddard; J.Chem.Soc.(A), 2673 (1971)
 1971ANA G Anderegg; Helv.Chim.Acta, 54, 509 (1971)
 1971APa L Albota, A Pavlinova, R Khomitskaya; Invest.VUZ.Khim., 14, 5, 675 (1971)
 1971AWa G Anderegg, F Wenk; Helv.Chim.Acta, 54, 216 (1971)
 1971BAB P Bianco, M Asso, J Haladjian; Bull.Soc.Chim.Fr., 3943 (1971)
 1971BAD V Blokhin, V Anufrienko, Y Makashev et al; Zh.Fiz.Khim., 45, 1860(E:1062) (1971)
 1971BDc A Braibanti, F Dallavalle et al; Inorg.Chim.Acta, 5, 449 (1971)
 1971BJa J Becka, J Jokl; Collec.Czech.Chem.Comm., 36, 3263 (1971)
 1971BPi D Barnes, L Pettit; J.Inorg.Nucl.Chem., 33, 2177 (1971)
 1971BVb E Bottari, M Vicedomini; J.Inorg.Nucl.Chem., 33, 1463 (1971)
 1971CAF T Chernova, K Astakhov; Zh.Fiz.Khim., 45, 5, 1114 (1971)
 1971Cwa R Childers, R Wentworth, L Zompa; Inorg.Chem., 10, 302 (1971)
 1971FPa G Ford, L Pettit, C Sherrington; J.Inorg.Nucl.Chem., 33, 4119 (1971)
 1971GDa D Giron, M Duc, G Thomas; Compt.Rend., 272C, 1022 (1971)
 1971GHa D Graddon, K Heng; Australian J.Chem., 24, 1059; 1781 (1971)
 1971GHC D Graddon, C Hsu; Australian J.Chem., 24, 2267 (1971)

1971GKa A Gergely, B Kiraly, I Nagypal et al; Acta Chim.Acad.Sci.Hung., 67, 133 (1971)

1971GNa A Gergely, I Nagypal, I Sovago; Acta Chim.Acad.Sci.Hung., 67, 241 (1971)

1971GRa R Green, M Rogerson; Australian J.Chem., 24, 65 (1971)

1971GSb R Griesser, H Sigel; Inorg.Chem., 10, 2229 (1971)

1971HBB H Hauer, E Billo, D Margerum; J.Am.Chem.Soc., 93, 4173 (1971)

1971HGC P Huber, R Griesser, H Sigel; Inorg.Chem., 10, 945 (1971)

1971HMc R Hay, P Morris; J.Chem.Soc.(A), 1518 (1971)

1971HMD R Hay, P Morris; J.Chem.Soc.(A), 3562 (1971)

1971HPa E Hanna, A Pethybridge, J Prue; Electrochim.Acta, 16, 677 (1971)

1971HSA J Hall, R Simmons, E Morita et al; Anal.Chem., 43, 634 (1971)

1971ICa J Israeli, J Cayouette; Can.J.Chem., 49, 199 (1971)

1971ICb J Israeli, J Cayouette; J.Inorg.Nucl.Chem., 33, 1523 (1971)

1971ICC J Israeli, J Cayouette, R Volpe; Talanta, 18, 737 (1971)

1971IVb J Israeli, R Volpe; J.Inorg.Nucl.Chem., 33, 4358 (1971)

1971KAc K Khakimov, M Azimov, K Khakimova; Zh.Neorg.Khim., 16, 1, 128 (1971)

1971KGa A Klygin, V Glebov, V Lekae et al; Zh.Neorg.Khim., 16, 1590(E:840) (1971)

1971KLa J Krajewski, T Lipiec; Roczn.Chem., 45, 1613 (1971)

1971KMc R Karlicek, J Majer; Collec.Czech.Chem.Comm., 36, 101 (1971)

1971KOa H Koshimura, T Okubo; Anal.Chim.Acta, 55, 163 (1971)

1971KTA K Kina, K Toei; Bull.Chem.Soc.Jpn., 44, 1289 (1971)

1971KVa M Kryzhanovskii, Y Volokhov et al; Zh.Prikl.Khim., 44, 476(E:484) (1971)

1971KZa T Kaden, A Zuberbuhler; Helv.Chim.Acta, 54, 1361 (1971)

1971LNa M Lim, G Nancollas; Inorg.Chem., 10, 1957 (1971)

1971MAh A Muftakhov, G Alimova, A Inoyatova; Zh.Neorg.Khim., 16, 5, 1349 (1971)

1971MAi A Muftakhov, V Alekseevskii et al; Zh.Neorg.Khim., 16, 6, 1550 (1971)

1971MGc P Migal, A Gerbeleu, Z Chapurina; Zh.Neorg.Khim., 16, 3, 727 (1971)

1971MKF Y Makashev, F Kulba, M Agaf et al; Zh.Fiz.Khim., 45, 735(E:414) (1971)

1971MMb R Motekaitis, I Murase, A Martell; Inorg.Nucl.Chem.Lett., 7, 1103 (1971)

1971MMC R Martin, L Mosoni, B Sarkar; J.Biol.Chem., 246, 5944 (1971)

1971MMh R Motekaitis, I Murase, A Martell; J.Inorg.Nucl.Chem., 33, 3353 (1971)

1971MSC W Malik, C Sharma, M Jain, Y Ashraf; J.Inorg.Nucl.Chem., 33, 4333 (1971)

1971NEb E Almeida Neves; J.Inorg.Nucl.Chem., 33, 571 (1971)

1971NTa T Nozaki, A Tanaka, T Nishimoto; Nippon Kagaku Kaishi, 92, 159 (1971)

1971OTa A Ouchi, T Takeuchi, Y Ohashi; Bull.Chem.Soc.Jpn., 44, 3461 (1971)

1971PPb J Podlaha, J Podlahova; Inorg.Chim.Acta, 5, 413 (1971)

1971RMC B Rao, H Mathur; J.Inorg.Nucl.Chem., 33, 2919 (1971)

1971RMD B Rao, H Mathur; J.Inorg.Nucl.Chem., 33, 809 (1971)

1971SAb A Sandell; Acta Chem.Scand., 25, 2609; 3172 (1971)

1971SAi A Sakharov; Zh.Obshch.Khim., 41, 10, 2119 (1971)

1971SHA H Sigel, P Huber, R Pasternack; Inorg.Chem., 10, 2226 (1971)

1971SIa T Sekine, N Ihara; Bull.Chem.Soc.Jpn., 44, 2942 (1971)

1971SJa S Sjoberg; Acta Chem.Scand., 25, 2149 (1971)

1971SNa P Senise, E Almeida Neves; J.Inorg.Nucl.Chem., 33, 351 (1971)

1971SSE K Srinivasan, R Subrahmanya; J.Electroanal.Chem., 31, 233; 245; 257 (1971)

1971STd M Stiff; Water Research, 5, 171 (1971)

1971TKc M Taqui-Khan, C Krishnamoorthy; J.Inorg.Nucl.Chem., 33, 1417 (1971)

1971TLa J Tummavuori, P Lumme; Suomen Kem., B44, 215; 222; 343; 350 (1971)

1971TRA M Taqui-Khan, P Reddy; J.Inorg.Nucl.Chem., 33, 1427 (1971)

1971TSh J Tandon, G Sharma; J.Prakt.Chem., 313, 993 (1971)

1971TSj J Tandon,G Sharma; Talanta,18,1163 (1971)
 1971WAc Z Warnke; Roczn.Chem.,45,695 (1971)
 1971WBa E Wendling,O Benali-Baitich,G Yaker; Rev.Chim.Minerale,8,559 (1971)
 1971WFa H Wada,Q Fernando; Anal.Chem.,43,751 (1971)
 1971WNb E Woodhouse,T Norris; Inorg.Chem.,10,614 (1971)
 1971WNC M Wozniak,J Nicole,G Tridot; Compt.Rend.,272C,635 (1971)
 1971YMa O Yamauchi,H Miyata,A Nakahara; Bull.Chem.Soc.Jpn.,44,2716 (1971)
 1970ABc A Advani,D Barnes,L Pettit; J.Chem.Soc.(A),2691 (1970)
 1970ARA S Ahrland,J Rawsthorne; Acta Chem.Scand.,24,157 (1970)
 1970ARb R Arnek; Ark.Kemi.,32,55 (1970)
 1970BCa G Besse,J Chabard,G Voissier et al; Bull.Soc.Chim.Fr.,4166 (1970)
 1970BEa A Bellomo; Talanta,17,1109 (1970)
 1970BLc G Berthon,C Luca; Chim.Anal.(Paris),52,391 (1970)
 1970BPa K Burger,E Papp-Molnar et al; Acta Chim.Acad.Sci.Hung.,64,323 (1970)
 1970BPd K Burger,E Papp-Molnar,H Nagy,L Korecz; Magyar Kem.Foly.,76,138 (1970)
 1970BRE V Blokhin,G Ragulin,V Anufrienko; Zh.Fiz.Khim.,44,1512 (1970)
 1970BSb G Berthon,A Sirieix,C Luca; Bull.Soc.Chim.Fr.,509 (1970)
 1970BSf A Bhargava,R Swaroop,Y Gupta; J.Chem.Soc.(A),2183 (1970)
 1970BTa J Bunting,K Thong; Can.J.Chem.,48,1654 (1970)
 1970CBd M Chidambaran,P Bhattacharya; J.Inorg.Nucl.Chem.,32,3271 (1970)
 1970CBe M Clark,J Bear; J.Inorg.Nucl.Chem.,32,3569 (1970)
 1970CHc C Childs; Inorg.Chem.,9,2465 (1970)
 1970CMc E Clarke,A Martell; J.Inorg.Nucl.Chem.,32,911 (1970)
 1970DDa S Dube,S Dhindsa; Can.J.Chem.,48,1007 (1970)
 1970DNa G Degischer,G Nancollas; Inorg.Chem.,9,1259 (1970)
 1970DTb J Desmarquest,C Trinh-Dinh,O Bloch; J.Electroanal.Chem.,27,101 (1970)
 1970EHa W Eilbeck,F Holmes,T Thomas; J.Chem.Soc.(A),2062 (1970)
 1970FAa M Falqui; Rend.Semin.Univ.Cagliari,40,291;303;313 (1970)
 1970FBa I Filipovic,A Bujak,V Vukicevic; Croat.Chem.Acta,42,493 (1970)
 1970FRa G Faraglia,F Rossotti,H Rossotti; Inorg.Chim.Acta,4,488 (1970)
 1970GAa A Garnier; J.Chim.Phys.,67,1458 (1970)
 1970GDa D Goel,Y Dutt,R Singh; J.Inorg.Nucl.Chem.,32,2119 (1970)
 1970GFa B Grabaric,I Filipovic; Croat.Chem.Acta,42,479 (1970)
 1970GHb A Gubeli,J Hebert,P Cote et al; Helv.Chim.Acta,53,186 (1970)
 1970GHc S Grassino,D Hume; J.Inorg.Nucl.Chem.,32,3112 (1970)
 1970GNC R Ghosh,V Nair; J.Inorg.Nucl.Chem.,32,3025;3033;3041 (1970)
 1970GPa R Griesser,B Prijs,H Sigel,W Fory et al; Biochemistry,9,3285 (1970)
 1970GPc J Gaur,M Palrecha; J.Inorg.Nucl.Chem.,32,1375 (1970)
 1970GSa R Griesser,H Sigel; Inorg.Chem.,9,1238 (1970)
 1970Gva K Girdhar,K Vaidya,P Relam; J.Indian Chem.Soc.,47,715 (1970)
 1970Hha J Hall,T Hill; Proc.W.Va.Acad.Sci.,42,146 (1970)
 1970HPc P Hemmes,S Petrucci; J.Phys.Chem.,72,467 (1970)
 1970HPd P Hemmes,S Petrucci; J.Phys.Chem.,74,467 (1970)
 1970JPa T Janjic,L Pfendt,M Celap; Z.Anorg.Allg.Chem.,373,83 (1970)
 1970KAb H Kakihana,T Amaya et al; Bull.Chem.Soc.Jpn.,43,3155 (1970)
 1970KAd N Kitajiri,T Arishima,S Takamoto; Nippon Kagaku Kaishi,91,240 (1970)
 1970KKa F Karczynski,G Kupryszewski; Roczn.Chem.,44,967 (1970)
 1970KMa R Karlicek,J Majer,J Polakovicova; Chem.Zvesti,24,161 (1970)
 1970LAe J Larson; J.Phys.Chem.,74,3392 (1970)
 1970LBa J Letter,J Bauman; J.Am.Chem.Soc.,92,437 (1970)

