

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 13 experiments for  
(no ligands specified)

Metal : Co+

(no references specified)

(no experimental details specified)

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e- HL Electron (442)  
Electron;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co+ EMF oth/un 20°C dil U 1953HHa (411) 1  
K=-6.9(-400 mV)

K: 0.5Co2(CO)8(s)+e=Co(CO)4- (Co(0) to Co(-1))

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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co+ kin NaClO4 24°C 0.50M U 1971LAb (2617) 2  
K(Co((CN)5H+OH=Co(CN)5+H2O)=-6

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CO2 L Carbon dioxide CAS 124-38-9 (1759)  
Carbon dioxide;

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

Co+ vlt non-aq 25°C 100% U M 1991FCa (2829) 3  
K(CoA+L)=1.40

Medium: MeCN. A:5,7,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradeca-4,14-diene. Method: cyclic voltammetry. Data also for other N-macrocyclics

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

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co+ sp non-aq 25°C 100% U T HM 1991FCa (19182) 4  
K(CoAB+L)=-0.959

Medium: MeCN. -40 to 40 C. A:5,7,7,12,14,14-hexamethyl-1,4,8,11-tetraaza-cyclotetradeca-4,11-diene. B:CO2. DH=-29.3 kJ mol-1; DS=-117

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C3H7NO2S H2L Cysteine CAS 52-90-4 (96)  
2-Amino-3-mercaptopropanoic acid; H2N.CH(CH2.SH)COOH

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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 Co+ sp oth/un 25°C 0.10M U M 1976NFb (26759) 5  
 K(CoA+L)=5.34  
 K(CoA+HL)=6.15  
 K(CoA(OH)+L=CoAL+OH)=-1.58  
 K(CoA(OH)+HL=CoAHL+OH)=-2.18

CoA(H2O)=aquocobalamin  
 \*\*\*\*\*

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

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

Co+ sp oth/un 22°C 0.0 U M 1991AFa (29576) 6  
 K(CoA+L)=1.95

A=a-(2-oxo-1,3-dioxolan-4-yl)cobalamin. With 1,5,6-trimethylbenzimidazole  
 K=0.6

\*\*\*\*\*

C4H7N L Butyronitrile CAS 109-74-0 (2992)  
 Butyronitrile; CH3.CH2.CH2.CN

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

Co+ sp non-aq 25°C 100% U T HM 1991FCa (31435) 7  
 K(CoAB+L)=-1.10

Medium: C3H7CN. -110 to 40 C. A:5,7,7,12,14,14-hexamethyl-1,4,8,11-tetraaza-  
 cyclotetradeca-4,11-diene. B:CO2. DH=-25.9 kJ mol<sup>-1</sup>; DS=-109

\*\*\*\*\*

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

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

Co+ sp oth/un 22°C 0.0 U M 1991AFa (36598) 8  
 K(CoA+L)=1.37

A=a-(2-oxo-1,3-dioxolan-4-yl)cobalamin.

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C5H9O3P L (6872)  
 4-Methyl-2,6,7-trioxa-1-phosphabicyclo[2.2.2]octane

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

Co+ oth non-aq 101°C 100% U M 1993STa (39617) 9  
 K(CoAB3+L=CoAB2L+B(g))=1.85

Metal:Co(0). Method unknown. Medium:Toluene. A:C3(t-Bu)3. B:CO.

Data formany other substituted phosphine ligands

\*\*\*\*\*

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+	sp	oth/un	22°C	0.0	U	M			1991AFa (47537)	10

K(CoA+L)=1.1

A=a-(2-oxo-1,3-dioxolan-4-yl)cobalamin.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+	dis	KCl	23°C	0.20M	C			K2=7.6 K3=6.9	1985SCa (69534)	11

Method: spectrophotometry with partition into n-hexane

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C12H12N2	L	4,4'-Dimethyl-2,2'-bipyridyl; CH3.C5H3N.C5H3N.CH3	CAS 1134-35-6	(3375)
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+	dis	KCl	23°C	0.20M	C			K2=8.0 K3=7.0	1985SCa (81008)	12

Method: spectrophotometry with partition into n-hexane

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C16H32N4	L	[14]-Dien-N4	CAS 81001-74-3	(2462)
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5,7,7,12,14,14-Hexamethyl-1,4,8,11-tetraazacyclotetradecane-4,11-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+	nmr	non-aq	rt	100%	U				1991FCa (95309)	13

K(N-meso-CoL=N-rac-CoL)=0.78 ?

Medium: MeCN. By spectrophotometry K=ca.2

## REFERENCES

- 1993STa J Shen,D Tucker et al; J.Am.Chem.Soc.,115,11312 (1993)
- 1991AFa Y Alelyunas,P Fleming et al; J.Am.Chem.Soc.,113,3781 (1991)
- 1991FCa E Fujita,C Creutz et al; J.Am.Chem.Soc.,113,343 (1991)
- 1985SCa H Schwarz,C Creutz,N Sutin; Inorg.Chem.,24,433 (1985)
- 1976NFb F Nome,J Fendler; J.Chem.Soc.,Dalton Trans.,1212 (1976)
- 1971LAB H Lim,F Anson; Inorg.Chem.,10,103 (1971)
- 1953HHa W Hieber,W Hubel; Z.Elektrochem.,57,331 (1953)

## EXPLANATORY NOTES

DATA Flags are :-

- T Data at other TEMPERATURES
- H Data for THERMOCHEMICAL quantities
- M Data for TERNARY Complexes

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END

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 4649 experiments for  
(no ligands specified)

Metal : Co++

(no references specified)

(no experimental details specified)

\*\*\*\*\*

e- HL Electron (442)  
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	KCl	25°C	0.10M	U			K=2.50	1970HPb (280)	1
K: Co(CN)5--- + 1/2H2(aq)=HCo(CN)5---										
Co++	oth	NaCl04	20°C	0.50M	U	H		K(Co+2e=Co(s))=-7.05, -205 mV	1968ZKb (281)	2
In SO4-- corr 0: K=-9.80, -285 mV. In I- corr 0: K=-8.15, -237 mV										
Co++	oth	KNO3	20°C	var	U	H		K'=-4.5, -131 mV	1968ZKb (282)	3
K': CoNO3+ + 2e = Co(s) + NO3-.										
Co++	cal	none	25°C	0.0	M			K(Co+2e=Co(s))=-9.8, -290 mV	1966GRa (283)	4
Co++	oth	none	25°C	0.0	M	H		K(Co+2e=Co(s))=-9.70, -287 mV	1966LCA (284)	5
DH=58.5 kJ mol-1										
Co++	EMF	none	25°C	0.0	U			K=-18.20, -269.1 mV	1966MDa (285)	6
K: Co2Fe(CN)6(s) + 4e = 2Co(s) + Fe(CN)6----										
Co++	EMF	alc/w	25°C	100%	U			K(Co+2e=Co(s))=-7.88(-233 mV)	1961TAa (286)	7
Medium: MeOH										
Co++	oth	none	25°C	0.0	U			K(Co+2e=Co(s))=-9.37(-277 mV)	1952LAb (287)	8
K'=-24.8(-730 mV)										
K': Co(OH)2(s)+2e=Co(s)+2OH. From thermodynamic data										
*****										
AsO4---		H3L						CAS 7778-39-4 (1557)		
Arsenate;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo

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Co++ sol oth/un 20°C var U 1956CHc (1126) 9  
Kso(Co3L2)=-28.12

\*\*\*\*\*  
AsW11039----- H7L (2468)  
alpha-Heteromonoarseno-polytungstate;  
-----

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

Co++ gl NaNO3 25°C 1.00M U K1=3.31 1984COa (1174) 10  
\*\*\*\*\*

As2W17H2061----- H8L (2469)  
alpha-Heteropolydiarseno-polytungstate;  
-----

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

Co++ gl NaNO3 25°C 1.00M U K1=7.82 1984COa (1185) 11  
K1=4.92 (alpha2 isomer)

\*\*\*\*\*  
BF4- HL (2497)  
Tetrafluoroborate;  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ con non-aq 25°C 100% U B2=1.18 1977KUb (1192) 12  
\*\*\*\*\*

B04H4- HL Borate CAS 10043-35-3 (991)  
Borate; B(OH)4-  
-----

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

Co++ sol none 22°C 0.0 U 1961SHd (1295) 13  
Kso=-8.5 (solid phase?)  
B4=10.03

\*\*\*\*\*  
Br- HL Bromide CAS 10035-10-6 (19)  
Bromide;  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ EMF non-aq 25°C 100% C T H K1=2.69 B2= 4.75 2001JMb (1684) 14  
K3=1.80

Medium: acetic acid, 0.1% H2O, 0.1 M NaBr. Method: Ag/AgBr/Br- electrode  
Data for 25-60 C. DH(K1)=-14.0 kJ mol-1, DH(K2)=-12.7, DH(K3)=-27.9.  
-----

Co++ sp non-aq 25°C 100% U H K1=1.60 19900Ia (1685) 15  
B3=5.61  
B4=6.3

Medium: DMF, 0.16 M R4NC104. DH(K1)=19 kJ mol-1, DH(B3)=73 by calorimetry  
-----

Co++ sp non-aq 25°C 100% U H K1=5.55 B2=8.74 1989A0a (1686) 16  
K3=0.79

In hexamethylphosphoric triamide; 0.1 M (n-Bu)<sub>4</sub>NClO<sub>4</sub>. DH(K1)=-2.7 kJ mol<sup>-1</sup>;  
DS=97. DH(K2)=0.3; DS=62, DH(K3)=2.1; DS=22

-----  
Co++ sp none 25°C 0.0 M T H K1=-0.03 B2=-1.18 1989PSb (1687) 17  
B3=-3.28  
B4=-6.45

Data for 25-90 C. Values calc from data for LiCl media to 15.0 m. DH(K1)=  
0.7 kJ mol<sup>-1</sup>, DS(K1)=1.9 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=0.8, DH(B3)=0.7, DH(B4)=0.77

-----  
Co++ dis non-aq 25°C 100% U 1987GRa (1688) 18  
K(CoS<sub>6</sub>+L=CoS<sub>5</sub>L+S)=3.23  
K(CoS<sub>5</sub>L+L=CoS<sub>2</sub>L<sub>2</sub>+3S)=3.64  
K(CoS<sub>2</sub>L<sub>2</sub>+L=CoSL<sub>3</sub>+S)=2.64

Solvent(S)=acetonitrile

-----  
Co++ sol oth/un 25°C 0.0 U 1987KPb (1689) 19  
Kout(Co(phen)<sub>3</sub>+Br)=2.02  
Kout(Co(phen)<sub>3</sub>+2Br)=2.84

Values extrapolated (Davies equation) from data for 0.1 M NaF.

-----  
Co++ cal KNO<sub>3</sub> 25°C 0.50M U H 1985BPb (1690) 20  
B4=-7.8

DH(B4)=43.1 kJ mol<sup>-1</sup>; TDS(B4)=-1.7 kJ mol<sup>-1</sup>

-----  
Co++ sp non-aq 25°C 100% U 1985LDa (1691) 21  
K(CoAS+L=CoAL+S)=1.72

Medium (S): DMF. A=N(CH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>)<sub>3</sub>

-----  
Co++ ISE non-aq 25°C 100% C 1983S0b (1692) 22  
B(CoS<sub>6</sub>+2L=CoS<sub>2</sub>L<sub>2</sub>+4S)=9.2  
K(CoS<sub>2</sub>L<sub>2</sub>+L=CoSL<sub>3</sub>)=5.30  
K(CoSL<sub>3</sub>+L=CoL<sub>4</sub>+S)=1.89

Medium: acetone

-----  
Co++ sp non-aq 25°C 100% U M 1982SMb (1693) 23  
K(CoA<sub>2</sub>L<sub>2</sub>+2A)=0.67  
K(CoA<sub>2</sub>L<sub>2</sub>+XL=X(CoA<sub>2</sub>L<sub>3</sub>))=2.23

Medium: dichloromethane. A=4-methylpyridine and X=tetrabutylammonium

-----  
Co++ EMF oth/un 25°C 1.50M U I K1=-1.1 1978LKd (1694) 24  
K1 defined in molality (Moles per kg) terms: K1=m(CoBr)/m(Co).m(Br), ionic  
strength in m(Co(ClO<sub>4</sub>)<sub>2</sub>). K1 (m): -1.2 (2.0), -1.15 (2.5), -1.05 (3.0)

-----  
Co++ EMF non-aq 25°C 100% U 1977STa (1695) 25  
K(CoA<sub>2</sub>+LiL=CoLA+LiA)=2.93  
K(CoA<sub>2</sub>+2LiL=CoL<sub>2</sub>+2LiA)=5.40  
K(CoL<sub>2</sub>+LiL=LiCoL<sub>3</sub>)=2.83  
K(LiCoL<sub>3</sub>+LiL=Li<sub>2</sub>CoL<sub>4</sub>)=0.4

Medium: LiClO4/Acetic acid : A = ClO4

-----  
Co++ cal NaClO4 25°C 3.0M U H 1974BRa (1696) 26  
Medium: Li(ClO4). DH(K1)=9.2 kJ mol<sup>-1</sup>, DS=14.6 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ sp non-aq 23°C 100% U I B2=7.3 1974IHa (1697) 27  
K3=2.8  
in acetone at 1000 kg/cm<sup>\*\*2</sup>. B2=6.7,K3=2.9(2000); B2=6.4,K3=3.0(3000);  
B2=6.15,K3=3.0(4000); B2=6.1,K3=3.1(5000); B2=5.9,K3=3.3(8000)

-----  
Co++ kin NaClO4 25°C 1.0M U K1=-0.20 1973HHb (1698) 28

-----  
Co++ ISE non-aq 161°C 100% U T K1=2.13 B2=2.83 1971PSa (1699) 29  
Medium: (Li,Na,K)NO3 eutectic. K1=2.03, K2=0.7(180 C)(x units)

-----  
Co++ sp oth/un 25°C 0.0 U 1970LGa (1700) 30  
K=-0.3  
Medium: MeCN. K: 3CoL2A2+2A=CoA6+2CoL3A, A=MeCN

-----  
Co++ sp NaClO4 25°C 3.0M U K1=-0.72 1970MMj (1701) 31  
Medium: LiClO4

-----  
Co++ sp mixed 23°C 0.10M U T H B2=8.3 1970SFC (1702) 32  
K3=3.66(23-45 C)  
K4=2.30(23-45 C)  
Medium: MeCN, 0.1 M Et4NClO4. DH(B2)=79 kJ mol<sup>-1</sup>. B2=8.9(35 C), 9.2(45 C)

-----  
Co++ sp alc/w 25°C 100% U I B2=5.74 1969OKa (1703) 33  
Medium: EtOH, 1 atm. B2=2.98(1000 atm), 2.07(2000), 1.43(3000), 1.16(4000).  
Also in PrOH, i-PrOH, BuOH, etc.

-----  
Co++ sp oth/un ? var U I 1967BPd (1704) 34  
K(CoA2+L)=0.60  
K(CoA2L+L)=0.60  
A=dimethylglyoxime. Medium: LiBr. InKBr: K(CoA2+2L)=0.60; in RbBr:0.36

-----  
Co++ cal NaClO4 40°C 2.0M U T H K1=-0.11 1966KLb (1705) 35  
DH(K1)=0.58(25 C),0.63(40 C) kJ mol<sup>-1</sup>, DS=0.29(25 C) J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ ix NaClO4 20°C 0.69M U K1=-0.13 B2=-0.42 1965FMa (1706) 36  
Method:cation exchange. Medium: HClO4

-----  
Co++ sp non-aq 100% U 1963CHa (1707) 37  
K3 > 5.7  
K4=4  
Medium:Et2O

-----  
Co++ sp non-aq 26°C 100% U B2=9.3 1962FIa (1708) 38  
K3>5  
K4=1.62



Medium:Me2CO

-----  
Co++ EMF NaClO4 25°C 2.0M U T K1=-0.12 1961LWa (1709) 39  
Method: Ag electrode. K1=-0.40(5 C), -0.08(50 C). Also intermediate temps.  
-----

Co++ sp non-aq 25°C 100% U K3=3.85 1961PSc (1710) 40  
K4=2.5

Medium:CH3CO2H

-----  
Co++ sp alc/w 20°C 100% U T K1=2.34 B2=3.82 1961SLd (1711) 41  
K3=1.08  
K4=0.85

Medium:EtOH. At 30 C: K1=2.75, K2=1.73, K3=1.36, K4=1.11, K5=0.6; at 40 C:  
K1=2.87, K2=2.05, K3=1.76, K4=1.32, K5=0.9, K6=0.3

-----  
Co++ sp non-aq ? 100% U K1=2.05 1960SHb (1712) 42  
Medium: iso-BuOH, I=0.06 M

-----  
Co++ sp oth/un 18°C var U K1=-2.30 1936JOa (1713) 43  
K2.K3=-4.89

Medium: HBr.

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BrO3- HL Bromate (6017)  
Bromate;

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

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Co++ kin non-aq 180°C 100% U K1=1.65 1961DLa (2406) 44  
Medium: liquid (K,Na)NO3, m units

\*\*\*\*\*

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

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

-----  
Co++ ISE NaClO4 25°C 1.00M U B3=13.7 1987ABd (2599) 45  
B5=23.0

-----  
Co++ EMF non-aq 450°C 100% U K1=1.38 B2=2.12 1970IJa (2600) 46  
Medium: fused (Li,K)Cl

-----  
Co++ kin NaClO4 25°C 1.0M U K(Co(CN)5+H)=-0.16 1968EPa (2601) 47

Medium: LiClO4

-----  
Co++ cal oth/un 25°C 0.0 U H DH(B5)=-257.1 kJ mol-1 1968IWa (2602) 48  
-----

Co++ cal oth/un 25°C 0.0 U H 1968IWa (2603) 49  
DH(2CoL5 + H3O=CoL5H2O + HCoL5)=-133.8 kJ mol-1. Co(II) to Co(III) + Co(I)

Co++ sp KCl 25°C 0.51M U M 1967BCa (2604) 50  
K(CoL5+1/2H2(aq)=HCoL5)=2.59  
Co(II) to Co(I) ?

Co++ sp NaNO3 20°C 3.0M U 1967PWc (2605) 51  
K(Rb+CoL5)=0.57

Co++ cal oth/un 25°C var U H 1964GHc (2606) 52  
DH(B5?)=-311.0 kJ mol-1

Co++ cal oth/un 25°C ? U H 1961GUa (2607) 53  
DH(B6) or DH(B5)=-325.1 kJ mol-1

Co++ vlt oth/un ??? 5 MM U 1936SAa (2608) 54  
B6=19.09

Medium: CaCl2.

\*\*\*\*\*

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

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

Co++ oth non-aq 25°C 100% U 1970BCb (2783) 55  
K(Co(PEt3)2Cl2+CO)=3.09

Method:chemical analysis, partial pressure of CO; Medium:C2H4Cl2.

K=3.39(Br); With Co(PPr3)2Cl2, K=2.90, 3.36(Br). Also other data

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

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

Co++ sol KNO3 25°C 0.10M U K1=4.70 1997SSa (3094) 56  
K(Co+HL)=1.85

Co++ sp none 25°C 0.0 C I 1987EFa (3095) 57  
K(Co+HCO3)=1.39

K extrapolated from data for 0.001-0.05 M NaCl solutions.

At I=0.05 M, K(Co+HCO3)=1.05. Also data for 5% and 10% MeOH/H2O.

Co++ oth oth/un 25°C 0.0 C H K1=4.41 1984FCa (3096) 58  
K(Co+HCO3)=2.20

K(Co+HCO3) calc using electrostatic model. K1 from assessment of lit data.  
DH(K1)=-0.92 kJ mol-1, DH(Co+HCO3)=4.3 (from DS calc by electrostat model)

Co++ vlt NaCl 25°C 0.56M C K1=3.15 1982CDa (3097) 59  
Method: polarography.

-----  
Co++ sol oth/un 25°C 0.0 U 1967BUb (3098) 60  
Kso=-9.98  
-----

Co++ oth oth/un 25°C 0.0 U 1935KAa (3099) 61  
Kso(CoCO3(s))=-12.84  
+Kpso=-10.35

From thermodynamic data. +Kpso: CoCO3(s)+CO2(g)+H2O=Co+2HCO3  
\*\*\*\*\*  
CS3-- H2L CAS 549-08-1 (936)  
Trithiocarbonate;  
-----

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

Co++ sp oth/un 25°C ? U B2=8.1 1957BIa (3464) 62  
\*\*\*\*\*  
C6N6Fe---- H4L (2191)  
Hexacyanoferrate (II); Fe(II)(CN)6----  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ con oth/un 20°C U T 1972BMe (3548) 63  
K(K2Co3L2(s)=2K+3Co+2L)=-27.8  
K's(K4Co4L3)=-45.7  
30 C: Ks=-26.9; K's=-43.8  
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Co++ ISE oth/un 25°C 0.0 U 1966MDa (3549) 64  
Kso(Co2L)=-37.32  
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Co++ vlt oth/un 20°C dil U 1959BSc (3550) 65  
Kso(Co2L)=-15.97  
-----

Co++ con oth/un 25°C dil U 1959BSd (3551) 66  
Kso(Co2L)=-16.18  
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Co++ sol oth/un 25°C var U 1956TGb (3552) 67  
Kso(Co2L)=-14.74  
\*\*\*\*\*  
Cl- HL Chloride CAS 7647-01-0 (50)  
Chloride;  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ oth alc/w 25°C 61% C K1=20.80 1996CHF (4345) 68  
Kso(CoCl2.6H2O)=2.52  
Method: application of Pitzer theory to literature data.  
-----

Co++ sp non-aq 25°C 100% C K1=1.2 B2= 1.70 1996KMb (4346) 69  
B3=1.4  
Medium: MeOH, 1.0 M LiClO4.

-----  
Co++ sp non-aq 25°C 100% U I K1=1.3 B2=2.8 1993LKa (4347) 70  
B3=4.1

Data also for propan-2-ol: B1=1.7, B2=3.3, B3=4.7  
-----

Co++ cal non-aq 25°C 100% U H K1=5.42 B2=11.83 1993SKb (4348) 71  
B3=16.3  
B4=18.3

Medium: N,N-dimethylacetamide 0.1 M R4NX; also by spectroscopy. DH(K1)=25 kJ mol<sup>-1</sup>, DH(B2)=22, DH(B3)=9.2, DH(B4)=1.0  
-----

Co++ sp non-aq 25°C 100% U H K1=1.6 B2=4.0 1990SIa (4349) 72  
B3=7.1  
B4=8.3

Medium: DMSO, 0.4 M Et4NBF4. By calorimetry: DH(K1)=11 kJ mol<sup>-1</sup>, DH(B2)=40, DH(B3)=47.7, DH(B4)=41.9  
-----

Co++ sp non-aq 25°C 100% U H K1=6.7 B2=10.90 1989A0a (4350) 73  
K3=2.7  
K4= 0.8 approx.

In hexamethylphosphoric triamide; 0.1 M (n-Bu)<sub>4</sub>NClO<sub>4</sub>. DH(K1)=-15.2 kJ mol<sup>-1</sup>; DS=78. DH(K2)=-12.6; DS=38. DH(K3)=-12.8; DS=9. DH(K4)=(-8); DS=(-10)  
-----

Co++ sp none 25°C 0.0 M T H K1=0.60 B2= 0.02 1989PSb (4351) 74  
B3=-1.71  
B4=-4.51

Data for 25-90 C. Values calc from data for LiCl media to 15.0 m. DH(K1)=2.1 kJ mol<sup>-1</sup>, DS(K1)=18.7 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=2.2, DH(B3)=2.33, DH(B4)=2.2  
-----

Co++ sp non-aq 25°C 100% U H K1=3.43 B2=6.85 1988I0a (4352) 75  
B3=11.84  
B4=14.13

In N,N-dimethylformamide. Bn values also by calorimetry. DH(K1)=8.5 kJ mol<sup>-1</sup> DH(B2)=36.4; DH(B3)=33.9; DH(B4)=27.6  
-----

Co++ sp non-aq 25°C 100% U K1=9.0 B2=15.50 1988PGa (4353) 76  
K3=3.05  
K4=-1.42

Medium: Hexamethylphosphoramide  
-----

Co++ ISE non-aq 25°C 100% U K1=2.60 1988SGa (4354) 77  
Medium: DMSO, 0.1 M Et4NCl  
-----

Co++ sp non-aq 25°C 100% U K4=10.15 1988SSa (4355) 78

Medium: 1,2-dichloroethane. K4: (NBu<sub>4</sub>)<sub>2</sub>(Co<sub>2</sub>Cl<sub>6</sub>)+2NBu<sub>4</sub>Cl=2(NBu<sub>4</sub>)<sub>2</sub>(CoCl<sub>4</sub>)  
-----

Co++ sp oth/un 23°C 6.00M U K1=-0.28 1987CCb (4356) 79  
B3=-1.9  
B4=-1.5

Co++	sol	oth/un	25°C	0.0	U			1987KPb	(4357)	80
								Kout(Co(phen)3+Cl)=3.26		
								Kout(Co(phen)3+2Cl)=2.67		
Values extrapolated (Davies equation) from data for 0.1 M NaF.										
Co++	sp	non-aq	25°C	100%	U		K1=4.03	1986GPa	(4358)	81
Medium: N,N-dimethylformamide										
Co++	sp	non-aq	25°C	100%	U		K1=3.50	B2=1.50	1986GPb	(4359)
							B3=11.0			82
Medium: N,N-dimethylformamide										
Co++	nmr	mixed	25°C	40%	U		K1=0.13	1985SCb	(4360)	83
Medium: 40% v/v CH3CN in H2O										
Co++	vlt	NaClO4	25°C	2.0M	C		K1=-0.11	1982CDa	(4361)	84
Method: polarography. At I=3.5 M NaClO4, K1=-0.30.										
In seawater medium, K1=-0.009										
Co++	ISE	alc/w	25°C	100%	U		K1=3.01	B2=4.01	1982DKa	(4362)
										85
Co++	sp	non-aq	25°C	100%	U	I	K1=2.79	1982LPa	(4363)	86
							B3=8.8			
Medium: DMSO, 0.2 M M(ClO4)2										
Co++	sp	non-aq	25°C	100%	U		K1=2.78	B2=5.26	1982LPb	(4364)
							K3=3.67			87
Medium: DMSO										
Co++	gl	NaClO4	25°C	3.00M	C	M	K1=2.73	B2=4.92	1981FGa	(4365)
							B3=6.53			88
							B4=7.45			
Co++	ISE	non-aq	25°C	100%	U			1981SOa	(4366)	89
								K(CoCl2+LiCl=LiCoCl3)=5.97		
								K(CoCl(ClO4)+LiCl=CoCl2)=6.2		
								K(LiCoCl3+LiCl=Li2CoCl4)=2.64		
Medium: Acetone, 0.1 M LiClO4. K(Co(ClO4)2+LiCl=CoCl(ClO4)3Cl+LiClO4)=5.0										
Co++	dis	oth/un	25°C	0.50M	U	I	K1=-1.44	B2=-3.25	1979BPa	(4367)
							B3=-4.89			90
Co++	dis	oth/un	25°C	0.10M	U		K1=-1.19	B2=-3.26	1978BIa	(4368)
							B3=-5.64			91
							B4=-7.38			
Co++	sp	KCl	25°C	10.0M	U		K1=1.34	1978SBa	(4369)	92
							B4=2.57			
Data from 10M H(Cl,ClO4)-medium.										

Co++	sp	oth/un	25°C	5.0M	U	I	K1=-1.05 K3=-1.54 K4=-1.34 Medium: 5-13 M LiCl	B2=-3.74	1975BHa	(4370)	93
Co++	gl	none	25°C	0.0	U		K1=-0.35		1975LTa	(4371)	94
Co++	ISE	NaClO4	25°C	1.0M	U		K1=-0.05		1974BLb	(4372)	95
Co++	ISE	non-aq	25°C	100%	U	I	K1=6.4 B3=18.2 B4=23.7 Medium: 0.1 M LiCl in tributylphosphate, sat. with H2O; AgCl/Cl-electrode	B2=12.4	1974BMa	(4373)	96
Co++	cal	NaClO4	25°C	3.0M	U	H	K1=-0.41 Medium: LiClO4. DH(K1)=3.8 kJ mol <sup>-1</sup> , DS=4 J K <sup>-1</sup> mol <sup>-1</sup>		1974BRa	(4374)	97
Co++	sp	non-aq	23°C	100%	U		B2=8.83 Medium: acetone at 1 atm. B2=7.43, K3=3.15(p=1000); 6.96,2.70(p=2000); 6.68,3.049(P=3000); 6.08,3.23(p=5000); 5.72,3.20(p=8000);p=kg cm <sup>-2</sup>		1974IHb	(4375)	98
Co++	sol	none	25°C	0.0	U		Ks(Co(OH)1.5Cl0.5)=-11.7		1974MSd	(4376)	99
Co++	sp	non-aq	25°C	100%	U	M	K(CoCl2+LiCl=LiCoCl3)=2.08 K(LiCoCl3+LiCl=Li2CoCl4)=0.8 K(CoA2+LiCl=CoClA)=3.46 K(CoA2+2LiCl=CoCl2)=5.68 Medium: anhydrous CH3COOH; method: glass elect.+spect. A=ClO4		1974STa	(4377)	100
Co++	EMF	non-aq	25°C	100%	U		K1=4.53 B3=11.78 B4=14.1 Medium: TBP	B2=8.34	1973BKd	(4378)	101
Co++	sp	alc/w	25°C	100%	U		K1=1.66 Medium: MeOH	B2=3.65	1973CCb	(4379)	102
Co++	kin	NaClO4	25°C	1.0M	U		K1=0.07		1973HHb	(4380)	103
Co++	sp	non-aq	25°C	100%	U		B3=7.20 Medium: DMSO, 0.5 M MClO4(M=Li,Na,(C2H5)4N)		1973SCa	(4381)	104
Co++	sp	NaClO4	25°C	5.0M	U	I	K1=0.04 B3=-1.40 B4=0.00 Medium: HClO4; K1=0.23,B2=-0.15,B3=-0.70,B4=-1.7(I=7); K1=0.40,B2=0.30,	B2=-0.62	1972BBf	(4382)	105

B3=0.02, B4=-0.9(I=8); 0.64, 0.78, 0.8, 0.2(I=9); 0.82, 1.26, 1.60, 1.4(I=10)

-----  
Co++ sp non-aq 25°C 100% U 1972CCa (4383) 106  
K3=7.65  
K4=2.78

Medium: acetone

-----  
Co++ sp non-aq 25°C 100% U 1972MRa (4384) 107  
B3=8.62  
B4=9.05

Medium: DMSO, 1 M LiClO4

-----  
Co++ sp non-aq ? 100% U 1972PBb (4385) 108  
K3=3.07  
K4=2.77

Medium: n-decanol

-----  
Co++ sp oth/un rt var U B2=-0.2 1971KGa (4386) 109  
K(CoCl2+2H+2Cl=CoH2Cl4)=-3.31

-----  
Co++ sp non-aq 20°C 100% U 1971LKa (4387) 110  
K(CoCl2A4=CoCl2A2+2A)=0.45  
K(CoCl2B4=CoCl2B2+2B)=-0.84

Medium: A or B. A=butanol. B=C6H5Cl. K: octahedral=tetrahedral

-----  
Co++ ISE oth/un 161°C 100% U T K1=2.34 B2=3.84 1971PSa (4388) 111  
Medium: molten (Li,Na,K)NO3 eutectic. At 180 C: K1=2.31, K2=1.5

-----  
Co++ sp NaClO4 20°C 7.0M U K1=-0.4 1971WBa (4389) 112  
Medium: HClO4

-----  
Co++ sp NaClO4 25°C 3.0M U K1=-0.24 1970MMj (4390) 113  
Medium: LiClO4

-----  
Co++ sp non-aq 23°C 100% U T H B2=11.2 1970SFC (4391) 114  
Medium: MeCN, 0.1 M Et4NClO4. DH(B2)=109.6 kJ mol<sup>-1</sup>. B2=11.9(35 C), 12.6(45 C)  
23-45 C: K3=5.41, K4=3.51

-----  
Co++ dis oth/un 160°C 100% U K1=0.9 B2=1.7 1970VPa (4392) 115  
B3=2.1  
B4=2.9

Medium: molten (Li,K)NO3

-----  
Co++ con alc/w rt 100% U I B2=6.70 1969KIa (4393) 116  
In EtOH. B2=8.43(propanol), 9.47(butanol), 11.22(i-propanol), 12.38(2-butanol),  
10.55(2-methyl-1-propanol), >11.9(2-methyl-2-propanol)

-----  
Co++ sp alc/w rt 100% U B2=5.93 1969KIa (4394) 117  
In EtOH at p=1 atm. B2=4.70(p=500), 4.01(p=1000), 3.55(p=1500), 3.12(p=2000).  
2.84(p=2500). Data also for many other solvent mixtures

-----  
Co++ sp alc/w 25°C 100% U I B2=6.27 19690Ka (4395) 118  
Medium: EtOH. By conductivity: B2=6.70. In PrOH: B2=8.96 and 8.43.  
Data also in other solvents  
-----