1970MBb J Meyer, J Bauman; J. Am. Chem. Soc., 92, 4210 (1970)
 1970MHb T Musgrave, E Humburg; J. Inorg. Nucl. Chem., 32, 2229 (1970)
 1970MKa J Majer, R Karlicek, B Kopecka; Collec. Czech. Chem. Commun., 35, 1066 (1970)
 1970MMj V Mironov, Y Makashev, I Mavrina et al; Zh. Neorg. Khim., 15, 1301 (E:668)
 (1970)
 1970MTc I Murgulescu, D Todor-Bogdan; Rev. Roumaine Chim., 15, 1473 (1970)
 1970MVa F Manok, C Varhelyi, I Mikulas; Stud. Univ. Babes-Bolyai, 2, 139 (1970)
 1970NKa R Nasanen, M Koskinen, P Tilus, A Ilomaki; Suomen Kem., B43, 34 (1970)
 1970NTa R Nasanen, P Tilus, H Jarvinen et al; Suomen Kem., B43, 154 (1970)
 1970OSa R Osterberg; Eur. J. Biochem., 13, 493 (1970)
 1970OVA G Ostacoli, A Vanni, E Roletto; Gazz. Chim. Ital., 100, 350 (1970)
 1970Pba C Petitfaux, J Barbier, J Faucherre; Bull. Soc. Chim. Fr., 3441 (1970)
 1970PNa E Papp-Molnar, H Nagy, K Burger; Acta Chim. Acad. Sci. Hung., 64, 317 (1970)
 1970PRA L Przyborowski; Roczn. Chem., 44, 1883 (1970)
 1970Rba V Romano, J Bjerrum; Acta Chem. Scand., 24, 1551 (1970)
 1970SFa L Sestili, C Furlani, A Ciana, F Garbassi; Electrochim. Acta, 15, 225 (1970)
 1970SKd G Stockelmann, A Kettrup, H Specker; Z. Anorg. Allg. Chem., 372, 134; 144 (1970)
 1970SSF A Swinarski, W Szczepaniak; Roczn. Chem., 44, 2071 (1970)
 1970SSg A Swinarski, W Szczepaniak; Roczn. Chem., 44, 957 (1970)
 1970STd G Sharma, J Tandon; J. Inorg. Nucl. Chem., 32, 1273 (1970)
 1970STf G Sharma, J Tandon; Z. Naturforsch., 25B, 22 (1970)
 1970SWa L Sillen, B Warnqvist; Ark. Kemi., 31, 377 (1970)
 1970TNa G Tridot, S Nicole, M Wozniak; Chim. Anal. (Paris), 52, 265 (1970)
 1970TPb F Tulyupa, V Pavlichenko, Y Usatenko; Ukr. Khim. Zh., 36, 2, 201 (1970)
 1970UTa Y Ueno, M Tsuiki; Denki Kagaku, 38, 278 (1970)
 1970Wka E Wilson, M Kasperian, R Martin; J. Am. Chem. Soc., 92, 5365 (1970)
 1970Zoa S Zommer; Roczn. Chem., 44, 1645 (1970)
 1970Zob S Zommer; Roczn. Chem., 44, 2085 (1970)
 1969Aia B Afghan, J Israeli; Bull. Soc. Chim. Fr., 1393 (1969)
 1969AKa M Andreeva, V Khalidin; Zh. Neorg. Khim., 14, 1194 (E:626) (1969)
 1969APa U Anders, J Plambeck; Can. J. Chem., 47, 3055 (1969)
 1969AVa A Agostino, F Vogliotti; Ann. Chim., (Rome), 59, 255 (1969)
 1969BGa F Becker, R Grundmann; Z. Phys. Chem., (Frankfurt), 66, 137 (1969)
 1969Bia A Beauchamp, J Israeli, H Saulnier; Can. J. Chem., 47, 1269 (1969)
 1969BLb E Bottari, A Liberti, A Ruffolo; Inorg. Chim. Acta, 3, 201 (1969)
 1969BMc K Bai, A Martell; J. Am. Chem. Soc., 91, 4412 (1969)
 1969Bmd K Bai, A Martell; J. Inorg. Nucl. Chem., 31, 1697 (1969)
 1969BOb A Bond; J. Electroanal. Chem., 23, 269; 277 (1969)
 1969CMD G Condikey, A Martell; J. Inorg. Nucl. Chem., 31, 2455 (1969)
 1969CPc C Childs, D Perrin; J. Chem. Soc. (A), 1039 (1969)
 1969DMd N Dyatlova, V Medyantsev, T Balashova et al; Zh. Obshch. Khim., 39, 329 (1969)
 1969DPb D Dodig, Z Pavlovic, J Brenet; J. Chim. Phys., 66, 1213 (1969)
 1969EHc W Eilbeck, F Holmes, T Thomas; J. Chem. Soc. (A), 113 (1969)
 1969ESb B Evtimova, J Scharff, M Paris; Bull. Soc. Chim. Fr., 81 (1969)
 1969FDc Y Fridman, N Dolgashova; Zh. Neorg. Khim., 14, 8, 2094 (1969)
 1969FFa F Fromage, S Fiorina; Compt. Rend., 268C, 1511; 1764 (1969)
 1969FKa Y Fujii, M Kodama; Bull. Chem. Soc. Jpn., 42, 3172 (1969)
 1969GEb A Gergely; Acta Chim. Acad. Sci. Hung., 59, 309 (1969)
 1969Gmd V Galinker, V Milovzorov; Ukr. Khim. Zh., 35, 1324 (1969)
 1969GPb R Griesser, B Prijs, H Sigel; Inorg. Nucl. Chem. Lett., 5, 951 (1969)

1969HEa H Helgeson; Am.J.Sci.,267,729 (1969)
 1969HGb P Huber,R Griesser,B Prijs,H Sigel; Eur.J.Biochem.,10,238 (1969)
 1969IEa R Izatt,D Eatough,J Christensen et al; J.Chem.Soc.(A),45;47 (1969)
 1969KHc W Kemula,A Hulanicki,M Minczewska; Roczn.Chem.,43,909 (1969)
 1969KLc C Ke,N Li; J.Inorg.Nucl.Chem.,31,1383 (1969)
 1969KTc M Kodama,Y Tominaga; Bull.Chem.Soc.Jpn.,42,394;721;724 (1969)
 1969LAa B Leach,R Angelici; Inorg.Chem.,8,907 (1969)
 1969MBb V Mikhailova,M Bonnet; Bull.Soc.Chim.Fr.,4258 (1969)
 1969MBc G Manku,A Bhat,B Jain; J.Inorg.Nucl.Chem.,31,2533 (1969)
 1969MMd M Michailidis,R Martin; J.Am.Chem.Soc.,91,4683 (1969)
 1969MMf V Mironov,Y Makashev,I Mavrina; Zh.Neorg.Khim.,14,1424(E:746) (1969)
 1969MVa F Manok,C Varhelyi,Z Kiss-Rajhona; Rev.Roumaine Chim.,14,1251 (1969)
 1969NTa R Nasanen,P Tilus,E Huttunen et al; Suomen Kem.,B42,390 (1969)
 1969PJb J Powell,D Johnson; J.Chromatography,44,212 (1969)
 1969PJc L Pajdowski,E John; Roczn.Chem.,43,1125 (1969)
 1969PMb G Popa,V Magearu; Rev.Roumaine Chim.,14,1387 (1969)
 1969PPb M Petit-Ramel,M Paris; Bull.Soc.Chim.Fr.,3070 (1969)
 1969RMB E Raju,H Mathur; J.Inorg.Nucl.Chem.,31,425 (1969)
 1969RMC K S Rajan,I Murase,A E Martell; J.Am.Chem.Soc.,91,4408 (1969)
 1969RRa S Ramamoorthy,A Raghavan,M Santappa; J.Inorg.Nucl.Chem.,31,1765;1851 (1969)
 1969RWa H Reinert,R Weiss; Hoppe Seylers Z.Phys.Chem.,350,1310;1321 (1969)
 1969SAa A Sandell; Acta Chem.Scand.,23,478 (1969)
 1969SGa H Sigel,R Griesser,B Prijs et al; Arch.Biochem.Biophys.,130,514 (1969)
 1969SGd S Schulman,H Gershon; J.Inorg.Nucl.Chem.,31,2467 (1969)
 1969SLb J Stary,J Liljenzin; Radiochem.Radioanal.Lett.,1,273 (1969)
 1969SMc H Sigel,D McCormick,R Griesser et al; Biochemistry,8,2687 (1969)
 1969SMD D Singh,A Mishra; Indian J.Chem.,7,1219 (1969)
 1969STb G Sharma,J Tandon; Z.Naturforsch.,24B,1258 (1969)
 1969SVb V Simeon,K Voloder,O Weber; Anal.Chim.Acta,44,309 (1969)
 1969TWa P Tedesco,H Walton; Inorg.Chem.,8,932 (1969)
 1969VAa L Varga; Anal.Chem.,41,323 (1969)
 1969VPa E Verdier,J Piro; Ann.Chim.,(France),4,213 (1969)
 1969VSA V Vdovenko,O Stebunov; Radiokhim.,11,635;640(E:625;630) (1969)
 1969WAA Z Warnke; Roczn.Chem.,43,1939 (1969)
 1969WAb Z Warnke; Szk.Ped.Gdanski,Mat.Fiz.Chem.,9,159 (1969)
 1969WKA J Watters,S Kalliney,R Machen; J.Inorg.Nucl.Chem.,31,3817;3823 (1969)
 1969YHa O Yamauchi,Y Hirano,Y Nakao,A Nakahara; Can.J.Chem.,47,3441 (1969)
 1969ZKa A Zuberbuhler,T Kaden; Chimia,23,418 (1969)
 1968APa R Arnek,C Patel; Acta Chem.Scand.,22,1097;1102 (1968)
 1968BCb E Bottari,L Ciavatta; Inorg.Chim.Acta,2,74 (1968)
 1968BDb V Barabanov,S Davydov,N Plate; Zh.Fiz.Khim.,42,4,930 (1968)
 1968BJa B Burrows,R Jasinski; J.Electrochem.Soc.,115,348 (1968)
 1968BLc A Brunetti,M Lim,G Nancollas; J.Am.Chem.Soc.,90,5120 (1968)
 1968BOa E Bottari; Monatsh.Chem.,99,176 (1968)
 1968BTc R Bury,C Treiner; J.Chim.Phys.,65,1410;1494 (1968)
 1968BUE R Bury; J.Chim.Phys.,65,1494 (1968)
 1968BVA A Bonniol,P Vieles; J.Chim.Phys.,65,414 (1968)
 1968CSa I Chawla,C Spillert; J.Inorg.Nucl.Chem.,30,2717 (1968)
 1968DDa R Das,A Dash,J Mishra; J.Inorg.Nucl.Chem.,30,2417 (1968)

1968DPa C Davies,B Patel; J.Chem.Soc.(A),1824;1924 (1968)
 1968DWa R Driver,W Walker; Australian J.Chem.,21,671 (1968)
 1968EFa H Erlenmeyer,C Flierl,H Sigel; Chimia,22,433 (1968)
 1968EGb H Erlenmeyer,R Griesser,B Prijs,H Sigel; Helv.Chim.Acta,51,339 (1968)
 1968FPa I Filipovic,I Piljac,A Medved et al; Croat.Chem.Acta,40,131 (1968)
 1968GFa G Gutnikov,H Freiser; Anal.Chem.,40,39 (1968)
 1968GFb R Griesser,S Fallab; Chimia,22,90 (1968)
 1968GGb A Golub,V Golovorushkin; Zh.Fiz.Khim.,42,8,1902 (1968)
 1968GGg A Golub,V Golovorushkin; Zh.Fiz.Khim.,42,1902 (1968)
 1968GMa D Graddon,G Mockler; Australian J.Chem.,21,617,907 (1968)
 1968GPd R Griesser,B Prijs,H Sigel; Inorg.Nucl.Chem.Lett.,4,443 (1968)
 1968GSb L Grigoreva,L Stepin,T Shurupova; Zh.Neorg.Khim.,13,12,3240 (1968)
 1968HAa D Hopgood,R Angelici; J.Am.Chem.Soc.,90,2508 (1968)
 1968HGa J Hall,W Glenn; Proc.W.Va.Acad.Sci.,40,270 (1968)
 1968HLa P Herman,K Lemke; Z.Physiol.Chem.,349,390 (1968)
 1968HMa R Hay,P Morris,D Perrin; Australian J.Chem.,21,1073 (1968)
 1968HMb R Hay,P Morris; J.Chem.Soc.,Chem.Comm.,732 (1968)
 1968HOa S Hock; Brooklyn College,Univ.New York,Thesis (1968)
 1968HPd P Hemmes,S Petrucci; J.Phys.Chem.,72,3986 (1968)
 1968HRb T Hseu,G Rechnitz; Anal.Lett.,1,629 (1968)
 1968ICa J Israeli,M Cecchetti; Can.J.Chem.,46,3821;3835 (1968)
 1968ICb J Israeli,M Cecchetti; Talanta,15,1031 (1968)
 1968IEa R Izatt,D Eatough,R Snow,J Christensen; J.Phys.Chem.,72,1208 (1968)
 1968ISa J Israeli,H Saulnier; Inorg.Chim.Acta,2,482 (1968)
 1968KYa E Kriss,K Yatsimirskii; Zh.Neorg.Khim.,13,2370(E:1223) (1968)
 1968KYb E Kriss,K Yatsimirskii; Zh.Neorg.Khim.,13,9,2370 (1968)
 1968KZa T Kaden,A Zuberbuhler; Helv.Chim.Acta,51,1797 (1968)
 1968LBa D Leussing,K Bai; Anal.Chem.,40,575 (1968)
 1968LCd J Larson,P Cerutti,H Garber,L Hepler; J.Phys.Chem.,72,2902 (1968)
 1968MMf V Mironov,Y Makashev,I Mavrina et al; Zh.Fiz.Khim.,42,2987 (1968)
 1968MTd Y Murakami,M Takagi; J.Phys.Chem.,72,116 (1968)
 1968OHa H Ohtaki; Inorg.Chem.,7,1205 (1968)
 1968OSc R Osterberg,B Sjoberg; J.Biol.Chem.,243,3038 (1968)
 1968OVa G Ostacoli,A Vanni,E Roletto; Ricerca Sci.,38,318 (1968)
 1968PPa M Petit-Ramel,M Paris; Bull.Soc.Chim.Fr.,2971 (1968)
 1968PRb L Przyborowski; Roczn.Chem.,42,1383 (1968)
 1968PRd B Prasad; J.Indian Chem.Soc.,45,1037 (1968)
 1968RMB E Raju,M Mathur; J.Inorg.Nucl.Chem.,30,2181 (1968)
 1968RPC M Petit-Ramel,M Paris; Bull.Soc.Chim.Fr.,2791 (1968)
 1968RSc S Ramamoorthy,M Santappa; J.Inorg.Nucl.Chem.,30,2393 (1968)
 1968RSk S Ramamoorthy,M Santappa; J.Inorg.Nucl.Chem.,30,1855 (1968)
 1968RVA R Ripan,G Vericeanu; Stud.Univ.Babes-Bolyai,13,31 (1968)
 1968SCc F Smirous,J Celeda; Collec.Czech.Chem.Comm.,33,1017 (1968)
 1968SIa H Sigel; Angew.Chem.Int.Ed.Eng.,7,137 (1968)
 1968SKd K Suzuki,C Karaki,S Mori,K Yamasaki; J.Inorg.Nucl.Chem.,30,167 (1968)
 1968SMd V Spivakovskii,G Makovskaya; Zh.Neorg.Khim.,13,1555 (1968)
 1968SNa K Suzuki,I Nakano,K Yamasaki; J.Inorg.Nucl.Chem.,30,545 (1968)
 1968SRe P Schindler,M Reinert,H Gamsjager; Helv.Chim.Acta,51,1845 (1968)
 1968SRg J Stary,J Ruzicka; Talanta,15,505 (1968)
 1968TBa G Tindall,S Bruckenstein; Anal.Chem.,40,1402 (1968)

- 1968TMa C Tyson,A Martell; J.Am.Chem.Soc.,90,3379 (1968)
 1968WIa D Williams; J.Chem.Soc.(A),2965 (1968)
 1968YMa M Yokoi,Y Mori,E Kubota et al; Nippon Kagaku Kaishi,89,1192 (1968)
 1968ZBa L Zompa,R Bogucki; J.Am.Chem.Soc.,90,4569 (1968)
 1968ZOa S Zommer; Roczn.Chem.,42,1803 (1968)
 1967ADd S Aditya; J.Inorg.Nucl.Chem.,29,1901 (1967)
 1967AMa V Athavale,N Mahadevan,P Mathur,R Sathe; J.Inorg.Nucl.Chem.,29,1947 (1967)
 1967BBd S Boyd,J Brannan,H Dunsmore,G Nancollas; J.Chem.Eng.Data,12,601 (1967)
 1967BSb D Banerjee,I Singh; Z.Anorg.Chem.,349,213 (1967)
 1967COa E Chikryzova,B Orgiyan,L Kiriyak; Zh.Neorg.Khim.,12,1448 (2747) (1967)
 1967FDd Y Fridman,N Dolgashova; Zh.Neorg.Khim.,12,639 (1206) (1967)
 1967FHa J Fisher,J Hall; Anal.Chem.,39,1550 (1967)
 1967GGb A Golub,V Golovorushkin; Izv.VUZ.Khim.,10,754 (1967)
 1967GNa A Gergely,I Nagypal,J Mojzes; Acta Chim.Acad.Sci.Hung.,51,381 (1967)
 1967GNb D Goddard,S Nwankwo; J.Chem.Soc.(A),1371 (1967)
 1967GNC D Goddard,S Nwankwo,L Staveley; J.Chem.Soc.(A),1376 (1967)
 1967HLa W Haffenden,G Lawson; J.Inorg.Nucl.Chem.,29,1499 (1967)
 1967HMc A Hulanicki,M Minczewska; Talanta,14,677 (1967)
 1967Hwa F Holmes,D Williams; J.Chem.Soc.(A),1702 (1967)
 1967KDa M Kabachnik,I Dyatlova,T Medved; Proc.Acad.Sci.(USSR),175,621 (351) (1967)
 1967KLa M Kabachnik,R Lastovskii,T Medved; Proc.Acad.Sci.(USSR),177,1060 (582) (1967)
 1967LOb A Lodzinska; Roczn.Chem.,41,1437 (1967)
 1967MAb R Martin; Bull.Soc.Chim.Fr.,2217 (1967)
 1967MAe R Matheson; J.Phys.Chem.,71,1302 (1967)
 1967MBa G Marcu,A Botar; Stud.Univ.Babes-Bolyai,12,2,11 (1967)
 1967MIc S Manahan,R Iwamoto; J.Electroanal.Chem.,13,411 (1967)
 1967MKa G Matsubayashi,Y Kawasaki,T Tanaka; Nippon Kagaku Kaishi,88,1251 (1967)
 1967MNC A McAuley,G Nancollas,K Torrance; Inorg.Chem.,6,136 (1967)
 1967MRa F Maggio,V Romano,L Pellerito; Ann.Chim.(Italy),57,191 (1967)
 1967MSb S Mahapatra,R Subrahmanya; Proc.Indian Acad.Sci.,65,283 (1967)
 1967NJJa R Nasanen,M Koskinen,R Jarvinen et al; Suomen Kem.,B40,25 (1967)
 1967NKC R Nasanen,M Koskinen; Suomen Kem.,B40,108,23 (1967)
 1967NKd R Nasanen,M Koskinen,M Alatalo,L Adler; Suomen Kem.,B40,124 (1967)
 1967NMa T Nozaki,T Mise,K Higaki; Nippon Kagaku Kaishi,88,1168 (1967)
 1967NTa G Nancollas,K Torrance; Inorg.Chem.,6,1567 (1967)
 1967OHb Y Oka,H Harada; Nippon Kagaku Kaishi,88,441 (1967)
 1967PRb J Powell,D Rowlands; J.Inorg.Nucl.Chem.,29,1729 (1967)
 1967PSc D Perrin,I Sayce,V Sharma; J.Chem.Soc.(A),1755 (1967)
 1967PSd D Perrin,V Sharma; J.Chem.Soc.(A),724 (1967)
 1967QVa M Quastlerova,Z Valtr; Chem.Zvesti,21,894 (1967)
 1967RMB K Rajan,A Martell; J.Inorg.Nucl.Chem.,29,463 (1967)
 1967RPd M Petit-Ramel,M Paris; Bull.Soc.Chim.Fr.,1359 (1967)
 1967RSb Z Rozhdestvenskaya,O Songina et al; Zh.Vsesouz.Khim.Obsch.,12,5,589;334 (1967)
 1967SBc H Sigel,K Becker,D McCormick; Biochim.Biophys.Acta,148,655 (1967)
 1967SBd M Sun,D Brewer; Can.J.Chem.,45,2729 (1967)
 1967SBF U Salakhutdinov,A Borisova,Y Granovskii; Proc.Acad.Sci.(USSR),177,1039

(365) (1967)