Co++ vlt non-aq 135°C 100% U K1=1.2 B2=2.0 1968BGB (4396) 119  
B3=1.0  
B4=3.14

Medium: molten (Li,Na,K)NO3  
-----

Co++ sp non-aq 25°C 100% U 1968LPb (4397) 120  
K(3CoCl2(MeCN)2+2MeCN)=-1.8

Medium:MeCN. reaction products: Co(MeCN)6+2CoCl3(MeCN)  
-----

Co++ sp non-aq 80°C 100% U T HM 1968MSe (4398) 121  
K(CoCl2(MeCN)2+HgCl2)=0.6

Medium:MeCN. 40-80 C. Reaction products: CoCl(MeCN)5+HgCl3. K=-0.7(40 C),  
-0.3(50 C), 0.0(60 C), 0.3(70 C). DH=71 kJ mol<sup>-1</sup>, DS=209 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ nmr KCl 27°C var U H K1=-0.8 B2=-3.60 1968ZMb (4399) 122  
K3=-2.5  
K4=-2.06

Medium:HCl var. DH(K1)=12.1 kJ mol<sup>-1</sup>, DS=25.1 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(K2)=8.78, DS=25.1; DH(K3)=47.2, DS=108.9; DH(K4)=3.3, DS=-28  
-----

Co++ sp NaCl ? var U 1967BPd (4400) 123  
K(Co(DMG)2+L)=0.2  
K(Co(DMG)2L+L)=0.2

DMG=dimethylglyoxime. In LiCl, K(Co(DMG)2+2L)=0.9, in RbCl: 0.12  
-----

Co++ sp NaClO4 25°C 3.0M U I K1=-0.28 1967MSg (4401) 124  
B4=-2.15

At I=6:K1=-0.43, B4=-2.82; I=7.3:K1=-1, B4 < -3  
-----

Co++ sp oth/un 44°C ? U IH 1967SWa (4402) 125  
25-63 C, DH(CoCl2(H2O)4+Cl=CoCl3(H2O)+3H2O)=48.9 kJ mol<sup>-1</sup>. DH(CoCl2(MeOH)4+  
Cl=CoCl3(MeOH)+3MeOH)=56.8 in MeOH  
-----

Co++ oth non-aq 260°C 100% U K1=-0.9 1966IWa (4403) 126  
Method:freezing point. Medium: molten LiNO3  
-----

Co++ cal NaClO4 40°C 2.0M U T H K1=-0.12 1966KLb (4404) 127  
K1=-0.14(25 C). DH(K1)=2.17(25C), 2.09(40C) kJ mol<sup>-1</sup>. DS=4.64 J K<sup>-1</sup> m<sup>-1</sup>(25C)  
-----

Co++ sp non-aq 300°C 100% U M K=-1.45 19650Gb (4405) 128

Medium: molten (K,Al)Cl. K: Co(Al2Cl7)2+AlCl4=Co(Al2Cl7)AlCl4+Al2Cl7  
-----

Co++ oth oth/un 0.0 U 1964VGa (4406) 129  
K2K3=-6.72



Method:electrical migration or transference number

-----  
Co++ oth non-aq 160°C 100% U K1=1.11 B2=2.02 1963LRa (4407) 130  
B3=2.40

Method:adsorption equil with Al2O3(s). Medium: (Li,K)NO3 eutectic

-----  
Co++ sp oth/un 0.0 U 1963VVb (4408) 131  
K(CoCl4(H2O)2=CoCl4)=-0.36

Octahedral-tetrahedral equilibrium

-----  
Co++ sp non-aq 26°C 100% U B2=9.5 1962FIa (4409) 132  
K3>5  
K4=2.73

Medium: acetone

-----  
Co++ sp non-aq 20°C 100% U M 1962LIId (4410) 133  
Medium: MeCN(S). K(3CoCl2S2+2S=CoS6+2CoCl3S)=-2.3

-----  
Co++ ix oth/un 25°C 10.0M U 1962MIa (4411) 134  
K(H+CoCl4)=0.2  
K(H+HCoCl4)=0.5

Medium: LiCl

-----  
Co++ ix NaClO4 20°C 0.69M U K1=0.69 B2=0.51 1962MSb (4412) 135

-----  
Co++ ix NaClO4 20°C 0.69M U K1=0.69 B2=0.51 1962MSe (4413) 136

-----  
Co++ vlt NaClO4 ? 1.50M U K1=-0.3 1962TCa (4414) 137  
K1=0.4 by spectrophotometry

-----  
Co++ sp non-aq 25°C 100% U 1961PSc (4415) 138  
K3=4.40  
K4=3.08

Medium: CH3COOH

-----  
Co++ EMF NaClO4 25°C 2.30M U T H K1=-0.18 1960LRa (4416) 139  
K1=-0.21(12 C), -0.15(40 C). DH(K1)=4.2 kJ mol<sup>-1</sup>

-----  
Co++ sp non-aq ? 100% U K1=3.05 1960SHb (4417) 140  
Medium: i-BuOH, I=0.06

-----  
Co++ con alc/w 25°C 50% U K1=1.63 1958DTa (4418) 141  
Medium: 50% EtOH/H2O

-----  
Co++ ix none 0°C 0.0 U B2=-1.28 1958HIb (4419) 142

-----  
Co++ sp NaClO4 20°C 7.0M U I K1=-0.43 1958SWb (4420) 143  
In 1.5 M NiNO3 K1=-0.60

-----  
Co++ sp none ? 0.0 U B2=-3.95 1948Rba (4421) 144

-----  
Co++ sp KCl 18°C var U K1=-2.40 1936J0a (4422) 145  
K2\*K3=-3.52

\*\*\*\*\*  
ClO3- HL Chlorate CAS 7790-93-4 (971)  
Chlorate;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ cal oth/un 25°C 1.00M U H 1975ARa (6028) 146  
DH(K1)=-2.73 kJ mol<sup>-1</sup>. DS = -5.1 J K<sup>-1</sup> mol<sup>-1</sup>. Medium: 1.0 M NaClO3  
-----

Co++ kin NaClO4 25°C 1.0M U K1=0.21 1973HHb (6029) 147  
\*\*\*\*\*  
ClO4- HL Perchlorate CAS 7001-90-3 (287)  
Perchlorate;  
-----

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

Co++ sol oth/un 25°C 0.0 U 1987KPb (6138) 148  
Kout(Co(phen)<sub>3</sub>+ClO4)=2.58  
Kout(Co(phen)<sub>3</sub>+2ClO4)=3.71

Values extrapolated (Davies equation) from data for 0.1 M NaF.  
-----

Co++ con non-aq 25°C 100% U K1=1.62 1981LGa (6139) 149  
Medium: DMSO; K1 in DMSO/benzene (mole fraction 0.3)=1.86  
-----

Co++ sp NaClO4 25°C ? U H 1975BWb (6140) 150  
Kout(Co(H2O)<sub>6</sub>ClO4)=-1.51

DH=4.2 kJ mol<sup>-1</sup>, DS=-12 J K<sup>-1</sup> mol<sup>-1</sup> when T=25.

HClO4 from 0 to 17.3M.  
-----

Co++ sp non-aq 25°C 100% U K1=1.3 1972MRa (6141) 151  
Medium: DMSO, 1 M LiClO4(?)  
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\*\*\*\*\*  
F- HL Fluoride CAS 7644-39-3 (201)  
Fluoride;  
-----

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

Co++ ISE R4N.X 25°C 0.05M U I K1=1.28 1983SBa (6671) 152  
Medium: 0.05 M Et4NF. In MeOH, 0.05 Et4NF, K1=3.04  
-----

Co++ ISE NaClO4 25°C 1.00M U I K1=1.1 1981KBb (6672) 153  
-----

Co++ ISE NaClO4 25°C 3.00M U K1=0.64 1976KBa (6673) 154  
-----

Co++ cal oth/un 25°C 0.50M U H K1=0.37 1974ARc (6674) 155  
DH(K1)=10.3 kJ mol<sup>-1</sup>, DS=41 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ ISE NaClO4 25°C 1.0M U K1=0.40 1972BHc (6675) 156  
\*\*\*\*\*

GeW11039----- H8L CAS 37369-86-1 (2466)  
alpha-Heteromonogermanium-polytungstate;

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

Co++ gl NaNO3 25°C 1.00M U K1=6.27 1984COa (7466) 157  
\*\*\*\*\*

HPO3-- H2L Phosphite CAS 13598-36-2 (6305)  
Phosphite;

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

Co++ gl NaClO4 25°C 0.20M U K1=4.0 1969EEa (7501) 158  
K(Co+HL)=1.6

K1 on the basis of K(HL)=6.5, K(H2L)=1.6

\*\*\*\*\*

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

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

Co++ sp non-aq 0°C 100% U I 1972ARa (7578) 159  
K3=1.9, K4=1.4(PrOH), K5=1.1, K6=0.7(i-PrOH), K5=1.1, K6=0.8(t-BuOH)

-----  
Co++ cal non-aq 25°C 100% U K1=1.68 B2=3.26 1969VAa (7579) 160  
B4=5.18  
B6=7.04

Medium: BuOH

-----  
Co++ cal non-aq 25°C 100% U H K1=1.76 B2=3.08 1968HMc (7580) 161  
B3=4.10  
B4=4.64  
B5=5.6?

Medium: C4H9OH. DH(K1)=-11.9 kJ mol<sup>-1</sup>, DH(B2)=-19.6, DH(B3)=-22.4  
DH(B4)=-23.4, DH(B5)=-24.2?

-----  
Co++ sp non-aq 25°C 100% U I K1=0.56 B2=-1.26 1965PPa (7581) 162  
Medium: acetone. In EtOH: K1=0.46, K2=-2.22

-----  
Co++ sp non-aq ? 100% U 1960SHb (7582) 163  
B3=1.6

Medium: iso-BuOH

-----  
Co++ sp oth/un ? conc U M 1959LIa (7583) 164  
K(CoCl4+2L=CoCl4L2)=0.3  
K(CoBr4+2L=CoBr4L2)=0.4

Medium: LiCl  
-----

Co++ sp alc/w 25°C 100% U 1955JBa (7584) 165  
Kav=-0.30

Medium: EtOH, CH3C6H4SO3

-----  
Co++ sp alc/w 25°C 100% U 1954JOa (7585) 166  
Kav=0.03

Medium: EtOH, NO3. N=6

\*\*\*\*\*

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

Iodide;

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

-----  
Co++ sp non-aq 25°C 100% U H K1=2.69 B2=3.58 1989A0a (7877) 167  
In hexamethylphosphoric triamide; 0.1 M (n-Bu)4NClO4. DH(K1)=13.0 kJ mol-1;  
DS=95. DH(K2)=6.9; DS=40

-----  
Co++ sp diox/w 25°C 10% U I 1974GBa (7878) 168  
K(Co(DMG)2+I)=1.60

In 50% dioxan/H2O, K=1.97

-----  
Co++ sp oth/un ? var U I 1967BPd (7879) 169

K(CoA2+L)=2.04

K(CoA2L+L)=2.04

Medium: CsI. A=dimethylglyoxime. In KI: K(CoA2+2L)=4.0, in LiI or NaI: 3.8

-----  
Co++ sp non-aq 26°C 100% U B2=>9 1962FIa (7880) 170  
K3=4.34  
K4=1.20

Medium: Me2CO

-----  
Co++ kin NaClO4 45°C 1.0M U M 1962YAA (7881) 171  
K(Co(NH3)5+L)=-0.68

\*\*\*\*\*

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

Iodate;

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

-----  
Co++ gl NaClO4 25°C 3.0M M I K1=-0.04 1995POa (8487) 172  
Kso=-4.739

At I=0: K=0.51

-----  
Co++ sol NaClO4 25°C 0.50M U I 1973FSc (8488) 173  
Kso(CoL2(H2O)2)=-4.77

Medium: LiClO4. Kso=-5.64(I=0), -4.71(I=1), -4.78(I=2), -4.93(I=3), -5.36(I=4)

\*\*\*\*\*

MoO4-- H2L Molybdate (443)

Molybdate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ sp NaClO4 25°C 0.40M U 1969TTa (8707) 174  
 K(Co + GeMo11039(8-))=3.65

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

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

Co++ gl R4N.X 25°C 0.10M U M 1995KBb (9074) 175  
 K(CoA+L)=2.00  
 K(CoAL+L)=0.53  
 Medium: 0.1 M NH4NO3. H3A=NTA  
 -----

Co++ kin NaClO4 25°C 1.00M C 1994BCb (9075) 176  
 K(CoL4CO3+H=CoL4HCO3)=0.0  
 K(CoLOH2OC02H+H=CoL(OH2)2+CO2)=0.0  
 -----

Co++ gl alc/w 25°C 2.0M U I K1=3.83 B2= 7.22 1992MPb (9076) 177  
 K3=2.84  
 for 100% H2O K1=2.06  
 for 100% H2O K2=1.10  
 for 100% H2O K3=1.65  
 Medium: 2.0 M NH4NO3 in 50% v/v EtOH in H2O  
 -----

Co++ gl diox/w 25°C 2.0M U K1=2.40 B2= 4.38 1992MSc (9077) 178  
 K3=1.41  
 K1=2.06(100%H2O)  
 K2=1.65 (100% H2O)  
 K3=1.10 (100%H2O)  
 Medium: NH4NO3 in 50% v/v dioxane/H2O; for 20% K1=2.24; K2=1.85, K3=1.27  
 For 2 M NH4NO3 in50%v/v acetone/H2O K1=2.40; K2=2.00; K3=1.43  
 -----

Co++ vlt R4N.X 20°C 0.50M U K1=1.9 B2=3.2 1990URa (9078) 179  
 B3=4.3  
 B4=4.6  
 B5=4.4  
 B6=6.0  
 Medium: 0.5 M NH4ClO4  
 -----

Co++ gl NaNO3 25°C 0.10M A M 1982SSa (9079) 180  
 K(CoA+L) < 1.9  
 A=uridine-5'-triphosphate  
 -----

Co++ kin NaCl 25°C <.01 U 1977MUa (9080) 181  
 K(CoL5(OH)+HL=CoL6+H2O)=1.4  
 -----

Co++ gl NaClO4 25°C 1.0M U B2=3.7 1970GHa (9081) 182  
 B3=5.1

B4=5.9

Solubility also used. B(Co(OH)2L2)=11.0

```

-----
Co++      gl  R4N.X  20°C  1.0M U    M    K1=2.18  B2=3.98  1966FLb  (9082) 183
                B3=5.08
                B4=5.98

```

Medium: NH4NO3. Also values for many Co-NH3-py complexes

```

-----
Co++      ISE  R4N.X  30°C  2.0M U    K1=2.08  B2=3.60  1966LMd  (9083) 184
                K3=1.17
                K4=0.74
                K5=0.25
                K6=-0.59

```

Medium: NH4NO3

```

-----
Co++      gl  R4N.X  30°C  2.0M U  TIH    K1=2.11  B2=3.74  1941BJa  (9084) 185
                K3=1.05
                K4=0.76
                K5=0.18
                K6=-0.62

```

Medium: NH4NO3. B6=5.11. At I=0 corr. K1=1.99, K2=1.51, K3=0.93, K4=0.64, K5=0.18, K6=-0.74, B6=4.39. DH(B6)=-54 kJ mol-1

```

-----
Co++      cal  oth/un 18°C  var  U    H    K1=-0.52      1936CHa  (9085) 186
                K2.K3=1.98

```

DH(K1)=-6.95 kJ mol-1; DH(K2)+DH(K3)=-15.1.

```

-----
Co++      ISE  oth/un 25°C  dil  U    B6=4.90
                1920LLa  (9086) 187

```

```

*****
NH30      L    Hydroxylamine;  CAS 5470-11-1  (1808)
Hydroxylamine; NH2.OH

```

```

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

```

```

Co++      EMF  KNO3   25°C  1.0M U    K1=4.46  B2=8.46  1974ISa  (9257) 188
                K3=3.76
                K4=3.62

```

```

-----
Co++      gl  NaNO3  20°C  0.50M U    K1=0.9      1963SZa  (9258) 189

```

```

*****
NO      L    Nitric oxide      CAS 10102-43-9  (850)
Nitric oxide;