- 1967SGa H Sigel, R Griesser; *Helv.Chim.Acta*, 50, 1842 (1967)
1967SIb H Sigel; *Chimia*, 21, 489 (1967)
1967SKb V Springer, R Karlicek, J Majer; *Collec.Czech.Chem.Comm.*, 32, 774 (1967)
1967SMd A Sychev, N Mitsul; *Zh.Neorg.Khim.*, 12, 1120 (1967)
1967SSL W Stack, H Skinner; *Trans.Faraday Soc.*, 63, 1136 (1967)
1967TGA H Thun, W Guns, F Verbeek; *Anal.Chim.Acta*, 37, 332 (1967)
1967TMf M Taqui-Khan, A Martell; *J.Am.Chem.Soc.*, 89, 5585; 7104 (1967)
1967TMg M Taqui-Khan, A Martell; *J.Am.Chem.Soc.*, 89, 7104 (1967)
1967ZFB A Zuberbuhler, S Fallab; *Helv.Chim.Acta*, 50, 889 (1967)
1966AAa S Aditya, S Aditya, S Mukherjee; *J.Electrochem.Soc.Jpn.*, 34, 203 (1966)
1966AGa K Anderson, W Greenhalgh, R Izatt; *Inorg.Chem.*, 5, 2106 (1966)
1966ANb K Anderson, D Newell, R Izatt; *Inorg.Chem.*, 5, 62 (1966)
1966APb V Athavale, L Prabhu, D Vartak; *J.Inorg.Nucl.Chem.*, 28, 1237 (1966)
1966BEb H Berge; *J.Prakt.Chem.*, 34, 15 (1966)
1966DME S Dubey, R Mehrotra; *J.Indian Chem.Soc.*, 43, 73 (1966)
1966FLb Y Fridman, M Levina, R Sorochan; *Zh.Neorg.Khim.*, 11, 1641 (1966)
1966FLc Y Fridman, M Levina, R Sorochan; *Zh.Neorg.Khim.*, 11, 877 (1966)
1966GCa S Gupta, M Chatterjee; *Indian J.Chem.*, 4, 22 (1966)
1966GEa P Gerding; *Acta Chem.Scand.*, 20, 2624; 2771 (1966)
1966GIb R Gillard, H Irving, R Parkins, L Pettit; *J.Chem.Soc.(A)*, 1159 (1966)
1966HPa J Huang, K Pan; *J.Chin.Chem.Soc.(Formosa)*, 13, 64 (1966)
1966IWA R Isbell, E Wilson, D Smith; *J.Phys.Chem.*, 70, 2493 (1966)
1966KLb M Kennedy, M Lister; *Can.J.Chem.*, 44, 1709 (1966)
1966KMa M Kim, A Martell; *J.Am.Chem.Soc.*, 88, 914 (1966)
1966LHC D Leussing, E Hanna; *J.Am.Chem.Soc.*, 88, 693; 696 (1966)
1966LME G L'Heureux, A Martell; *J.Inorg.Nucl.Chem.*, 28, 481 (1966)
1966MBb W Masterton, L Berka; *J.Phys.Chem.*, 70, 1924 (1966)
1966MSa M Miyazaki, T Senshu, I Tamura; *Chem.Pharm.Bull.*, 14, 114 (1966)
1966NHa P Niebergall, D Hussar, W Cressman et al; *J.Pharm.Pharmac.*, 18, 729 (1966)
1966NKA R Nasanen, M Koskinen, L Anttila, M Korvola; *Suomen Kem.*, B39, 122 (1966)
1966NTa R Nasanen, P Tilus, A Rinne; *Suomen Kem.*, B39, 45 (1966)
1966OCa G Ostacoli, E Campi, M Gennaro; *Gazz.Chim.Ital.*, 96, 741 (1966)
1966OCb G Ostacoli, E Campi, A Vanni, E Roletto; *Ricerca Sci.*, 36, 427 (1966)
1966OSb R Osterberg; *Ark.Kemi.*, 25, 177 (1966)
1966PMA C Postmus, L Magnusson, C Craig; *Inorg.Chem.*, 5, 1154 (1966)
1966PNa P Paoletti, F Nuzzi, A Vacca; *J.Chem.Soc.(A)*, 1385 (1966)
1966PSb S Petri, H Sigel, H Erlenmeyer; *Helv.Chim.Acta*, 49, 1612 (1966)
1966PSc D Perrin, V Sharma; *J.Inorg.Nucl.Chem.*, 28, 1271 (1966)
1966SKc E Sklenskaya, M Karapetyants; *Zh.Neorg.Khim.*, 11, 1102 (1966)
1966SKe E Sklenskaya, M Karapetyants; *Zh.Neorg.Khim.*, 11, 1478 (1966)
1966SWa V Simeon, O Weber; *Croat.Chem.Acta*, 38, 161 (1966)
1966SYa K Suzuki, K Yamasaki; *J.Inorg.Nucl.Chem.*, 28, 473 (1966)
1966VAa A Vacca, D Arenare, P Paoletti; *Inorg.Chem.*, 5, 1384 (1966)
1966VKA V Vdovenko, V Kolokol'tsov, O Stebunov; *Radiokhim.*, 8, 286 (1966)
1966VMA D Vartak, N Menon; *J.Inorg.Nucl.Chem.*, 28, 2911 (1966)
1966WMA J Watters, S Matsumoto; *Inorg.Chem.*, 5, 361 (1966)
1966WRb J Walter, S Rosalie; *J.Inorg.Nucl.Chem.*, 28, 2969 (1966)
1966ZAa J Zarembowitch; *J.Chim.Phys.*, 63, 420 (1966)
1966ZBa L Zompa, R Bogucki; *J.Am.Chem.Soc.*, 88, 5186 (1966)

1965ANa G Anderegg; *Helv.Chim.Acta*,48,1712;1718;1722 (1965)
 1965AZa A Andrews,D Zebolsky; *J.Chem.Soc.*,742 (1965)
 1965BMA M Bonnet,R Martin,R Paris; *Bull.Soc.Chim.Fr.*,176 (1965)
 1965BPc G Bryce,J Pinkerton,L Steinrauf,F Gurd; *J.Biol.Chem.*,240,3829 (1965)
 1965CCa Y Curtis,N Curtis; *Australian J.Chem.*,18,1933 (1965)
 1965CJa W Connor,M Jones, Tuleen; *Inorg.Chem.*,4,1129 (1965)
 1965CVa L Ciavatta,M Villafiorita; *Gazz.Chim.Ital.*,95,1247 (1965)
 1965DKb N Dyatlova,M Kabachnik,T Medved; *Proc.Acad.Sci.(USSR)*,161,307 (607)
 (1965)
 1965DOa G Douheret; *Bull.Soc.Chim.Fr.*,1965,2915 (1965)
 1965DOb G Douheret; *Bull.Soc.Chim.Fr.*,2915 (1965)
 1965DSa V Devendran,M Santappa; *Curr.Sci.*,34,145 (1965)
 1965ETa J Endicott,H Taube; *Inorg.Chem.*,4,437 (1965)
 1965IAa H Irving,N Al-Niami; *J.Inorg.Nucl.Chem.*,27,419 (1965)
 1965JKA M Jain,A Khan,W Malik; *J.Indian Chem.Soc.*,42,597 (1965)
 1965JMa V Jokl,J Majer; *Acta Fac.Pharm.Brun.Bratislav.*,10,55 (1965)
 1965JNa R Jameson,W Neillie; *J.Inorg.Nucl.Chem.*,27,2623 (1965)
 1965LAB Z Leshchinskaya,M Averbukh,N Selivanova; *Zh.Fiz.Khim.*,39,2036 (1965)
 1965MAe R Matheson; *J.Phys.Chem.*,69,1537 (1965)
 1965MBa E Mario,S Bolton; *Anal.Chem.*,37,165 (1965)
 1965MBb R Mercier,M Bonnet,M Paris; *Bull.Soc.Chim.Fr.*,2926;3577 (1965)
 1965MIa S Manahan,R Iwamoto; *Inorg.Chem.*,4,1409 (1965)
 1965MNa M Misra,R Nanda; *J.Indian Chem.Soc.*,1965,42,267 (1965)
 1965MTa Y Murakami,M Takagi; *Bull.Chem.Soc.Jpn.*,38,828 (1965)
 1965NCa M Nyberg,M Cefola; *Arch.Biochem.Biophys.*,111,321;327 (1965)
 1965NKf R Nasanen,M Koskinen,R Salonen,A Kiiski; *Suomen Kem.*,B38,81 (1965)
 1965ONa Y Oka,N Nakazawa,H Harada; *Nippon Kagaku Kaishi*,86,1158 (1965)
 1965PBa R Paterson,J Bjerrum; *Acta Chem.Scand.*,19,729 (1965)
 1965POa R Pottel; *Ber.Buns.Phys.Chem.*,69,363 (1965)
 1965RWA J Ritsma,G Wiegers,F Jellinek; *Rec.Trav.Chim.*,84,1577 (1965)
 1965SAC P Schindler,H Althaus,F Hofer,W Minder; *Helv.Chim.Acta*,48,1204 (1965)
 1965SHc M Shchigol; *Zh.Neorg.Khim.*,10,2097 (1965)
 1965SKb V Shulman,T Kramareva; *Zh.Neorg.Khim.*,10,1632 (1965)
 1965SKd V Shulman,T Kramareva; *Zh.Neorg.Khim.*,10,890 (1632) (1965)
 1965SMB V Sharma,H Mathur,P Kilkarni; *Indian J.Chem.*,3,146,475 (1965)
 1965TSb N Tanaka,Y Saito,H Ogino; *Bull.Chem.Soc.Jpn.*,38,984 (1965)
 1965VFa E Verdier,J Fournier; *J.Chim.Phys.*,62,1196 (1965)
 1965VZa E Verdier,G Zalesky; *J.Chim.Phys.*,62,479 (1965)
 1965WHA D Wright,J Holloway,C Reilly; *Anal.Chem.*,37,884 (1965)
 1965WRA S Westerback,K Rajan,A Martell; *J.Am.Chem.Soc.*,87,2567 (1965)
 1965YKa M Yokoi,E Kubota; *J.Chem.Soc.Jpn.*,86,894 (1965)
 1964ACa F Achenza; *Ann.Chim.(Italy)*,54,240 (1964)
 1964AMa D Archer,C Monk; *J.Chem.Soc.*,3117 (1964)
 1964ANa G Anderegg; *Helv.Chim.Acta*,47,1801 (1964)
 1964BGa L Banford,W Geary; *J.Chem.Soc.*,378 (1964)
 1964BJa J Bjerrum; *Acta Chem.Scand.*,18,843 (1964)
 1964BSd W Brandel,A Swinarski; *Symp.papers Wroclaw1962* (1964)
 1964BUE E Buketov,M Ugorets,A Pashinkin; *Zh.Neorg.Khim.*,9,526 (1964)
 1964COB E Campi,G Ostacoli,M Meirone,G Saini; *J.Inorg.Nucl.Chem.*,26,553 (1964)
 1964COb E Campi,G Ostacoli,A Vanni,E Casorati; *Ricerca Sci.*,34 (II-A6),341

(1964)

- 1964DCa M Doran, S Chaberek, A Martell; J. Am. Chem. Soc., 86, 2129 (1964)
1964DCb M Doran, S Chaberek, A Martell; J. Am. Chem. Soc., 86 (1964)
1964EMb H Ellison, A Martell; J. Inorg. Nucl. Chem., 26, 1555 (1964)
1964GAb E Ganelina; Zh. Prikl. Khim., 37, 1358 (1964)
1964HDa J Hull, R Davies, L Staveley; J. Chem. Soc., 5422 (1964)
1964ICa R Izatt, J Christensen, V Kothari; Inorg. Chem., 3, 1565 (1964)
1964JMa V Jokl, J Majer, M Mazacova; Chem. Zvesti, 18, 584 (1964)
1964JOa V Jokl; J. Chromatography, 14, 71 (1964)
1964JVa K Jabalpurwala, K Venkatachalam, M Kabadi; J. Inorg. Nucl. Chem., 26, 1011, 1027

(1964)

- 1964KLa O Kolling, J Lambert; Inorg. Chem., 3, 202 (1964)
1964KMa M Kim, A Martell; Biochemistry, 1964, 3, 1169 (1964)
1964KSb K Kahmann, H Sigel, H Erlenmeyer; Helv. Chim. Acta, 47, 1754 (1964)
1964LKa T Lane, A Kandathil, S Rosalie; Inorg. Chem., 3, 487 (1964)
1964LMa G Lenz, A Martell; Biochemistry, 3, 745; 750 (1964)
1964LMb R Lacoste, A Martell; Inorg. Chem., 3, 881 (1964)
1964LUa I Lundquist; Acta Chem. Scand., 18, 858 (1964)
1964MTb Y Murakami, M Tokunaga; Bull. Chem. Soc. Jpn., 37, 1562 (1964)
1964NAb J Nassler; Collec. Czech. Chem. Commun., 29, 174 (1964)
1964NIa I Nelson, R Iwamoto; Inorg. Chem., 3, 661 (1964)
1964NKa R Nasanen, M Koskinen; Acta Chem. Scand., 18, 1337 (1964)
1964NMa R Nasanen, P Merilainen, S Lukkari; Suomen Kem., B37, 1; 54 (1964)
1964NMB R Nasanen, P Merilainen, M Koskinen; Suomen Kem., B37, 41 (1964)
1964PAb F Pantani; Ricerca Sci., 34 (II-A-6), 417 (1964)
1964PCa Personal Communication etc; Chem. Soc. Spec. Publ., no. 17 (1964)
1964SBb P Schneider, H Brintzinger, H Erlenmeyer; Helv. Chim. Acta, 47, 992 (1964)
1964SYa A Sychev; Zh. Neorg. Khim., 9, 1270 (2343) (1964)
1964TTa E Tucci, F Tskahashi, V Tucci, N Li; J. Inorg. Nucl. Chem., 26, 1263 (1964)
1964ULa E Uhlig, D Linke; Z. Anorg. Chem., 331, 112 (1964)
1964WEb H Wenger; Diss. Univ. Zurich (1964)
1963ABa G Atkinson, J Bauman; Inorg. Chem., 2, 64 (1963)
1963ASa K Al-Komser, B Sen; Inorg. Chem., 2, 1219 (1963)
1963BAb C Banks, S Anderson; Inorg. Chem., 2, 112 (1963)
1963BHb J Barnes, D Hume; J. Phys. Chem., 67, 526 (1963)
1963CAa E Campi; Ann. Chim. (Italy), 53, 96 (1963)
1963CAC M Cadiot-Smith; J. Chim. Phys., 60, 957, 976, 991 (1963)
1963CCa K Clarke, R Cowen, G Gray, E Osborne; J. Chem. Soc., 245 (1963)
1963CCb A Chakravorty, F Cotton; J. Phys. Chem., 67, 2878 (1963)
1963CHd E Chikryzova; Zh. Neorg. Khim., 8, 41 (83) (1963)
1963CLa P Cloke; Geochim. Cosmo. Acta, 27, 1264; 1265; 1299 (1963)
1963FPa N Friedman, R Plane; Inorg. Chem., 2, 11 (1963)
1963FVa Y Fridman, R Veresova, N Dolgashova; Zh. Neorg. Khim., 8, 344 (676) (1963)
1963GTb R Gutierrez-Flores, B Tremillon; Bull. Soc. Chim. Fr., 2878 (1963)
1963HPa C Hawkins, D Perrin; Inorg. Chem., 2, 839; 843 (1963)
1963IPa H Irving, L Pettit; J. Chem. Soc., 1546 (1963)
1963ISa Y Israeli; Bull. Soc. Chim. Fr., 1273 (1963)
1963ISb Y Israeli; Can. J. Chem., 41, 2710 (1963)
1963JWa A Johansson, E Wanninen; Talanta, 10, 769 (1963)
1963KRa W Koltun, R Roth, F Gurd; J. Biol. Chem., 238, 124 (1963)

1963LLa P Lumme,H Lumme; Suomen Kem.,B36,176;192 (1963)
 1963MFC M Mercer,R Fraser; J.Inorg.Nucl.Chem.,25,525 (1963)
 1963MHa S Mesaric,D Hume; Inorg.Chem.,2,1063 (1963)
 1963MNC Y Murakami,K Nakamura,M Tokunaga; Bull.Chem.Soc.Jpn.,36,669 (1963)
 1963MPa R Martin,R Paris; Bull.Soc.Chim.Fr.,1600 (1963)
 1963MPb R Martin,R Paris; Bull.Soc.Chim.Fr.,570 (1963)
 1963MYa T Malkova,K Yatsimirskii; Zh.Neorg.Khim.,8,332 (1963)
 1963NMa R Nasanen,P Merilainen,S Lukkari; Suomen Kem.,B36,135 (1963)
 1963NMb R Nasanen,P Merilainen; Suomen Kem.,B36,205 (1963)
 1963NMc R Nasanen,P Merilainen,M Koskinen; Suomen Kem.,B36,9;97;110 (1963)
 1963Rba R Ramette,R Broman; J.Phys.Chem.,67,942 (1963)
 1963Sba H Sigel,H Brintzinger; Helv.Chim.Acta,46,701 (1963)
 1963Sbb H Sigel,H Brintzinger,H Erlenmeyer; Helv.Chim.Acta,46,712 (1963)
 1963Sbd H Sigel,H Brintzinger; Helv.Chim.Acta,46,701;712 (1963)
 1963SSf O Schupp,P Sturrock,J Watters; Inorg.Chem.,2,106 (1963)
 1963STb P Sturrock; Anal.Chem.,35,1092 (1963)
 1963STc J Stary; Anal.Chim.Acta,28,132 (1963)
 1963SWb A Swinarski,J Wojtczakove; Z.Phys.Chem.,223,345 (1963)
 1963SZa I Szilard; Acta Chem.Scand.,17,2674 (1963)
 1963Tca V Tolmachev,E Chmykhalo; Uch.Zapiski Kharkov Univ.,133,140 (1963)
 1962ANb G Anderegg; Helv.Chim.Acta,45,1303 (1962)
 1962AYa G Atkinson,M Yokoi; J.Phys.Chem.,66,1520 (1962)
 1962BEa S Bolton,R Ellin; J.Pharm.Sci.,51,533 (1962)
 1962BSb P Brauner,G Schwarzenbach; Helv.Chim.Acta,45,2030 (1962)
 1962Dca G D'Amore,G Calabro,P Curro; Atti.Soc.Pel.Sci.Fis.Mat.Nat.,8,265 (1962)
 1962Fca J Faucherre,A Crego; Bull.Soc.Chim.Fr.,1820 (1962)
 1962FHa J Fisher,J Hall; Anal.Chem.,34,1094 (1962)
 1962HJa F Holmes,F Jones; J.Chem.Soc.,2818 (1962)
 1962HPa C Hawkins,D Perrin; J.Chem.Soc.,1351 (1962)
 1962Hsa J Hall,J Swisher,D Brannon; Inorg.Chem.,1,409 (1962)
 1962KPa R Kolat,J Powell; Inorg.Chem.,1,293 (1962)
 1962KRa E Kuchinkos,Y Rosen; Arch.Biochem.Biophys.,97,370 (1962)
 1962LIa R Larsson,R Iwamoto; Inorg.Chem.,1,316 (1962)
 1962LLa P Lumme,H Lumme; Suomen Kem.,B35,120 (1962)
 1962MFb T Moeller,R Ferrus; Inorg.Chem.,1,55 (1962)
 1962MIa K Mizumachi; J.Chem.Soc.Jpn.,83,61;67 (1962)
 1962Mka F Meeks,H Kosenkranius; J.Colloid Sci.,17,1 (1962)
 1962MMb D Martin,B Martin; Inorg.Chem.,1,404 (1962)
 1962MRa D McMasters,J di Raimondo,L Jones et al; J.Phys.Chem.,66,249 (1962)
 1962MSC D Morris,E Short; J.Chem.Soc.,2662;2672 (1962)
 1962NMa R Nasanen,P Merilainen,S Lukkari; Acta Chem.Scand.,17,2384 (1962)
 1962NMe R Nasanen,P Merilainen,M Koskinen; Suomen Kem.,B35,59 (1962)
 1962RBb R Reeves,P Bragg; J.Am.Chem.Soc.,84,2491 (1962)
 1962SLa P Sturrock,E Loughran,J Watters; Inorg.Chem.,1,457 (1962)
 1962TAc M Taqui-Khan; Diss.Clark Univ. (1962)
 1962WIa T Williams; J.Inorg.Nucl.Chem.,24,1215 (1962)
 1962Wka G Watelle-Marion,D Keita; Bull.Soc.Chim.Fr.,2108 (1962)
 1961ANA A Ablov,L Nazarova; Zh.Neorg.Khim.,6,1044 (1961)
 1961BHb N Barker,C Harris,E McKenzie; Proc.Chem.Soc.,335 (1961)

1961BMa J Broomhead, H McKenzie, D Mellor; Australian J.Chem., 14, 649 (1961)
 1961CAa V Chukhlantsev, K Alyamovskaya; Isvest.VUZ.Khim., 4, 359; 706 (1961)
 1961COa E Campi, G Ostacoli, N Cibrario, G Saini; Gazz.Chim.Ital., 91, 361 (1961)
 1961CPa M Ciampolini, P Paoletti, L Sacconi; J.Chem.Soc., 2994 (1961)
 1961DEb R Delhez; Bull.Soc.Roy.Sci.Liege, 30, 446 (1961)
 1961DHa D Dyrssen, M Hennichs; Acta Chem.Scand., 15, 47 (1961)
 1961DLa F Duke, W Lawrence; J.Am.Chem.Soc., 83, 1269 (1961)
 1961FRa R Fraser; J.Inorg.Nucl.Chem., 17, 265 (1961)
 1961IWb R Izatt, J Wrathall, K Anderson; J.Phys.Chem., 65, 1914 (1961)
 1961JWa B James, R Williams; J.Chem.Soc., 2007 (1961)
 1961KPa E Knoblock, W Purdy; J.Electroanal.Chem., 2, 493 (1961)
 1961KPb E Knoblock, W Purdy; Radiation Res., 15, 94 (1961)
 1961LLa C Liu, C Liu; J.Am.Chem.Soc., 83, 4169 (1961)
 1961MAb R Martin; Fed.Proc., 20, No.3, Suppl., 10, 54 (1961)
 1961MAf S Matsuo; J.Chem.Soc.Jpn., 82; 1330, 1334 (1961)
 1961MIa R Miller; Diss.Abs., 22, 3365 (1961)
 1961MLa C Muendel, H Linford, W Selke; AIChEJ., 7, 133 (1961)
 1961OCa G Ostacoli, E Campi, N Cibrario, G Saini; Gazz.Chim.Ital., 91, 349 (1961)
 1961PEb D Perrin; J.Chem.Soc., 2244 (1961)
 1961PFa A Patterson, H Freitag; J.Electrochem.Soc., 108, 529 (1961)
 1961RFa R Reichard, W Fernelius; J.Phys.Chem., 65, 380 (1961)
 1961SAa A Sandell; Acta Chem.Scand., 15, 190 (1961)
 1961SHA H Shimura; Nippon Kagaku Kaishi, 82, 641 (1961)
 1961Sma I Smith; Diss.Kansas State Univ. (1961)
 1961SOB G Saini, G Ostacoli, E Campi, N Cibrario; Gazz.Chim.Ital., 91, 242 (1961)
 1961SPb L Sacconi, P Paoletti, M Ciampolini; J.Chem.Soc., 5115 (1961)
 1961TDb E Tucci, E Doody, N Li; J.Phys.Chem., 65, 1570 (1961)
 1961VAa S Valladas-Dubois; Bull.Soc.Chim.Fr., 967 (1961)
 1961Wka G Watelle-Marion, D Keita-Garreau; Compt.Rend., 252, 2718 (1961)
 1960ANb G Anderegg; Helv.Chim.Acta, 43, 414 (1960)
 1960ASb A Albert, E Serjeant; Biochem.J., 76, 621 (1960)
 1960BBa P Barton, P Bethke; Am.J.Sci., 258, A21 (1960)
 1960DPa R Das, R Patnaik, S Panit; J.Indian Chem.Soc., 37, 59 (1960)
 1960DUa R Dutta; J.Indian Chem.Soc., 37, 499 (1960)
 1960ENa H El-Shamy, M Nassar; J.Inorg.Nucl.Chem., 16, 124 (1960)
 1960FFa P Feng, Q Fernando; J.Am.Chem.Soc., 82, 2115 (1960)
 1960Hda J Hall, W Dean, E Pacofsky; J.Am.Chem.Soc., 82, 3303 (1960)
 1960HJa F Holmes, F Jones; J.Chem.Soc., 2398 (1960)
 1960HOb E Hoyer; Chem.Ber., 93, 2475 (1960)
 1960HOc D Hope, R Otter, J Prue; J.Chem.Soc., 5226 (1960)
 1960KAa M Kato; Z.Phys.Chem., 23, 375 (1960)
 1960KFb W Koltun, M Fried, F Gurd; J.Am.Chem.Soc., 82, 233 (1960)
 1960KFc H Kido, W Fernelius, C Haas; Penn.State Univ.Con.No.AT(30)-907 (1960)
 1960Lra M Lister, P Rosenblum; Can.J.Chem., 38, 1827 (1960)
 1960LRc R Leberman, B Rabin; Nature, 185, 768 (1960)
 1960Lub P Lumme; Suomen Kem., B33, 85; 87 (1960)
 1960MNa A McAuley, G Nancollas; Trans.Faraday Society, 56, 1165 (1960)
 1960NAf R Nasanen; Suomen Kem., B33, 7; 111 (1960)
 1960NFa W Nicholas, W Fernelius; Pennsylv.State Coll.U.S Atom.Energy Comm (1960)
 1960OSa R Osterberg; Acta Chem.Scand., 14, 471 (1960)