```

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

```

```

Co++      oth  oth/un 25°C  0.0  U    Kp(Co+NO(g))=-1.5
                1961TAb  (9291) 190

```

Method: Chemical analysis

\*\*\*\*\*

NO2- HL Nitrite CAS 7782-77-6 (635)  
Nitrite;

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

Co++ gl NaClO4 25°C 1.0M U K1=0.44 1990ERb (9355) 191  
\*\*\*\*\*

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

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

Co++ con non-aq 25°C 100% U K1=1.49 1980GPa (9555) 192  
Medium: DMSO

Co++ sp non-aq 25°C 100% M H K1=4.02 1978LFa (9556) 193  
Medium: acetonitrile. By calorimetry, DH=9.88 kJ mol<sup>-1</sup>, DS=110 J K<sup>-1</sup> mol<sup>-1</sup>

Co++ cal NaNO3 25°C 1.00M U H 1975ARa (9557) 194  
DH(K1)=-4.86 kJ mol<sup>-1</sup>. DS = -19.2 J K<sup>-1</sup> mol<sup>-1</sup>.

Co++ sol NaClO4 25°C 0.50M U I K1=-0.46 B2=-0.30 1973FSc (9558) 195  
K1=-0.46, B2=-0.43(I=1). K1=-0.48, B2=-0.60(I=2). K1=-0.60, B2=-0.62(I=3).  
K1=-0.38, B2=-0.43(I=4). K1=0.22(I=0)

Co++ kin NaClO4 25°C 1.0M U K1=-0.15 1973HHb (9559) 196

Co++ sp non-aq ? 100% U 1957TSb (9560) 197  
K3=3.43  
B3=8.65

Medium: acetone

Co++ sp alc/w 25°C 100% U K1=>2.3 1955KGb (9561) 198  
Medium: EtOH

-----  
N2 L Nitrogen CAS 7727-37-9 (5686)  
Dinitrogen, also Nitrous oxide; N2O

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

Co++ sol oth/un 25°C ? U 1985VGb (10023) 199  
K(CoA2+L)=1.87  
K(CoB2+L)=1.18

A=Histamine, B=Histidine.

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

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

Co++ gl R4N.X 25°C 0.10M U M 1995KBb (10071) 200  
 K(CoA+L)=1.81  
 K(CoAL+L)=0.61

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

Co++ sp NaCl 25°C 1.00M U K1=2.54 B2=5.02 1978TAa (10072) 201

Co++ sp oth/un 25°C 1.0M U K1=1.6 B2=2.3 1973SSd (10073) 202  
 B3=3.4

Medium: N2H5ClO4. Using EMF: K1=1.6, B2=2.2, B3=3.1

Co++ gl oth/un 25°C var U K1=1.4 B2=2.80 1972AKa (10074) 203  
 K3=1.4  
 K4=1.4

Co++ sp oth/un 23°C 0.0 U 1967BEc (10075) 204  
 K(Co(CN)5L+H)=4.35

By glass electrode: K=4.32

Co++ gl NaClO4 30°C 1.0M U K1=1.78 B2=3.34 1967BSb (10076) 205

\*\*\*\*\*

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

Azide;

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

Co++ sp KNO3 25°C 0.50M U 1991BKa (10173) 206  
 K(CoA+N3)=2.57

A=1,4,8,11-tetramethyl-1,4,8,11-tetraazacyclotetradecane. By kinetics K1=2.44

Co++ sp non-aq 25°C 100% U 1985LDa (10174) 207  
 K(CoAS+L=CoAL+S)=2.67

Medium (S): DMF. A=N(CH2CH2NMe2)3

Co++ con NaClO4 25°C 1.0M U K1=0.74 B2=1.08 1980AVb (10175) 208

Co++ gl NaClO4 25°C 1.0M C K1=0.76 1978GSb (10176) 209

Co++ sp oth/un 20°C var U T H K1=1.26 1973AAc (10177) 210  
 K1=1.28(25 C), 1.28(31 C), 1.32(36 C). DH(K1)=5.9 kJ mol-1.  
 In MeOH: B4=3.68(23 C), 3.74(27 C), 3.78(33 C). DH(B4)=17

Co++ sp oth/un 0°C var U K1=1.7 1970AAAa (10178) 211

Co++ sp NaClO4 25°C 1.0M U K1=0.72 1970SGa (10179) 212

\*\*\*\*\*

OCN- HL Cyanate CAS 661-20-1 (6165)

Cyanate, Fulminate;

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



-----  
Co++ sp KNO3 25°C 0.50M U 1991BKa (10292) 213  
K(CoA+OCN)=3.82

A=1,4,8,11-tetramethyl-1,4,8,11-tetraazacyclotetradecane.By kinetics K1=3.62  
-----

Co++ sp NaNO3 27°C 1.50M U 1966CVa (10293) 214  
B4=2.67

-----  
Co++ sp oth/un var U K1=1.80 B2=3.06 1966LOa (10294) 215  
K3=1.04  
K4=0.90(0.84?)

\*\*\*\*\*

OH- HL Hydroxide (57)  
Hydroxide;

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

Co++ gl NaNO3 25°C 0.10M C 2000MSa (10819) 216  
\*K1=-8.23  
\*B2=-17.83

-----  
Co++ sol none 25°C 0.0 C T H 1999ZGa (10820) 217  
\*K1=-10.21  
\*B2=-20.99  
\*K3=-11.9  
K(Co(OH)+NH3=Co(OH)NH3)=1.84

K(beta-Co(OH)2(s)+2H=Co+2H2O)=13.37  
-----

Co++ gl NaNO3 25°C 0.10M U 1998MSe (10821) 218  
\*K1=-8.23  
\*B2=-17.83

-----  
Co++ gl alc/w 25°C 50% C 1997MGb (10822) 219  
\*K1=-7.36  
\*B2=-15.51

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.  
-----

Co++ gl NaClO4 30°C 0.10M C K1=6.35 1995STa (10823) 220  
-----

Co++ sp NaClO4 25°C 1.00M U I 1992FLa (10824) 221  
\*K1=-1.92

Medium: LiClO4. At 2.0 M: \*K1=-2.05; at 3.0 M: \*K1=-1.82.  
-----

Co++ gl KNO3 25°C 0.50M M H 1991BKa (10825) 222  
K(CoA+OH)=5.28

A=1,4,8,11-tetramethyl-1,4,8,11-tetraazacyclotetradecane. DH=-34 kJ mol<sup>-1</sup>;  
DS=47 J K<sup>-1</sup> mol<sup>-1</sup>.  
-----

Co++ gl alc/w 30°C 50% C 1991MCb (10826) 223  
\*K1=-7.05



\*K1=-9.85(35 C), -9.62(35 C), -9.50(40 C). DH=34.2 kJ mol<sup>-1</sup>

---

Co++ gl none 25°C 0.0 U 1963BPa (10838) 235  
\*K2=-8.9

---

Co++ gl none ? 0.0 U 1963FSa (10839) 236  
Kso=-14.2 (blue)  
Kso=-14.8 (pink, fresh)  
Kso=-15.7 (pink, aged)

---

Co++ gl NaClO4 28°C 1.00M U 1963SSa (10840) 237  
\*K1=-9.82

---

Co++ gl NaClO4 25°C 0.25M U TI 1962BAc (10841) 238  
\*K1=-9.85  
\*K1=-9.96(15 C), -9.62(35 C), -9.50(40 C), same values for I=0.25 and 0.75

---

Co++ gl none 25°C 0.0 U 1959ACb (10842) 239  
\*K1=-11.20

---

Co++ gl NaClO4 25°C 0.25M U I 1957POa (10843) 240  
\*K1=-7.6  
For I=0 corr?: \*K1=-6.96

---

Co++ gl oth/un 25°C var U 1954BSa (10844) 241  
\*K1(cis-Co(en)2NO2H2O)=-6.34  
\*K1(trans)=-6.44

---

Co++ gl none 75°C 0.0 U 1954DOa (10845) 242  
Kso(Co(OH)2)=-15.5

---

Co++ gl KCl 30°C 0.10M U 1952CCa (10846) 243  
\*K1=-8.9

---

Co++ gl none 25°C 0.0 U 1952GWA (10847) 244  
\*K1=-12.20

---

Co++ sol none 25°C 0.0 U 1950GGA (10848) 245  
B2=9.2  
K3=1.3  
\*Kso=12.40  
K(Co(OH)2(s)=Co(OH)2)=-6.40  
K(Co(OH)2(s)+OH=Co(OH)3)=-5.10

---

Co++ EMF none 25°C 0.0 C 1942NAa (10849) 246  
Kso(Co(OH)2)=-14.89

---

Co++ gl oth/un 25°C dil U 1938OKa (10850) 247  
Kso(Co(OH)2)=-14.0

---

Co++ dis oth/un 20°C var U K1=4.05 1933JEa (10851) 248

-----  
Co++ EMF oth/un 18°C var C 1925BRa (10852) 249  
Kso(Co(OH)2)=-17.80  
-----

Co++ kin oth/un 100°C dil U K1=3.64 1913KUa (10853) 250  
\*K1=-8.7  
-----

Co++ EMF oth/un 25°C var C 1908DEa (10854) 251  
\*K1=-9.3  
-----

Method: H electrode. Alternative interpretation: B2=-14.36

\*\*\*\*\*

O2 L Oxygen CAS 7782-44-7 (83)

Dioxygen, also oxide; O-- , and superoxide, O2-

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

Co++ gl KNO3 25°C 0.10M C 2003AZa (12558) 252

K(Co2(OH)A+O2)=1.74

K(Co2A(OH)2+O2)=2.02

K(Co2A(OH)(O2)+B)=4.57

B(Co2AB(O2))=16.14

A is 3,6,9,17,20,23-hexaazatricyclo[23.3.1.1]triaconta-1(29),11(30),12,14,  
25,26,27-hexaene (C24H38N6). B is 4-methoxy-1,2-phenylenediamine.

-----  
Co++ kin non-aq 25°C 100% C 2003CMc (12559) 253

K(2Co(trien)+O2)=9.1

Medium: DMSO, 0.10 M Et4NClO4. p(O2) controlled by mass-flow device.

-----  
Co++ oth non-aq 20°C 100% C T H 2002BDb (12560) 254

K(Co2A2+O2=Co2A2O2)=-2.46

Data for -5 to 20 C. DH=-37.9 kJ mol-1, DS=-175 J K-1mol-1.

H2A is 4,4'-[1,2-ethanediy]bis(oxy)]bis[N-hydroxy-N-phenylbenzanide].

-----  
Co++ oth non-aq 0°C 100% C T H 2002SCa (12561) 255

K(CoA(py)+O2=CoA(py)O2)=-2.75

In pyridine. Data for -10 to 10 C. DH=-17.0 kJ mol-1, DS=-115 J K-1mol-1.

A is N,N'-bis(furaldehyde)-1,2-diaminoethane.

-----  
Co++ oth non-aq 0°C 100% C T H 2002SCa (12562) 256

K(CoA(py)+O2=CoA(py)O2)=-2.74

In pyridine. Data for -10 to 10 C. DH=-20.8 kJ mol-1, DS=-115 J K-1mol-1.

A is N,N'-bis(furaldehyde)-1,2-diaminopropane.

-----  
Co++ oth non-aq 0°C 100% C T H 2002SCa (12563) 257

K(CoA(py)+O2=CoA(py)O2)=-2.33

In pyridine. Data for -10 to 10 C. DH=-34.2 kJ mol-1, DS=-163 J K-1mol-1.

A is N,N'-bis(furaldehyde)-1,2-phenylenediamine.

-----  
Co++ oth non-aq 0°C 100% C T H 2002SCa (12564) 258

K(CoA(py)+O2=CoA(py)O2)=-2.41

In pyridine. Data for -10 to 10 C. DH=-25.8 kJ mol<sup>-1</sup>, DS=-141 J K<sup>-1</sup>mol<sup>-1</sup>.  
A is N,N'-bis(furaldehyde)-1,3-diaminopropane.

---

Co++ oth non-aq 0°C 100% C T H 2001SCb (12565) 259  
K(CoA(py)+O2=CoA(py)O2)=-1.36

In pyridine. Data for -10 to 10 C. DH=-40.3 kJ mol<sup>-1</sup>, DS=-174 J K<sup>-1</sup>mol<sup>-1</sup>.  
H2A: 4',5'-bis(2-hydroxyphenylmethylideneimino)benzo-12-crown-4.

---

Co++ oth non-aq 0°C 100% C T H 2001SCb (12566) 260  
K(CoA(py)+O2=CoA(py)O2)=-1.32

In pyridine. Data for -10 to 10 C. DH=-42.8 kJ mol<sup>-1</sup>, DS=-182 J K<sup>-1</sup>mol<sup>-1</sup>.  
H2A: 4',5'-bis(5-chloro-2-hydroxyphenylmethylideneimino)benzo-12-crown-4.

---

Co++ oth non-aq 0°C 100% C T H 2001SCb (12567) 261  
K(CoA(py)+O2=CoA(py)O2)=-1.27

In pyridine. Data for -10 to 10 C. DH=-44.8 kJ mol<sup>-1</sup>, DS=-189 J K<sup>-1</sup>mol<sup>-1</sup>.  
H2A: 4',5'-bis(5-bromo-2-hydroxyphenylmethylideneimino)benzo-12-crown-4.

---

Co++ sp non-aq 25°C 100% C H 2001ZLa (12568) 262  
K(Co2P2+2O2=Co2P2(O2)2)=2.16

Medium: dimethylformamide. Additional method: esr.  
DH=-172.1 kJ mol<sup>-1</sup>, DS=-536 J K<sup>-1</sup> mol<sup>-1</sup>.

---

Co++ cal NaClO4 25°C 0.15M U H 1999CCa (12569) 263  
DH(2CoL+O2+OH)=-164 kJ mol<sup>-1</sup>. L=1,4,7,10-tetraazacyclododecane.

Reaction: 2CoL+O2+OH=CoL(O2,OH)CoL2.

---

Co++ cal NaClO4 25°C 0.15M U H 1999CCa (12570) 264  
DH(2CoL+O2+OH)=-165 kJ mol<sup>-1</sup>. L is 1,4,8,11-tetraazacyclotridecane

Reaction: 2CoL+O2+OH=CoL(O2,OH)CoL.

---

Co++ sp none 25°C 0.0 C T H K1=1.901 1999LQa (12571) 265  
K(CoAB+O2)=-2.58

Data for -5 to 25 C. DH=-36.5 kJ mol<sup>-1</sup>, DS=-173 J K<sup>-1</sup> mol<sup>-1</sup>. A=py. B is  
4'-(2-hydroxyphenylmethylideneimino)-benzo-15-crown-5.

---

Co++ sp KCl 25°C 0.10M C 1999RNa (12572) 266  
K(Co2AB+O2)=2.88

K(Co2AC+O2)=2.37

K(Co2AD+O2)=3.49

K(Co2AE+O2)=3.51

K(Co2AF+O2)=3.71 A: 1,4,7,13,16,19-hexaza-10,22-dioxacyclotetracosane  
B:1,2-diaminobenzene; C to F: 4-Cl-, 4-Me, 4-MeO, and 4,5-diMe-derivatives

---

Co++ oth non-aq 0°C 100% C T H 1998LMa (12573) 267  
K(CoA(py)+O2)=-4.34

Method: manometric. Medium: CH3CN. Data for -20 to 0 C. DH=-15.5 kJ mol<sup>-1</sup>,  
DS=-140 J K<sup>-1</sup> mol<sup>-1</sup>. H2A is HO.C6H4.CH:N.CH(COOH)(CH2)2S.CH3.

---

Co++ kin non-aq 25°C 100% U 1998RMa (12574) 268

$K(\text{CoA}(\text{MeIm})+\text{O}_2)=-2.89$

$K(\text{CoA}(\text{py})+\text{O}_2)=-3.77$

Medium: acetone. Also data for CH<sub>3</sub>CN and MeOH.

A is a bridged cyclidene ligand. MeIm: 1-methylimidazole.

---

Co++ sp non-aq -45°C 100% C T HM 1998SSe (12575) 269

$K(\text{CoA}+\text{O}_2)=-1.64$

Medium: CH<sub>2</sub>Cl<sub>2</sub>. HA is N,N,N',N'-Tetrakis(2-pyridylmethyl)-1,3-diamino-2-propanol. DH=-76 kJ mol<sup>-1</sup>, DS=-361.

---

Co++ sp non-aq -39°C 100% U T HM 1997R0a (12576) 270

$K(\text{CoA}_2+\text{L})=3.21$

Medium: acetone. A=(salicyliden-iminato-3-propyl)methylamine.

Data also for O<sub>2</sub> binding by other Co(II) Schiff base complexes.

---

Co++ oth KNO<sub>3</sub> 0°C 0.10M C 1993KSa (12577) 271

$K(2\text{CoA}_2+\text{O}_2=\text{Co}_2\text{A}_4\text{O}_2)=7.87$

$K(2\text{CoA}_2+\text{O}_2+\text{OH}=\text{Co}_2\text{A}_4(\text{OH})\text{O}_2)=2.12$ . HA=L-histidine.

Method: manometry.

---

Co++ oth KNO<sub>3</sub> 0°C 0.10M C 1993KSa (12578) 272

HA = glycyl-L-histidine.  $K(2\text{CoH}-1\text{A}+\text{O}_2+\text{OH}=\text{Co}_2(\text{H}-1\text{A})_2(\text{OH})\text{O}_2)=2.29$ ,

$K(2\text{CoH}-1\text{A}+\text{O}_2=\text{Co}_2(\text{H}-1\text{A})_2\text{O}_2)=9.24$ . Method: manometry.

---

Co++ oth KNO<sub>3</sub> 0°C 0.10M C 1993KSa (12579) 273

$K(2\text{CoA}_2+\text{O}_2=\text{Co}_2\text{A}_4\text{O}_2)=5.35$

HA = L-histidyl-glycine.  $K(2\text{CoH}-1\text{A}+\text{O}_2+\text{OH}=\text{Co}_2(\text{H}-1\text{A})_2(\text{OH})\text{O}_2)=-2.12$ ,

$K(2\text{CoA}_2+\text{O}_2+\text{OH}=\text{Co}_2\text{A}_4(\text{OH})\text{O}_2)=-1.87$ ,  $K(2\text{CoH}-1\text{A}+\text{O}_2=\text{Co}_2(\text{H}-1\text{A})_2\text{O}_2)=5.12$ .

---

Co++ oth KNO<sub>3</sub> 0°C 0.10M C M 1992KUa (12580) 274

Method: manometry.  $K(2\text{Co}(\text{H}-1\text{A})_2+\text{L}=\text{Co}_2(\text{H}-1\text{A})_4\text{L})=13.90$ . HA is Gly-phe.

Alternative model:  $K(2\text{Co}(\text{H}-\text{A}1)_2+\text{L}+\text{OH}=\text{Co}_2(\text{A}\text{H}-1)_4(\text{OH})\text{L})=5.21$ .

---

Co++ oth KNO<sub>3</sub> 0°C 0.10M C M 1992KUa (12581) 275

Method: manometry.  $K(2\text{Co}(\text{H}-1\text{A})_2+\text{L}=\text{Co}_2(\text{H}-1\text{A})_4\text{L})=13.77$ . HA is Phe-gly.

Alternative model:  $K(2\text{Co}(\text{H}-1\text{A})_2+\text{L}+\text{OH}=\text{Co}_2(\text{H}-1\text{A})_4(\text{OH})\text{L})=5.35$ .

---

Co++ oth KNO<sub>3</sub> 0°C 0.10M C M 1992KUa (12582) 276

Method: manometry.  $K(2\text{Co}(\text{H}-1\text{A})_2+\text{L}=\text{Co}_2(\text{H}-1\text{A})_4\text{L})=13.13$ . HA is Ala-phe.

Alternative model:  $K(2\text{Co}(\text{H}-1\text{A})_2+\text{L}+\text{OH}=\text{Co}_2(\text{H}-1\text{A})_4(\text{OH})\text{L})=4.80$ .

---

Co++ oth KNO<sub>3</sub> 0°C 0.10M C M 1992KUa (12583) 277

Method: manometry.  $K(2\text{Co}(\text{H}-1\text{A})_2+\text{L}=\text{Co}_2(\text{H}-1\text{A})_4\text{L})=10.81$ . HA is Phe-ala.

Alternative model:  $K(2\text{Co}(\text{H}-1\text{A})_2+\text{L}+\text{OH}=\text{Co}_2(\text{H}-1\text{A})_4(\text{OH})\text{L})=2.53$ .

---

Co++ oth KNO<sub>3</sub> 0°C 0.10M C M 1992KUa (12584) 278

Method: manometry.  $K(2\text{Co}(\text{H}-1\text{A})_2+\text{L}=\text{Co}_2(\text{H}-1\text{A})_4\text{L})=13.54$ . HA is Phe-ser.

Alternative model:  $K(2\text{Co}(\text{H}-1\text{A})_2+\text{L}+\text{OH}=\text{Co}_2(\text{H}-1\text{A})_4(\text{OH})\text{L})=5.47$ .

---

Co++ oth KNO<sub>3</sub> 0°C 0.10M C M 1992KUa (12585) 279

Method: manometry.  $K(2Co(H-1A)_2+L=Co_2(H-1A)_4L)=12.57$ . HA is Val-phe.  
Alternative model:  $K(2Co(H-1A)_2+L+OH=Co_2(H-1A)_4(OH)L)=4.08$ .

---

Co++ sp non-aq -20°C 100% U I 1991SDa (12586) 280  
 $K(CoA(py)_2+O_2)=-4.45$

Medium: pyridine. A=4,4'-oxalyldinitrilodi(pent-2-one). In toluene:  
 $K(CoAB_2+O_2)=-4.45$ , B=1-methylimidazole

---

Co++ sp NaCl 25°C 0.10M U M 1991YBa (12587) 281  
 $K(CoA+O_2=CoAO_2)=-1.12$

A=2,9,10,17,19,25,33,34-Octamethyl-3,6,13,16,20,24,27,31-octaazapentacyclo-  
octatriaconta-1,8,10,17,19,24,26,31,33-nonaene

---

Co++ sp non-aq 0°C 100% U T H 1990LGa (12588) 282  
 $K(CoAB+L=CoABL)=-2.74$

$K(CoAC+L=CoACL)=-1.60$

Medium: MeCN. A=BF<sub>2</sub>-bridged bis-dimethylglyoximate; B=pyridine;  
C=N-methylimidazole. For B=py, DH=-57.3 kJ mol<sup>-1</sup>: DS=-257 J K<sup>-1</sup> mol<sup>-1</sup>.

---

Co++ oth oth/un 20°C ? U M 1989CMA (12589) 283  
 $K(CoA+O_2)=0.98$

A=Bis(3-fluorosalicylaldehyde)ethylenediamine. Data also for several  
similar Co(II) Schiff bases.

---

Co++ oth non-aq 25°C 100% U M 1989UKa (12590) 284  
 $K(FeAB+L)=-2.58$

A=5,15-Diphenyl-10a,20a-bis(nonanediamidodi-o-phenylene)porphyrin  
B=1,2-Dimethylimidazole. Medium: toluene. Data for other similar porphyrins

---

Co++ cal KNO<sub>3</sub> 25°C 0.10M U H 1988CCa (12591) 285

L=tris(2-aminoethyl)amine. DH(Co+L+OH=CoL(OH))=-56.9 kJ mol<sup>-1</sup>. DH(CoL)=-41.8  
DH(2Co+2L+OH+O<sub>2</sub>=Co<sub>2</sub>L<sub>2</sub>(O<sub>2</sub>)(OH))=-251.0

---

Co++ cal KNO<sub>3</sub> 25°C 0.10M U H 1988CCa (12592) 286

L=3,7-diazanonane-1,9-diamine. DH(Co+L=CoL)=-50.2 kJ mol<sup>-1</sup>. DH(2Co+2L+O<sub>2</sub>=  
Co<sub>2</sub>L<sub>2</sub>(O<sub>2</sub>))=-240.6. DH(2Co+2L+OH+O<sub>2</sub>=Co<sub>2</sub>L<sub>2</sub>(OH)(O<sub>2</sub>))=-260.2

---

Co++ gl diox/w 25°C 70% C M 1988MMd (12593) 287

$B(Co_2A_2L)=33.08$

Medium: 70% v/v dioxan/H<sub>2</sub>O. A=N,N-Bis(2-((2-hydroxybenzyl)amino)phenyl)-  
methylamine, 0.1 M KCl

---

Co++ sp non-aq 20°C 100% U M 1988TFa (12594) 288

$K(CoA+L=CoAL)=-2.03$

A=2,3,9,12,18-Hexamethyl-3,9,13,17,20,23-hexaazabicyclo[9.7.6]-tetracosa-  
1,10,12,17,19,23-hexaene. And others. Medium: 1.5 M Methylimidazole in CH<sub>3</sub>CN

---

Co++ oth non-aq 25°C 100% U T M 1987CMB (12595) 289

$K(CoA+L)=2.3$

A=bis(salicylaldehyde) o-phenylenediiminato pyridyl, in 2-methoxyethyl ether

Data also for several other similar Co Schiff base complexes

---

Co++ sp non-aq -30°C 100% U T H 1987FGd (12596) 290  
K(CoP+L=CoPL)=-3.58

In toluene. At -42 C, K=-2.48; at -54 C, K=-1.28. DH=-42.2 kJ mol<sup>-1</sup>;  
DS=-205. CoP = meso-tetraphenylporphinatocobalt(II)pyridine complex.

---

Co++ sp none 20°C 0.0 U H 1987Lda (12597) 291  
A=N,N'-Bis(4,6-dimethoxysalicylidine)-4-(trifluoromethyl)-o-phenylenediamine  
For CoAB+L=CoABL DH=-45.6 (B=py); -48.5 (1-Me-imidazole); -18.5 (B=C4H8S)

---

Co++ sp non-aq 25°C 100% U 1986CHb (12598) 292  
K(Co2PH2O+O2=Co2P(O2)+H2O)=1.3  
In benzonitrile 0.1 M in H2O. Co2P=Co(II)Co(III)-cofacial porphyrin complex

---

Co++ gl oth/un 25°C 0.10M U H 1984CCb (12599) 293  
K(2CoA+O2=Co2(O2)A2)=8.30  
Medium not stated. K'(2CoA+2OH+O2=Co2(OH)2(O2)A2)=23.0.  
A is cyclam. By calorimetry, DH(K)=-86.1 kJ mol<sup>-1</sup>, DH(K')=-132.1.

---

Co++ sol oth/un 25°C ? U 1984VGa (12600) 294  
K(Co(histamine)2+O2)=3.09

---

Co++ vlt KCl 25°C 1.00M U H 1983CCa (12601) 295  
K(2Co(en)2+O2+H2O)=4.76  
B(2Co+4en+O2+H2O)=26.08  
Full equations are K(2Co(en)2+O2+H2O=Co2(en)4(O2)(H2O)+H) and  
B(2Co+4en+O2+H2O=Co2(en)4(O2)(H2O)+H). DH(K)=-116.3; DH(B)=-233.0 kJ mol<sup>-1</sup>.

---

Co++ vlt mixed 25°C 0.10M U M 1981PCa (12602) 296  
K(CoA+O2=Co(O2)A)=3.62  
A=N,N'-propane-1,2-diylbis(salicylideneimine); Also A=N,N'-butane-2,3- or  
meso-butane-2,3-derivatives

---

Co++ sp NaClO4 25°C 1.0M U M 1980WSa (12603) 297  
K(CoA+L)=3.9  
Medium: LiClO4. A=1,4,8,11-tetraazacyclotetradecane

---

Co++ sp NaClO4 25°C 1.0M U M 1980WSa (12604) 298  
K(CoA+L)=3.6  
Medium: LiClO4. A=1,4,8,11-tetraazacyclotetra-1,(14),11-diene-13-one

---

Co++ sp NaClO4 25°C 1.0M U M 1980WSa (12605) 299  
K(CoA+L)=4.6  
K(CoA+CoAL)=4.3  
Medium: LiClO4. A=1,4,8,12-tetraazacyclopentadecane

---

Co++ sp non-aq 20°C 100% U HM 1977CGa (12606) 300  
K(CoA+O2)=2.81  
Medium: dimethylformamide. DH=-60(approx) kJ mol<sup>-1</sup>. A=salicylidene compound



-----  
 Co++ vlt KNO3 25°C 0.10M C M 1976Bmd (12607) 301  
 K(2Co(bpy)2+O2)=4.2  
 K(2Co(bpy)2+O2+H2O=CoX+H)=-2.6  
 -----

Co++ cal oth/un 25°C 0.02M U HM 1972PNa (12608) 302  
 K(Co(His)2+O2)=6.63

DH=-126 kJ mol<sup>-1</sup>. In 1 M KCl, K(Co(en)2(H2O)2+O2)=10.84; DH=-123.  
 In 0.13 M KCl, K(Co(histamine)2(H2O)2+O2)=8.47. Polarography also used  
 \*\*\*\*\*

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

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ gl NaNO3 25°C 0.10M M 1996SSa (13052) 303  
 K(Co+HL)=2.22  
 -----

Co++ gl NaClO4 25°C 0 M I K1=0.96 B2=1.89 1995POa (13053) 304  
 In 3.0 M NaClO4: K1=0.51, B2=1.03  
 -----

Co++ gl NaNO3 25°C 0.10M C 1981BKb (13054) 305  
 K(Co+HPO4)=2.18  
 -----

Co++ gl NaClO4 25°C 0.10M U I M 1967SBc (13055) 306  
 K(Co+HL)=2.18  
 In 10% dioxan, 0.1 M NaClO4: K(Co+HL)=2.26, K(Co+bpy+HL)=2.26  
 I=0.1(NaClO4)  
 -----

Co++ gl oth/un 20°C dil U 1961CAa (13056) 307  
 Kso(Co3L2)=-34.7  
 Ks(CoHL=Co+HL)=-6.7  
 -----

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

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 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ gl NaNO3 25°C 1.00M U K1=4.58 1984COa (13398) 308  
 \*\*\*\*\*

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

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

Co++ gl R4N.X 25°C 0.50M C K1=1.75 B2= 4.17 1979DHa (13545) 309  
 K(Co+HL=CoL+H)=-6.70  
 K(Co+2HL=CoL2+2H)=-12.75  
 K(CoL+HL=CoL2+H)=-6.05

Medium: 0.50 M Me4NCl. Kso(Co2P207.6H2O)=-15.3.

-----  
Co++ gl R4N.X 25°C 0.20M U T H K1=6.53 B2= 9.35 1979MFb (13546) 310  
K(Co+HP207)=3.70

Medium: Me4NBr, 0.20 M. Data for 5-35 C.  
By calorimetry: DH(K1)=41.8 kJ mol<sup>-1</sup>.

-----  
Co++ gl R4N.X 25°C 0.10M U K1=7.2 1964HMb (13547) 311  
K(Co+HL)=4.05

Medium: Me4NCl

-----  
Co++ gl NaNO3 25°C 0.10M U K1=6.1 1963JWa (13548) 312  
K(CoL+H)=5.7

-----  
Co++ sp oth/un 25°C var U K1=3.02 1958VRb (13549) 313  
\*\*\*\*\*  
P208---- H4L CAS 13825-81-5 (2402)  
Peroxydiphosphate, also cyclic metaphosphates, thiophosphates etc.;

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

Co++ ix NaClO4 20°C 0.23M U 1974K0a (13687) 314  
Ligand:metaphosphates, cyclic, (PO3)<sub>n</sub> n-, K1=2.62(n=4), 3.65(n=6), 4.80(n=8)  
\*\*\*\*\*  
P2W17O61----- Polytungstate (2102)  
alpha-Heterodiphospho-polytungstate (usually alpha1 isomer)

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

Co++ gl NaNO3 25°C 1.00M U K1=7.66 1984C0a (13706) 315  
K1=5.57 (alpha2 isomer)  
\*\*\*\*\*  
P3010----- H5L CAS 10380-08-2 (1001)  
Tripolyphosphate; from (HO)2PO.O.PO(OH).O.PO(OH)2

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

Co++ gl KNO3 25°C 0.10M U T H K1=6.95 1973TRa (13815) 316  
K(Co+HL)=4.05  
At 2 C: K1=7.01, K(Co+HL)=4.10; 35 C: K1=7.27, K=4.21; 45 C: 4.04  
DH(K1)=-29.3, DH(Co+HL)=-0.84 kJ mol<sup>-1</sup>

-----  
Co++ gl KNO3 45°C 0.10M U K1=6.39 B2=7.59 1971TRa (13816) 317  
K(Co+HL)=4.14  
K(CoL+HL)=2.6  
K(CoL2+H)=9.53

-----  
Co++ gl R4N.X 20°C 0.10M U H K1=7.95 1965ANa (13817) 318  
K(Co+HL)=4.93  
K(CoL+H)=5.8

Medium: Me4NNO3. By calorimetry: DH(K1)=18.9 kJ mol<sup>-1</sup>, DS=216 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
 Co++ gl KCl 25°C 0.10M U K1=6.89 1964EMb (13818) 319  
 K(Co+HL)=3.81  
 K(CoL+H)=4.98  
 -----

Co++ gl R4N.X 25°C 0.10M U K1=8.16 1964HMb (13819) 320  
 K(Co+HL)=5.17  
 Medium: Me4NCl  
 -----

Co++ sp KNO3 30°C 1.0M U K(Co+HL)=4.03 1964SSc (13820) 321  
 -----

Co++ gl NaNO3 25°C 0.10M U K1=6.6 1963JWa (13821) 322  
 K(CoL+H)=5.4  
 -----

Co++ vlt oth/un rt 0.25M U K1=7 1957K0a (13822) 323  
 \*\*\*\*\*  
 P4012---- H4L CAS 13598-74-8 (234)  
 Cyclotetrametaphosphate;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	ix	NaClO4	20°C	0.23M	U			K1=2.62	1974K0a (13993)	324
*****										
P6018-----			H6L		(233)					
Cyclohexametaphosphate;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	ix	NaClO4	20°C	0.23M	U			K1=3.65	1974K0a (14069)	325
*****										
P8024-----			H8L		(232)					
Cyclooctametaphosphate;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	ix	NaClO4	20°C	0.23M	U			K1=4.80	1974K0a (14081)	326
*****										
S--			H2L		Sulfide		CAS 7783-06-4 (705)			
Sulfide;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	vlt	oth/un	25°C	0.72M	C				1999AVb (14292)	327
								K(Co+HL)=6.8		
								K(Co+2HL)=10.4		

Method: determination of Co by cathodic stripping voltammetry using oxine as competitive ligand. Medium: seawater, pH 9.0, S=35.  
 -----

Co++	vlt	NaClO4	24°C	0.50M	C	I		K1=5.52	1999CRb (14293)	328
------	-----	--------	------	-------	---	---	--	---------	-----------------	-----

$$B(\text{Co}_2(\text{S}_5))=11.53$$

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

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Co++ vlt oth/un 25°C 0.70M C I 1996LRb (14294) 329

$$\begin{aligned}K(\text{Co}+\text{HS}) &= 4.68 \\K(2\text{Co}+\text{HS}) &= 9.52 \\K(3\text{Co}+\text{HS}) &= 15.50\end{aligned}$$

Method: voltammetry at Hg/HgS electrode. Medium: seawater. Also data for 0.1 and 0.5 strength seawater

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Co++ vlt NaCl 25°C ? U 1994ZMa (14295) 330

$$K_{\text{leff}}=5.3$$

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

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Co++ oth none ? 0 U 1990DKa (14296) 331

$$\begin{aligned}^*K_{\text{s}}(\text{CoS}+\text{H}=\text{Co}+\text{HS}) &= -7.44 \text{ (LS)} \\^*K_{\text{s}}(\text{CoS}+\text{H}=\text{Co}+\text{HS}) &= -11.07 \text{ (HS)}\end{aligned}$$

Low spin (LS) and high spin (HS) Co++. Recalculation of literature data.

---

Co++ oth none 25°C 0.0 C 1989DYa (14297) 332

$$K(\text{Co}+\text{HS}=\text{CoS}+\text{H})=3.1$$

Calculated from literature data, based on  $K(\text{H}+\text{S})=17.0$ .

FeS is troilite.

---

Co++ oth none 25°C 0 U 1988LIa (14298) 333

$$\begin{aligned}K_{\text{so}}(\text{CoS}, \alpha) &= -24.6 \\^*K_{\text{so}}(\text{CoS}, \alpha) &= -7.2 \\K_{\text{so}}(\text{CoS}, \beta) &= -30.3 \\^*K_{\text{so}}(\text{CoS}, \beta) &= -13.0\end{aligned}$$

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

---

Co++ dis oth/un 25°C 0.69M U 1985DYa (14299) 334

$$\begin{aligned}K(\text{Co}+2\text{H}_2\text{S}=\text{CoHS}_2+3\text{H}) &= -6.18 \\K(\text{Co}+2\text{H}_2\text{S}=\text{Co}(\text{HS})_2+2\text{H}) &= 0.08\end{aligned}$$

---

Co++ vlt oth/un 25°C 0.05M U 1970CLa (14300) 335

$$K_{\text{so}}=-17.5$$

---

Co++ oth none 25°C 0.0 U 1952GGc (14301) 336

$$K_{\text{so}}(\text{CoL})=-22.10$$

From thermodynamic data

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Co++ oth none 25°C 0.0 U 1952LAb (14302) 337

$$\begin{aligned}K_{\text{so}}(\text{CoL}(\alpha)) &= -21.3 \\K_{\text{so}}(\text{CoL}(\beta)) &= -26.72\end{aligned}$$

From thermodynamic data. alpha and beta ambiguous

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Co++ oth none 25°C 0.0 U 1940KAa (14303) 338

$$K_{\text{so}}(\text{CoL})=-22.51$$

From thermodynamic data

-----  
Co++ sol oth/un 20°C 1.0M U 1931K0a (14304) 339  
Kso(CoL)=-26.72  
K(CoL(s)+2H=Co+H2S(g))=-3.77

Medium: H2SO4

-----  
Co++ oth oth/un 18°C var U 1909BZa (14305) 340  
Kso(CoL)=-25.5

From thermodynamic data

\*\*\*\*\*

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

Thiocyanate;

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

-----  
Co++ oth NaClO4 25°C 3.0M U I R K1=1.01 1997BPa (14748) 341  
IUPAC evaluation

-----  
Co++ sp KNO3 25°C 0.50M U 1991BKa (14749) 342  
K(CoA+SCN)=3.07

A=1,4,8,11-tetramethyl-1,4,8,11-tetraazacyclotetradecane. By kinetics K1=3.09

-----  
Co++ cal non-aq 25°C 100% U H T K1=2.4 B2=4.2 1990IOa (14750) 343  
K3=2.4  
K4=3.3

Medium: N,N-Dimethylformamide, 0.4 M Et4NClO4. DH(K1)=-0.9, DH(K2)=-15,  
DH(K3)=50, DH(K4)=-29 kJ mol<sup>-1</sup>. DS(K1)=43 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Co++ sp oth/un 25°C 0.50M U I K1=5.3 1989WMa (14751) 344  
Medium: HCl. K1(I=1.7)=5.3, K1(I=2.0)=5.2, K1(I=3.4)=6.0

-----  
Co++ cal NaClO4 25°C 0.50M U H T K1=1.20 B2=1.57 1988ISb (14752) 345  
DH(K1)=-8.10 kJ mol<sup>-1</sup>, DH(B2)=-22.5. DS(K1)=-4 J K<sup>-1</sup> mol<sup>-1</sup>, DS(B2)=-45  
Data also for media containing 1.0, 2.5, and 5.0 %w/w Triton X-100

-----  
Co++ sp non-aq 25°C 100% U K1=4.5 1987PGb (14753) 346  
B4=12.2

Medium: N,N-dimethylformamide

-----  
Co++ EMF non-aq 25°C 100% U K1=5.01 B2=9.81 1985CCc (14754) 347  
B4=19.36

Medium: propylene carbonate, 0.5 M NaClO4

-----  
Co++ sp non-aq 25°C 100% U 1985LDa (14755) 348  
K(CoAS+L=CoAL+S)=2.24

Medium (S): DMF. A=N(CH2CH2NMe2)3

-----  
Co++ sp NaClO4 25°C 2.0M U K1=0.84 B2=1.46 1985VNa (14756) 349  
B3=1.08  
B4=0.11

-----

Co++ sp NaClO4 25°C 0.45M U M 1979ZKa (14757) 350  
 K(CoA+SCN)=3.10  
 A=1,4,8,11-tetramethyl-1,4,8,11-tetraazacyclotetradecane

-----

Co++ sp non-aq 130°C 100% U 1974HNa (14758) 351  
 B4=7.94  
 Medium: dimethylsulfone. B4=5.7 using iE studies

-----

Co++ sp non-aq 25°C 100% U 1974MAa (14759) 352  
 B4=15.5  
 Medium: acetonitrile, 0.1 M Et4NClO4

-----

Co++ sp non-aq ? 100% U K1=4.22 1974SIb (14760) 353  
 B4=14.5  
 Medium: acetone;(error in abstract(?))

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Co++ kin NaClO4 25°C 1.0M U T K1=0.95 1973HHb (14761) 354

-----

Co++ sp oth/un ? var U 1973KKe (14762) 355  
 B3=3.29

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Co++ oth non-aq ? 100% U I K1=2.9 1973MIa (14763) 356  
 Medium: acetonitrile; K1=2.7 in trimethylphosphate; 2.7 in MeCONMe2;  
 2.2 in dimethylsulphoxide. Method: infrared spectroscopy

-----

Co++ sp non-aq 25°C 100% U K1=1.64 B2=2.51 1973SCa (14764) 357  
 B4=3.45  
 Medium: DMSO, 0.5 M MClO4(M=Li,Na,Et4N)

-----

Co++ sp non-aq 25°C 100% U K1=2.67 B2=4.71 1972MRa (14765) 358  
 B4=6.76  
 Medium: DMSO

-----

Co++ sp non-aq ? 100% U K2=2.9 1972PBa (14766) 359  
 K3=2.7  
 K4=2.5  
 K6=2.4  
 Medium: N,N-dimethylformamide

-----

Co++ EMF none 25°C 0.0 U T H K1=1.87 1971DDb (14767) 360  
 DH(K1)=-20 kJ mol<sup>-1</sup>. K1=1.78(35 C), 1.66(45 C)

-----

Co++ sp none 27°C 0.0 U K1=1.88 1971DDb (14768) 361

-----

Co++ dis NaClO4 25°C 1.0M U T K1=1.00 B2=1.32 1971SMa (14769) 362

-----

Co++ sp NaClO4 25°C 3.0M U T K1=1.27 1970MMj (14770) 363  
 medium:LiClO4

-----

Co++ ix oth/un rt var U K1=2.5 B2=1.8 1970SLa (14771) 364  
 B3=4.0  
 B4=3.9

---

Co++ nmr NaClO4 27°C 1.50M U H T K1=1.2 B2=1.65 1970ZMa (14772) 365  
 K3=-0.62  
 K4=-1.30  
 DH(K1)=16.7 kJ mol<sup>-1</sup>, DH(K2)=-25.1, DH(K3)=8.4, DH(K4)=6.3

---

Co++ EMF oth/un 25°C 0.0 U K1=1.77 1968PRd (14773) 366

---

Co++ sp oth/un ? var U M 1967BPc (14774) 367  
 K(CoA2+L)=4.9  
 K(CoA2L+L)=2.9  
 HA=dimethylglyoxime. Medium: KL

---

Co++ cal oth/un 25°C 0.0 U H K1=1.72 1967NTa (14775) 368  
 Medium: 0 corr. DH(K1)=-6.8 kJ mol<sup>-1</sup>, DS=9.2 J K<sup>-1</sup> mol<sup>-1</sup>

---

Co++ sol KNO3 ? 0.50M U I 1965PDa (14776) 369  
 Kso(CoL2(C5H5N)4)=-12.67  
 Kso=-12.87(I=0.2), -13.08(I=0.05), -13.11(I=0). Kso: K(CoL2py2(s)=Co+2L+2py)

---

Co++ sp NaClO4 20°C 0.60M U I T K1=1.10 1964KSe (14777) 370  
 Medium: HClO4. K1=1.18(I=0.3), 1.28(I=0.15)

---

Co++ sp KNO3 23°C 3.0M U K1=0.63 1964KUb (14778) 371  
 B3=-0.38

---

Co++ dis NaClO4 25°C 3.0M U K1=-0.45 B2=-1.07 1963DCa (14779) 372  
 Kd(CoL2=CoL2(org A))=3.51  
 Kd(CoL2+2S(org B)=CoL2S2(org B))=1.12. A=i-BuCOMe, B=i-BuCHOHMe

---

Co++ vlt NaClO4 25°C 1.80M U T K1=0.98 1963TCb (14780) 373

---

Co++ sp oth/un ? 0.0 U 1963WVb (14781) 374  
 Medium: 0 corr  
 K(CoL4(H2O)2(octahedral)=CoL4(tetrahedral)+2H2O)=-0.33

---

Co++ oth oth/un ? var U K1=0.95 1962FLa (14782) 375  
 Method: ir

---

Co++ sp NaClO4 ? 1.50M U K1=1.00 1962TCa (14783) 376

---

Co++ dis R4N.X 20°C 1.50M U K1=0.95 B2=1.6 1962TZa (14784) 377  
 B3=1.8  
 B4=-0.3  
 Medium: NH4ClO4. Also Kd values into Me-i-Bu-ketone

---

Co++ sp none 25°C 0.0 U K1=1.72 1962WIa (14785) 378

-----  
Co++ sp oth/un 1°C 0.50M U K1=1.2 1961DSd (14786) 379  
-----

Co++ sp non-aq 25°C 100% U K3/K4=2.72 1961PSc (14787) 380  
-----

Medium: CH3COOH  
-----

Co++ vlt NaClO4 ? 0.50M U K1=1.06 1960TRa (14788) 381  
-----

Co++ sp NaClO4 25°C 1.0M U T K1=1.01 1958SPc (14789) 382  
-----

Co++ sp NaClO4 20°C 1.0M U I T K1=0.40 1958SWb (14790) 383  
K1=1.7? (I=0 corr)  
-----

Co++ sp none 23°C 0.0 U K1=1.51 1958YKa (14791) 384  
-----

Co++ sp mixed ? 40% U I K1=1.28 1951KTa (14792) 385  
B4=4.11  
-----

Medium 40% w/w acetone/H2O; K1=1.32(0%), 1.55(50%), 1.78(60%); B4=5.38(50%)  
6.59(60%), 13.72(100%).  
-----

Co++ sp oth/un 20°C var U K1=3 K2=0 1951LEa (14793) 386  
K3=-0.7  
K4=-0.04  
-----

Co++ sp NaClO4 25°C 0.60M U T K1=1.15 1951SSa (14794) 387  
-----

Co++ sp mixed ? 50% U K2\*K3\*K4=3.82 1950BDa (14795) 388  
-----

Medium: 50% w/w acetone/H2O.  
-----

Co++ sp oth/un ? var U I B4=-0.5 1950BDb (14796) 389  
-----

Also data for EtOH, HCO2H, CH3CO2H, dioxan.

\*\*\*\*\*

S02 L Sulfur dioxide (6336)  
Sulfur dioxide;  
-----

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

Co++ sp oth/un 20°C dil C K(CoP+S02)=1.94 2002TNa (15351) 390  
-----

Medium: pH 11 buffer. At pH 7.4, K(CoP+S02)=2.11.

CoP is Co(II) tetrasulfophthalocyanine.

\*\*\*\*\*

S03-- H2L Sulfite CAS 7782-99-2 (801)  
Sulfite;  
-----

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



Co++ EMF NaCl 25°C 0.00 U I K1=3.08 1991RZb (15432) 391  
-----  
Co++ gl NaClO4 25°C 2.00M C K1=2.63 B2=4.34 1987CPa (15433) 392  
K3=2.15  
\*\*\*\*\*  
SO4-- H2L Sulfate CAS 7664-93-9 (15)  
Sulfate;  
-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ con mixed 20°C 50% C I K1=3.16 2001MTa (15880) 393  
Medium: 50 % w/w DMF/H2O. Data for 0-80 % w/w DMF/H2O. At 0% DMF/  
H2O, K1=2.44  
-----  
Co++ con none 25°C 0.0 C K1=2.25 1985SGd (15881) 394  
-----  
Co++ vlt NaCl 25°C 0.56M C K1=1.50 1982CDa (15882) 395  
Method: polarography. Medium pH 8.0  
-----  
Co++ cal KNO3 35°C 2.0M U H 1981ARc (15883) 396  
DH(K1)=-0.7 kJ mol-1, DS=20 K J mol-1  
-----  
Co++ oth none 25°C 0.0 C H K1=2.21 1981YYa (15884) 397  
Calculated from published conductivity data. DH(K1)=5.33 kJ mol-1,  
DS(K1)=60.2 J K-1 mol-1.  
-----  
Co++ con none 25°C 0.0 C T K1=2.27 1979FFc (15885) 398  
Also data for 15 C. Also data at 1000 and 2000 atm.  
K expressed on molal scale.  
-----  
Co++ con mixed 25°C ? U T H K1=2.25 1976KAa (15886) 399  
K1=2.19 (0 C); 2.24 (20 C); 2.26 (30 C); 2.30 (40 C); 2.32 (45 C)  
Medium: Water-ethylene glycol mixture  
-----  
Co++ con diox/w 25°C 100% U I M 1976MBa (15887) 400  
K(Co(NH3)5NO2+L)=4.61  
In H2O: K(Co(NH3)5NO2+L)=2.58  
-----  
Co++ cal NaClO4 25°C 3.0M U H 1974BRa (15888) 401  
Medium: LiClO4. DH(K1)=2.6 kJ mol-1, DS(K1)=12.5 J K-1 mol-1  
-----  
Co++ cal none 25°C 0.0 U H 1973HPa (15889) 402  
DH(K1)=6.1 kJ mol-1  
-----  
Co++ cal none 25°C 0.0 U H 1973POa (15890) 403  
DH(K1)=5.7 to 6.3 kJ mol-1  
-----  
Co++ oth none 25°C 0.0 C K1=2.31 B2= 1.66 1972PIa (15891) 404  
Calculated from published osmotic coefficient data.  
-----

Co++	dis	NaClO4	25°C	1.0M	U		K1=0.74	B2=1.48	1971MSd (15892)	405
Co++	sp	NaClO4	25°C	3.0M	U		K1=0.23		1970MMj (15893)	406
Medium: LiClO4										
Co++	cal	none	25°C	0.0	U	H	K1=2.69		1969IEa (15894)	407
DH(K1)=2.1 kJ mol <sup>-1</sup> , DS(K1)=58.2 J K <sup>-1</sup> mol <sup>-1</sup>										
Co++	ISE	oth/un	35°C	0.0	U		K1=1.93		1968PRd (15895)	408
Co++	sol	oth/un	300°C	0.0	U	T H			1967GNd (15896)	409
Kso(CoLH2O)=-6.58 Kso=-3.84(160 C), -4.15(180 C), -4.47(200 C), -4.78(220 C), -5.11(240 C), -5.51(260 C), -5.98(280 C). At 25 C:DHso=-54.3 kJ mol <sup>-1</sup> ,DS=-200.6 J K <sup>-1</sup> mol <sup>-1</sup>										
Co++	oth	oth/un	25°C	0.0	U	H	K1=2.36		1967HEb (15897)	410
From thermodynamic data. DH(K1)=7.5 kJ mol <sup>-1</sup> , DS=70.2 J K <sup>-1</sup> mol <sup>-1</sup>										
Co++	oth	non-aq	260°C	100%	U		K1=-0.4		1966IWa (15898)	411
Method:freezing point. Medium: molten LiNO3, m units										
Co++	ix	alc/w	25°C	20.0M	U	I	K1=2.6		1965SMF (15899)	412
In H2O: K1=2.41										
Co++	EMF	NaClO4	20°C	2.72M	U	M	K1=2.9		1963KVa (15900)	413
K(Co(en)2+L)=0.8 K(Co(en)3+L)=-0.7										
Co++	EMF	oth/un	25°C	0.0	U	T H	K1=2.36		1959NNa (15901)	414
Method: H electrode. K1=2.24(0 C), 2.27(5 C), 2.30(15 C), 2.40(35 C), 2.44 (45 C). DH(K1)=7 kJ mol <sup>-1</sup> , DS=70 J K <sup>-1</sup> mol <sup>-1</sup>										
Co++	con	alc/w	25°C	10%	U	I	K1=2.58		1958DTa (15902)	415
Medium: EtOH. K1=3.245(30%), 3.98(50%)										
Co++	oth	oth/un	25°C	0.0	U		K1=2.2		1955BPb (15903)	416
Method: freezing point. K1=2.00 to 2.36										
Co++	sol	oth/un	75°C	0.0	U				1954DOa (15904)	417
Kso(Co(OH)1.5L0.25)=-12.93										
Co++	con	oth/un	25°C	0.0	U		K1=2.47		1932MDa (15905)	418
*****										
S2O3-- H2L Thiosulfate CAS 73686-28-7 (177)										
Thiosulfate;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	cal	R4N.X	25°C	0.50M	U	H	K1=0.77		1974ARa (16794)	419
DH=2.09 kJ mol <sup>-1</sup> .										

-----  
Co++ dis NaClO4 25°C 1.0M U K1=0.84 B2=0.88 1971MSd (16795) 420  
-----

Co++ sp NaClO4 20°C 1.00M U K1=0.37 1958SWb (16796) 421  
-----

Co++ sp NaCl ? 0.30M U I K1=0.64 1956ANc (16797) 422  
At I=0 corr. K1=2.05  
-----

Co++ sol none 25°C 0.0 U M K1=2.05 1951DMb (16798) 423  
K(Co(NH3)6+L)=4.62  
-----

\*\*\*\*\*  
S2O8-- H2L Peroxodisulfate (7860)  
Peroxodisulfate;  
-----

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

Co++ cal KNO3 35°C 2.0M U H K1=1.40 1981ARc (16920) 424  
DH(K1)=-+4.3 kJ mol-1, DS=41 K J mol-1  
-----

\*\*\*\*\*  
Se-- H2L Selenide (6335)  
Selenide;  
-----

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

Co++ oth none 25°C 0.0 U Kso=-31.2 1964BUe (16937) 425  
-----

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

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

Co++ ISE none 25°C 0.0 U H K1=1.49 1975SSa (16975) 426  
DH = -6.35 kJ mol-1. DS = 7.21 J K-1 mol-1.  
-----

Co++ con non-aq 20°C 100% U I K1=3.0 B2=4.91 1968SBa (16976) 427  
B3=5.70  
B4=6.79  
-----

Medium: Me2NCHO. In MeCN: K1=3.93, B2=6.45, B3=9.67, B4=12.81  
-----

Co++ sp oth/un ? var U M K(CoA2+L)=5.1 1967BPd (16977) 428  
K(CoA2L+L)=3.1  
-----

A=dimethylglyoxime. Medium: KL  
-----

Co++ EMF oth/un ? var U K1=1.20 1962GSc (16978) 429  
-----

Co++ sp mixed ? 50% U I K1=1.5 1962GSc (16979) 430  
Medium: 50% w/w acetone/H2O. In acetone K1=6.1, B4=13.15  
-----

Co++ sp alc/w ? 100% U K1=3.68 B2=4.38 1962GSc (16980) 431  
 B3=4.74  
 B4=5.07  
 B5=5.34  
 B6=5.55

Medium: MeOH

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

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ con oth/un 18°C dil U Kso=-6.93 1968RVa (17033) 432

-----  
 Co++ sol KNO3 ? 0.30M U I B2=3.25 1966PDa (17034) 433  
 Kso=-7.93  
 Kso=-7.94(I=0.01), solid=CoSeO3(H2O)2

-----  
 Co++ sol oth/un 20°C 0.0 U Kso=-7.08 1964SLa (17035) 434

-----  
 Co++ sol oth/un 20°C var U Kso(CoL)=-6.8 1957CTa (17036) 435

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

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ EMF oth/un 0°C ? U T H K1=2.50 1970GNc (17097) 436  
 Method: H electrode. K1=2.58(10 C), 2.66(20 C), 2.70(25 C), 2.76(35 C);  
 2.83(45 C). DH(K1)=12.2 kJ mol-1, DS=92.9 J K-1 mol-1 (25 C)

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

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl NaNO3 25°C 1.00M U K1=7.24 1984C0a (17232) 437  
 K(beta1 isomer)=6.88  
 K(beta2 isomer)=6.75  
 K(beta3 isomer)=6.82

\*\*\*\*\*  
 W04-- H2L Tungstate CAS 13783-36-3 (445)  
 Tungstate;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ sp NaCl ? 1.00M U M 1973Tsa (17429) 438

$K(\text{Co}+\text{MnA}=\text{CoA}+\text{Mn})=0.9$   
 $K(\text{Co}+\text{NiA}=\text{CoA}+\text{Ni})=0.1$   
 $K(\text{Co}+\text{ZnA}=\text{CoA}+\text{Zn})=0.3$   
 $K(\text{Co}+\text{CuA}=\text{CoA}+\text{Cu})=0.6$

A=SiW11039(8-)

\*\*\*\*\*

CH202 HL Formic acid CAS 64-18-6 (37)  
 Methanoic acid; H.CO<sub>2</sub>H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	oth	NaClO <sub>4</sub>	25°C	2.0M	U			K1=0.53	1990FTa (17577)	439
Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.										
Co++	sol	oth/un	25°C	1.00M	U			K1=0.59	1973TRc (17578)	440
Co++	gl	oth/un	25°C	1.00M	U			K1=0.56	1973TRc (17579)	441
Co++	gl	NaNO <sub>3</sub>	30°C	0.40M	U			K1=0.68	1970BTa (17580)	442
Co++	EMF	NaClO <sub>4</sub>	25°C	2.00M	U			K1=0.73 B2=1.18	1970FMa (17581)	443
Co++	sp	NaClO <sub>4</sub>	rt	2.00M	U			K1=0.40 B2=0.92	1970GFa (17582)	444

\*\*\*\*\*

CH305P H3L Phosphonoformic CAS 4428-95-9 (5654)  
 Phosphonoformic Acid; O:P(OH)<sub>2</sub>.CO<sub>2</sub>H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO <sub>3</sub>	25°C	0.10M	C			K1=5.31 K(Co+HL)=2.41 K(CoL+H)=4.67	1994SCa (17697)	445

\*\*\*\*\*

CH4N2S L Thiourea CAS 62-56-6 (51)  
 Thiocarbamide, Thiourea; (H<sub>2</sub>N)<sub>2</sub>CS

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	alc/w	25°C	100%	U	I		K2=0.8 K3=0.7 K4=0.7 K1 > 1	1983BCb (17802)	446

K1=>3, K2=>3, K3=2.6 and K4=2.0 in Propylene carbonate. K1=2.6, K2=2.1, K3=1.9 and K4=1.8 in n-Propanol. K1=2.5, K2=2.3, K3=K4=2.2 in Ethyl acetate

Co++	nmr	non-aq	27°C	100%	U	M			1971Eza (17803)	447
$K(\text{CoL}_2\text{Cl}_2=\text{CoLCl}_2+\text{L})=4.16$ $K(\text{CoL}_2\text{Br}_2=\text{CoLBr}_2+\text{L})=4.45$ $K(\text{CoL}_4(\text{NO}_3)_2=\text{CoL}_3(\text{NO}_3)_2+\text{L})=5.2$										

Data for other ternary complexes also available

Co++	sp	mixed	20°C	50%	U	I				1967LSa (17804)	448	
									B4=2.26			
Medium: acetone. In 100%, B4=9.95												
Co++	dis	oth/un	25°C	0.20M	U				K1=0.74 K3=0.33	B2=1.16	1966IGa (17805)	449
Medium: LiNO3												
Co++	sp	alc/w	20°C	95%	U				B2=1.7 B6=4.5		1966SIc (17806)	450
Medium: 95% EtOH, 0.1 M NaClO4; 18-22 C												
Co++	EMF	mixed	25°C	90%	U				K1=1.05	B2=1.75	1966SLb (17807)	451
Medium: 90% Me2CO, 2 M NaClO4												
Co++	EMF	mixed	25°C	90%	U				K1=1.05	B2=1.75	1966SLc (17808)	452
Medium: 90% acetone												
*****												
CH4O3ClP		H2L									CAS 2565-58-4 (1973)	
Chloromethylphosphonic acid; Cl.CH2.PO3H2												
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values		Reference	ExptNo
Co++	EMF	NaNO3	25°C	0.10M	U				K1=1.89		1970TNa (17926)	453
*****												
CH5N3S		L									CAS 79-19-6 (372)	
Thiosemicarbazide; H2N.CS.NH.NH2												
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values		Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U				K1=1.14 B3=4.17	B2=2.86	1979LGa (18077)	454
*****												
CH5O3P		H2L									CAS 13590-71-1 (1752)	
Methylphosphonic acid; CH3.PO3H2												
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values		Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	M				K1=2.24		1992SCa (18118)	455
*****												
CH5O4P		H2L									CAS 86703-09-5 (1751)	
Methylphosphoric acid; CH3OP(O)(OH)2												
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values		Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	M				K1=1.99		1996SSa (18168)	456
*****												
Co++	sp	oth/un	20°C	0.10M	U	T			K1=2.00		1965BRb (18169)	457

K1(65 C)=2.28

\*\*\*\*\*

CH6NO2P HL (7264)

Aminomethylphosphinic acid; H2NCH2PO(OH)H

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

Co++ gl KNO3 25°C 0.10M C K1=2.96 1996RLa (18179) 458  
B(CoH-1L)=-5.64

\*\*\*\*\*

CH6NO3P H2L AMPA CAS 1066-51-3 (1981)

Aminomethylphosphonic acid; H2N.CH2.PO3H2

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

Co++ gl KNO3 25°C 0.10M C I R K1=4.5 2001PRa (18216) 459  
K(Co+HL)=1.6

IUPAC Recommended values

-----  
Co++ gl NaNO3 25°C 0.10M C K1=4.58 1994SCa (18217) 460  
K(Co+HL)=1.52  
K(CoL+H)=7.02

-----  
Co++ gl KNO3 25°C 0.10M U K1=4.45 B2=8.09 1979WNb (18218) 461  
B(CoHL)=11.79  
B(CoHL2)=16.75  
B(CoH2L2)=22.9

-----  
Co++ gl NaClO4 25°C 0.10M U K1=4.78 B2=8.79 1976SOa (18219) 462  
B(CoHL)=12.73

-----  
Co++ gl oth/un 25°C 0.10M U K1=4.5 B2=7.50 1972AUa (18220) 463

-----  
Co++ gl KNO3 25°C 0.10M U K1=4.18 B2=8.1 1971WNC (18221) 464  
B(CoHL)=11.71  
B(CoH2L2)=23.3  
B(CoHL2)=16.7

\*\*\*\*\*

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  
-----

Co++ gl NaClO4 20°C 0.10M U K1=2.83 B2=5.38 1964COd (18239) 465

\*\*\*\*\*

CH6N4S L CAS 2231-57-4 (4209)

Thiocarbohydrazide; H2N.NH.CS.NH.NH2

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

Co++ gl KCl 25°C 0.50M U K1=2.97 B2=5.66 1969BDa (18243) 466  
\*\*\*\*\*

CH606P2 H4L Medronic acid CAS 1984-15-2 (2384)  
Methanediphosphonic acid; CH<sub>2</sub>(PO<sub>3</sub>H<sub>2</sub>)<sub>2</sub>

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

Co++ gl KCl 25°C 0.10M U K1=12.03 B2=18.99 1967KLa (18268) 467  
K(Co+HL)=6.11  
K(Co+2HL)=10.67  
K(2Co+L)=14.98  
K(2Co+HL)=8.65

\*\*\*\*\*  
CH607P2 H3L CAS 56399-35-0 (7664)  
Methyldiphosphoric acid;

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

Co++ gl NaNO<sub>3</sub> 25°C 0.10M M K1=3.73 1999SSa (18307) 468  
\*\*\*\*\*  
C<sub>2</sub>H<sub>2</sub>O<sub>2</sub>Cl<sub>2</sub> HL CAS 79-43-6 (1282)  
Dichloroethanoic acid; Cl<sub>2</sub>CH.COOH

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

Co++ gl NaClO<sub>4</sub> 20°C 1.00M U K1=1.3 B2=2.6 1969PJc (18390) 469  
\*\*\*\*\*  
C<sub>2</sub>H<sub>2</sub>O<sub>4</sub> H<sub>2</sub>L Oxalic acid CAS 144-62-7 (24)  
Ethanedioic acid; (COOH)<sub>2</sub>

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

Co++ gl KNO<sub>3</sub> 35°C 0.10M C M K1=4.35 1997PSb (18730) 470  
K(CoL+A)=6.07  
H<sub>2</sub>A is thiamine orthophosphoric acid.

-----  
Co++ gl KNO<sub>3</sub> 30°C 0.10M U K1=4.99 1994RSa (18731) 471

-----  
Co++ gl NaCl 25°C 0.50M C K1=3.21 B2=5.93 1989FRa (18732) 472

-----  
Co++ gl KNO<sub>3</sub> 35°C 0.10M C M K1=4.97 1985RRc (18733) 473  
B(CoL(cytidine))=9.17

-----  
Co++ gl KNO<sub>3</sub> 35°C 0.10M C K1=4.97 1985RRh (18734) 474

-----  
Co++ oth NaClO<sub>4</sub> 40°C 0.10M C M B2=5.13 1984SIa (18735) 475  
B(CoL(nta))=7.49

Method: Paper electrophoresis, pH 10.0.

-----  
Co++ vlt NaClO<sub>4</sub> 20°C 0.50M C K1=3.51 B2= 6.38 1981UBa (18736) 476



B(Co2L5)=18.40

Method: polarography.

-----  
Co++ sp R4N.X 25°C 1.50M U M 1973BDd (18737) 477  
B(CoCuL3A)=30.62  
B(CoNiL4A)=32.02

Medium: NH4NO3. H4A=EDTA

-----  
Co++ sp R4N.X 25°C 1.50M U M 1973BDd (18738) 478  
K((CoL2)2A+(NiL2)2A)=1.11  
K((CoL2)2A+(CuL2)2A)=0.58

Medium : NH4NO3. H4A=EDTA

-----  
Co++ sp R4N.X 25°C 1.50M U M 1973BFd (18739) 479  
K(CoAL+CoL3=(CoL2)2A)=3.76  
K(CoA+L=CoAL)=1.97

Medium : NH4NO3. H4A=EDTA

-----  
Co++ dis NaClO4 25°C 1.00M U K1=3.33 B2=6.20 1971MSd (18740) 480

-----  
Co++ EMF NaClO4 25°C 1.00M U K1=3.25 B2=5.60 1970CGa (18741) 481

-----  
Co++ gl oth/un 25°C 0.0 U K1=4.69 B2=7.15 1965MOb (18742) 482

-----  
Co++ ix oth/un 25°C 0.0 U K1=4.75 B2=6.91 1965SMf (18743) 483

-----  
Co++ dis NaClO4 20°C 0.10M U B2=6.79 1963STc (18744) 484

-----  
Co++ dis NaCl 25°C 0.20M U I K1=3.63 1961MMa (18745) 485  
K1=4.64(I=0 corr), 4.174(I=0.2), 4.027(I=0.04), 3.858(I=0.08),  
3.809(I=0.10), 3.688(I=0.16), K2=2.14(I=0.16)

-----  
Co++ EMF oth/un 45°C 0.0 U H 1961MNa (18746) 486  
K1=6.81-0.015T+0.0000276T^2

Method: H electrode. DH(K1)=2.5 kJ mol<sup>-1</sup>, DS=100 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ gl oth/un 0°C 0.0 U T K1=4.77 1961MNb (18747) 487  
K1=4.78(15 C); 4.79(25 C); 4.81(35 C); 4.83(45 C)

-----  
Co++ ix oth/un ? ? U 1960SFa (18748) 488  
K(Co+HL)=1.66  
K(Co+2HL)=1.28

-----  
Co++ sp oth/un 25°C ? U K1=0.96 1958AOa (18749) 489

-----  
Co++ gl oth/un 25°C 0.10M U K1=4.7 1958GHc (18750) 490

-----  
Co++ ix NaCl 25°C 0.16M U K1=3.72 B2=6.03 1958SLb (18751) 491  
K(Co+HL)=1.66  
K(Co+2HL)=2.91

-----  
Co++ ix oth/un ? ? U K1=4.49 B2=11.15 1956FSb (18752) 492  
K3=8.13  
-----

Co++ ix oth/un ? ? U K1=4.49 B2=11.13 1956KFa (18753) 493  
-----

Co++ sol oth/un 25°C 0.0 U B2=6.7 1951BAa (18754) 494  
-----

Co++ vlt oth/un 18°C ? U B3=9.7 1934SAa (18755) 495  
-----

Co++ con oth/un 18°C 0.0 U K1=4.7 1932MDa (18756) 496  
\*\*\*\*\*  
C2H3NO4 HL CAS 625-75-2 (2968)  
Nitroacetic acid; O2N.CH2.COOH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ kin oth/un 18°C 0.20M U K1=0.0 1949PEa (19204) 497  
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  
-----  
Co++ gl KNO3 25°C 0.10M C K1=6.10 2002BMa (19229) 498  
-----  
Co++ cal NaNO3 25°C 1.00M U H K1=1.32 B2=2.74 1986ARa (19230) 499  
DH(K1)=-17.1, DH(K2)=-26 kJ mol-1  
-----  
Co++ gl KNO3 25°C 0.50M U 1980LKb (19231) 500  
K(Co+HL)=1.32  
K(Co+2HL)=2.74  
K(Co+3HL)=3.07  
\*\*\*\*\*

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 20°C 0.10M U K1=2.07 1963COb (19239) 501  
\*\*\*\*\*  
C2H3N3S L CAS 3179-31-5 (4221)  
1,2,4-Triazolone-3-thione;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=3.02 2002BMa (19242) 502  
\*\*\*\*\*

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  
-----  
Co++ gl KNO3 25°C 0.50M U K1=0.69 B2=1.09 1982GLa (19252) 503  
B3=1.21

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

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 30°C 0.40M U K1=0.23 1970BTa (19350) 504  
-----  
Co++ EMF NaClO4 18°C 2.00M U K1=0.38 1970FMa (19351) 505  
-----  
Co++ sp NaClO4 10°C 2.00M U K1=0.00 1970GFa (19352) 506  
-----  
Co++ EMF NaClO4 20°C 1.00M U K1=1.3 B2=2.6 1969PJc (19353) 507

\*\*\*\*\*  
C2H4N4 L CAS 16682-77-9 (3539)  
1-Methyltetrazole; CHN4-CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 25°C 100% U K1=2.13 B2=3.52 1963GBa (19459) 508  
Medium: tetrahydrofuran

\*\*\*\*\*  
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  
-----  
Co++ gl KNO3 25°C 0.10M C K1=5.54 2002BMa (19475) 509  
-----  
Co++ gl KNO3 25°C 0.10M U I K(Co+HL)=1.37  
K(Co+2HL)=2.52

Data also for I=0.5 and 1.0 M

-----  
Co++ gl KNO3 25°C 0.50M U K(Co+HL)=1.40  
K(Co+2HL)=3.40  
K(Co+3HL)=4.54

\*\*\*\*\*  
C2H4N4O2 HL Urazine; CAS 21531-96-4 (3541)  
4-Amino-1,2,4-triazolidin-3,5-dione;

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

-----  
 Co++ gl NaClO4 20°C 0.10M U K1=2.34 1963COb (19491) 512  
 \*\*\*\*\*  
 C2H4N4S HL CAS 16691-43-3 (9032)  
 3-Amino-5-mercapto-1,2,4-triazole;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C			K1=2.77	2003AHa (19496)	513
*****										
C2H4OS		HL						Thioacetic acid	CAS 507-09-5 (4223)	
Thiolethanoic acid; CH3.CO.SH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	60%	U			K1=4.0 B2=7.50	19720Tc (19506)	514
Medium: 60% dioxan, 1 M (K,Na)NO3										
*****										
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
Co++	oth	NaClO4	25°C	2.0M	U			K1=0.64	1990FTa (19849)	515
Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.										
Co++	gl	KCl	25°C	0.10M	U			K1=0.82	1983LTa (19850)	516
Co++	gl	NaNO3	25°C	0.10M	C			K1=0.60	1981BKb (19851)	517
Co++	gl	NaClO4	25°C	1.00M	U T			K1=0.69	1981BPa (19852)	518
K1=0.71 (35 C); 0.75 (50 C)										
Co++	kin	NaClO4	25°C	1.00M	U			K1=0.81	1973HHb (19853)	519
Co++	vlt	NaClO4	25°C	1.00M	U T			K1=-0.40 B2=0.38	1971TRd (19854)	520
50 C: K1=-0.22, B2=0.51										
Co++	gl	NaNO3	30°C	0.40M	U			K1=0.71	1970BTa (19855)	521
Co++	EMF	NaClO4	25°C	2.00M	U			K1=0.66 B2=0.79 B3=0.87	1970FMa (19856)	522
Co++	sp	NaClO4	rt	2.00M	U			K1=0.61 B2=0.61	1970GFa (19857)	523
Co++	ix	oth/un	25°C	0.0	U			K1=1.29	1965SMf (19858)	524
Co++	gl	oth/un	25°C	0.0	U			K1=1.46	1964AMa (19859)	525