1960PCa P Paoletti, M Ciampolini, L Sacconi; *Ricerca Sci.*, 30, 1791 (1960)
 1960PEb D Perrin; *J. Am. Chem. Soc.*, 82, 5642 (1960)
 1960PEc D Perrin; *J. Chem. Soc.*, 3189 (1960)
 1960PEd S Pelletier; Thesis, Univ. Paris (1960)
 1960RAB A Ray; *Z. Anorg. Chem.*, 305, 207 (1960)
 1960REb A Rescigno; *Ann. Chim.*, (Italy), 50, 365 (1960)
 1960SAa A Sandell; *Acta Chem. Scand.* (1960)
 1960SAb A Sandell; *Acta Chem. Scand.*, (page not known) (1960)
 1960SRa N Sengupta, P Ray; *J. Indian Chem. Soc.*, 37, 303 (1960)
 1960TKb N Tanaka, K Kato; *Bull. Chem. Soc. Jpn.*, 33, 417; 1412 (1960)
 1960YYa M Yasada, K Yamasaki, H Ohtaki; *Bull. Chem. Soc. Jpn.*, 33, 1067 (1960)
 1959BBb A Basinski, F Burnicki, W Dzierza; *Rocz. Chem.*, 33, 177 (1959)
 1959BRb J Biester, P Ruoff; *J. Am. Chem. Soc.*, 81, 6517 (1959)
 1959CBa E Corey, J Bailer; *J. Am. Chem. Soc.*, 81, 2620 (1959)
 1959CFb G Cheney, H Freiser, Q Fernando; *J. Am. Chem. Soc.*, 81, 2611 (1959)
 1959CGB R Courtney, R Gustafson, S Chaberek et al; *J. Am. Chem. Soc.*, 81, 519 (1959)
 1959CZa G Czamanske; *Econ. Geol.*, 54, 57 (1959)
 1959DLb S Datta, R Leberman, B Rabin; *Trans. Faraday Society*, 55, 1982; 2141 (1959)
 1959DLc S Datta, R Leberman, B Rabin; *Trans. Faraday Society*, 55, 2141 (1959)
 1959FBa J Faucherre, Y Bonnaire; *Compt. Rend.*, 248, 3705 (1959)
 1959GFa D Goldberg, W Fernelius; *J. Phys. Chem.*, 63, 1246 (1959)
 1959GMA R Gustafson, A Martell; *J. Am. Chem. Soc.*, 81, 525 (1959)
 1959GRb D Graddon; *Nature*, 183, 1610 (1959)
 1959KEb J Kenttamaa; *Suomen Kem.*, B32, 9; 55; 68; 220 (1959)
 1959LBb J Lotz, B Block, W Fernelius; *J. Phys. Chem.*, 63, 541 (1959)
 1959LRa R Leberman, B Rabin; *Trans. Faraday Society*, 55, 1660 (1959)
 1959MBa G McIntyre, B Block, W Fernelius; *J. Am. Chem. Soc.*, 81, 529 (1959)
 1959MFA B Martin, W Fernelius; *J. Am. Chem. Soc.*, 81, 2342 (1959)
 1959MPa P Migal, A Pushnyak; *Zh. Neorg. Khim.*, 4, 601 (1959)
 1959NAa R Nasanen; *Acta Chem. Scand.*, 13, 869 (1959)
 1959NCA M Nyberg, M Cefola, D Sabine; *Arch. Biochem. Biophys.*, 85, 82 (1959)
 1959OKb A Okac, Z Kolarik; *Collec. Czech. Chem. Commun.*, 24, 266 (1959)
 1959OSa R Osterberg; *Ark. Kemi.*, 13, 393 (Nature, 1957, 179, 476) (1959)
 1959PEe D Perrin; *Nature*, 184, 1868 (1959)
 1959RAa R Ramette; *J. Chem. Educ.*, 36, 191 (1959)
 1959RRa M Ray, P Ray; *J. Indian Chem. Soc.*, 36, 849 (1959)
 1959RRb M Ray, P Ray; *J. Indian Chem. Soc.*, 36, 849; 851 (1959)
 1959RRc F Rossotti, H Rossotti; *J. Phys. Chem.*, 63, 1041 (1959)
 1959SCe P Scott; Thesis, Univ. Minnesota, Microf. 59-3764 (1959)
 1959SIb P Sims; *J. Chem. Soc.*, 3648 (1959)
 1959SRa J Sullivan, J Rydberg, W Miller; *Acta Chem. Scand.*, 13, 2023 (1959)
 1959TTb N Tanaka, T Takamura; *J. Inorg. Nucl. Chem.*, 9, 15 (1959)
 1959YGa V Yakovleva, E Ganelina; *Zh. Neorg. Khim.*, 4, 775 (1959)
 1958ACa F Achenza; *Ann. Chim.*, (Italy), 48, 565 (1958)
 1958BBa P Barton, P Bethke; *Econ. Geol.*, 53, 914 (1958)
 1958BBc C Bertsch, B Block, W Fernelius; *J. Phys. Chem.*, 62, 444; 503 (1958)
 1958BFa C Bertsch, W Fernelius, B Block; *J. Phys. Chem.*, 62, 444 (1958)
 1958BFb C Bertsch, W Fernelius, P Block; *J. Phys. Chem.*, 68, 444 (1958)
 1958BPa V Bochkova, V Peshkova; *Zh. Neorg. Khim.*, 3, 1132 (1958)
 1958BRC P Bretton; Thesis, Paris (1958)

1958CPa R Connick,A Paul; J.Am.Chem.Soc.,80,2069 (1958)
 1958GHc E Gelles,R Hay; J.Chem.Soc.,3673;3684;3689 (1958)
 1958GLa W Griffith,J Lewis,G Wilkinson; J.Chem.Soc.,3993 (1958)
 1958HDa J Hall,W Dean; J.Am.Chem.Soc.,80,4183 (1958)
 1958INa A Indelli; Ann.Chim.,(Italy),48,345 (1958)
 1958JPa J Jones,J Poole,J Tomkinson,R Williams; J.Chem.Soc.,2001 (1958)
 1958KEa J Kenttamaa; Acta Chem.Scand.,12,1323 (1958)
 1958KKc W Koltun,R Kexter,R Clark,F Gurd; J.Am.Chem.Soc.,80,4188 (1958)
 1958LDa N Li,E Doody,J White; J.Am.Chem.Soc.,80,5901 (1958)
 1958MSb P Migal,A Sychev; Zh.Neorg.Khim.,3,314 (1958)
 1958MUa R Murmann; J.Am.Chem.Soc.,80,4174 (1958)
 1958PAa C van Panthaleon; Thesis,Leiden (1958)
 1958PBa V Peshkova,V Bochkova; Nauk Dokl.Vyz.Shkoly,1,62 (1958)
 1958PEe D Perrin; Nature,182,741 (1958)
 1958PTa V Persiantseva,P Titov; Nauk Dokl.Vyz.Shkoly,584 (1958)
 1958SIa J Silman; Thesis,Harvard Univ. (1958)
 1958TRa B Tremillon; Bull.Soc.Chim.Fr.,1483 (1958)
 1958VRb J Vaid,T Ramachar; Bull.India Sect.Elect.Soc.,7,5 (1958)
 1958YKa K Yatsimirskii,V Korableva; Zh.Neorg.Khim.,3,339 (1958)
 1957BDb W Bale,E Davies,D Morgan,C Monk; Trans.Faraday Society,24,94 (1957)
 1957BEa W Bennett; J.Am.Chem.Soc.,79,1290 (1957)
 1957BJa J Bjerrum; Personal communication (1957)
 1957BRc P Bretton; J.Chim.Phys.,54,837;827 (1957)
 1957Cwa N Clark,B Willoford; J.Am.Chem.Soc.,79,1296 (1957)
 1957DOa W Davies,R Otter,J Prue; Trans.Faraday Society,24,103 (1957)
 1957FCa A Frost,S Chaberek,N Bicknell; J.Am.Chem.Soc.,79,2755 (1957)
 1957FGa Y Fialkov,V Grigoreva; Zh.Neorg.Khim.,2,287 (1957)
 1957GIa M Gibaud; Compt.Rend.,244,1930 (1957)
 1957HBa H Hershenson,R Brooks,M Murphy; J.Am.Chem.Soc.,79,2046 (1957)
 1957IHb M Ishidate,A Hanaki; Yakugaku Kaishi,77,634 (1957)
 1957JAa M Janssen; Rec.Trav.Chim.,76,827 (1957)
 1957JBb H Jonassen,J Bertrand,F Groves et al; J.Am.Chem.Soc.,79,4279 (1957)
 1957Lda N Li,E Doody,J White; J.Am.Chem.Soc.,79,5859 (1957)
 1957LEa J Lefebvre; J.Chim.Phys.,54,567;581;601 (1957)
 1957LHa D Leussing,R Hansen; J.Am.Chem.Soc.,79,4270 (1957)
 1957LUa P Lumme; Suomen Kem.,B30,176;182;194 (1957)
 1957LYa T Lyons; Diss.Kansas State Univ. (1957)
 1957Mca A Martell,S Chaberek,R Courtney et al; J.Am.Chem.Soc.,79,3036 (1957)
 1957MIb P Milyukov; Zh.Neorg.Khim.,2,491 (1957)
 1957Mma C Murphy,A Martell; J.Biol.Chem.,226,37 (1957)
 1957MSb H Morawetz,E Sammak; J.Phys.Chem.,61,1357 (1957)
 1957NGa Y Nozaki,F Gurd,R Chen,J Edsall; J.Am.Chem.Soc.,79,2123 (1957)
 1957OSa R Osterberg; Nature,179,476 (1957)
 1957PAa M Pascal; Bull.Soc.Chim.Fr.,185 (1957)
 1957PBa R Pecsok,J Bjerrum; Acta Chem.Scand.,11,1419 (1957)
 1957RSb C Reilly,R Schmid; J.Elisha Mitchell Sci.Soc. (1957)
 1957SCa J Scaife; Can.J.Chem.,35,1332 (1957)
 1957SOa S Saini,G Ostacoli; J.Inorg.Nucl.Chem.,8,346 (1957)
 1957SYa K Suzuki,M Yasada,K Yamasaki; J.Phys.Chem.,61,229 (1957)
 1957SYb K Suzuki,K Yamasaki; Naturwissenschaft,44,396 (1957)

1957TBb R Tichane,W Bennett; J.Am.Chem.Soc.,79,1293 (1957)
 1957TIa C Timberlake; J.Chem.Soc.,4987 (1957)
 1957VIa H Vink; Ark.Kemi.,11,9 (1957)
 1957WFa A Weiss,S Fallab; Helv.Chim.Acta,40,576 (1957)
 1957Wfb A Weiss,S Fallab,H Erlenmeyer; Helv.Chim.Acta,40,611 (1957)
 1957Ymb K Yatsimirskii,P Milyukov; Zh.Fiz.Khim.,31,842 (1957)
 1956ARA S Ahrland,K Rosengren; Acta Chem.Scand.,10,727 (1956)
 1956ARb A Albert,C Reese,A Tomlinson; Brit.J.Exp.Pathology,37,500 (1956)
 1956ARD A Albert,C Rees; Nature,177,433;525 also 172,201 (1956)
 1956BDa W Bale,E Davies,C Monk; Trans.Faraday Society,52,816 (1956)
 1956BEa C Berecki-Biedermann; Ark.Kemi.,9,175 (1956)
 1956BFd C Bertsch,W Fernelius,B Block; Penn.State Univ.Con.No.AT(30)-907 (1956)
 1956CDa V Cielezsky,A Dines,E Sandi; Acta Chim.Acad.Sci.Hung.,9,381 (1956)
 1956CHd V Chukhlantsev; Zh.Neorg.Khim.,1,1975 (1956)
 1956CHE V Chukhlantsev; Zh.Neorg.Khim.,1,2300 (1956)
 1956CUa J Curchod; Diss.Univ.Paris (1956)
 1956DRb S Datta,B Rabin; Trans.Faraday Society,52,1117;1123;1130 (1956)
 1956GAa J Gazo; Chem.Zvesti,10,509 (1956)
 1956GNa E Gelles,G Nancollas; J.Chem.Soc.,4847 (1956)
 1956Gwc P Gray,T Waddington; Proc.Roy.Soc.(A),235,106 (1956)
 1956Hda C Heitner,I Dliezer; Bull.Soc.Chim.Fr.,574 (1956)
 1956Hfb G Hares,W Fernelius,B Douglas; J.Am.Chem.Soc.,78,1816 (1956)
 1956IFa R Irving,W Fernelius; J.Phys.Chem.,60,1427 (1956)
 1956Jaa M Janssen; Rec.Trav.Chim.,75,1411 (1956)
 1956Jab M Janssen; Rec.Trav.Chim.,75,1397;1411 (1956)
 1956KEb J Kenttamaa; Suomen Kem.,B29,59 (1956)
 1956KIa S Kida; Bull.Chem.Soc.Jpn.,29,805 (1956)
 1956KOa M Kobayashi; J.Chem.Soc.Jpn.,77,279 (1956)
 1956LWa N Li,J White,R Yoest; J.Am.Chem.Soc.,78,5218 (1956)
 1956NAb R Nasanen; Suomen Kem.,B29,91 (1956)
 1956NEb J Neilands; Arch.Biochem.Biophys.,62,151;161 (1956)
 1956NMa R Nasanen,R Markkanen; Suomen Kem.,B29,119 (1956)
 1956PKa I Pyatnitskii,A Kostyshina; Ukr.Khim.Zh.,22,434 (1956)
 1956RAa S Rasmussen; Acta Chem.Scand.,10,1279 (1956)
 1956SBa G Schwarzenbach,R Bauer; Helv.Chim.Acta,39,722 (1956)
 1956SGa G Schwarzenbach,R Gut; Helv.Chim.Acta,34,1589 (1956)
 1956SPb S Sircar,B Prasad; J.Indian Chem.Soc.,33,361 (1956)
 1956SRa B Sarma,P Ray; J.Indian Chem.Soc.,33,341 (1956)
 1956SRb B Sarma,P Ray; J.Indian Chem.Soc.,33,841 (1956)
 1956Tgb I Tananaev,M Glushkova,G Seifer; Zh.Neorg.Khim.,1,66 (1956)
 1956ULa E Ukshe,A Levin; Zh.Obshch.Khim.,26,2657 (1956)
 1956WJa P Webber,W Johannsen; Z.Anal.Chem.,153,324 (1956)
 1956Wmb J White,R Manning,N Li; J.Am.Chem.Soc.,78,2367 (1956)
 1956Wme S Westerback,A Martell; Nature,178,321 (1956)
 1956YFa K Yatsimirskii,T Fedorova; Zh.Neorg.Khim.,1,2310 (1956)
 1956YOa H Yoneda; Bull.Chem.Soc.Jpn.,29,68;319 (1956)
 1956YVa K Yatsimirskii,V Vasilev; Zh.Anal.Khim.,11,536 (1956)
 1956YVb K Yatsimirskii,V Vasilev; Zh.Fiz.Khim.,30,28;901 (1956)
 1955BKa M Bobtelsky,S Kertes; Bull.Soc.Chim.Fr.,328 (1955)
 1955BPb P Brown,J Prue; Proc.Roy.Soc.(A),232,320 (1955)