```

Co++      gl  non-aq 25°C 100% U      K2=7.56      1964KLa (19860) 526
Medium: ethanoic acid
-----
Co++      vlt oth/un 15°C 0.20M U T    K1=0.32      1960TKb (19861) 527
K1=-0.22(25 C)
-----
Co++      gl  oth/un 29°C 0.0 U      K1=1.52      B2=1.93      1958SBb (19862) 528
-----
Co++      sol oth/un 35°C 0.0 U      K1=1.36      1955BAa (19863) 529
*****
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
-----
Co++      gl  alc/w 30°C 5% U      K1=5.95      1995RRb (20295) 530
Medium: 5% v/v EtOH/H2O, 0.10 M KNO3.
-----
Co++      gl  NaCl04 30°C 0.10M U      K1=8.25      B2=14.33      1988NDa (20296) 531
-----
Co++      vlt KCl 25°C 0.10M U M      1971TAb (20297) 532
K(CoB02+2HL=CoB02(HL)2)=7.23
-----
Co++      gl  KCl 0°C 0.10M U T      K1=6.0      B2=12.48      1964PCa (20298) 533
15 C: K1=5.3, B2=12.0; 35 C: K1=5.9, B2=11.9; 40 C: K1=5.6, B2=11.6
-----
Co++      gl  oth/un 25°C 0.10M U      K1=5.84      B2=12.15      1958LEa (20299) 534
*****
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
-----
Co++      ix  none 23°C 0.0 U      K1=1.09      B2=1.38      1980PSb (20481) 535
-----
Co++      EMF NaCl04 25°C 2.00M U      K1=1.48      B2=2.29      1970FMa (20482) 536
B3=2.52
-----
Co++      sp  NaCl04 25°C 2.00M U      K1=1.30      B2=2.08      1970GFa (20483) 537
-----
Co++      ix  oth/un 25°C 0.0 U      K1=1.96      B2=3.01      1965SMf (20484) 538
-----
Co++      ix  oth/un 25°C 0.05M U      K1=1.76      1958SLb (20485) 539
-----
Co++      ix  oth/un 25°C 0.16M U      K1=1.60      1958SLb (20486) 540
-----
Co++      ix  oth/un 25°C 0.23M U      K1=1.51      1958SLb (20487) 541
-----
Co++      con oth/un 25°C ->0 U      K1=1.975      1954EMa (20488) 542
*****

```

C2H5NO2 HL Glycine CAS 56-40-6 (85)  
 2-Aminoethanoic acid; H2N.CH2.COOH

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	C	M		K1=4.90 B2= 8.69 K(CoA+L)=3.10	2000KAb (21421)	543

H2A=Dipicolinic acid.

---

Co++	gl	KNO3	25°C	0.10M	C	M		K1=4.60 K(CoL+A)=3.76 B(CoLA)=8.36 K(CoHL+B)=3.82 K(CoL+C)=3.43	1999AAa (21422)	544
------	----	------	------	-------	---	---	--	---	-----------------	-----

B(CoLC)=8.03. HA=MOPSO, HB=MOPS, HC=DIPSO.

---

Co++	gl	NaNO3	25°C	0.10M	U			K1=5.20	1997ISd (21423)	545
------	----	-------	------	-------	---	--	--	---------	-----------------	-----

---

Co++	gl	alc/w	25°C	50%	C			K1=6.19	1997MGb (21424)	546
------	----	-------	------	-----	---	--	--	---------	-----------------	-----

---

Co++	gl	KNO3	35°C	0.10M	C	M		K1=5.21 K(CoL+A)=4.20	1997PSb (21425)	547
------	----	------	------	-------	---	---	--	--------------------------	-----------------	-----

H2A is thiamine orthophosphoric acid.

---

Co++	gl	alc/w	20°C	50%	M	M		K1=5.33 K(CoA+L)=5.15	1995AMb (21426)	548
------	----	-------	------	-----	---	---	--	--------------------------	-----------------	-----

Medium: 50% v/v EtOH/H2O, 0.20 M NaClO4. A is 2,2',2"-terpyridine.

---

Co++	gl	none	25°C	0.0	C	TIH		K1=5.04 B2= 9.16 B3=11.58	1995CDc (21427)	549
------	----	------	------	-----	---	-----	--	------------------------------	-----------------	-----

Data for 0-0.09 M and 5-45 C. DH(K1)=-11.2 kJ mol<sup>-1</sup>, DH(B2)=-26.9, DH(B3)=-40.5

---

Co++	kin	NaClO4	25°C	1.00M	C				1994BCb (21428)	550
------	-----	--------	------	-------	---	--	--	--	-----------------	-----

K(CoLOH2OCO2H+H=CoL(OH2)2+CO2)=0.14

---

Co++	gl	NaNO3	37°C	0.10M	U	M		K1=4.94	1994MGc (21429)	551
------	----	-------	------	-------	---	---	--	---------	-----------------	-----

Data for ternary complexes with 6-aminopenicillanic acid

---

Co++	gl	NaClO4	25°C	0.20M	C			K1=5.20	1993BAb (21430)	552
------	----	--------	------	-------	---	--	--	---------	-----------------	-----

---

Co++	gl	KCl	25°C	0.10M	C	M		K1=4.67 B2=8.48 K3=2.36 *K(CoL)=-10.09 B(CoH-1AL)=4.33 B(Co2AL2)=21.58	1992MMb (21431)	553
------	----	-----	------	-------	---	---	--	--	-----------------	-----

B(Co2AL)=16.57, K(CoHA+L)=4.8

A=1,4,7,13,16,19-Hexaaza-10,22-dioxacyclotetracosane

---

Co++ nmr KNO3 25°C 1.0M U K1=4.86 B2= 8.69 1992SZb (21432) 554  
B3=11.11  
K(Co+HL)=0.36

-----  
Co++ gl NaCl 25°C 0.15M C TI R K1=4.66 B2=8.51 1991KSa (21433) 555  
B3=10.83

IUPAC evaluated. Tentative values

-----  
Co++ gl KNO3 37°C 0.15M C M K1=4.642 B2= 8.32 1989KKd (21434) 556  
B3=10.748  
B(CoH-1L)=-4.380  
B(Co(imidazole)L)=6.802

-----  
Co++ gl KNO3 25°C 0.10M U M K1=5.36 1989MAc (21435) 557  
K(CoA+L)=4.40

H4A is adenosine-5'-triphosphoric acid.

-----  
Co++ gl KNO3 35°C 0.20M U M K1=4.62 B2=8.73 1989RVa (21436) 558  
K(CoA+L)=4.22

A=bis(imidazol-2-yl)methane

-----  
Co++ gl KNO3 25°C 0.15M U K1=4.64 B2=8.46 1987FZa (21437) 559

-----  
Co++ nmr none 27°C 0.0 U K1=4.96 B2=9.18 1987GFb (21438) 560  
B3=10.43  
K(Co+HL)=0.76  
K(CoL+HL)=1.04  
K(CoL2+HL)=-0.45

K(Co+2HL)=1.02

-----  
Co++ gl diox/w 30°C 50% C K1=5.70 B2= 9.87 1987MSd (21439) 561  
Medium: 50% v/v dioxane/H2O, 0.2 M NaNO3.

-----  
Co++ gl KNO3 35°C 0.10M C M K1=5.50 1985RRc (21440) 562  
K(Co+HL+cytidine)=8.03  
K(CoL(cytidine)+H)=5.10

-----  
Co++ gl KNO3 35°C 0.10M C K1=5.50 1985RRh (21441) 563

-----  
Co++ gl KCl 25°C 0.20M C M T K1=4.56 B2=8.30 1983HSa (21442) 564  
B(CoLA)=12.84

H2A=D-penicillamine

-----  
Co++ oth NaClO4 35°C 0.10M C K1=4.82 B2= 7.85 1983PYa (21443) 565  
Method: paper electrophoresis.

-----  
Co++ gl NaNO3 37°C 0.15M U M 1982ESa (21444) 566  
B(CoLA)=7.889  
B(CoLHAB)=21.958  
B(CoLH2AB)=29.321

A= Imidazole and B= Pyridoxamine.

-----  
Co++ EMF mixed 30°C 80% U 1979EHa (21445) 567

B(CoH-1L)=-4.23  
B(CoH-2L2)=-10.61

Medium: 80% Dimethylsulfoxide / 0.1M NaNO3.  
-----

Co++ oth NaClO4 25°C 2.00M U K1=3.90 B2=7.74 1979NLa (21446) 568  
Method: Chronopotentiometry  
-----

Co++ gl NaNO3 20°C 0.10M U K1=4.64 B2=8.46 1978LEb (21447) 569  
-----

Co++ gl KNO3 25°C 0.10M C T K1=4.71 B2=8.76 1975IPb (21448) 570  
-----

Co++ gl NaNO3 25°C 0.20M U K1=4.91 B2=8.71 1974FSa (21449) 571  
B(CoLA)=6.58  
B(CoLB)=6.47  
B(CoLC)=6.45  
B(CoLD)=6.42

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

Co++ oth oth/un 25°C 0.67M U K1=4.31 B2=7.67 1974KNa (21450) 572  
Method - magnetic spectropolarimetry  
[L]=0,333 M; room temp.  
-----

Co++ sp R4N.X 25°C 1.50M U M 1973BDd (21451) 573  
K((CoL2)2A+(NiL2)2=2(CoL2)A(NiL2))=0.96, K(((CoL2)2A+(CuL)2A=2(CoL2)A(CuL)))=0.92. B(CoCuL3A)=35.45, B(CoNiL4A)=36.66, H4A=EDTA. Medium: NH4NO3  
-----

Co++ sp R4N.X 25°C 1.50M U M T 1973BDd (21452) 574  
K(CoA+L)=1.97  
K(CoAL+CoL3=(CoL2)2A)=3.00

Medium: NH4NO3. H4A=EDTA  
-----

Co++ gl KCl 25°C 0.05M U M T K1=4.70 B2=8.58 1972GSc (21453) 575  
B(CoLA)=8.51  
B(CoL(Phe))=8.35  
K(CoHL(Tyr))=8.30

HA=norvaline  
-----

Co++ gl none 25°C 0.00 U T T K1=5.07 B2=9.09 1972IJb (21454) 576  
K3=2.54  
10 C: K1=5.16, K2=4.07, K3=2.67; 40 C: K1=4.98, K2=3.91, K3=2.45  
-----

Co++ gl KNO3 25°C 0.10M U T M 1972IVc (21455) 577  
K(CoA+L)=4.03  
H2A=methyliminodicetic acid. 15 C, K=4.14; 50 C, K=3.74; 70 C, K=3.63  
-----

Co++ cal KCl 25°C 0.05M U H T K1=4.66 B2=8.64 1971GNa (21456) 578



DH(K1)=-12.6 kJ mol<sup>-1</sup>, DS=46 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-18.8, DS=13

-----  
Co++ gl NaClO4 25°C 0.10M U T K1=4.63 B2=8.50 1971GSb (21457) 579  
-----

Co++ gl KNO3 25°C 0.10M U T K1=4.75 B2=8.63 1969GEb (21458) 580  
B3=11.03  
-----

Co++ gl KCl 25°C 0.50M U M T K1=4.51 B2=8.16 1969HLa (21459) 581  
B3=10.43  
B(CoLA2)=5.32  
-----

A=salicylaldehyde

-----  
Co++ cal KCl 25°C 0.10M U H 1967BBd (21460) 582  
DH(K1)=-10.4 kJ mol<sup>-1</sup>, DS=53.5 J K<sup>-1</sup> mol<sup>-1</sup>. DH(K2)=-10.7, DS=40.1  
-----

Co++ cal KNO3 20°C 0.10M U HM 1967SSl (21461) 583  
DH(B2)=-27.6 kJ mol<sup>-1</sup>, DS=67.3 J K<sup>-1</sup> mol<sup>-1</sup>. Ternary complexes with NTA  
-----

Co++ gl KCl 40°C 0.20M U T H K1=4.64 B2=7.98 1965SMB (21462) 584  
At 15 C: K1=4.76, K2=3.56. DH(K1)=-8.4 kJ mol<sup>-1</sup>, DS=62.7 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(K2)=-15.0, DS=16.7  
-----

Co++ EMF oth/un 25°C 0.0 U T H K1=5.072 B2=10.04 1964BDa (21463) 585  
Method: H electrode. K1=5.276(0 C), 5.143(15 C), 5.009(35 C), 4.953(45 C);  
K2=4.23(0 C), 4.07(15 C), 4.90(35 C), 4.82(45 C). DH(K1)=-11.7 kJ, DH(K2)=-15.0  
-----

Co++ oth KNO3 20°C 0.10M U K1=5.5 B2=9.00 1964JOa (21464) 586  
K3=2.3  
-----

Method: paper electrophoresis.

-----  
Co++ EMF oth/un 25°C ->0 U T K1=5.02 B2=8.99 1955EMa (21465) 587  
Method: H electrode  
-----

Co++ gl oth/un 26°C 0.15M U T K1=4.65 B2=8.43 1955GOa (21466) 588  
K3=3.33  
-----

Co++ gl oth/un 20°C 0.01M U K1=5.1 B2=8.9 1953ALa (21467) 589  
-----

Co++ gl KNO3 25°C 0.15M U T K1=4.65 B2=8.43 1953TSa (21468) 590  
K3=2.38  
-----

Co++ gl oth/un 22°C 0.01M U B2=8.8 1952PEa (21469) 591  
Medium: CoCl2.  
-----

Co++ gl oth/un 25°C ->0 U T K1=5.23 B2=9.25 1951MOa (21470) 592  
-----

Co++ gl oth/un 25°C 0.01M U K1=4.95 B2=8.94 1950MMa (21471) 593  
-----

Co++ gl KNO3 20°C 0.50M U K1=4.61 B2=8.36 1945FLa (21472) 594  
K3=2.56  
-----

\*\*\*\*\*

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
Co++	gl	KCl	25°C	0.10M	C	M		K1=4.99 K3=2.66 K(CoA+L)=4.93	1992MMb (21799)	595

A=1,4,7,13,16,19-Hexaaza-10,22-dioxacyclotetracosane

Co++	gl	NaCl	31°C	0.15M	U	I		K1=5.70	1992SKa (21800)	596
------	----	------	------	-------	---	---	--	---------	-----------------	-----

Also data for 25 and 50% v/v EtOH/H2O.

Co++	gl	KNO3	25°C	0.10M	C	M		K1=5.42 K(Co(ida)+L)=3.80 K(Co(bpy)+L)=5.25 K(CoA+L)=5.27 K(Co(phen)+L)=5.43	1991DAc (21801)	597
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K(CoB+L)=5.68, K(CoC+L)=5.20. A: 2,2'-dipyridylamine;  
B: 5-nitro-1,10-phenanthroline; C: 5-methyl-1,10-phenanthroline.

Co++	gl	KNO3	25°C	0.10M	C	M		K1=5.42 B(Co(ida)L)=10.74 B(Co(mida)L)=11.34 B(Co(nta)L)=13.93 B(Co(bpy)L)=11.05	1989DAb (21802)	598
------	----	------	------	-------	---	---	--	--	-----------------	-----

B(Co(phen)L)=12.51, B(CoAL)=11.90 where H3A is N-(2-carboxyphenyl)-  
iminodiethanoic acid

\*\*\*\*\*

C2H5NO3 HL CAS 2921-14-4 (1892)  
Aminooxyethanoic acid; H2N.O.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U			K1=3.04	1985WTa (21828)	599

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
Co++	gl	NaClO4	25°C	0.01M	U	T H		K1=10.38 B2=17.93	1979SBa (21848)	600
Co++	gl	NaClO4	25°C	0.01M	U			K1=10.38 B2=17.93	1975SSb (21849)	601

C2H5N5 L (6902)  
5-Aminomethyl-1H-tetrazole; NH2CH2.CHN4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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-----  
Co++ gl NaNO3 20°C 0.10M U K1=5.36 B2=8.36 1978LEb (21860) 602  
\*\*\*\*\*

C2H6N2O L Glycinamide CAS 598-41-4 (60)  
2-Aminoethanoic acid amide; H2N.CH2.CO.NH2  
-----

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

Co++ gl oth/un 25°C 0.02M U K1=2.71 B2=4.95 1956DRb (21949) 603  
\*\*\*\*\*

C2H6N2O L Acethydrazide CAS 1068-57-1 (2566)  
Ethanoic acid hydrazide, Acetylhydrazine; CH3.CO.NH.NH2  
-----

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

Co++ gl NaNO3 25°C 0.20M U K1=1.85 B2=3.09 1974FSa (21964) 604  
\*\*\*\*\*

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  
-----

Co++ gl NaClO4 25°C 0.10M C K1=5.60 B2=10.03 1987PCa (21988) 605  
B(CoHL)=11.90  
B(CoH-1L)=-1.90  
B3=12.45  
-----

Co++ gl KCl 25°C 0.50M C K1=6.493 B2=11.14 1986LEb (21989) 606  
B(CoH-1L2)=1.708  
\*\*\*\*\*

C2H6N2S L Methyl-Thiourea CAS 598-52-7 (1077)  
N-Methylthiourea; CH3.NH.CS.NH2  
-----

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

Co++ nmr non-aq 27°C 100% U M 1971Eza (22006) 607  
K(CoL2Cl2=CoLC12+L)=4.08  
K(CoL2Br2=CoLBr2+L)=4.11  
K(CoL2I2=CoLI2+L)=4.61  
K(CoL4(ClO4)2=...)=5.50  
-----

Co++ nmr oth/un 27°C ? U M 1971Eza (22007) 608  
K(CoL4A2=CoL3A2+L)=5.50

Medium: acetone. A=perchlorate ion  
\*\*\*\*\*

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  
-----

Co++ gl oth/un ? 0.0 U 1961AMa (22061) 609

B3=13.08

\*\*\*\*\*

C2H6OS L DMSO CAS 67-68-5 (329)

Dimethylsulfoxide; (CH3)2.SO

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

Co++ nmr none 20°C 0.0 U T H 1987LDA (22088) 610

K(CoA+L=CoAL)=0.37

Data at -13.3 to 19.7 C. A=Schiff base from 4,6-dimethoxysalicylaldehyde and 4-(trifluoromethyl)-o-phenylenediamine. DH=-10.9 kJ mol-1.

\*\*\*\*\*

C2H6O2 L Ethyleneglycol CAS 107-21-1 (924)

1,2-Dihydroxyethane (Ethane-1,2-diol); HO.CH2.CH2.OH

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

Co++ sp non-aq 20°C 100% U 1978CMA (22133) 611

K'=-0.4

K"=-2.4

Medium: DMSO, K': Co(DMSO)2L2 + L = CoL3 + 2 DMSO

K": Co(DMSO)2L2 + 4DMSO = Co(DMSO)6 + 2L

\*\*\*\*\*

C2H6O6P2 H4L CAS 34169-22-7 (2582)

trans-1,2-Vinylidenediphosphonic acid; (HO)2P(O)CH:CHP(O)(OH)2

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

Co++ gl KCl 25°C 0.10M U K1=3.87 B2=6.14 1977YKb (22182) 612

K(Co+HL)=3.33

K(CoL+H)=6.99

\*\*\*\*\*

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  
-----

Co++ sp R4N.X 25°C 2.00M C I K1=2.43 B2=4.23 1983DBa (22396) 613

Co++ gl oth/un 25°C 0.10M U K1=2.20 B2=3.53 1981HAa (22397) 614

Medium: 0.1 M HOCH2CH2NH2.HNO3

-----  
Co++ gl oth/un 25°C 0.43M U K1=2.42 B2=4.10 1966SKe (22398) 615

K3=1.27

Medium: 0.43 M L.HNO3

\*\*\*\*\*

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
Co++	gl	oth/un	20°C	0.01M	U		B2=4	1950ALa (22439)	616
*****									
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
Co++	sp	NaCl04	20°C	1.00M	U	M		1972GSh (22483)	617
K(Co+NiL2)=6.15									
Co++	vlt	oth/un	25°C	0.26M	U			1961KPb (22484)	618
B4=12.89									
Medium: 0.264 M phosphate buffer									

Co++	gl	KNO3	30°C	1.0M	U		K1=7.68 B2=14.71	1951G0a (22485)	619
*****									
C2H7OPS2		HL					CAS 993-44-2	(4228)	
Dimethyldithiophosphonic acid; (CH3S)2PO.H									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	ISE	alc/w	25°C	90%	U		K1=2.19 B2=3.93	1972TCa (22527)	620
Medium: 90% EtOH, 0.3 M NaCl04									
*****									
C2H7O3P		H2L					CAS 71778-99-9	(1978)	
Ethylphosphonic acid; CH3.CH2.PO3H2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	M		K1=2.27	1992SCa (22564)	621
*****									
C2H8NO2P		HL					(7266)		
Aminomethyl(methylphosphinic acid); H2NCH2PO(OH)CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C		K1=2.62 B(CoH-1L)=-6.66	1996RLa (22584)	622
*****									
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
Co++	gl	KCl	25°C	0.20M	C		K1=4.55 B2=7.70	1987KBb (22609)	623
Co++	gl	KNO3	25°C	0.20M	C		K1=4.58 B2=7.95 K(Co+HL)=1.45	1978MAb (22610)	624



K(Co(thiodipropoate)+L)=5.88

-----  
Co++ gl KNO3 35°C 0.20M U M K1=5.81 B2=10.50 1989RVa (23105) 636  
K(CoA+L)=4.92

A=bis(imidazol-2-yl)methane

-----  
Co++ gl diox/w 25°C 70% C M K1=7.36 B2=14.27 1988MMd (23106) 637  
K3=3.55  
K(CoL2OH+H)=9.44  
K(Co+LA)=14.21  
K(Co+HLA)=9.05

Medium: 70% dioxan/H2O, 0.1M KCl. K(Co+LA2)=14.56, K(CoLA2=CoLA2OH+H)=-9.93,  
K(2CoLA2+2B+O2=(CoLA2B)2O2)=11.06. A=Salicylaldehyde, B=4-Methylpyridine

-----  
Co++ gl NaClO4 25°C 0.10M U M 1984MSb (23107) 638  
K(Co(thiolactate)+en)=4.06

-----  
Co++ gl KCl 25°C 0.20M C M K1=5.60 B2=10.24 1983HSa (23108) 639  
B(CoLA)=14.09

H2A=D-penicillamine

-----  
Co++ sp KNO3 25°C 0.10M U H 1982CCd (23109) 640  
K(2Co+4L+O2=Co2L4O2OH+H)=26.1

DH(K)=-224 kJ mol<sup>-1</sup>; DS=-251 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ gl NaNO3 30°C 0.50M M K1=5.89 B2=11.33 1982MAd (23110) 641

-----  
Co++ sp R4N.X 25°C 1.50M U M 1973BDd (23111) 642  
B(Co+Ni+4L+A=(CoL2)A(NiL2))=41.75, K((CoL2)2A+(NiL2)2A=2(CoL2)A(NiL2))=0.88  
H4A=EDTA Data for other complexes also given

-----  
Co++ sp R4N.X 25°C 1.50M U M 1972BFd (23112) 643  
K(CoA+L)=4.24  
K(CoAL+CoL3=Co2AL4)=2.72

Medium: NH4NO3. H4A=EDTA

-----  
Co++ gl KNO3 25°C 0.10M U M K1=5.89 B2=10.76 1972NMB (23113) 644  
K(2Co+4L+O2=CoL2(O2)(OH)ML2+H)=24.9, where (O2) is in atmospheres

-----  
Co++ gl NaClO4 25°C 0.10M U K1=5.38 B2=10.24 1971GSb (23114) 645  
K3=3.55

-----  
Co++ gl KNO3 25°C 0.10M U K2=4.73 1970DNa (23115) 646

-----  
Co++ oth oth/un ? ? U K1=6.05 B2=10.88 1969MMb (23116) 647  
K3=3.16

Data from survey of literature data

-----  
Co++ gl KNO3 37°C 0.15M U M K1=5.30 B2=9.57 1969PSb (23117) 648  
B3=11.99

B(CoLA)=9.31  
B(CoL(Ser))=9.04  
B(CoL(Ser)2)=11.18

A=histamine. Data for other ternary complexes also

-----  
Co++ vlt oth/un 0.5°C 1.0M U M 1968FDa (23118) 649

K3=3.51

Medium: 1 M L(HCl)2. In 1 M L(HClO4)2): K3=4.17. Ternary complexes with EDTA

-----  
Co++ gl diox/w 30°C 50% U K1=6.91 B2=13.59 1968HOa (23119) 650

K3=5.04

Constants corrected to zero ionic strength

-----  
Co++ vlt oth/un 20°C 2.70M U K1=6.26 B2=11.33 1963KVa (23120) 651

K3=3.57

-----  
Co++ cal KCl 25°C 1.0M U H 1960CPa (23121) 652

DH(K1)=-28.9, DH(B2)=-58.4, DH(B3)=-92.7, S1=17, S(B2)=8.4, S(B3)=-49.4

DG(K1)=-33.86, DG(B2)=-60.82, DG(B3)=-7.96 kJ mol<sup>-1</sup>

-----  
Co++ gl KCl 25°C 1.0M U K1=5.93 B2=10.66 1950EDa (23122) 653

K3=3.30

-----  
Co++ EMF KCl 30°C 1.0M U K1=5.89 B2=10.72 1941BJa (23123) 654

K3=3.10

Method: H electrode

\*\*\*\*\*

C2H8N4S L CAS 35771-42-7 (4227)

S-Methylisothiocarbohydrazide; H2N.N:C(S.CH3).NH.NH2

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

-----  
Co++ gl KCl 25°C 0.50M U K1=4.81 B2=9.25 1972BMc (23252) 655

\*\*\*\*\*

C2H8O6P2 H4L CAS 6145-31-9 (2579)

1,2-Ethylenediphosphonic acid; H2O3P.CH2.CH2.PO3H2

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

-----  
Co++ gl KCl 25°C 0.10M U K1=3.87 1977YKb (23258) 656

B(Co2L)=6.14

K(Co+HL)=3.33

K(CoL+H)=6.99

K(Co+CoL)=1.72

\*\*\*\*\*

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

-----



Co++ gl KNO3 25°C 0.10M U K1=4.83 1980ZRc (23343) 657  
K(Co+HL)=3.53  
K(Co+H2L)=2.78

Co++ gl KCl 25°C 0.10M U K1=9.36 1967KLa (23344) 658  
K(Co+HL)=5.29  
K(2Co+H-1L)=19.65  
K(2Co+L)=12.77  
K(2Co+HL)=7.51

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

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

Co++ gl KNO3 25°C 0.1M C K1=7.75 1985MMa (23446) 659  
B(CoHL)=14.07  
B(CoH23L)=18.89

Co++ gl KNO3 25°C 1.00M M K1=7.16 1982BGb (23447) 660  
K(Co+HL)=2.77

Co++ gl KCl 25°C 0.10M U K1=11.06 1979ZPa (23448) 661  
By spectrophotometry: K1=11.31

\*\*\*\*\*  
C2H9NO6P2 H4L (6889)  
N-Methylaminomethylenedi(phosphonic acid); CH3.NH.CH(PO3H2)2

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

Co++ gl KCl 25°C 0.10M M K1=7.87 1978GMf (23463) 662  
K(Co+HL)=6.37

\*\*\*\*\*  
C2H16N5O4Co HL (231)  
Pentaammineoxalatocobalt(III); Co(NH3)5(HC2O4)

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

Co++ sp NaClO4 28°C 0.30M U K1=1.68 1974NDa (23471) 663

\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 0.50M U K1=-0.05 B2=-0.16 1978KLa (23497) 664

\*\*\*\*\*  
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
Co++	gl	NaClO4	25°C	2.0M	U		K1=0.39	1981MFa (23510)	665
*****									
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
Co++	gl	KNO3	25°C	0.50M	U		K1=0.34 B2=1.01	1978KLa (23519)	666
*****									
C3H3NS		L		Thiazole			CAS 288-47-1	(382)	
Thiazole; cyclo(-S.CH:N.CH:CH-) C3H3NS									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U		K1=1.43 B2=2.43 B3=2.98	1974LKb (23527)	667
*****									
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
Co++	cal	NaNO3	25°C	1.0M	U	H	K1=0.25	1981ARd (23566)	668
DH(K1)=-21.3 kJ mol-1									

Co++	gl	KNO3	25°C	0.50M	U		K1=1.23 B2=2.08 B3=2.32	1977BBb (23567)	669
------	----	------	------	-------	---	--	-------------------------	-----------------	-----

Co++	gl	KNO3	25°C	0.50M	U		K1=1.38 B2=2.38 B3=3.02 B4=3.32	1977LNa (23568)	670
------	----	------	------	-------	---	--	---------------------------------	-----------------	-----

Co++	vlt	NaNO3	25°C	0.10M	U		K1=1.50 B2=1.78 B3=2.23 B4=1.78	1968CWa (23569)	671
------	-----	-------	------	-------	---	--	---------------------------------	-----------------	-----

*****									
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
Co++	sp	NaClO4	25°C	1.0M	C	M		2001LHa (23831)	672
K(CoA+L)=0.87									
Medium pH 7.9 (0.05 M Tris). A is tris(2-(dimethylamino)ethylamine).									

Co++	gl	KNO3	35°C	0.10M	C	M	K1=2.42 B(CoAL)=2.90	1999DSb (23832)	673
------	----	------	------	-------	---	---	----------------------	-----------------	-----

A is thiamine hydrochloride.



Co++ gl NaClO4 25°C 3.00M C M 1981FGa (23847) 688

B(-1,1,1)=-5.18  
B(-2,1,2)=-10.91  
B(-3,1,3)=-17.21  
B(-4,1,4)=-24.20

B(p,q,r): pH+qCo+rHL=HpCoq(HL)r; Data also for ternary CoClm(HL)n complexes

Co++ gl NaClO4 25°C 0.50M C TIH K1=2.484 1974LVa (23848) 689  
B3=6.523

Co++ ISE R4N.X 25°C 0.50M U K1=2.23 B2=4.09 1971BLb (23849) 690  
B3=5.00  
B4=6.01  
B5=6.70  
B6=7.27

Medium: NH4NO3

Co++ gl NaClO4 25°C 0.10M U M K1=2.43 1968ISa (23850) 691  
K(Co(EDTA)+L)=1.66  
K(Co(NTA)+L)=2.35

Co++ sp oth/un 25°C 0.11M U T HM 1966HIa (23851) 692  
K(CoA+L)=4.09  
K=4.25(15 C), 4.04(28 C), 3.95(34.2 C), CoA+=cobalamin Factor B  
At 25 C, I=0 corr: DH=-26.3 kJ mol<sup>-1</sup>, DS=-8

Co++ sp oth/un 25°C 0.0 U HM 1966HIa (23852) 693  
K(CoA(H-1L)+H)=4.49  
K'(CoA(H-2L)+H)=11.00  
Medium:0 corr. CoA+=cobalamin Factor B. DH(K)=-19 kJ mol<sup>-1</sup>, DS=21 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K')=-50, DS=46

Co++ gl KNO3 25°C 0.16M U H K1=2.47 B2=4.40 1966SKc (23853) 694  
K3=1.45  
K4=1.00  
K5=0.5  
K6=0  
DH(K1)=-17.6 kJ mol<sup>-1</sup>, DS=-10.7 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=16.3, DS=-20, DH3=14.6  
DS=-21, DH(K4)=-16, DS=-33, DH(K5)=-12, DS=-29, DH(K6)=-17, DS=-50. 10-50 C

Co++ sp oth/un 25°C 0.04M U T HM 1964HIa (23854) 695  
K(CoA+L)=4.59  
K=4.88(10.7 C), 4.75(18.5 C), 4.53(29.8 C). CoA+=aquocobalamin. At I=0 corr, 25 C:DH=-30 kJ mol<sup>-1</sup>, DS=-12 J K<sup>-1</sup> mol<sup>-1</sup>. K(CoAH-1L+H)=10.25. DH=-46, DS=50

Co++ gl oth/un 25°C 0.16M U K1=2.42 B2=4.37 1958MEb (23855) 696  
K3=1.58  
K4=1.2

Co++ dis oth/un 25°C 0.15M U K1=2.23 1958SLb (23856) 697

\*\*\*\*\*

C3H4N2O2 HL Hydantoin CAS 461-72-3 (389)  
2,4-Imidazolidinedione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U	H	K1=2.93 B2= 4.24 B3=5.16	1979BEc (23948)	698

By calorimetry: DH(K1)=-9.66 kJ mol<sup>-1</sup>, DS(K1)=24 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(B2)=-18.4, DS(B2)=19; DH(B3)=-30.

\*\*\*\*\*

C3H4N2S L CAS 95-50-4 (821)  
2-Aminothiazole; C3H2NS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U		K1=0.90 B2=1.54	1982GKa (23961)	699

Co++ gl KNO3 25°C 0.10M U T H K1=1.99 1978BBd (23962) 700  
Data for 30, 35 and 40 C. DH(K1)=-41.8 kJ mol<sup>-1</sup>, DS(K1)=-102 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C3H4N2S HL Imidazolethiol CAS 872-35-5 (1823)  
2-Mercaptoimidazole; C3H3N2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	U		K1=5.76 B2= 9.82	1977STc (23969)	701

C3H4O3 HL Pyruvic acid CAS 127-17-3 (1152)  
2-Oxopropanoic acid; CH3.CO.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	2.00M	U		K1=0.60 B2=0.44	1980MKb (24042)	702

Alternative method: Spectrophotometry.

\*\*\*\*\*

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
Co++	gl	KNO3	35°C	0.10M	C	M	K1=3.08 K(CoL+A)=5.46	1997PSb (24353)	703

H2A is thiamine orthophosphoric acid.

Co++	gl	KCl	25°C	0.10M	C	M	K1=2.92 B2=4.60 K3=0.7 K(CoHA+L=CoHAL)=3.15 K(CoH2A+L=CoH2AL)=3.39 K(CoH2A+HL=CoH3AL)=4.7	1992MMb (24354)	704
------	----	-----	------	-------	---	---	--	-----------------	-----

K(Co2H-1A+L=Co2H-1AL)=3.1, K(Co2H-1A+L=Co2AL+OH)=-2.2  
 A=1,4,7,13,16,19-Hexaaza-10,22-dioxacyclotetracosane

Co++	gl	NaCl	25°C	0.50M	C		K1=2.37		1989FRa (24355)	705
							B(CoHL)=5.86			
Co++	ix	none	23°C	0.0	U		K1=2.50	B2=3.93	1980PSb (24356)	706
Co++	gl	KNO3	25°C	0.10M	C	M	K1=2.87		1975DOc (24357)	707
							B(Co(bpy)2L)=14.05			
Co++	vlt	NaClO4	25°C	1.00M	U				1975TQa (24358)	708
							K(Co+HL)=0.54			
Co++	gl	NaClO4	25°C	0.10M	U		K1=2.97		19700Va (24359)	709
Co++	gl	KNO3	25°C	0.10M	U		K1=2.95	B2=4.43	1969PJb (24360)	710
Co++	gl	NaClO4	25°C	0.10M	U		K1=2.97		19680Va (24361)	711
							K(Co+HL)=0.82			
Co++	kin	NaClO4	12°C	0.10M	U	T	K1=2.80		1965CAB (24362)	712
							At 7 C: K1=2.78			
Co++	gl	oth/un	25°C	0.0	U		K1=3.74	B2=5.14	1965MOB (24363)	713
Co++	ix	oth/un	25°C	0.0	U		K1=3.77	B2=5.12	1965SMF (24364)	714
Co++	gl	NaClO4	20°C	0.10M	U		K1=2.98		1963CAa (24365)	715
							K(Co+HL)=2.21			
Co++	cal	oth/un	25°C	0.0	U	H			1963MNd (24366)	716
							Medium: 0 corr. DH(K1)=12.1 kJ mol <sup>-1</sup> , DS=112.4 J K <sup>-1</sup> mol <sup>-1</sup>			
Co++	dis	NaCl	25°C	0.16M	U	I	K1=2.658		1961MMA (24367)	717
							K1=3.60(I=0), 3.135(I=0.02), 2.981(I=0.04), 2.820(I=0.08)			
Co++	gl	oth/un	0°C	->0	U	T H	K1=3.62		1961NNA (24368)	718
							DH(K1)=10.4 kJ mol <sup>-1</sup> , DS=106 J K <sup>-1</sup> mol <sup>-1</sup> . K1=3.71(15 C), 3.73(25 C), 3.85(35 C), 3.88(45 C)			
Co++	oth	oth/un	18°C	0.40M	U			B2=3.14	1953BBb (24369)	719
							METHOD:spJ, TEMP.:18-25			
Co++	EMF	oth/un	25°C	0.04M	U		K1=3.72		1949SDa (24370)	720
							*****			
		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

-----  
Co++ gl NaClO4 20°C 0.10M U K1=3.25 1963CAa (24613) 721  
K(Co+HL)=1.91

\*\*\*\*\*  
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

-----  
Co++ gl oth/un 20°C 0.01M U K1=5.3 1956ARd (24676) 722

\*\*\*\*\*  
C3H5N3S HL (7519)  
(2-Thiazolin-2-yl)hydrazine; (C3H2NS).NHNH2

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

-----  
Co++ gl NaClO4 25°C 0.10M C 1997BGb (24677) 723

K(Co+HL)=2.42  
B(CoHL2)=12.61  
B(CoH3L3)=28.93

\*\*\*\*\*  
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

-----  
Co++ gl KNO3 25°C 0.50M U K1=0.85 1982GLa (24683) 724

\*\*\*\*\*  
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

-----  
Co++ gl KNO3 25°C 0.50M U K1=0.51 1982GLa (24689) 725

\*\*\*\*\*  
C3H5O2Cl HL CAS 598-78-7 (1951)  
2-Chloropropanoic acid; CH3.CH(Cl).COOH

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

-----  
Co++ sp NaClO4 25°C 2.00M U K1=1.0 B2=1.7 1974J0a (24710) 726

\*\*\*\*\*  
C3H5O2Cl HL CAS 107-94-8 (1436)  
3-Chloropropanoic acid; Cl.CH2.CH2.COOH

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

-----  
Co++ sp NaClO4 25°C 2.00M U K1=1.2 B2=1.8 1974J0a (24728) 727

\*\*\*\*\*  
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
-----
Co++      gl  KNO3   25°C 0.50M U          K1=1.95   B2=3.39   1983GWa (24792) 728
                                     B3=4.58
                                     B4=5.51
-----
```

```
Co++      gl  KCl    25°C 0.10M U          K1=1.86           1981BDdb (24793) 729
                                     K(Co+H-1L)=3.38
                                     K(Co+2H-1L)=5.59
-----
```

```
Co++      gl  oth/un 25°C 0.01M U          B2=5.7           1956NEb (24794) 730
*****
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
-----
Co++      gl  diox/w 25°C 50% U          K1=9.5   B2=18.6   1958BPpa (24800) 731
*****
C3H6OS2          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
-----
Co++      sp  alc/w  25°C 75% U          B2=7.20           1970BPd (24872) 732
                                     B3=11.25
-----
```

```
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
-----
Co++      oth NaClO4 25°C 2.0M U          K1=0.74           1990FTa (24971) 733
Methods: averaged results from potentiometric, polarographic and
spectrophotometric measurements.
-----
```

```
Co++      sp  NaClO4 25°C 2.00M U          K1=1.3   B2=1.9   1974J0a (24972) 734
-----
```

```
Co++      vlt NaClO4 25°C 1.00M U T          K1=0.04   B2=0.40   1971TRd (24973) 735
50 C: K1=0.34, K2=0.72
-----
```

```
Co++      EMF NaClO4 25°C 2.00M U          K1=0.70   B2=0.62   1970FMa (24974) 736
                                     B3=1.18
-----
```

```
Co++      sp  NaClO4 25°C 2.00M U          K1=0.78   B2=0.11   1970GFa (24975) 737
*****
C3H6O2S          H2L Thiolactic acid CAS 79-42-5 (366)
-----
```



2-Mercaptopropanoic acid; CH<sub>3</sub>.CH(SH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	30°C	0.10M	U			K1=7.26 B2=12.34	1988NDa (25127)	738
Co++	gl	NaClO4	25°C	0.10M	U	M		K(CoL+dientriamine)=5.98	1985MSa (25128)	739
Co++	gl	NaClO4	25°C	0.10M	U	M		K1=6.25 B2=13.50 K(CoL+en)=4.06	1984MSb (25129)	740

\*\*\*\*\*

C3H6O3 HL CAS 81598-26-7 (2521)

3-Hydroxypropanoic acid; HO.CH<sub>2</sub>.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	2.00M	U			K1=0.86 B2=1.18 B3=1.23	1976KGa (25257)	741
Co++	sp	NaClO4	25°C	2.00M	U			K1=0.49	1972SSa (25258)	742

\*\*\*\*\*

C3H6O3 HL L-Lactic acid CAS 79-33-4 (82)

L-2-Hydroxypropanoic acid; CH<sub>3</sub>.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	2.00M	U			K1=1.48 B2=2.42 B3=2.74	1976KGa (25376)	743
Co++	gl	NaClO4	20°C	2.00M	U			K1=1.39 B2=2.36 B3=2.74	1972LNa (25377)	744
Co++	oth	NaClO4	20°C	2.00M	U			K1=1.38 B2=2.30 B3=2.3	1972LNa (25378)	745

Method: polarimetry

Co++	sp	NaClO4	25°C	2.00M	U			K1=1.28 B2=2.53	1972SSa (25379)	746
Co++	oth	oth/un	25°C	0.50M	U	I		B2=1.63	1968BVa (25380)	747

Method: circular dichroism. B2=3.33(I=0.05), 2.61(I=0.1), 2.15(I=0.2)

Co++	EMF	NaClO4	25°C	1.0M	U			K1=1.37 B2=2.32 K3=0.2	1967TGa (25381)	748
------	-----	--------	------	------	---	--	--	---------------------------	-----------------	-----

Method: quinhydrone electrode

Co++	con	oth/un	25°C	?	U			K1=1.896	1954EMa (25382)	749
Co++	sp	oth/un	18°C	0.04M	U			B2=1.68	1953BBa (25383)	750

\*\*\*\*\*

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  
-----  
Co++ sp NaClO4 25°C 2.00M U K1=1.18 B2=1.52 1975PGa (25628) 751  
B3=2.54

\*\*\*\*\*  
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  
-----  
Co++ gl NaNO3 25°C 0.10M U K1=4.85 1997ISd (26110) 752  
-----  
Co++ gl KNO3 35°C 0.10M C M K1=4.51 1997PSb (26111) 753  
K(CoL+A)=4.01

H2A is thiamine orthophosphoric acid.

-----  
Co++ gl KNO3 25°C 0.20M U T HM K1=4.69 1996JLd (26112) 754  
K(Co(bpy)+L)=4.31

Data for 25-45 C. DH(K1)=-10.5 kJ mol<sup>-1</sup>, DS(K1)=3.4 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(Co(bpy)L)=-7.1, DS(Co(bpy)L)=60.2.

-----  
Co++ gl alc/w 20°C 50% M M K1=4.78 1995AMb (26113) 755  
K(CoA+L)=4.64

Medium: 50% v/v EtOH/H2O, 0.20 M NaClO4. A is 2,2',2''-terpyridine.

-----  
Co++ gl KNO3 30°C 0.10M U K1=4.53 1994RSa (26114) 756

-----  
Co++ gl KNO3 0°C 0.10M U M K1=4.17 B2=7.81 1994VKb (26115) 757  
K3=2.46  
B3=10.27

Ternary complexes in Co-Asp-02 system: K(CoL3+O2=Co2L6O2)=6.45 - 8.46,  
K(CoL3+OH+O2=Co2L6O2OH)=-0.99 - -2.35

-----  
Co++ gl NaClO4 25°C 0.20M C K1=5.10 1993BAb (26116) 758

-----  
Co++ gl KCl 25°C 0.10M C IH T K1=4.33 B2=7.73 1993SKa (26117) 759  
IUPAC evaluation. DH(K1)=-9.7 kJ mol<sup>-1</sup>, DH(K2)=-22. I=0: K1=4.77, B2=8.44

-----  
Co++ gl KNO3 35°C 0.10M U K1=4.59 1990RSe (26118) 760

-----  
Co++ gl KNO3 25°C 0.10M C M K1=4.85 1989MAd (26119) 761  
K(CoA+L)=4.19  
B(CoAL)=11.24

H2A is N-(2-acetamido)imino diethanoic acid.

-----  
Co++ gl KNO3 35°C 0.20M U M K1=4.35 B2=7.77 1989RVa (26120) 762  
K(CoA+L)=3.89

A=bis(imidazol-2-yl)methane

Co++	gl	KNO3	25°C	0.20M	U	M	K1=4.71		1988BSc (26121)	763
							K(Co(bpy)+L)=4.39			
Co++	gl	KNO3	25°C	0.15M	U		K1=4.31	B2=7.8	1987FZa (26122)	764
Co++	gl	KCl	25°C	0.20M	C	M			1984KDb (26123)	765
							K(Co(DOPA)+L)=3.39			
							B(CoHL(DOPA))=22.49			
							K(Co(Dopamine)+L)=3.60			
							B(CoHL(Dopamine))=22.70			
K(CoA+L)=3.26, B(CoHLA)=21.44; K(CoB+L)=3.44, B(CoHLB)=22.04										
A=Noradrenaline, B=Adrenaline, H3DOPA=3,4-dihydroxyphenylalanine										
Co++	gl	KCl	25°C	0.20M	C		K1=4.24	B2= 7.65	1983KGb (26124)	766
							B3=9.91			
Co++	gl	none	25°C	0.00	U	T	K1=4.718	B2=8.41	1971GKa (26125)	767
K1(30 C)=4.669; K2(30 C)=3.640; K1(35 C)=4.667; K2(35 C)=3.654										
Co++	gl	KCl	25°C	0.05M	U	T H T	K1=4.354	B2=7.86	1971GKa (26126)	768
K1(30 C)=4.303; K2(30 C)=3.456; K1(35 C)=4.303, K2(35 C)=3.470										
DH(K1)=-8.4 kJ mol <sup>-1</sup> , DH(K2)=-9.6, DS(K1)=54 J K <sup>-1</sup> mol <sup>-1</sup> , DS(K2)=33 (at 25C)										
Co++	gl	NaClO4	25°C	0.10M	U	T	K1=4.44		1970GPa (26127)	769
Co++	cal	KNO3	22°C	0.10M	U	H			1967SSl (26128)	770
DH(B2)=-24.7 kJ mol <sup>-1</sup> , DS=83.6 J K <sup>-1</sup> mol <sup>-1</sup>										
Co++	gl	KCl	40°C	0.20M	U	T H T	K1=4.25	B2=7.33	1965SMb (26129)	771
K1=4.41(15 C),4.36(25 C); K2=3.27(15 C),3.20(25 C). DH(K1)=-10.9 kJ mol <sup>-1</sup> ,										
DS=46 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-13.0, DS=16.7										
Co++	oth	KNO3	20°C	0.10M	U		K1=5.0	B2=8.20	1964JOa (26130)	772
							K3=2.4			
Method: paper electrophoresis										
Co++	gl	KCl	20°C	0.10M	U	T	K1=4.32	B2=7.92	1963IPa (26131)	773
Co++	gl	KNO3	25°C	0.15M	U	T	K1=4.27	B2=7.72	1953TSa (26132)	774
							K3=1.75			
Co++	gl	oth/un	25°C	->0	U		K1=4.82	B2=8.48	1951MOa (26133)	775
Co++	gl	oth/un	25°C	0.01M	U		B2=8.4		1950ALa (26134)	776
Co++	gl	oth/un	25°C	0.01M	U		K1=4.83	B2=8.78	1950MMa (26135)	777
*****										
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
-----
Co++      oth NaNO3  35°C 0.10M U    M                      1985V5a (26440) 778
                                         K(Co(NTA)+L)=3.60
```

By electrophoresis

```
-----
Co++      gl  NaNO3  20°C 0.10M U          K1=3.58  B2=6.64  1978LEb (26441) 779
```

```
-----
Co++      oth oth/un 45°C 0.0 U T H T K1=4.06          1967BBd (26442) 780
Method: H electrode. K1=4.47(0 C),4.31(15 C),4.21(25 C),4.13(35 C). DH(K1)=
-15.0 kJ mol-1. By calorimetry, 25 C: DH(K1)=-13.8, DS=33.9
```

```
-----
Co++      gl  KCl    40°C 0.20M U T H T K1=3.53  B2=5.98  1965SMb (26443) 781
K1=3.69(15 C),3.58(25 C); K2=2.59(15 C),2.56(25 C). DH(K1)=-10.9 kJ mol-1,
DS=33 J K-1 mol-1, DH(K2)=-9.6, DS=16. By ion exchange, 40 C: K1=3.56
```

```
-----
Co++      gl  oth/un 20°C 0.01M U      T B2=7          1950ALa (26444) 782
*****
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
-----
Co++      gl  KNO3   37°C 0.15M C    M    K1=4.325  B2= 7.76  1989KKd (26538) 783
                                         B3=10.161
                                         B(CoH-2L)=-14.434
                                         B(Co(imidazole)L)=6.419
```

```
-----
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
-----
Co++      gl  KNO3   25°C 0.10M U    M                      1972IVc (26597) 784
                                         K(CoA+L)=3.72
```

H2A=methyliminodiethanoic acid

```
-----
Co++      gl  oth/un 25°C 0.01M U          K1=4.34  B2=7.82  1959DLb (26598) 785
*****
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
-----
Co++      gl  KCl    25°C 0.50M M T H      K1=11.20          1988MAa (26745) 786
Data for 25-40 C. DH(K1)=48.12 kJ mol-1, DS(K1)=-54.1 J K-1 mol-1.
```

```
-----
Co++      gl  NaClO4 25°C 0.10M U    M                      1984KPb (26746) 787
```



-----  
Co++ gl KNO3 25°C 0.15M U K1=4.36 B2=8.00 1987FZa (27103) 799  
-----

Co++ gl NaCl 25°C 3.00M C K1=4.32 B2=7.90 1985PBb (27104) 800  
B3=10.2

D-, L- and DL-serine studied.

-----  
Co++ gl NaCl04 25°C 3.00M U K1=4.58 B2=8.57 1973WIa (27105) 801  
B3=11.55  
-----

Co++ gl KCl 25°C 0.05M U T K1=4.38 B2=8.00 1972GMb (27106) 802  
K1(20 C)=4.42, K2=3.66; K1(30 C)=4.34, K2=3.58; K1(35 C)=4.30, K2=3.54  
-----

Co++ gl KNO3 37°C 0.15M U M K1=4.20 B2=7.56 1969PSb (27107) 803  
B3=9.81  
B(CoLA)=8.61  
B(CoLA2)=11.01

A=histamine

-----  
Co++ gl KNO3 40°C 0.20M U T H K1=4.25 B2=7.51 1968RMb (27108) 804  
K1=4.37(15 C), 4.33(25 C); K2=3.38(15 C), 3.33(25 C)  
DH(B2)=-16.7 kJ mol<sup>-1</sup>, DS=92.0 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ gl oth/un 25°C 0.05M U I K1=4.47 B2=8.25 1964SYa (27109) 805  
I=0 M: K1=4.90, K2=4.20; I=0.1: K1=4.84, K2=4.41; I=0.02: K1=4.74, K2=4.11  
-----

Co++ gl oth/un 20°C 0.01M U B2=8.0 1950ALa (27110) 806  
\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 0.50M U K1=2.43 1985WTa (27211) 807  
\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 0.10M C M 1988ACa (27229) 808  
B(CoHL)=10.4  
B(Co2H-2L2)=-5.61

Also B(CoZnH-2L2)=-3.74; B(CoCdH-2L2)=-4.97.

-----  
Co++ gl KCl 25°C 0.10M U B2=13.478 1976BMe (27230) 809  
B(CoH2L)=23.959  
B(Co2L2)=20.803  
-----

\*\*\*\*\*  
C3H7NO5S H2L Cysteic acid CAS 23537-25-9 (2603)

2-Amino-3-sulfonatopropanoic acid; H03S.CH2.CH(NH2).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.50M U K1=5.76 B2=9.93 1979DZb (27253) 810  
\*\*\*\*\*  
C3H7N5 L (6903)  
5-(2-Aminoethyl)-1H-tetrazole; NH2.CH2.CH2.CHN4  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 20°C 0.10M U K1=6.82 B2=11.07 1978LEb (27291) 811  
\*\*\*\*\*  
C3H7O5P H3L CAS 5926-41-4 (3549)  
2-Phosphonopropanoic acid; CH3.CH(PO3H2).COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl R4N.X 25°C 0.25M U K1=2.54 1957Wba (27299) 812  
Medium: 0.1-0.4 M (C3H7)4NI  
\*\*\*\*\*  
C3H7O6P H2L (6830)  
3-Hydroxy-2-oxopropylphosphoric acid; CH2(OH).CO.CH2.OPO3H2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 25°C 0.10M U K1=1.84 1992LCb (27320) 813  
\*\*\*\*\*  
C3H7O7P H3L CAS 28474-06-8 (3552)  
D-2,3-Dihydroxypropanoic acid 2-phosphate (D-2-phosphoglyceric acid)  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl R4N.X 25°C 0.25M U K1=2.97 1957Wba (27329) 814  
Medium: 0.1-0.4 M (C3H7)4NI  
\*\*\*\*\*  
C3H8NO5P H3L 3-Phosphono-Ala CAS 20263-06-3 (1509)  
2-Amino-3-phosphonatopropanoic acid; (H2O3P)CH2.CH(NH2).COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.20M C K1=6.22 B2=10.30 1989KFb (27347) 815  
-----  
Co++ gl KNO3 25°C 0.20M C K1=6.52 B2=10.81 1978Mab (27348) 816  
K(Co+HL)=2.56  
K(CoL+HL)=2.24  
\*\*\*\*\*  
C3H8NO5P H3L CAS 23052-80-4 (1508)  
3-Amino-3-phosphonatopropanoic acid; (H2O3P)(NH2)CH.CH2.COOH  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	C			K1=6.56 B2=10.69 B(CoH2L)=18.06 B(CoHL)=13.18	1989KFb (27360)	817

\*\*\*\*\*  
 C3H8N05P 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
Co++	gl	KNO3	25°C	0.1M	C			K1=7.23 B2=11.12 B(CoHL)=12.59	1985MMa (27396)	818

\*\*\*\*\*  
 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
Co++	gl	KNO3	15°C	0.15M	C			K1=5.41 B2= 9.21 K(Co+HL)=1.88	1983MBa (27453)	819

Data for LL. For DL: K1=5.44, K2=3.72, K(Co+HL)=1.86

Co++	gl	KNO3	25°C	0.20M	C	M		K1=5.31 B2=9.16 K(Co+HL)=1.94 K(CoL+HL)=2.32 B(CoH(histamine)L)=17.48 K(Co(histamine)+L)=4.70	1979MBa (27454)	820
------	----	------	------	-------	---	---	--	---	-----------------	-----

K(Co(phen)+L)=4.85, K(Co(bpy)+L)=4.90

Co++	gl	KNO3	25°C	0.20M	C			K1=5.37 B2=9.02 K(Co+HL)=2.21 K(CoL+HL)=1.95	1978MAB (27455)	821
------	----	------	------	-------	---	--	--	--	-----------------	-----

Co++	gl	KNO3	25°C	0.20M	C			K1=5.37 B2=9.02 K3=1.95 K(Co+HL)=2.21 K(CoHL+L)=1.95 K(CoL+H)=6.56	1978MAc (27456)	822
------	----	------	------	-------	---	--	--	--	-----------------	-----

\*\*\*\*\*  
 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
Co++	gl	oth/un	25°C	0.01M	U			K1=2.35 B2=4.09	1959DLb (27490)	823

\*\*\*\*\*  
 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
Co++	gl	KNO3	25°C	0.10M	C		K1=6.28 B2=11.36 B(CoHL)=12.30 B(CoHL2)=17.96	1976BPb (27547)	824

Co++	gl	NaCl	25°C	0.10M	C		K1=6.55 B2=11.73 K(Co+HL)=2.91	1975KPa (27548)	825
------	----	------	------	-------	---	--	-----------------------------------	-----------------	-----

K(2CoL2+O2=(CoL2)2O2) = 8.90 at pH=8.0

Co++	gl	oth/un	20°C	0.01M	U		B2=11.8	1952ALa (27549)	826
------	----	--------	------	-------	---	--	---------	-----------------	-----

\*\*\*\*\*  
 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
Co++	gl	KCl	25°C	0.20M	C		K1=4.74 B2=9.39 B(CoHL)=12.12 B(CoH-1L)=-2.64 B(Co2L3)=17.69	1989FSa (27574)	827

Co++	gl	KCl	25°C	0.50M	C		K1=6.08 B2=10.69 B(CoH-1L2)=1.59 B(Co2L)=8.91	1989LEa (27575)	828
------	----	-----	------	-------	---	--	---	-----------------	-----

\*\*\*\*\*  
 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
Co++	gl	KCl	25°C	0.50M	C		K1=5.81 B2=10.54 B(CoH-1L2)=1.17 B(Co2L)=8.76	1989LEd (27617)	829

\*\*\*\*\*  
 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
Co++	nmr	non-aq	27°C	100%	U	M		1971Eza (27625)	830

K(CoLBr2+L)=-4.31  
 K(CoLI2+L)=-4.56  
 K(CoL3(C104)2+L)=-5.47

Medium: acetone

\*\*\*\*\*  
 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
-------	-----	--------	------	------	-----	-------	-------------	-----------	--------

-----  
 Co++ gl NaClO4 20°C 0.10M U TI K1=9.50 1986NDb (27708) 831  
 \*\*\*\*\*  
 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
Co++	sp	NaCl	25°C	0.1M	U			K1=16.67 B2=24.80	1999PAa (27779)	832

Also published in Zh. Neorg.Khim. (1999) 44, 590  
 -----

Co++ sp oth/un ? 0.20M U B2=11.61 19720Fa (27780) 833  
 \*\*\*\*\*  
 C3H9N L n-Propylamine CAS 107-10-8 (2356)  
 1-Aminopropane; H2N.CH2.CH2.CH3  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	non-aq	22°C	100%	U T HM			K(CoA2+L)=0.86	1984JCa (27826)	834

In toluene, A=N-Propylsalicylaldimine, DH=-23.3 KJ mol<sup>-1</sup>, DS=-62.9 J K<sup>-1</sup> m<sup>-1</sup>  
 At 2 C, K=1.12; 43 C, K=0.54  
 -----

Co++	sp	non-aq	2°C	100%	U M			K(CoA2+L)=0.67	1984JCa (27827)	835
------	----	--------	-----	------	-----	--	--	----------------	-----------------	-----

In DMF, A=N-Propylsalicylaldimine  
 -----

Co++	ISE	R4N.X	25°C	2.00M	U			K1=2.12 B2=3.65 K3=1.24 K4=1.18	1969PMc (27828)	836
------	-----	-------	------	-------	---	--	--	---------------------------------------	-----------------	-----

Medium: H4NO3  
 \*\*\*\*\*  
 C3H9N L iso-Propylamine CAS 75-31-0 (157)  
 2-Propylamine; CH3.CH(CH3).NH2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	ISE	R4N.X	25°C	2.00M	U			K1=2.14 B2=3.62 K3=1.19 K4=0.87	1970PMa (27843)	837

Medium: NH4NO3  
 -----

C3H9N2O4P H2L CAS 30211-73-5 (7117)  
 Glycylaminomethylphosphonic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KN03	25°C	0.10M	C			K1=3.458 B2=6.16 B(CoHL)=9.2 B(CoH-1L)=-5.41	1995HLa (27966)	838



C3H10N2 L Propanediamine CAS 109-76-2 (123)  
1,3-Diaminopropane; H2N.CH2.CH2.CH2.NH2

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

Co++ gl KNO3 25°C 0.50M M M 1974KPa (28297) 846  
K(2CoL+O2+OH)=15.7

\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 1.00M C K1=5.50 B2=9.76 1982ABc (28360) 847  
K3=1.77

-----  
Co++ gl KCl 25°C 1.0M U K1=5.96 B2=10.42 1950EDa (28361) 848  
K3=1.58

\*\*\*\*\*  
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  
-----

Co++ gl KNO3 30°C 1.0M U K1=3.90 B2=7.14 1955GFa (28383) 849

\*\*\*\*\*  
C3H11NO6P2 H4L (6772)  
(Dimethylamino)-N-methylenediphosphonic acid; (CH3)2N.CH(PO3H)2

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

Co++ gl KCl 25°C 0.10M M K1=7.29 1978GMf (28409) 850  
K(Co+HL)=6.09

\*\*\*\*\*  
C3H11NO6P2 H4L (6735)  
N-Methylimino-N,N-bis(methylenephosphonic acid); CH3.N(CH2PO3H)2

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

Co++ gl KCl 25°C 0.20M C K1=8.77 2000KKa (28439) 851  
B(CoHL)=15.05  
B(CoH2L)=19.42  
B(CoH-1L)=-2.39

-----  
Co++ gl KNO3 25°C 0.10M C K1=9.27 1993SKc (28440) 852  
K(CoL+H)=6.59  
K(CoHL+H)=4.42  
\*K(CoL)=-11.3

-----  
Co++ gl NaClO4 25°C 0.10M U K1=9.47 B2=13.96 1988LDa (28441) 853





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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp  NaClO4 20°C 0.20M U          K1=5.56      1981LDa (28757) 867
*****
C4H3N3O5          H3L  Diluturic acid  CAS 480-68-2 (8715)
5-Nitrobarbituric acid, 5-Nitro-2,4,6-pyrimidinetrione;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl    25°C 0.05M C          K(Co+HL)=3.68
*****
C4H4N2          L    Pyridazine      CAS 289-80-5 (1484)
1,2-Diazine, Pyridazine; cyclo(-N:N.CH:CH.CH:CH-)
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.50M U          K1=0.70  B2=1.20  1988KLa (28771) 869
*****
C4H4N2          L    Pyrazine        CAS 290-37-9 (620)
1,4-Diazine, Pyrazine;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp  non-aq 30°C 100% U    M          K(CoA2+L)=2.2
Medium: CHCl3. HA=0,0'-diethyldithiophosphoric acid
*****
C4H4N2O2          HL   Uracil          CAS 66-22-8 (412)
2,4-Dihydroxypyrimidone, 2,4-Pyrimidinedione;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3  37°C 0.10M U    M    K1=3.82      1994MGd (28851) 871
          B(CoAL)=7.27
          *K(CoAL)=-7.45
          *K(Co(OH)AL)=-10.32
HA is 6-aminopenicillanic acid.
-----

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-----
Co++      gl  KNO3   35°C 0.10M U    M    K1=3.83      1989SRc (28852) 872
          K(Co(thiamine)+L)=3.17
-----

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-----
Co++      gl  KNO3   25°C 0.10M U T H    K1=3.76      1983KSa (28853) 873
-----

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```

-----
Co++      gl  KNO3   35°C 0.10M U          K1=3.93  B2=7.77  1981TSa (28854) 874
-----

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-----
Co++      gl  KNO3   45°C 0.10M U          K1=3.2      1974KKa (28855) 875
*****
C4H4N2O2          H2L          CAS 123-33-1 (8346)
-----