1955CHa F Cotton,F Harris; J.Phys.Chem.,59,1203 (1955)
 1955CHb F Cotton,F Harris; J.Phys.Chem.,69,1203 (1955)
 1955DKa H Dobbie,W Kermack; Biochem.J.,59,257 (1955)
 1955DKb J Dobbie,W Kermack; Biochem.J.,59,240 (1955)
 1955DKc H Dobbie,W Kermack; Biochem.J.,59,246 (1955)
 1955EMa J Evans,C Monk; Trans.Faraday Society,51,1244 (1955)
 1955FKa R Flannery,B Ke,M Greib,D Trivich; J.Am.Chem.Soc.,77,2996 (1955)
 1955GGa R Gross,J Gryder; J.Am.Chem.Soc.,77,3695 (1955)
 1955GLd H Gregor,L Luttinger,E Loeb1; J.Phys.Chem.,59,34 (1955)
 1955HCa F Holmes,W Crimmin; J.Chem.Soc.,1175;3467 (1955)
 1955JRa H Jonassen,R Reeves,L Sogal; J.Am.Chem.Soc.,77,2748 (1955)
 1955KOa P Kovalenko; S.O.N.I.Prim.O.V.Khim.Obshch.,1,12 (1955)
 1955LFa W Lutz,S Fallab,H Erlenmeyer; Helv.Chim.Acta,38,1115 (1955)
 1955MAb B Michel,A Andrews; J.Am.Chem.Soc.,77,5291 (1955)
 1955MMa H Mackenzie,D Mellor; Australian J.Chem.,14,562 (1955)
 1955PAa A Paul; Thesis,Univ.California,Berkeley,UCRL-292 (1955)
 1955PBa I Poulsen,J Bjerrum; Acta Chem.Scand.,9,1407 (1955)
 1955PJa R Pecsok,R Juvet; J.Am.Chem.Soc.,77,202 (1955)
 1955Saa G Schwarzenbach,G Anderegg et al; Helv.Chim.Acta,38,1147 (1955)
 1955VGB A Vasilev,V Gorokhorskii; Uch.Zapiski Kazanskogo U.,115,3,27;35;39
 (1955)
 1954AHb A Albert,A Hampton; J.Chem.Soc.,505 (1954)
 1954BBa J Bjerrum,C Ballhausen,C Jorgensen; Acta Chem.Scand.,8,1275 (1954)
 1954BCa F Basolo,Y Chen,R Murmann; J.Am.Chem.Soc.,76,956 (1954)
 1954BCb F Basolo,Y Chen; J.Am.Chem.Soc.,76,953 (1954)
 1954BFa B Bryant,W Fernelius; J.Am.Chem.Soc.,67,5351 (1954)
 1954BMa F Basolo,R Murmann; J.Am.Chem.Soc.,76,211 (1954)
 1954BRc B Bryant; J.Phys.Chem.,58,573 (1954)
 1954CFa R Charles,H Freiser; Anal.Chim.Acta,11,1;101 (1954)
 1954DOa G Dobrokhotoy; Zh.Prikl.Khim.,27,1056 (1954)
 1954DSa T Davies,S Singer,L Staveley; J.Chem.Soc.,2304 (1954)
 1954EFa J Edsall,G Felsenfeld,D Goodman,F Gurd; J.Am.Chem.Soc.,76,3054 (1954)
 1954EMa W Evans,C Monk; J.Chem.Soc.,550 (1954)
 1954GFa E Gonick,W Fernelius,B Douglas; J.Am.Chem.Soc.,76,4671 (1954)
 1954IGa H Irving,J Griffiths; J.Chem.Soc.,213;4370 (1954)
 1954IHa R Izatt,C Haas,B Block,W Fernelius; J.Phys.Chem.,58,1133 (1954)
 1954IRa H Irving,H Rossotti; J.Chem.Soc.,2910;3494 (1954)
 1954JOa C Jorgensen; Acta Chem.Scand.,8,175 (1954)
 1954LDa N Li,E Doody; J.Am.Chem.Soc.,76,221 (1954)
 1954LLa R Lloyd; Thesis, Temple Univ.Phil.,Microf.12401 (1954)
 1954LWa N Li,J White,E Doody; J.Am.Chem.Soc.,76,6219 (1954)
 1954NKb R Nasanen,B Klaile; Suomen Kem.,B27,50 (1954)
 1954PSa T Pavlopoulous,H Strehlow; Z.Phys.Chem.,(Frankfurt),2,89 (1954)
 1954REa R Rebertus; Diss.Univ.Illinois (1954)
 1954UFa L van Uitert,W Fernelius; J.Am.Chem.Soc.,76,375 (1954)
 1954ULa E Ukshe,A Levin; Zh.Obshch.Khim.,24,775 (1954)
 1954WFa A Weiss,S Fallab; Helv.Chim.Acta,40,576 (1954)
 1953ALa A Albert; Biochem.J.,54,646 (1953)
 1953BBa M Bobtelsky,I Bargadda; Bull.Soc.Chim.Fr.,276;687 (1953)
 1953BBb M Bobtelsky,I Bargadda; Bull.Soc.Chim.Fr.,687;276;382 (1953)

1953BHa J Booling, J Hall; J.Am.Chem.Soc., 75, 3953 (1953)
 1953CCa S Chaberek, R Courtney, A Martell; J.Am.Chem.Soc., 75, 2185 (1953)
 1953CGa A Chakraborty, N Ghosh, P Ray; J.Indian Chem.Soc., 30, 185 (1953)
 1953FEa S Fallab, H Erlenmeyer; Helv.Chim.Acta, 36, 6 (1953)
 1953KIa E Kiseleva; Zh.Fiz.Khim., 27, 443 (1953)
 1953LUa A Levin, E Ukshe; Sbornik.Stat.obshch.Khim., 2, 798 (1953)
 1953Mca G McIntyre; Diss.Pennsylvania State College (1953)
 1953Nab R Nasanen; Suomen Kem., B26, 2; 11; 37; 67; 69 (1953)
 1953OGa M Oudinet, F Gallais; Compt.Rend., 78 (1953)
 1953SAb S Sircar, S Aditya, B Prasad; J.Indian Chem.Soc., 30, 255; 633 (1953)
 1953SLa S Shchukarev, L Lilich, V Latysheva; Dokl.Akad.Nauk SSSR, 91, 273 (1953)
 1953SPb C Spike, R Parry; J.Am.Chem.Soc., 75, 3770 (1953)
 1953SPc C Spike; Thesis, Univ.Michigan, Microf. 5098 (1953)
 1953UFb L Uitert, W Fernelius, B Douglas; J.Am.Chem.Soc., 75, 2736; 2739; 457 (1953)
 1953UFe L van Uitert, W Fernelius, B Douglas; J.Am.Chem.Soc., 75, 457; 2736; 2739
 (1953)
 1953Waa J Watters, A Aaron; J.Am.Chem.Soc., 75, 611 (1953)
 1953Wma J Watters, J Mason, A Aaron; J.Am.Chem.Soc., 75, 5212 (1953)
 1953WSa E Wheelwright, F Spedding, G Schwarzenbach; J.Am.Chem.Soc., 75, 4196 (1953)
 1953WWa R Warner, I Weber; J.Am.Chem.Soc., 75, 5086 (1953)
 1953YGa K Yatsimirskii, Z Grafova; Zh.Obshch.Khim., 23, 717 (1953)
 1952ALa A Albert; Biochem.J., 50, 690 (1952)
 1952Bma F Basolo, R Murmann; J.Am.Chem.Soc., 74, 5243 (1952)
 1952Bmb F Basolo, R Murmann; J.Am.Chem.Soc., 74, 2373; 5243 (1952)
 1952CCa S Chaberek, R Courtney, A Martell; J.Am.Chem.Soc., 74, 5057 (1952)
 1952Cma S Chaberek, A Martell; J.Am.Chem.Soc., 74, 5052 (1952)
 1952Cmb S Chaberek, A Martell; J.Am.Chem.Soc., 74, 6021 (1952)
 1952CMc S Chaberek, A Martell; J.Am.Chem.Soc., 74, 6228 (1952)
 1952FAa P Farrington; J.Am.Chem.Soc., 74, 966 (1952)
 1952FCa H Freiser, R Charles, W Johnston; J.Am.Chem.Soc., 74, 1383 (1952)
 1952FYa W Fyfe; J.Chem.Soc., 2018; 2023 (1952)
 1952GGc J Goates, M Gordon, N Faux; J.Am.Chem.Soc., 74, 835 (1952)
 1952Haa G Hares; Diss.Pennsylvania State College (1952)
 1952JHa H Jonassen, G Hurst, R le Blanc, A Meibohm; J.Phys.Chem., 56, 16 (1952)
 1952LAB W Latimer; "Oxidation Potentials", Prentice Hall, NY (1952)
 1952Lda N Li, E Doody; J.Am.Chem.Soc., 74, 4184 (1952)
 1952Mca G McIntyre; Diss.Pennsylvania State College (1952)
 1952Pda R Parry, F Dubois; J.Am.Chem.Soc., 74, 3749 (1952)
 1952SUC S Suzuki; Sci.Rep.Res.Inst.Tohoku Univ., 4, 464 (1952)
 1951FRA S Fronaeus; Acta Chem.Scand., 5, 139; 859 (1951)
 1951GOa E Gonick; Diss.Pennsylvania State College (1951)
 1951LWa M Lloyd, V Wycherley, C Monk; J.Chem.Soc., 1786 (1951)
 1951MOa C Monk; Trans.Faraday Society, 47, 285; 292/7; 1233 (1951)
 1951NLb R Nasanen, P Lumme; Acta Chem.Scand., 5, 13 (1951)
 1951PCa S Peterson, O Cooper; Trans.Kentucky Acad.Sci., 13, 146 (1951)
 1951PJb J Peacock, J James; J.Am.Chem.Soc., 73, 2233 (1951)
 1951PJa J Peacock, J James; J.Chem.Soc., 2233 (1951)
 1951SFa G Schwarzenbach, E Freitag; Helv.Chim.Acta, 34, 1492; 1503 (1951)
 1951Sta A Stabrovskii; Zh.Obshch.Khim., 21, 949; 1223 (1951)
 1951UIa L van Uitert; Thesis, Pennsylvania State College (1951)