```

3,6-Dihydroxypyridazine;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      vlt mixed 25°C 30% C T H    K1=10.93      1992SBb (28875) 876
Method: polarography. Medium: 30% DMSO/H2O, 0.10 M LiClO4.
Data for 15 and 35 C. DH(K1)=-53.4 kJ mol-1, DS(K1)=-44 J K-1 mol-1.
*****
C4H4N2O2S      H2L Thiobarbituric CAS 504-17-6 (4279)
4,6-Dihydroxy-2-mercaptopyrimidine, 2-thiobarbituric acid;
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl NaClO4 31°C 0.10M U T H    K1=6.14 B2=11.08 1984SJa (28883) 877
Also data for 18 and 42 C. DH(K1)=-66.7 kJ mol-1, DS(K1)=-102 J K-1 mol-1
DH(K2)=-47.7, DS(K2)=-62.8.
*****
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
-----
Co++      gl KNO3 35°C 0.10M C          K1=3.21      1996RRa (28934) 878
-----
Co++      gl KNO3 45°C 0.10M C          K1=3.61      1986KZa (28935) 879
*****
C4H4N6      L      8-Azaadenine CAS 1123-54-2 (1884)
8-Aza-6-aminopurine;
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl KNO3 30°C 0.10M U          K1=5.3       1983SKa (28950) 880
-----
Co++      gl KNO3 45°C 0.10M U          K1=4.0       1973TKa (28951) 881
*****
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
-----
Co++      gl alc/w 25°C 50% U M    K1=8.07      1978MCb (28962) 882
                        K(Co(bpy)+L)=7.45
                        K(Co(phen)+L)=7.57
                        K(Co(NTA)+L)=4.55
*****
C4H4O5      H2L Oxobutanedioic CAS 328-42-7 (1733)
2-Oxosuccinic acid, Oxalacetic acid; HOOC.CH2.CO.COOH
-----
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
```



Co++ gl NaClO4 25°C 0.50M U TI K1=1.82 1990MOF (29257) 883  
At 0.1 M, K1=2.23. At 30 C and 0.5 M, K1=1.85.

Co++ gl oth/un 25°C 0.10M U K1=3.1 1958GHc (29258) 884  
K(CoL+Co)=2.3

\*\*\*\*\*  
C4H5NO L Methylisoxazole CAS 5765-44-6 (2045)  
5-Methylisoxazole; C3H2NO.CH3

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

Co++ EMF KNO3 25°C 0.50M U K1=0.20 B2=-0.15 1977LKa (29290) 885  
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  
-----

Co++ gl oth/un 25°C 0.10M U B2=7.88 1977Cwa (29294) 886

\*\*\*\*\*  
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  
-----

Co++ sp oth/un ? ? U K1=5.38 1968MSb (29310) 887

\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 0.50M U K1=0.54 B2=0.77 1976Lkb (29325) 888  
K1 by spectrophotometry = 0.61

\*\*\*\*\*  
C4H5N2Cl L CAS 872-49-1 (7589)  
5-Chloro-1-methylimidazole;

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

Co++ gl NaNO3 25°C 0.50M M K1=2.03 1998KSa (29333) 889

\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 0.50M U K1=0.25 B2=0.51 1988KLa (29344) 890

\*\*\*\*\*



Medium: CH<sub>2</sub>Cl<sub>2</sub>. Data for 15-30 C. H<sub>2</sub>P is 5,10,15,20-tetra(4-methylphenyl)-porphyrin. DH= -13.2 kJ mol<sup>-1</sup>, DS=-9.7 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Co++ gl NaClO<sub>4</sub> 25°C 0.10M C M 1994Mgb (29473) 900  
K(Co(malate)+L)=2.72  
-----

Co++ gl KNO<sub>3</sub> 25°C 0.50M U K1=1.73 B2=3.05 1974LKa (29474) 901  
B3=3.84  
B4=6.16  
-----

\*\*\*\*\*  
C<sub>4</sub>H<sub>6</sub>N<sub>2</sub> L Methylpyrazole CAS 453-58-3 (368)  
3-Methyl-1,2-diazole; C<sub>3</sub>H<sub>3</sub>N<sub>2</sub>.CH<sub>3</sub>  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO<sub>3</sub> 25°C 0.50M U K1=1.43 B2=2.51 1975LWc (29502) 902  
B3=3.30  
-----

\*\*\*\*\*  
C<sub>4</sub>H<sub>6</sub>N<sub>2</sub> L CAS 7554-65-6 (2052)  
4-Methyl-1,2-diazole; C<sub>3</sub>H<sub>3</sub>N<sub>2</sub>.CH<sub>3</sub>  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO<sub>3</sub> 25°C 0.50M U K1=1.54 B2=2.75 1978LKc (29511) 903  
B3=3.63  
B4=4.19  
B5=4.43  
-----

\*\*\*\*\*  
C<sub>4</sub>H<sub>6</sub>N<sub>2</sub> L 4-Me-Imidazole CAS 822-36-6 (353)  
4-Methyl-1,3-diazole; C<sub>3</sub>H<sub>3</sub>N<sub>2</sub>.CH<sub>3</sub>  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO<sub>3</sub> 25°C 0.50M U K1=2.34 B2=4.09 1977L0a (29526) 904  
B3=5.33  
B4=6.67  
-----

\*\*\*\*\*  
C<sub>4</sub>H<sub>6</sub>N<sub>2</sub> L N-Me-Imidazole CAS 616-47-7 (354)  
N-Methyl-1,3-diazole; C<sub>3</sub>H<sub>3</sub>N<sub>2</sub>.CH<sub>3</sub>  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 19°C 100% U T 2000WJa (29561) 905  
K(CoA<sub>2</sub>+L)=3.58  
K(CoA<sub>2</sub>L+L)=0.71  
-----

Medium: acetonitrile. Also data at 0 and 35 C. HA: (difluoroboryl)-dimethylgloxime. DH(CoA<sub>2</sub>+L)=-26.0, DH(CoA<sub>2</sub>L+L)=-18.7 k J mol<sup>-1</sup>.

-----  
Co++ gl NaNO<sub>3</sub> 25°C 0.50M M K1=2.46 1998KSa (29562) 906  
-----

Co++ sp non-aq 20°C 100% C H 1997SZa (29563) 907

K(CoP+L)=3.10

Medium: CH<sub>2</sub>Cl<sub>2</sub>. Data for 15-30 C. H<sub>2</sub>P is 5,10,15,20-tetra(4-methylphenyl)-porphyrin. DH= -29.8 kJ mol<sup>-1</sup>, DS=-42.3 J K<sup>-1</sup> mol<sup>-1</sup>.

Co++ sp none 30°C 0.0 U T H 1987Lda (29564) 908

K(CoA+L=CoAL)=2.64

Data at 30.1 to 51.4 C. A=Schiff base from 4,6-dimethoxysalicylaldehyde and 4-(trifluoromethyl)-o-phenylenediamine. DH=-33.9 kJ mol<sup>-1</sup>.

Co++ cal NaNO<sub>3</sub> 25°C 1.0M C 1983ARa (29565) 909

DH(K1)=-16.94 kJ mol<sup>-1</sup>, DS(K1)=-10.9 J K<sup>-1</sup> mol<sup>-1</sup>.

Co++ sp non-aq 23°C 100% U TIHM 1982RWb (29566) 910

K(CoA+L)=2.16

Medium: CH<sub>3</sub>Cl. A=Tetra(4-methoxyphenyl)porphyrin. In ClCH<sub>2</sub>.CH<sub>2</sub>Cl: K=2.90; in DMF: K=2.56. Also DH and DS values and other solvents

Co++ sp non-aq 23°C 100% U HM 1980ELa (29567) 911

K(CoA+L)=2.32

Medium: toluene. A= "Capped" porphyrin. DH=-13 kJ mol<sup>-1</sup>.

Co++ sp non-aq 25°C 100% U M 1980ELa (29568) 912

K(CoA+L)=2.28

Medium: toluene. A="Homologous capped" porphyrin

Co++ sp non-aq 23°C 100% U 1979BEa (29569) 913

K(CoA+L)=2.32

Medium: toluene. CoA=a substituted porphyrinato-Co(II)  
K(CoAL+O<sub>2</sub>)=4.77

Co++ sp non-aq 20°C 100% U M 1978CBa (29570) 914

K(CoP+L=CoPL)=4.23

P=meso-tetra(alpha,alpha,alpha,alpha-ortho-pivalamidophenyl)-porphin.  
Medium: toluene.

Co++ sp non-aq 21°C 100% U T M 1978DBa (29571) 915

K(CoA+L)=3.82

Medium: toluene. A= Protoporphyrin IX dimethyl-ester. Also enthalpy data for O<sub>2</sub> adduct. At 30 C: K(CoA+L)=3.53; 39 C: 3.33; 49 C: 3.13

Co++ gl KNO<sub>3</sub> 25°C 0.16M M K1=2.29 B2=4.25 1977ASe (29572) 916

B3=5.32

B4=6.70

Co++ gl KNO<sub>3</sub> 25°C 0.50M M K1=2.40 B2= 4.40 1977LBb (29573) 917

B3=5.85

B4=6.95

\*\*\*\*\*

C<sub>4</sub>H<sub>6</sub>N<sub>2</sub>O

L

CAS 13148-65-7 (2050)

2,5-Dimethyl-1,3,4-oxadiazole; C2N2O(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	ISE	KNO3	25°C	0.50M	U		K1=0.26 B2=0.56	1977LGa (29614)	918
Competition with Ag									
*****									
C4H6N2O5		H2L					CAS 25081-31-6	(3003)	
N-Nitrosoiminodiethanoic acid; O:N.N(CH2.COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	30°C	0.10M	U		K1=1.4	1957TBb (29630)	919
*****									
C4H6N2O6		H2L					CAS 25081-33-8	(3004)	
N-Nitroiminodiethanoic acid; O2N.N(CH2.COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	30°C	0.10M	U		K1=1.6	1957TBb (29636)	920
*****									
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
Co++	gl	KNO3	25°C	0.50M	U		K1=-0.13	1985GLa (29643)	921
Competitive potentiometric method using Ag(I) as an auxiliary cation									
Using spectrophotometry, K1=-0.27									
*****									
C4H6N2S		L					CAS 7063-91-4	(1422)	
2-Amino-4-methylthiazole; C3HNS(CH3).NH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U		K1=0.83	1982GKa (29649)	922
*****									
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
Co++	gl	NaClO4	25°C	0.10M	U		K1=5.69 B2=10.99	1977STc (29661)	923
*****									
C4H6N4O		L					CAS 1672-50-0	(5993)	
4,5-Diamino-6-hydroxypyrimidine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	45°C	0.10M	C		K1=4.06	1986KZa (29681)	924

\*\*\*\*\*

C4H6N4O3S2 L (6481)  
2-Acetylamino-1,3,4-thiadiazole-5-sulphonamide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 50% U B2=8.044 1990FBb (29690) 925  
\*\*\*\*\*

C4H6O4 H2L Succinic acid CAS 110-15-6 (112)  
1,4-Butanedioic acid; HOOC.CH2.CH2.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C M 2002BMa (29912) 926

K(CoL+A)=5.61  
K(CoL+B)=7.76  
K(CoL+C)=2.95

HA is 1,2,4-triazole; HB is 3-amino-1,2,4-triazole; HC is 3-mercapto-1,2,4-triazole (1,2,4-triazoline-3-thione)

-----  
Co++ gl KNO3 25°C 0.10M U K1=1.71 1998VAa (29913) 927  
-----

Co++ gl KNO3 25°C 0.1M C K1=1.71 1998VZb (29914) 928  
-----

Co++ gl NaNO3 25°C 0.10M U M K1=6.10 1997ISd (29915) 929  
K(CoL+gly)=4.80  
K(CoL+ala)=4.75  
K(CoL+leu)=4.35  
K(CoL+asp)=6.86

-----  
Co++ gl NaCl 25°C 0.50M C K1=1.26 1989FRa (29916) 930  
B(CoHL)=5.57  
-----

Co++ cal KCl 25°C 0.10M U H 1967Mnc (29917) 931  
DH(K1)=13.4 kJ mol<sup>-1</sup>, DS=87.8 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ gl oth/un 25°C 0.0 U K1=2.37 1965MOb (29918) 932  
-----

Co++ ix oth/un 25°C 0.0 U K1=2.41 1965SMf (29919) 933  
-----

Co++ gl NaClO4 20°C 0.10M U K1=1.70 1963CAa (29920) 934  
K(Co+HL)=0.99  
-----

Co++ dis oth/un 25°C 0.16M U I K1=1.916 1961MMa (29921) 935  
K1=2.80(I=0), 2.207(I=0.04), 2.111(I=0.06), 2.034(I=0.08)

-----  
Co++ gl oth/un 25°C ->0 U T H K1=2.22 1961Mnc (29922) 936  
DH(K1)=10.0 kJ mol<sup>-1</sup> DS=82.0. K1=2.08(0 C), 2.12(15 C), 2.29(35 C), 2.38(45 C)

-----  
Co++ sp oth/un 20°C 0.40M U K1=0.14 1953BBb (29923) 937

\*\*\*\*\*

C4H6O4 HL Acetoxyacetic a CAS 13831-30-6 (4249)  
Acetoxyethanoic acid; CH3.CO2.CH2.COOH

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

Co++ gl NaNO3 30°C 0.40M U K1=0.39 1970BTa (30085) 938

\*\*\*\*\*

C4H6O4 H2L Me-Malonic Acid CAS 516-15-2 (816)  
Methylpropanedioic acid; HOOC.CH(CH3).COOH

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

Co++ gl NaClO4 25°C 0.10M U K1=2.45 19680Va (30112) 939

\*\*\*\*\*

C4H6O4S H2L Thiodiacetic CAS 123-93-3 (140)  
2,2'-Thiodiglycolic acid, Thiodiethanoic acid; HOOC.CH2.S.CH2.COOH

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

Co++ gl KNO3 35°C 0.10M C M K1=3.60 1999DSb (30204) 940  
B(CoAL)=6.00

A is thiamine hydrochloride.

-----  
Co++ gl KNO3 35°C 0.10M U M 1990RSd (30205) 941

B(Co(asp)L)=5.56  
K(CoL+en)=5.54  
K(CoL+his)=6.83  
K(CoL+A)=2.06

K(CoL+met)=3.88, K(CoL+B)=4.14, K(CoL+trp)=4.14,  
K(CoL+HC)=4.00. A is imidazole, HB is phenylalanine, H2C is tyrosine.

-----  
Co++ gl NaClO4 25°C 0.10M U TIH K1=3.72 B2=6.41 1983DBb (30206) 942  
-----

Co++ gl NaClO4 25°C 0.10M U K1=3.51 B2=6.19 1970PPa (30207) 943  
K(Co+HL)=1.72

-----  
Co++ EMF NaClO4 25°C 0.10M U K1=3.3 1966SYa (30208) 944  
-----

Co++ gl KCl 30°C 0.10M U K1=3.4 B2=5.5 1957TBb (30209) 945

\*\*\*\*\*

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  
-----

Co++ gl NaClO4 30°C 0.10M U K1=6.56 B2=12.06 1988NDa (30313) 946  
-----

Co++ gl KCl 25°C 0.20M C K1=6.71 B2=11.15 1983HSa (30314) 947  
B(Co3L4)=28.91

B(Co2L3)=19.61

-----  
Co++ gl KNO3 20°C 0.10M U K1=6.53 1977CAAd (30315) 948  
K(Co+HL)=0.00  
-----

Co++ gl KNO3 25°C 0.10M U K1=6.88 1965LMa (30316) 949  
-----

Co++ gl oth/un 25°C ? U K1=6.31 1959CFa (30317) 950  
\*\*\*\*\*  
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  
-----

Co++ gl NaClO4 25°C 0.10M U K1=1.5 1968SKd (30411) 951  
\*\*\*\*\*  
C4H6O4Se H2L CAS 6228-62-2 (984)  
Selenodiethanoic acid; HOOC.CH2.Se.CH2.COOH  
-----

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

Co++ gl KNO3 25°C 0.10M C K1=2.47 1975LPa (30448) 952  
K(Co+HL)=1.37  
-----

Co++ gl NaClO4 25°C 0.10M U K1=2.3 1966SYa (30449) 953  
\*\*\*\*\*  
C4H6O5 H2L Malic acid CAS 617-48-1 (393)  
2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; HOOC.CH2.CH(OH).COOH  
-----

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

Co++ gl KNO3 25°C 0.10M C M K1=3.10 2002BMa (30571) 954  
K(CoL+A)=5.17  
K(CoL+B)=7.26  
K(CoL+C)=2.83  
-----

HA is 1,2,4-triazole; HB is 3-amino-1,2,4-triazole; HC is 3-mercapto-1,2,4-triazole (1,2,4-triazoline-3-thione)  
-----

Co++ gl NaNO3 25°C 0.10M U M K1=5.65 1997ISd (30572) 955  
K(CoL+gly)=4.40  
K(CoL+ala)=4.65  
K(CoL+leu)=4.11  
K(CoL+asp)=6.10  
-----

Co++ gl NaClO4 20°C 0.10M U K1=1.64 1963CAa (30573) 956  
K(Co+HL)=2.86  
-----

Co++ dis oth/un 25°C 0.16M U I K1=2.012 1961MMA (30574) 957  
K1=3.00(I=0), 2.373(I=0.04), 2.281(I=0.06), 2.198(I=0.08)  
-----



\*\*\*\*\*

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
Co++	gl	NaClO4	25°C	0.10M	M	M		K1=3.24 B(Co(ida)L)=6.69	1987NDb (30840)	958
Co++	gl	KCl	25°C	0.10M	C			K1=2.74 K(CoL+H)=2.28	1984MMg (30841)	959
Co++	gl	NaClO4	25°C	0.10M	U	TIH		K1=3.07	1983DBb (30842)	960
Co++	gl	KNO3	25°C	0.10M	U			K1=2.65	1975MTc (30843)	961
Co++	gl	KCl	30°C	0.10M	U			K1=2.7	1957TBb (30844)	962

\*\*\*\*\*

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
Co++	gl	KNO3	25°C	0.10M	C	M		K1=2.88 K(CoL+A)=5.03 K(CoL+B)=7.02 K(CoL+C)=2.78	2002BMa (30972)	963

HA is 1,2,4-triazole; HB is 3-amino-1,2,4-triazole; HC is 3-mercapto-1,2,4-triazole (1,2,4-triazoline-3-thione)

\*\*\*\*\*

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
Co++	gl	NaNO3	25°C	0.10M	U	M		K1=5.22 K(CoL+gly)=4.45 K(CoL+ala)=4.15 K(CoL+leu)=3.79 K(CoL+asp)=5.95	1997ISd (31005)	964

Co++ oth oth/un 25°C dil C K1=3.225 1982HKa (31006) 965  
Method: isotachopheresis. Medium: 0.006-0.019 M tartrate buffer, pH 5.1.

\*\*\*\*\*

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
Co++	ix	oth/un	30°C	dil	C	T		K1=2.48	1992LHb (31171)	966

Medium: 0.2-5.0 mM tartaric acid eluent. At 40 C, K1=2.47

-----  
Co++ oth NaClO4 40°C 0.10M C B2=4.84 1982SYb (31172) 967  
Method: paper electrophoresis. Medium: 0.10 M HClO4.  
-----

Co++ oth oth/un 40°C 0.10M U M 1981YSa (31173) 968  
B(CoL(NTA))=5.33  
Method: paper electrophoresis  
-----

Co++ gl NaClO4 32°C 0.01M U 1970TPa (31174) 969  
K(Co+H2L=CoL+2H)=-5.08  
K(CoL=Co(H-1)L+H)=-7.46  
K(Co(H-1)L=Co(H-2)L+H)=-9.88  
K(Co+L=Co(H-1)L+H)=-5.45  
K(Co+HL=CoL+H)=-1.38  
-----

Co++ gl oth/un 25°C 0.0 U K1=3.08 B2=3.78 1965MOb (31175) 970  
-----

Co++ ix oth/un 25°C 0.0 U K1=3.02 B2=4.21 1965SMf (31176) 971  
-----

Co++ dis NaClO4 20°C 0.10M U K1=2.8 1963STc (31177) 972  
-----

Co++ dis oth/un 25°C .155M U I K1=2.098 1961MMa (31178) 973  
K1=3.08(I=0), 2.50(I=0.035), 2.377(I=0.055), 2.288(I=0.075)  
-----

\*\*\*\*\*  
C4H7NO2 HL (8137)  
(S)-Azetidine-2-carboxylic acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=5.4 B2= 9.90 1989ARa (31440) 974  
K3=3.4  
-----

\*\*\*\*\*  
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  
-----  
Co++ gl alc/w 25°C 75% U K1=6.8 B2=11.70 1986BTa (31453) 975  
Medium: 75% MeOH/H2O, 0.1 M NaClO4  
-----

\*\*\*\*\*  
C4H7NO2 HL CAS 5687-86-5 (8042)  
Cyclopropanecarbohydroxamic acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp NaNO3 25°C 0.10M C B2=9.11 1997NWa (31458) 976  
-----

\*\*\*\*\*  
C4H7NO2S HL Thioproline CAS 444-27-9 (1183)  
Thiazolidine-4-carboxylic acid; C3H6NS.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.15M	U			K1=3.025 B2=5.354	1976FJa (31471)	977
*****										
		C4H7NO3	HL					CAS 543-24-8 (3586)		
N-Acetylglycine; CH3.CO.NH.CH2.COOH										
Co++	gl	NaNO3	30°C	0.40M	U			K1=0.54	1970BTa (31497)	978
*****										
		C4H7NO4	H2L	Aspartic acid				CAS 56-84-8 (21)		
Aminobutanedioic acid; H2N.CH(CH2.COOH).COOH										
Co++	gl	KNO3	25°C	0.10M	C	M		K1=6.74 K(CoL+A)=3.75	2003AHa (31784)	979
HA is 3-amino-5-mercapto-1,2,4-triazole.										
Co++	gl	NaNO3	25°C	0.10M	C	M		K1=5.81 B2=10.12 K(CoA+L)=6.06	2000KAb (31785)	980
H2A=Dipicolinic acid.										
Co++	gl	NaNO3	25°C	0.10M	C			K1=5.90 B2= 9.82 B(CoH-1L)=-3.33	2000MSa (31786)	981
Co++	gl	KNO3	25°C	0.10M	C	M		K1=6.57 K(CoL+A)=3.85 B(CoLA)=10.42 K(CoL+B)=3.68 B(CoLB)=10.25	1999AAa (31787)	982
K(CoHL+C)=2.81. HA=MOPSO, HB=MOPS, HC=DIPSO.										
Co++	gl	KNO3	25°C	0.10M	C			K1=6.14	1999BIa (31788)	983
Co++	gl	alc/w	25°C	20%	M	M		K1=6.65 K(CoL+oxine)=8.38	1998ABa (31789)	984
Medium: 20% w/w EtOH/H2O, 0.1 M KNO3.										
Co++	gl	NaNO3	25°C	0.10M	U	M		K1=5.90 B2= 9.82 B(CoH-1L)=-3.33 B(CoAL)=8.68 B(CoH-1AL)=-1.33 B(Co2AL2)=18.08	1998MSe (31790)	985
B(Co2(H-1A)L2)=10.28. A is imidazole.										
Co++	gl	NaNO3	25°C	0.10M	U			K1=7.00	1997ISd (31791)	986

Co++ gl KNO3 25°C 0.10M M M K1=6.74 1996AEa (31792) 987  
Data for ternary complexes with dipicolinic acid.

-----  
Co++ gl KNO3 20°C 0.01M U K1=5.27 B2=8.21 1996EMa (31793) 988  
-----

Co++ gl alc/w 20°C 50% M M K1=6.47 1995AMb (31794) 989  
K(CoA+L)=7.69  
Medium: 50% v/v EtOH/H2O, 0.20 M NaClO4. A is 2,2',2"-terpyridine.

-----  
Co++ gl NaClO4 25°C 0.20M C K1=6.07 1993BAb (31795) 990  
-----

Co++ nmr KNO3 25°C 1.0M U K1=5.86 B2=16.03 1992SZb (31796) 991  
K3=11.35  
K(Co+HL)=0.97

-----  
Co++ gl KNO3 30°C 0.10M U 1990APa (31797) 992  
K(Co+H2L=CoL+2H)=-7.34  
\*K(CoL)=-8.83  
K(Co+2H2L=CoL2+4H)=-16.47  
K(Co+HL=CoL+H)=-3.83  
-----

Co++ gl KNO3 25°C 0.10M U M K1=6.30 1989MAc (31798) 993  
K(CoA+L)=8.50  
H4A is adenosine-5'-triphosphoric acid.

-----  
Co++ gl KNO3 25°C 0.10M C M K1=6.20 1989MAd (31799) 994  
K(CoA+L)=9.28  
B(CoAL)=16.33  
H2A is N-(2-acetamido)imino diethanoic acid.

-----  
Co++ gl KNO3 35°C 0.20M U M K1=5.78 B2=10.50 1989RVa (31800) 995  
K(CoA+L)=5.10  
A=bis(imidazol-2-yl)methane

-----  
Co++ gl KNO3 25°C 0.10M M K1=5.81 B2= 9.89 1981GVa (31801) 996  
-----

Co++ vlt KNO3 25°C 1.00M U 1977HDa (31802) 997  
K1eff=7.60  
Keff at pH 7

-----  
Co++ gl KNO3 25°C 0.10M U K1=5.96 B2=10.23 1965RWa (31803) 998  
-----

Co++ gl oth/un 20°C 0.01M U B2=10.7 1952ALa (31804) 999  
-----

Co++ gl KCl 30°C 0.10M U K1=5.90 B2=10.18 1952CMB (31805)1000  
\*\*\*\*\*  
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

-----  
Co++ gl KNO3 35°C 0.10M C M K1=7.83 1999DSb (32178)1001  
B(CoAL)=10.19

A is thiamine hydrochloride.

-----  
Co++ gl NaNO3 25°C 0.10M M K1=7.06 1996KSc (32179)1002

-----  
Co++ gl KNO3 25°C 0.10M C M K1=6.94 1991DAc (32180)1003  
Data for ternary complexes with acetohydroxamic acid

-----  
Co++ gl KNO3 25°C 0.10M C M K1=6.94 1990DAb (32181)1004  
K(CoL+A)=4.63  
B(CoLA)=11.57

H2A: salicylaldehyde

-----  
Co++ gl KNO3 25°C 0.10M C M K1=6.94 1990DAc (32182)1005  
K(CoL+A)=3.62  
B(CoAL)=10.56

HL: benzohydroxamic acid

-----  
Co++ gl KNO3 25°C 0.15M U M K1=6.96 B2=12.23 1987FZa (32183)1006  
B(CoL(Gly))=11.15  
B(CoL(Ala))=10.79  
B(CoL(Met))=10.53  
B(CoL(Phe))=10.55

B(CoL(Ser))=10.52, B(CoL(Asn))=10.36, B(CoL(Nor-valine))=10.63

-----  
Co++ gl NaClO4 25°C 0.10M M K1=7.08 1987NDb (32184)1007

-----  
Co++ cal NaNO3 25°C 0.50M U TIH 1984VRa (32185)1008  
DH(K1)=-8.9 kJ mol<sup>-1</sup>; DS(K1)=95 J mol<sup>-1</sup> K<sup>-1</sup>; DH(B2)=-26.6; DS(B2)=136

-----  
Co++ gl NaClO4 25°C 0.10M U TIH K1=7.00 B2=11.99 1983DBb (32186)1009

-----  
Co++ gl NaClO4 25°C 1.00M U K1=6.54 B2=11.95 198000b (32187)1010

-----  
Co++ gl KNO3 20°C 0.10M U H K1=6.97 B2=12.31 1964ANa (32188)1011  
By calorimetry: DH(K1)=-8.9 kJ mol<sup>-1</sup>, DS=102.8 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-25.1,  
DS=149.6

-----  
Co++ gl KCl 30°C 0.10M U K1=6.95 B2=12.29 1952CMA (32189)1012

\*\*\*\*\*

C4H7NO5 H2L (1234)

N-Hydroxyiminodiethanoic acid; HO.N(CH2.COOH)2

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

-----  
Co++ gl KNO3 25°C 0.10M C K1=5.44 B2=9.44 1987AKa (32425)1013

\*\*\*\*\*

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
-----
Co++      gl  oth/un 25°C 0.01M U          K1=4.8      1960HJa (32437)1014
*****
C4H7N3S          L          CAS 14068-53-2 (1456)
2-Amino-5-ethyl-1,3,4-thiadiazole; C2N2S(C2H5).NH2
-----
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3  25°C 0.50M U          K1=0.92     1985GLa (32445)1015
*****
C4H7N3S          L          CAS 13275-68-8 (1427)
2-Ethylamino-1,3,4-thiadiazole; C2HN2S.NHC2H5
-----
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3  25°C 0.50M U          K1=0.80    B2=1.13    1982GLa (32451)1016
                        B3=0.99
*****
C4H8N2O2          H2L    Dimethylglyoxim CAS 95-45-4 (2032)
2,3-Butanedione dioxime, Dimethylglyoxime; CH3.(C:NOH).(C:NOH).CH3
-----
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaClO4 25°C 0.30M U I          K(Co+2HL)=9.98
1982PNa (32520)1017
In 50% dioxan/H2O: K(Co+2HL)=11.88
-----
```

```
-----
Co++      vlt non-aq 20°C 100% U M          1980KTa (32521)1018
                        K(CoL2+A)=2.9
                        K(CoL2+2A)=2.5
                        K(CoL2A(DMSO)+A)=-0.3
Medium: DMSO, 0.1 M NaClO4. A=pyrrolidine. Other ligands also studied
-----
```

```
-----
Co++      vlt non-aq 20°C 100% U M          1980KTa (32522)1019
                        K(CoL2+A)=2.5
                        K(CoL2+2A)=2.2
                        K(CoL2A(DMSO)+A)=-0.3
Medium: DMSO, 0.1 M NaClO4. A=piperidine. Other ligands also studied
-----
```

```
-----
Co++      vlt non-aq 20°C 100% U M          1980KTa (32523)1020
                        K(CoL2+A)=2.3
                        K(CoL2+2A)=2.2
                        K(CoL2A(DMSO)+A)=-0.1
Medium: DMSO, 0.1 M NaClO4. A=butylamine. Other ligands also studied
-----
```

```
-----
Co++      vlt alc/w 25°C 10% U          K1=9.14    B2=17.79  1974ANb (32524)1021
-----
```

Co++ sp NaClO4 ? 6.0M U I 1968BPa (32525)1022

K(CoHL2+I)=3.86

K(CoHL2+2I)=6.3

K(CoHL2+I)=1.38(I=1),1.54(I=2),1.80(I=3),2.40(I=4),3.04(I=5); K(CoHL2+2I)=  
K=3.4(1),3.7(2),4.2(3),4.8(4),5.5(5). Also in 1-6 M NaNO3 and LiNO3

Co++ gl diox/w 25°C 75% U I K1=12.20 B2=22.44 1963BAb (32526)1023  
Medium: 75% dioxan. K1=8.35(0%),11.01(50%); B2=16.98(0%),20.68(50%)

Co++ gl diox/w 25°C 50% U K1=11.75 B2=21.25 1958BPa (32527)1024

Co++ gl diox/w 25°C 50% U K1=9.80 B2=18.94 1952FRb (32528)1025

\*\*\*\*\*

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

Co++ gl KNO3 25°C 0.10M C T H K1=4.37 2001BTa (32667)1026  
Data for 15-45 C. DH(K1)=-11.73 kJ mol-1, DS(K1)=-44.3 J K-1 mol-1.

Co++ gl KNO3 25°C 0.10M C K1=4.37 1999BIa (32668)1027

Co++ gl KNO3 25°C 0.10M M M K1=4.38 1996AEa (32669)1028  
Data for ternary complexes with dipicolinic acid.

Co++ gl NaCl 25°C 1.00M C K1=4.88 B2=8.77 1996BFb (32670)1029

Co++ gl KNO3 0°C 0.10M U M K1=4.79 B2=8.78 1994VKb (32671)1030  
K3=2.72

Ternary complexes in Co-Asp-02 system : K(2CoL3+02=Co2L6O2)=4.74-6.29,  
K(2CoL3+0H+02=Co2L6O2OH)= -4.04 - -4.42

Co++ gl NaClO4 25°C 0.20M C K1=4.50 1993BAb (32672)1031

Co++ gl KNO3 25°C 0.15M U K1=4.51 B2=8.01 1987FZa (32673)1032

Co++ gl KNO3 25°C 0.10M U T H K1=4.48 B2=8.12 1980ZYb (32674)1033

Co++ gl NaClO4 25°C 3.00M C K1=4.903 B2=9.029 1974BWa (32675)1034  
B3=11.855

Co++ gl KNO3 25°C 0.10M U K1=4.51 B2=8.01 1965RWa (32676)1035

Co++ gl KNO3 25°C 0.15M U K1=4.55 B2=8.13 1953TSa (32677)1036  
K3=1.83

Co++ gl oth/un 20°C 0.01M U B2=8.40 1950ALa (32678)1037

\*\*\*\*\*

C4H8N2O3 HL Gly-Gly CAS 556-50-3 (54)

Glycyl-glycine; H<sub>2</sub>N.CH<sub>2</sub>.CO.NH.CH<sub>2</sub>.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KN03	25°C	0.1M	U			K(Co+HL)=3.49 K(CoL+H)=11.25 K(CoHL+HL)=2.39 K(CoHL2+H)=10.95 K(CoL2+H)=11.14; K(CoL+HL)=2.69	2003PGa (32996)	1038
Co++	gl	NaCl04	20°C	0.10M	U	M		K1=3.41 B2=5.98 K(CoL2=CoH-1L2+H)=6.0 K1(O2)=10.0 K2(O2)=-10.6 K1(O2) = K(2CoH-1L2 + O2 = Co2H-2L4O2) (reversible O2 binding) K2(O2) = K(2CoH-1L2 + O2 = Co2H-4L4O2 + 2H)	1988KUa (32997)	1039
Co++	gl	NaN03	37°C	0.15M	M	M		K1=2.97 B2=6.45 B(CoH-1L)=-7.32 B(CoLA)=8.46 B(CoHLA)=17.05 A=pyridoxamine. Also, B(CoLB3)=13.93, B(CoL2B2)=12.12; B=imidazole. Also ternary CoHLAB complexes.	1987M0b (32998)	1040
Co++	oth	NaCl04	35°C	0.10M	C	M		K1=3.30 B2= 5.50 K(Co(nta)+L)=2.69 Method: paper electrophoresis. Medium pH 8.5.	1986SYa (32999)	1041
Co++	gl	NaN03	35°C	0.10M	U	M		K1=3.10 K(CoL+CMP)=1.59 H2CMP=cytidine-5'-monophosphoric acid	1985KSc (33000)	1042
Co++	gl	KCl	25°C	0.20M	C	M		K(Co(DOPA)+L)=3.17 B(CoHL(DOPA))=22.27 Ternary data also with Dopamine, Adrenaline and Noradrenaline H3DOPA=3,4-dihydroxyphenylalanine	1984KDb (33001)	1043
Co++	gl	NaN03	30°C	0.10M	U			B(CoH-1L)=-5.68	1979EHa (33002)	1044
Co++	gl	KN03	25°C	0.10M	C			K1=3.07 K[Co(H-1L)+H]=9.35	1977HMd (33003)	1045
Co++	gl	NaCl	25°C	0.12M	U			K1=3.18 B2=5.92	1977PNa (33004)	1046
Co++	gl	NaCl	25°C	0.12M	U			K1=3.18 B2= 5.92	1976PNa (33005)	1047
Co++	gl	NaCl	25°C	0.10M	U			K1=2.94 B2=5.42	1959BRb (33006)	1048



-----  
Co++ ix oth/un 25°C 0.15M U K1=3.00 B2=5.28 1957LDa (33007)1049  
-----

Co++ gl oth/un 25°C 0.15M U K1=3.08 B2=5.30 1957LDa (33008)1050  
-----

Co++ gl KCl 25°C .058M U T K1=6.28 1957LYa (33009)1051  
Ø C: B2=6.96  
-----

Co++ gl oth/un 25°C 0.02M U T K1=3.23 B2=5.79 1956DRb (33010)1052  
4Ø C: K1=3.08, K2=2.37  
-----

Co++ gl oth/un 26°C 0.03M U K1=3.04 B2=5.30 1955G0a (33011)1053  
-----

Co++ gl KNO3 25°C 1.0M U K1=2.73 B2=5.02 1954TKb (33012)1054  
-----

Co++ gl oth/un 21°C 0.01M U B2=5.8 1952PEa (33013)1055  
Medium: CoCl2.  
-----

Co++ gl oth/un 25°C ->Ø U K1=3.49 B2=5.88 1951M0a (33014)1056  
\*\*\*\*\*  
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  
-----

Co++ gl KCl 30°C 0.10M U K1=6.0 B2=10.9 1957TBb (33079)1057  
\*\*\*\*\*  
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  
-----

Co++ gl KCl 25°C 0.20M C K1=7.10 B2=12.00 1990FBa (33131)1058  
B(CoHL)=13.71  
B(CoHL2)=19.92  
B(CoH-1L2)=1.87  
\*\*\*\*\*

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  
-----

Co++ gl KCl 25°C 0.50M C K1=7.56 B2=12.86 1988LEb (33147)1059  
B(CoHL)=13.91  
B(Co2L3)=23.43  
B(CoH-1L2)=2.46  
\*\*\*\*\*

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
Co++	oth	NaClO4	25°C	2.0M	U		K1=0.62	1990FTa (33320)	1060

Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.

Co++	sp	NaClO4	25°C	2.00M	U	I	K1=0.59 B2=0.76	1974GMb (33321)	1061
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Co++	EMF	NaClO4	25°C	2.00M	U		K1=0.66 B2=0.88	1970FMa (33322)	1062
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Co++	sp	NaClO4	25°C	2.00M	U		K1=0.61	1970GFa (33323)	1063
------	----	--------	------	-------	---	--	---------	-----------------	------

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 C4H8O2S H2L CAS 26473-48-3 (3018)  
 2-Mercaptobutanoic acid; CH3.CH2.CH(SH)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KCl	30°C	0.10M	U			1964PCa (33361)	1064
------	----	-----	------	-------	---	--	--	-----------------	------

K(Co+HL)=2.15

\*\*\*\*\*  
 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
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Co++	gl	diox/w	30°C	50%	U		K1=3.06	1956IFa (33402)	1065
------	----	--------	------	-----	---	--	---------	-----------------	------

\*\*\*\*\*  
 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
-------	-----	--------	------	------	-----	-------	-------------	-----------	--------

Co++	con	oth/un	25°C	0.10M	U		K1=1.68	1971KHb (33440)	1066
------	-----	--------	------	-------	---	--	---------	-----------------	------

Co++	EMF	NaClO4	25°C	1.0M	U		K1=1.45 B2=2.43	1967TGa (33441)	1067
------	-----	--------	------	------	---	--	-----------------	-----------------	------

K3=0.3

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

Co++	oth	NaClO4	25°C	2.0M	U		K1=1.46	1990FTa (33574)	1068
------	-----	--------	------	------	---	--	---------	-----------------	------

Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.

Co++	EMF	NaClO4	25°C	2.00M	U		K1=1.49 B2=2.38	1978MMg (33575)	1069
------	-----	--------	------	-------	---	--	-----------------	-----------------	------

B3=3.04

Co++ sp NaClO4 25°C 2.00M U I K1=1.43 B2=1.83 1974Gmb (33576)1070

-----  
Co++ gl KCl 30°C 0.10M U K1=1.95 1938CKa (33577)1071

\*\*\*\*\*

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

-----  
Co++ oth NaClO4 25°C 2.0M U K1=0.83 1990FTa (33616)1072

Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.

-----  
Co++ EMF NaClO4 25°C 2.00M U K1=0.91 B2=1.08 1978MMg (33617)1073

B3=1.26

-----  
Co++ sp NaClO4 25°C 2.00M U I K1=0.75 B2=1.15 1974Gmb (33618)1074

\*\*\*\*\*

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

-----  
Co++ EMF NaClO4 25°C 2.00M U K1=0.45 1978MMg (33653)1075

-----  
Co++ sp NaClO4 25°C 2.00M U I K1=0.48 B2=1.04 1974Gmb (33654)1076

\*\*\*\*\*

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

-----  
Co++ sp none 20°C 0.0 U T H 1987Lda (33733)1077

K(CoA+L=CoAL)=0.33

Data at -1.7 to 19.7 C. A=Schiff base from 4,6-dimethoxysalicylaldehyde and 4-(trifluoromethyl)-o-phenylenediamine. DH=-23.4 kJ mol<sup>-1</sup>.

-----  
Co++ sp non-aq 21°C 100% U T M 1978DBa (33734)1078

K(CoA+L)=1.50

Medium: toluene. A=Protoporphyrin IX dimethyl-ester. Also enthalpy data for O2 adduct. At 30 C: K(CoA+L)=1.36; 39 C: 1.20; 49 C: 1.10

\*\*\*\*\*

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

-----  
Co++ sp oth/un 25°C ? U M 1981CKb (33791)1079

K(Co(C6H5)4porphin+L)=2.09

Co++ ISE R4N.X 25°C 2.00M U K1=2.22 B2=3.41 1969PDa (33792)1080  
 K3=0.88  
 K4=0.74  
 K5=0.78

Medium: NH4NO3

\*\*\*\*\*

C4H9NO2 HL Aminoisobutyric CAS 144-90-1 (188)  
 2-Amino-2-methylpropanoic acid; H2N.C(CH3)2.COOH

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

Co++ gl KCl 20°C 0.10M U K1=4.11 B2=7.51 1963IPa (33835)1081

\*\*\*\*\*

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  
 -----

Co++ gl NaNO3 25°C 0.10M M K1=4.164 B2=7.848 1975SSd (33905)1082

Co++ gl KCl 25°C 0.05M U K1=4.21 B2=7.71 1972GMb (33906)1083

Co++ gl KCl 40°C 0.20M U T H K1=4.16 B2=7.17 1965SMb (33907)1084  
 At 15C: K1=4.31, K2=3.19  
 DH(K1)=-10.5 kJ mol<sup>-1</sup>, DS=46.0 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-12.5, DS=16.7

-----  
 Co++ gl KCl 30°C 0.10M U K1=4.28 B2=7.60 1964PCa (33908)1085

\*\*\*\*\*

C4H9NO2 HL 3-Aminobutyric CAS 2835-82-7 (2894)  
 3-Aminobutanoic acid; CH3.CH(NH2).CH2.COOH

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

Co++ gl NaNO3 25°C 0.10M M K1=3.527 1975SSd (33951)1086

Co++ gl KCl 40°C 0.20M U T H K1=3.44 B2=5.70 1965SMb (33952)1087  
 K1=10.44(15 C), 10.19(25 C); K2=3.50(15 C), 3.55(25 C); DH(K1)=-7.1 kJ mol<sup>-1</sup>  
 DS=46.0 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-13.8, DS=0. By ion exchange: K1=3.44(40 C)

\*\*\*\*\*

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  
 -----

Co++ gl NaClO4 30°C 1.0M U K1=1.43 B2=2.63 1966HJa (34001)1088

\*\*\*\*\*

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

-----  
Co++ gl KNO3 25°C 0.10M U M 1972IVc (34029)1089  
K(CoA+L)=3.40

H2A=iminodiethanoic acid

\*\*\*\*\*

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

-----  
Co++ oth NaCl04 35°C 0.10M C K1=4.25 B2= 7.80 1998TEa (34092)1090

Method: paper electrophoresis.

-----  
Co++ gl KNO3 25°C 0.10M U K1=4.12 B2=7.61 1964LMa (34093)1091

\*\*\*\*\*

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

-----  
Co++ gl KNO3 20°C 0.01M U K1=4.32 B2=7.21 1996EMa (34274)1092

-----  
Co++ gl KNO3 25°C 0.1M U M K1=4.54 B2= 8.23 1992SPb (34275)1093  
K3=2.53

-----  
Co++ gl KNO3 25°C 0.10M U M K1=4.38 1989MAc (34276)1094  
K(CoA+L)=4.00

H4A is adenosine-5'-triphosphoric acid.

-----  
Co++ gl KNO3 25°C 0.10M C M K1=4.38 1989MAd (34277)1095

K(CoA+L)=4.20

B(CoAL)=11.25

H2A is N-(2-acetamido)imino diethanoic acid.

-----  
Co++ gl KNO3 35°C 0.20M U M K1=4.13 B2=7.91 1989RVa (34278)1096

K(CoA+L)=3.64

A=bis(imidazol-2-yl)methane

-----  
Co++ gl oth/un 20°C 0.10M U K1=4.31 B2=7.16 1987MTa (34279)1097

-----  
Co++ gl KNO3 25°C 0.10M U K1=4.32 1987MTb (34280)1098

-----  
Co++ gl NaNO3 25°C 0.10M C K1=4.298 B2= 7.76 1982KPc (34281)1099

B(CoH-1L2)=-1.94

-----  
Co++ gl NaNO3 25°C 0.10M U K1=4.25 B2=8.18 1981ISb (34282)1100

K values for D, L and DL isomers. For the allo isomer, K1=4.00, K2=3.21

-----  
Co++ cal NaNO3 25°C 0.10M C H 1978ISc (34283)1101

For L-Thr and DL-Thr: DH(K1)=-10.8 kJ mol<sup>-1</sup>, DS=45 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=

-8.1, DS=48. For L-allo-Thr: DH(K1)=-8.2, DS=49; DH(K2)=-4.8, DS=45.