1950AFa N Akselrud,Y Fialkov; Ukr.Khim.Zh.,16,283 (1950)
 1950ALa A Albert; Biochem.J.,47,531 (1950)
 1950BJa J Bjerrum; Chem.Revs.,46,381 (1950)
 1950BLa J Bjerrum,C Lamm; Acta Chem.Scand.,4,997 (1950)
 1950FRa S Fronaeus; Acta Chem.Scand.,4,72 (1950)
 1950LDa N Li,E Doody; J.Am.Chem.Soc.,72,1891 (1950)
 1950LOa H Laitinen,E Onstott; J.Am.Chem.Soc.,72,4729 (1950)
 1950MDa H McConnell,N Davidson; J.Am.Chem.Soc.,72,3164;3168 (1950)
 1950MEa L Meites; J.Am.Chem.Soc.,72,180 (1950)
 1950MEb L Meites; J.Am.Chem.Soc.,72,180;184 (1950)
 1950MMA L Maley,D Mellor; Nature,165,453 (1950)
 1950NAa R Nasanen; Acta Chem.Scand.,4,140;816 (1950)
 1950PSa J Prue,G Schwarzenbach; Helv.Chim.Acta,33,963;985;995 (1950)
 1950SCa G Schwarzenbach; Helv.Chim.Acta,33,974 (1950)
 1949ERa E Eriksson; Kgl.Lant-Hogs.Annal.,16,39;72 (1949)
 1949KAa R Keefer,L Andrews,R Kepner; J.Am.Chem.Soc.,71,2381 (1949)
 1949KAb R Keefer,L Andrews,R Kepner; J.Am.Chem.Soc.,71,3906 (1949)
 1949LAd H Laitinen et al; J.Am.Chem.Soc.,71,1550 (1949)
 1949MEa L Meites; J.Am.Chem.Soc.,71,3269 (1949)
 1949MMA L Maley,D Mellor; Australian J.Sci.Res.,A,2;92;579 (1949)
 1949NAa R Nasanen; Acta Chem.Scand.,3,179 (1949)
 1949NAb R Nasanen; Acta Chem.Scand.,3,959 (1949)
 1949NTa R Nasanen,V Tamminen; J.Am.Chem.Soc.,71,1994 (1949)
 1949PEa K Pedersen; Acta Chem.Scand.,3,676 (1949)
 1949SDa D Stock,C Davies; J.Chem.Soc.,1371 (1949)
 1948BNa J Bjerrum,E Neilson; Acta Chem.Scand.,2,307;316 (1948)
 1948BVa R Bruehlman,F Verhoek; J.Am.Chem.Soc.,70,1401 (1948)
 1948FRa S Fronaeus; Diss.Lund (1948)
 1948GVa F Gallais,J Vives; Bull.Soc.Chim.Fr.,702 (1948)
 1948KEa R Keefer; J.Am.Chem.Soc.,70,476 (1948)
 1948MMA D Mellor,E Maley; Nature,161,436 (1948)
 1947BRa J Bjerrum,S Refn; Nordiska Kemistmote,Lund,227 (1947)
 1947GSa F Graner,L Sillen; Acta Chem.Scand.,1,631 (1947)
 1946BJb J Bjerrum; Kgl.Danske Vid.Sels.Medd.,22,18 (1946)
 1946KEa R Keefer; J.Am.Chem.Soc.,68,2329 (1946)
 1946KSa A Kossiakoff,D Sickman; J.Am.Chem.Soc.,68,442 (1946)
 1945CMA G Carlson,J McReynolds,F Verhoek; J.Am.Chem.Soc.,67,1334 (1945)
 1945CWA M Calvin,K Wilson; J.Am.Chem.Soc.,67,2003 (1945)
 1945FLa H Flood,V Lorez; Tidskr.Kjemi.Berg.,5,83 (1945)
 1945MEa J Mercadie; Compt.Rend.,221,581 (1945)
 1945PEa K Pedersen; Kgl.Danske Vid.Sels.Medd.,22,10;12 (1945)
 1944FEa W Feitknecht; Helv.Chim.Acta,27,771 (1944)
 1944NAa R Nasanen; Suomen Kem.,B17,11;31 (1944)
 1943PEa K Pedersen; Kgl.Danske Vid.Sels.Medd.,20,7 (1943)
 1943SCa M Straumanis,A Cirulis; Z.Anorg.Chem.,251,315 (1943)
 1941BJa J Bjerrum; Thesis,repr.1957,P.Haase&Son,Copenhagen (1941)
 1940KAa A Kapustinskii; Dokl.Akad.Nauk SSSR,28,144 (1940)
 1940SFa M von Stackelberg,H von Freyhold; Z.Elektrochem., 46,120 (1940)
 1939BAa A Babko; Nauk Zapiski Kiev Derzhav Univ.,4,81 (1939)
 1939HAA H Hagisawa; Bull.Inst.Phys.Chem.Tokyo,18,260;368;648 (1939)

1938DAa C Davies; J.Chem.Soc.,277;2093 (1938)
 1938OGa B Owen,R Gurry; J.Am.Chem.Soc.,60,3074 (1938)
 1938OKa Y Oka; J.Chem.Soc.Jpn.,59,971 (1938)
 1937CBa J Cranston,H Brown; J.Royal Tech.Coll.,Glasgow, 4,54 (1937)
 1937QUa M Quintin; Compt.Rend., 204,968 (1937)
 1936BJa H Britton,M Jarrett; J.Chem.Soc.,1489 (1936)
 1936JOa P Job; Ann.Chim.,(France),6,97 (1936)
 1936MJa L McDowell,H Johnston; J.Am.Chem.Soc., 58,2009 (1936)
 1936RAa S Ravitz; J.Phys.Chem.,40,61 (1936)
 1935BJa H Britton,M Jarrett; J.Chem.Soc.,168 (1935)
 1935DAa C Davies; J.Chem.Soc.,910 (1935)
 1935KAa K Kelley,C Anderson; Bur.Mines,Bull.,384 (1935)
 1934BJb J Bjerrum; Kgl.Danske Vid.Sels.Medd.,1215 (1934)
 1934FRa E Ferrell,J Ridgion,H Riley; J.Chem.Soc.,1440 (1934)
 1934RSa H Riley,H Smith; J.Chem.Soc.,1448 (1934)
 1933ATa M Aumeras,A Tamisier; Bull.Soc.Chim.Fr.,53,97;157 (1933)
 1933JEa K Jellinek,F Enke; Stuttgart,"Lehrbuch Phys.Chemie",2nd Ed (1933)
 1932BJa J Bjerrum; Kgl.Danske Vid.Sels.Medd.,1110 (1932)
 1932MDa R Money,C Davies; Trans.Faraday Society,28,609 (1932)
 1932ROa F Rosenblatt; Z.Anorg.Chem.,204,351 (1932)
 1931BJa J Bjerrum; Kgl.Danske Vid.Sels.Medd.,115 (1931)
 1931HEa E Heinerth; Z.Elektrochem.,37,61 (1931)
 1931IRa D Ives,H Riley; J.Am.Chem.Soc.,1998 (1931)
 1931IRb D Ives,H Riley; J.Chem.Soc.,1998 (1931)
 1930KNa W Knobloch; Lotos.,78,110 (1930)
 1930RIa H Riley; J.Chem.Soc.,1642 (1930)
 1929RFa H Riley,N Fisher; J.Chem.Soc.,2006 (1929)
 1929RIa H Riley; J.Chem.Soc.,1307;1387 (1929)
 1928JOa P Job; Ann.Chim.,(France),9,113 (1928)
 1927DAb C Davies; Trans.Faraday Society,23,351 (1927)
 1925BRa H Britton; J.Chem.Soc.,127,2110;2148;2796;2956 (1925)
 1924JGa K Jellinek,H Gordon; Z.Phys.Chem., 112,207 (1924)
 1923MUa E Muller; Z.Phys.Chem., 105,73 (1923)
 1914AUa F Auerbach; Z.phys.Chem.,86,243 (1914)
 1913KUa C Kullgren; Z.Phys.Chem.,85,466 (1913)
 1913SPa J Spencer; Z.Phys.Chem.,83,290 (1913)
 1909ALa A Allmand; J.Chem.Soc.,95,2151 (1909)
 1905SAb R Abegg,H Schafer; Z.Anorg.Chem.,45,293 (1905)

EXPLANATORY NOTES

DATA Flags are :-

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

EVALUATION Flags are :-

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

END

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 12 experiments for
(no ligands specified)

Metal : Cu+++

(no references specified)

(no experimental details specified)

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

Periodate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+++	kin	oth/un	40°C	?	U	H		1961LIa (8600)	1
							K1eff=4.47 in NaOH B2eff=10.10 in NaOH		

DH(B2eff)=-31 kJ mol⁻¹

OH- HL Hydroxide (57)

Hydroxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+++	oth	oth/un	?		U			1965BFa (11268)	2
							*K1=-3.0		

Method: pulse radiolysis(?)

Cu+++	sol	oth/un	40°C	var	U			1961DEb (11269)	3
							K(Cu(OH)3(s)+OH=Cu(OH)4)=-2.3		

Te04-- H2L Tellurate (5750)

Tellurate(VI); Te04-- or Te02(OH)4--

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+++	kin	oth/un	40°C	0.40M	U			1961LIa (17308)	4
							K1eff=5.74 in 0.4 M NaOH B2eff=10.96		

Cu+++	kin	oth/un	40°C	var	U			1953LIa (17309)	5
							K(Cu(OH)4+2H2TeO6=Cu(HTeO6)2+2OH+2H2O)=-11.7		

C7H13N3O4 HL Gly-Gly-Ala CAS 19729-30-7 (3775)

Glycylglycylalanine; H2N.CH2.CO.NH.CH2.CO.NH.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Cu+++	EMF	NaCl04	25°C	1.00M	C			1997MFA (57686)	6
							K(CuH-2L=CuH-3L+H)=-10.12		

C9H15N5O2 L (7098)

Glycyl-glycyl-histamine;

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

Cu+++ kin NaCl04 25°C 1.00M C 1995MSa (67596) 7
K(CuH-1L+H)=8.5

C10H15N5O4 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

Cu+++ kin NaCl04 25°C 1.00M C 1995MSa (72799) 8
K(CuH-1L+H)=8.2

C12H18N6O5 HL GlyGlyHisGly (7362)

Glycyl-glycyl-histidyl-glycine;

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

Cu+++ EMF NaCl04 25°C 1.00M C 1997MFa (81958) 9
K(CuH-2L=CuH-3L+H)=-8.79

C12H19N5O4 HL Ala-Ala-His (7097)

Alanyl-alanyl-histidine;

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

Cu+++ kin NaCl04 25°C 1.00M C 1995MSa (81985) 10
K(CuH-1L+H)=8.2

C14H23N5O4 HL (7096)

2-Methylalanyl-2-methylalanyl-histidine;

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

Cu+++ kin NaCl04 25°C 1.00M C 1995MSa (89463) 11
K(CuH-1L+H)=8.55
K(CuL+H=CuHL)=4.05

C16H26N6O5 HL CAS 191403-33-5 (7363)

Bis(methylalanine)histidyl-glycine;

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

Cu+++ EMF NaCl04 25°C 1.00M C 1997MFa (94628) 12
K(CuH-2L=CuH-3L+H)=-8.81

REFERENCES

- 1997MFa M McDonald,F Fredericks et al; Inorg.Chem.,36,3119 (1997)
1995MSa M McDonald,W Scheper,H Lee et al; Inorg.Chem.,34,229 (1995)
1965BFa J Baxendale,E Fielden; Eds.Acad.Press.N.Y.,217 (1965)
1961DEb R Delhez; Bull.Soc.Roy.Sci.Liege,30,446 (1961)
1961LIa M Lister; Can.J.Chem.,39,2330 (1961)
1953LIa M Lister; Can.J.Chem.,31,638 (1953)

EXPLANATORY NOTES

DATA Flags are :-

H Data for THERMOCHEMICAL quantities

END