-----  
Co++ gl KCl 25°C 0.05M U T K1=4.38 B2=8.01 1972GMb (34284)1102  
K1(20 C)=4.39, K1(35 C)=4.33, K2(20 C)=3.64, K2(35 C)=3.50  
-----

Co++ gl KNO3 40°C 0.20M U T H K1=4.37 B2=7.72 1968Rmb (34285)1103  
K1=4.50(15 C),4.43(25 C); K2=3.48(15 C),3.41(25 C)  
DH(B2)=-18.0 kJ mol<sup>-1</sup>, DS=92 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*  
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  
-----

Co++ gl KCl 25°C 0.10M U K1=4.30 B2=7.81 1971BDc (34355)1104  
\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.50M U K1=2.36 1985WTa (34364)1105  
\*\*\*\*\*

C4H9N3O2 HL CAS 57-00-1 (8275)  
Methylguanidoethanoic acid;  
-----

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

Co++ gl NaClO4 20°C 0.10M U T H K1=2.99 B2= 5.33 1983SSg (34418)1106  
Also data for 30 and 40 C. DH(B2)=-5.61 kJ mol<sup>-1</sup>, DS(B2)=219 J K<sup>-1</sup> mol<sup>-1</sup>.  
\*\*\*\*\*

C4H10NO5P H3L (6029)  
2-Amino-3-phosphonatobutanoic acid; CH3.CH(H2O3P).CH(NH2).COOH  
-----

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

Co++ gl KCl 20°C 0.10M U K1=7.77 1987BDc (34449)1107  
K(Co+HL)=2.82  
\*\*\*\*\*

C4H10NO5P H3L CAS 6323-99-5 (6043)  
2-Amino-4-phosphonatobutanoic acid; H2O3P.CH2.CH2.CH(NH2)COOH  
-----

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

Co++ gl KCl 25°C 0.20M C K1=5.44 B2=8.69 1989KFb (34461)1108  
-----

Co++ gl KCl 20°C 0.10M U K1=5.16 1987BDc (34462)1109  
K(Co+HL)=3.00  
\*\*\*\*\*

C4H10NO6P H2L CAS 6401-59-8 (2399)

O-Phospho-2-methylserine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.20M	C			K1=5.28 B2=8.96 K(Co+HL)=1.71 K(CoHL+L)=1.71 K(CoL+H)=6.50	1978MAc	(34474)1110

\*\*\*\*\*

C4H10NO6P H2L CAS 1114-81-4 (2400)

O-Phospho-threonine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.20M	C			K1=5.47 B2=9.05 K(Co+HL)=2.03 K(CoL+H)=6.23	1978MAc	(34482)1111

\*\*\*\*\*

C4H10N2 L CAS 56123-06-9 (8023)

1,3-Diamino-2-methylenepropane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U			K1=4.45 B2= 8.04	1975HSb	(34489)1112

\*\*\*\*\*

C4H10N2O L CAS 1857-19-8 (3015)

Sarcosine methylamide; CH3.NH.CH2.CO.NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	oth/un	25°C	0.01M	U			K1=2.10 B2=4.20	1959DLb	(34513)1113

\*\*\*\*\*

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
Co++	gl	NaClO4	25°C	1.00M	U			K1=7.51 B2=14.05	198000b	(34564)1114
Co++	gl	KNO3	25°C	0.10M	C			K1=6.75 B2=12.00 B(CoHL)=13.60 B(CoHL2)=19.92	1976BPb	(34565)1115

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.10M	U			K1=7.07 B2=12.46 K(Co+HL)=3.46 K(CoHL+L)=6.40 K(2CoL2+O2=CoL2(O2)CoL2)=7.77	1976GPa	(34566)1116

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	oth/un	20°C	0.01M	U			B2=12.8	1952ALa	(34567)1117

\*\*\*\*\*

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  
-----  
Co++ gl KCl 25°C 0.50M C K1=8.123 B2=13.050 1985LEa (34591)1118  
\*\*\*\*\*

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  
-----  
Co++ gl KCl 25°C 0.50M C K1=5.787 B2=10.299 1989LEc (34601)1119  
B(Co2L)=8.807  
B(CoH-1L2)=1.429  
\*\*\*\*\*

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  
-----  
Co++ gl KNO3 25°C 0.10M C M K1=3.78 2001AAa (34620)1120  
Also data for ternary complexes with 5'-GMP, 5'-IMP and 5'-CMP.

-----  
Co++ gl KNO3 25°C 0.10M C K1=3.52 2000ADa (34621)1121  
\*\*\*\*\*

C4H10N4O2 L CAS 4146-43-4 (2564)  
1,4-Butanedioic acid dihydrazide; H2N.NH.CO.CH2.CH2.CO.NH.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 25°C 0.20M U K1=1.86 B2=4.02 1974FSa (34647)1122  
\*\*\*\*\*

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  
-----  
Co++ gl NaClO4 25°C 1.0M C K1=-0.20 1979SRa (34681)1123  
\*\*\*\*\*

C4H11N L iso-Butylamine CAS 78-81-9 (2355)  
1-Amino-2-methylpropane; H2N.CH2.CH(CH3).CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 20°C 100% U T HM 1984JCa (34728)1124  
K(CoA2+L)=0.68

In toluene, A=N-(2-Methylpropyl)salicylaldimine, DH=-18.6KJ mol<sup>-1</sup>,  
DS=-49.9 J K<sup>-1</sup> mol<sup>-1</sup>. At 2 C, K=0.93; 32 C, K=0.56



-----  
Co++ sp non-aq 2°C 100% U M 1984JCa (34729)1125  
K(CoA2+L)=0.60

DMF,A=N-(2-Methylpropyl)salicylaldimine

\*\*\*\*\*

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

-----  
Co++ ISE non-aq 25°C 100% C H K1=1.91 B2= 3.20 2001CGc (34757)1126  
B3=4.1

Method: Cd ion selective electrode. Medium: DMSO, 0.10 M Et4NClO4.

By calorimetry: DH(K1)=-23 kJ mol<sup>-1</sup>, DH(B2)=-62, DH(B3)=-88.

-----  
Co++ sp non-aq 23°C 100% U T HM 1984JCa (34758)1127  
K(CoA2+L)=0.79

In toluene.HA=N-Butylsalicylaldimine,DH=-24.6 kJ mol<sup>-1</sup>,DS=-67.5 J K<sup>-1</sup> mol<sup>-1</sup>

At -2 C, K=1.17; 43 C, K=0.53

-----  
Co++ sp non-aq 25°C 100% U T HM 1984JCa (34759)1128  
K(CoA2+L)=0.30

In DMF. HA=N-Butylsalicylaldimine,DH=-19.3 kJ mol<sup>-1</sup>,DS=-58.7 J K<sup>-1</sup> mol<sup>-1</sup>

At -17 C, K=0.85; -11 C, K=0.76; -6 C, K=0.69; 2 C, K=0.58

\*\*\*\*\*

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

-----  
Co++ ISE R4N.X 25°C 2.0M U K1=2.10 B2=3.52 1967PMc (34816)1129  
K3=1.25  
K4=1.07

Medium: NH4NO3

\*\*\*\*\*

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

-----  
Co++ sp R4N.X 25°C 2.00M C I K1=2.24 B2=3.66 1983DBa (34953)1130

-----  
Co++ gl oth/un 25°C 0.43M U K1=2.72 B2=4.47 1966SKe (34954)1131

Medium: CH2OHCH2NH3NO3

\*\*\*\*\*

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

Co++ gl NaClO4 25°C 2.0M U K1=2.22 B2= 3.85 2000LMb (35050)1132  
B3=4.38

-----  
Co++ gl KNO3 25°C 0.10M C M K1=1.73 1979FHa (35051)1133  
K(Co(ATP)+L)=1.57

\*\*\*\*\*  
C4H11N08P2 H5L CAS 2439-99-8 (2129)  
N-Carboxymethyl-N,N-bis(methylenephosphonic acid); HOOC.CH2.N(CH2.PO3H2)2

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

-----  
Co++ gl KNO3 25°C 0.10M C K1=13.0 2000SDa (35100)1134  
K(CoL+H)=5.52  
K(CoHL+H)=4.49  
K(CoL+OH)=2.7

-----  
Co++ sp KNO3 20°C 0.50M U K1=12.48 1974NKa (35101)1135  
K(Co+HL)=6.60  
K(Co+H2L)=4.58

\*\*\*\*\*  
C4H11N204P H2L CAS 53626-52-1 (9088)  
2[(Aminoacetyl)amino]ethylphosphonic acid;

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

-----  
Co++ gl KNO3 25°C 0.10M U K1=3.53 1975HMc (35147)1136  
K(CoL+H)=6.87

\*\*\*\*\*  
C4H11N204P H2L (7118)  
Alanylaminomethylphosphonic acid;

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

-----  
Co++ gl KNO3 25°C 0.10M C K1=2.837 B2=4.3 1995HLa (35152)1137  
B(CoH-1L)=-6.11

\*\*\*\*\*  
C4H11N204P H2L (7121)  
Glycyl-1-aminoethylphosphonic acid;

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

-----  
Co++ gl KCl 25°C 0.10M U K1=3.633 B2=6.11 1995HLa (35156)1138  
B(CoHL)=9.91  
B(CoH-1L)=-5.38

\*\*\*\*\*  
C4H11N302 HL CAS 471915-94-3 (8550)  
2,4-Diamino-N-hydroxybutanamide;

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

Co++ gl KCl 25°C 0.20M C K1=7.31 B2=13.03 2002ECa (35174)1139  
B(CoHL)=14.32  
B(CoH-1L)=-1.38  
B(CoHL2)=20.82

\*\*\*\*\*

C4H11N2O3P HL (7917)  
(Glycylamino)methyl(methylphosphinic acid);

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

Co++ gl KNO3 25°C 0.10M C K1=3.20 B2= 5.79 2001LKa (35199)1140  
B(ZnHL)=9.61

\*\*\*\*\*

C4H11O2PS2 H3L CAS 298-06-6 (210)  
O,O'-Diethyldithiophosphoric acid; (C2H5O)2P(S)SH

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

Co++ ISE alc/w 25°C 90% U K1=1.97 B2=3.60 1972TCa (35228)1141  
Medium: 90% EtOH, 0.3 M NaClO4

Co++ ISE alc/w 25°C 90% U K1=1.96 B2=3.44 1971TCa (35229)1142  
Medium: 90% EtOH, 0.3 M NaClO4

\*\*\*\*\*

C4H11O4P H2L (5867)  
n-Butyl phosphoric acid; C4H9.O.PO(OH)2

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

Co++ gl NaNO3 25°C 0.10M C K1=2.08 1988MSa (35284)1143

\*\*\*\*\*

C4H12NO3P H2L AMPPH CAS 18108-24-2 (222)  
1-Amino-2-methylpropylphosphonic acid; (CH3)2.CH.CH(NH2).PO3H2

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

Co++ gl KNO3 24°C 0.10M U K1=5.60 1989YKa (35307)1144

\*\*\*\*\*

C4H12N2 L Putrescine CAS 110-60-1 (360)  
1,4-Diaminobutane; H2N.(CH2)4.NH2

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

Co++ cal alc/w 25°C 100% U H K1=2.36 1985BUd (35362)1145  
Medium: MeOH, 0.05 M Et4N.NO3. DH=-18.5 kJ mol<sup>-1</sup>

\*\*\*\*\*

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  
-----

-----  
Co++ gl KNO3 25°C 0.10M U K1=5.58 B2=10.08 1977PSb (35378)1146  
\*\*\*\*\*

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  
-----

Co++ sp non-aq 25°C 100% C H K1=5.70 B2= 9.90 2002Cma (35420)1147  
Medium: DMSO, 0.10 M Et4NClO4. By calorimetry: DH(K1)=-48.3 kJ mol<sup>-1</sup>,  
DS(K1)=-53 J K<sup>-1</sup>mol<sup>-1</sup>; DH(B2)=-99.0, DS(B2)=-143.

\*\*\*\*\*  
C4H12N2 L CAS 110-72-5 (1307)  
N-Ethyl-1,2-diaminoethane; C2H5.NH.CH2.CH2.NH2

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

Co++ gl KCl 25°C 1.0M U K1=5.83 B2=10.19 1950EDa (35472)1148  
K3=1.40

\*\*\*\*\*  
C4H12N2 L CAS 6291-84-5 (2679)  
N-Methyl-1,3-diaminopropane; CH3.NH.CH2.CH2.CH2.NH2

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

Co++ gl NaClO4 25°C 0.10M C K1=4.06 19800Tb (35476)1149

\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 0.10M U K1=4.84 B2=8.88 1977PSb (35488)1150  
\*\*\*\*\*

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  
-----

Co++ sp non-aq 25°C 100% C H K1=6.3 B2=11.20 2004DMb (35504)1151  
Medium: dmsO, 0.1 M Et4NClO4. DH(K1)=-43 kJ mol<sup>-1</sup>, DS(K1)=-23 J K<sup>-1</sup> mol<sup>-1</sup>  
DH(B2)=-88, DS(B2)=-81

\*\*\*\*\*  
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  
-----

Co++ sp non-aq 25°C 100% U H K1=6.08 B2=11.74 2004DMb (35545)1152  
B3=14.1

Medium: dmsO, 0.1 M Et4NC104. DH(K1)=-46 kJ mol-1, DS(K1)=-38 J K-1 mol-1  
 DH(B2)=-92, DS(B2)=-84.6, DH(B3)=-133, DS(B3)=-178.

-----  
 Co++ gl oth/un 25°C 0.50M U K1=4.87 B2=9.87 1960HDa (35546)1153  
 -----

Co++ gl KCl 25°C 1.0M U K1=6.58 B2=11.83 1950EDa (35547)1154  
 -----

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  
 -----

Co++ gl KNO3 30°C 1.0M U T H K1=5.09 B2=9.01 1954GFa (35566)1155  
 DH(K1)=-29 kJ mol-1, DS=0; DH(K2)=-33, DS=-38. 0 C: K1=5.56, K2=4.63;  
 50 C: K1=4.70, K2=3.58  
 -----

C4H12O7P2 H3L CAS 52811-47-9 (7665)  
 N-Butyldiphosphoric acid;  
 -----

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

Co++ gl NaNO3 25°C 0.10M M K1=3.89 1999SSa (35583)1156  
 -----

C4H13NO6P2 H4L CAS 5995-26-6 (1336)  
 N-Ethyliminobis(methylenephosphonic) acid; C2H5N(CH2PO3H2)2  
 -----

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

Co++ gl KCl 25°C 0.20M C K1=7.95 2000Kka (35603)1157  
 B(CoHL)=15.10  
 B(CoH2L)=19.86  
 B(CoH-1L)=-3.05  
 -----

Co++ gl KNO3 25°C 1.00M M K1=7.86 1982BGb (35604)1158  
 K(Co+HL)=2.86  
 -----

C4H13N3 L CAS 14478-63-8 (3000)  
 1,3-Diamino-2-aminomethylpropane; H2N.CH2.CH(CH2.NH2).CH2.NH2  
 -----

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

Co++ gl KNO3 20°C 0.10M U K1=6.25 1962ANb (35632)1159  
 K(Co+HL)=3.75  
 K(Co+H2L)=1.60  
 -----

C4H13N3 L Dien CAS 111-40-0 (584)  
 1,4,7-Triazaheptane, 2,2'Iminobis(ethylamine), diethylenetriamine;  
 NH2.(CH2)2.NH.(CH2)2.NH2  
 -----

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

-----  
 Co++ ISE non-aq 25°C 100% C H K1=9.49 B2=18.50 2001CGc (35754)1160  
 Method: Cd ion selective electrode. Medium: DMSO, 0.10 M Et4NClO4.  
 By calorimetry: DH(K1)=-75.4 kJ mol<sup>-1</sup>, DH(B2)=-157.  
 -----

Co++ gl KNO3 25°C 0.10M C M K1=8.05 B2=13.92 1986BMa (35755)1161  
 B(CuL(Amp))=12.40  
 K(2CoL(Amp)+O2=Co2L2(Amp)2O2)=10.59  
 Amp=Adenosine-5'-monophosphoric acid  
 -----

Co++ gl NaClO4 25°C 0.10M U M K1=8.11 B2=14.13 1985MSa (35756)1162  
 K(Co(thiolactate)+L)=5.98  
 -----

Co++ gl NaClO4 25°C 1.00M U K1=9.34 B2=16.89 198000b (35757)1163  
 -----

Co++ gl KNO3 25°C 0.10M U K1=8.4 B2=14.50 1973AHc (35758)1164  
 -----

Co++ gl KNO3 25°C 0.10M U M K1=8.24 1972NMb (35759)1165  
 K(2Co+2L+O2=CoL(O2)(OH)ML+H)=14.6, where (O2) is in atmospheres  
 -----

Co++ cal KCl 25°C 0.10M U H 1961CPa (35760)1166  
 DG(K1)=-45.56 kJ mol<sup>-1</sup>, DH=-34.1, DS=38; DG(K2)=-33.44, DH=-42.9, DS=-31  
 -----

Co++ gl oth/un 35°C 1.0M U H 1952JHa (35761)1167  
 DH(K1)=-37.6 kJ mol<sup>-1</sup>, DH(K2)=-41.8  
 -----

Co++ gl KCl 30°C 1.0M U T K1=8.47 B2=14.54 1952JHa (35762)1168  
 40 C: K1=8.26, K2=5.83  
 -----

Co++ gl KCl 20°C 0.10M U K1=8.10 B2=14.10 1950PSa (35763)1169  
 \*\*\*\*\*  
 C4H14N2O4P2 H2L CAS 37107-07-6 (4287)  
 Ethylenebis(iminomethylenephosphonous acid)  
 -----

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

Co++ gl KNO3 25°C 0.10M U K1=5.95 1971MMh (35827)1170  
 \*\*\*\*\*  
 C4H14N2O6P2 H2L EDDPO CAS 1733-49-9 (2435)  
 1,2-Diaminoethane-N,N'-bis(methylenephosphonic) acid; (H2O3P.CH2.NH.CH2)2  
 -----

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

Co++ gl KCl 25°C 0.10M C K1=9.72 2001MNa (35861)1171  
 B(CoHL)=19.09  
 B(CoH4L2)=49.96  
 B(CoH2L2)=34.0  
 B(CoH6L2)=63.52  
 -----

B(Co2L)=14.64  
 -----

Co++ gl KNO3 25°C 0.10M U K1=10.79 1976TIa (35862)1172  
K(Co+H2L)=3.47

-----  
Co++ gl KNO3 25°C 0.10M U M K1=10.79 1975ITa (35863)1173

-----  
Co++ gl oth/un 25°C 0.10M U K1=10.4 1972AUa (35864)1174  
K(Co+HL)=5.4  
K(Co+H2L)=2.9

-----  
Co++ gl KNO3 25°C 0.10M U K1=10.23 1971MMh (35865)1175  
K(CoL+H)=5.98  
K(CoHL+H)=5.33

-----  
Co++ gl KCl 25°C 0.10M U K1=10.80 1965DKb (35866)1176  
K(Co+HL)=3.84

\*\*\*\*\*  
C5H2O2F6 HL HFA CAS 1522-22-1 (195)  
1,1,1,5,5,5-Hexafluoropentane-2,4-dione; F3C.CO.CH2.CO.CF3

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

-----  
Co++ dis NaClO4 25°C 1.0M C M K1=1.56 B2= 2.32 1977SMe (35918)1177  
K(CoL2(org)+A(org))=5.19  
K(CoL2(org)+2A(org))=10.58

Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylphosphine  
oxide (A). K(Co+2HL(org)=CoL2(org)+2H)=-3.90.

-----  
Co++ dis NaClO4 25°C 1.00M U K1=1.56 B2=2.32 1971MSe (35919)1178

\*\*\*\*\*  
C5H3N2O4Br H2L 5-Bromoortotic 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

-----  
Co++ gl R4N.X 25°C 0.10M U K1=3.27 1964TTa (35960)1179  
Medium: Me4NBr

\*\*\*\*\*  
C5H3N2O4I H2L 5-Iodoortotic 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

-----  
Co++ gl R4N.X 25°C 0.10M U K1=3.78 1964TTa (35967)1180  
Medium: Me4NBr

\*\*\*\*\*  
C5H3N3O6 H2L 5-Nitroortotic CAS 17687-24-0 (3615)  
1,2,3,6-Tetrahydro-2,6-dioxo-5-nitro-4-pyrimidinecarboxylic acid;

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

Co++ ix NaClO4 25°C 0.10M U K1=2.44 1966DTa (35975)1181

Co++ gl KCl 25°C 0.10M U K1=2.42 1961TDa (35976)1182

\*\*\*\*\*  
C5H3N4Cl L 6-Chloropurine CAS 87-42-3 (3032)  
6-Chloropurine;

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

Co++ gl KNO3 45°C 0.10M U K1=6.3 1971TKc (35987)1183

\*\*\*\*\*  
C5H4NBr L CAS 36511-33-8 (4306)  
2-Bromopyridine; C5H4N.Br

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

Co++ sp non-aq 25°C 100% U I M 1973DZa (35990)1184

K(CoCl2+L)=4.28  
Medium: cyclohexanone. In acetone: K=4.10

\*\*\*\*\*  
C5H4NBr L CAS 626-55-1 (3617)  
3-Bromopyridine; C5H4N.Br

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

Co++ sp non-aq 25°C 100% U I M 1973DZa (35994)1185

K(CoCl2+L)=2.45  
K(CoCl2+2L)=3.77  
Medium: cyclohexanone. In acetone values are 2.19, 2.66

\*\*\*\*\*  
C5H4NBr L CAS 1120-87-2 (8780)  
4-Bromopyridine;

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

Co++ gl NaNO3 25°C 0.50M C K1=1.03 2002KSb (36001)1186

\*\*\*\*\*  
C5H4NCl L CAS 109-09-1 (5891)  
2-Chloropyridine; C5H4N.Cl

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

Co++ sp non-aq 25°C 100% C M 1989ANb (36006)1187

K(Co(OAc)2+L)=-0.7  
Medium: CCl4 + 10% acetic acid

\*\*\*\*\*  
C5H4NCl L CAS 626-60-8 (322)  
3-Chloropyridine; C5H4N.Cl

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



-----  
Co++ gl NaNO3 25°C 0.50M C K1=0.79 2002KSb (36019)1188  
-----

Co++ sp non-aq 25°C 100% C M 1989ANb (36020)1189  
K(Co(OAc)2+L)=0.8

Medium: CCl4 + 10% acetic acid  
-----

Co++ sp non-aq 25°C 100% U I M 1973DZa (36021)1190  
K(CoCl2+L)=2.43  
K(CoCl2+2L)=4.00

Medium: cyclohexanone. In acetone, values are 2.05, 1.80  
-----

\*\*\*\*\*  
C5H4N2O3S H2L Thioorotic acid (4335)  
1,2,3,6-Tetrahydro-2-thio-6-oxo-4-pyrimidinecarboxylic acid;  
-----

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

Co++ gl NaCl 20°C 0.15M U K1=4.87 1979DZe (36073)1191  
K(Co+HL)=2.48

\*\*\*\*\*  
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  
-----

Co++ gl NaCl 20°C 0.15M U K1=5.95 1979DZe (36104)1192  
K(Co+HL)=2.63

-----  
Co++ gl R4N.X 25°C 0.10M U K1=6.39 1967TKc (36105)1193  
Medium: Me4NBr  
-----

\*\*\*\*\*  
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  
-----

Co++ ix NaClO4 25°C 0.10M U K(Co+HL)=2.48 1966DTa (36127)1194

\*\*\*\*\*  
C5H4N4O HL Hypoxanthine CAS 68-94-0 (1174)  
6-Hydroxypurine;  
-----

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

Co++ gl KNO3 25°C 0.10M U T H 1983KSa (36184)1195  
K(Co+HL)=2.50  
K(Co+2HL)=4.13  
-----

Co++ gl NaClO4 25°C 0.10M U TIH K1=3.67 B2= 7.08 1979RPb (36185)1196  
Medium: KClO4. Data for 35 and 45 C and for I=0.05 and 0.20 M at 45 C.

DH(K1)=-42.2 kJ mol<sup>-1</sup>, DS(K1)=-71 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-107.2, DS(K2)=-294

-----  
Co++ gl KNO3 45°C 0.10M U K1=7.08 1971TKc (36186)1197  
-----

Co++ gl oth/un 20°C 0.01M U K1=3.8 1953ALa (36187)1198  
\*\*\*\*\*  
C5H4N4O2 HL Xanthine CAS 69-89-6 (4305)  
Xanthine;  
-----

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

Co++ gl NaNO3 25°C 0.10M U K1=2.10 1991KMa (36205)1199  
\*\*\*\*\*  
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  
-----

Co++ gl KNO3 45°C 0.10M U K1=6.5 1971TKc (36223)1200  
-----

Co++ gl diox/w 25°C 50% U K1=5.44 1959CFb (36224)1201  
\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 0.10M U T M K1=2.53 1988NSc (36251)1202  
B(CoAL)=7.66  
HA is pyridine-2-carboxylic acid. At 40 C, K1=2.44, B(CoAL)=7.52.  
-----

Co++ gl diox/w 25°C 50% U K1=1.82 1968EGb (36252)1203  
Medium: 50% dioxan, 0.1 M NaClO4  
\*\*\*\*\*  
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  
-----

Co++ cal NaNO3 25°C 1.0M C 1987ARb (36291)1204  
DH(K1)=1.17 kJ mol<sup>-1</sup>, DS(K1)=13.6 J K<sup>-1</sup> mol<sup>-1</sup>.  
-----

Co++ cal NaNO3 25°C 1.0M C 1982ARb (36292)1205  
DH(K1)=1.17 kJ mol<sup>-1</sup>, DS(K1)=13.6 J K<sup>-1</sup> mol<sup>-1</sup>.  
-----

Co++ EMF NaClO4 25°C 1.00M U K1=1.22 1972LPb (36293)1206  
\*\*\*\*\*  
C5H5N L Pyridine CAS 110-86-1 (31)  
Pyridine, Azine;  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo	
Co++	gl	NaNO3	25°C	0.50M	C		K1=1.34	2002KSb (36554)	1207	
Co++	sp	NaClO4	25°C	1.0M	C	M	K(CoA+L)=0.0	2001LHa (36555)	1208	
Medium pH 7.9 (0.05 M Tris). A is tris(2-(dimethylamino)ethylamine).										
Co++	cal	non-aq	25°C	100%	C	H	K1=3.67 1.94 1.25	B2= 6.59	2000KKb (36556)	1209
Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-32.4 kJ mol <sup>-1</sup> , DS=-39 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-29.0, DS=-41; DH(K3)=-30, DS=-63; DH(K4)=-22; DS=-51.										
Co++	sp	non-aq	25°C	100%	U	H	K(CoCl2+L)=4.63 K(CoCl2L+L)=3.76		1997EPa (36557)	1210
Medium: cyclohexane. In CH3CN: K(CoCl2+L)=3.59, K(CoCl2L+L)=2.80. Calorimetry: cyclohexane DH(CoCl2+2L)=-51.6 kJ m <sup>-1</sup> . In CH3CN DH=-49.0.										
Co++	vlt	non-aq	25°C	100%	U	M	K(CoA2B2+L=CoA2BL+B)=1.76 K(CoA2BL+L=CoA2L2+B)=-0.07		1997ERa (36558)	1211
Medium: DMF; 0.1 M (CH2(CH2)3)4NPF6. A=salicylideneethylenediamine, B=DMF										
Co++	sp	non-aq	25°C	100%	U	M	K(CoA+L)=-0.824 K(CoB+L)=0.223		1993BEa (36559)	1212
Medium: acetone. A=N,N'-bis(3-tert-butyl-5-methylsalicylidene)-2,3-diamino-2,3-dimethylbutane, B=chlorosalicylidene derivative of A.										
Co++	sp	non-aq	25°C	100%	U	HM	K(CoA+L)=2.691 K(CoB+L)=2.998		1993SSc (36560)	1213
Medium: Toluene. T: 15-65 C. H2A:Octaethylporphyrin. DH=-40.4 kJ mol <sup>-1</sup> ; DS=-84.5. H2B=t-Octaethylchlorin; DH=-42.7 kJ mol <sup>-1</sup> , DS=-85.5.										
Co++	cal	non-aq	25°C	100%	C	H	K1=4.919	B2= 8.41	1989JVb (36561)	1214
Medium: acetone. DH(K1)=-37.5 kJ mol <sup>-1</sup> , DS(K1)=-31.5 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=-79.8, DS(B2)=-106.7. Reaction is CoCl2+nL.										
Co++	nmr	none	19°C	0.0	U	T H	K(CoA+L=CoAL)=2.20		1987LDa (36562)	1215
Data at 18.7 to 47.0 C. A=Schiff base from 4,6-dimethoxysalicylaldehyde and 4-(trifluoromethyl)-o-phenylenediamine. DH=-32.6 kJ mol <sup>-1</sup> .										
Co++	sp	non-aq	20°C	100%	U	M	K(CoA2+L)=1.25		1984KIa (36563)	1216
In benzene. A=1,3,8,10-Tetramethyl-4,7-diazadecane-1,3,7,9-tetraene-1,10-diol										

Data also for 7 other related tertiary ligands.

-----  
Co++ nmr alc/w -44°C 100% U 1984VF a (36564)1217  
Kout(Co(CD3OD)+L)=-0.22

Medium: MeOD

-----  
Co++ vlt NaClO4 20°C 0.50M C TI K1=1.95 B2= 3.15 1982KNd (36565)1218  
B3=3.90  
B4=3.78  
B5=4.56

Method: polarography. Data for 20 and 30 C. Also data for 10 and 20%  
DMF/H2O and formamide/H2O.

-----  
Co++ sp non-aq 25°C 100% U TIHM 1982RWb (36566)1219  
K(CoA+L)=2.43

Medium: CHCl3. A=Tetra(4-Methoxyphenyl)porphyrin. In ClCH2.CH2Cl: K=2.70;  
in C6H5Cl: K=2.71; in DMF: 2.30. Also DH and DS values

-----  
Co++ gl NaNO3 25°C 0.10M C K1=1.25 1981BKb (36567)1220

-----  
Co++ sp non-aq 25°C 100% U M 1980MAb (36568)1221  
K(CoA(ClO4)+L)=3.4

Medium: CH2Cl2. A= 1,19-Dimethyl-AD-didehydrocorrin.  
In H2O, K(CoA(CN)+L)=2.17

-----  
Co++ sp non-aq 21°C 100% U T M 1978DBa (36569)1222  
K(CoA+L)=3.27

Medium: toluene. A=Protoporphyrin IX dimethyl-ester. At 30 C: K(CoA+L)=3.04;  
39 C: 2.86; 49 C: 2.66

-----  
Co++ sp mixed 20°C 0.0 U TI M 1976LKa (36570)1223  
K(CoCl2L2+2L)=2.12

Medium: L+benzene; also data for L+Clbenzene & L+o-diClbenzene at 30 C

-----  
Co++ gl KNO3 25°C 0.10M U K1=1.20 1974ILa (36571)1224

-----  
Co++ gl KNO3 25°C 0.50M U K1=1.15 B2=1.70 1973BJa (36572)1225  
K3=-0.3

-----  
Co++ gl NaClO4 25°C 0.10M U K1=1.16 B2=1.77 1973JVa (36573)1226

-----  
Co++ dis NaClO4 25°C 0.10M U K1=1.30 B2=2.00 1973JVa (36574)1227  
K3=0.58

-----  
Co++ sp non-aq ? 100% U M 1972ADc (36575)1228  
B(CoCl2L2)=4.17

Medium: HCON(CH3)2

-----  
Co++ sp mixed ? 75% U I M 1972MAe (36576)1229  
B(CoCl2L)=0.78

B(CoCl<sub>2</sub>L<sub>2</sub>)=2.18  
 Medium: 25-100% v/v HCON(CH<sub>3</sub>)<sub>2</sub>. In 100%, B(CoCl<sub>2</sub>L)=0.41  
 -----

Co++ sp non-aq 25°C 100% U I M 1972MAe (36577)1230  
 B(CoCl<sub>2</sub>L)=0.85  
 B(CoCl<sub>2</sub>L<sub>2</sub>)=2.03  
 Medium: 50% v/v HCON(CH<sub>3</sub>)<sub>2</sub>, 50% benzene. In 0% benzene, B(CoCl<sub>2</sub>L)=0.41  
 -----

Co++ sp non-aq ? 100% U I M 1971AMc (36578)1231  
 K(CoCl<sub>2</sub>+L)=2.05  
 K(CoCl<sub>2</sub>+2L)=4.41  
 Medium: 50% benzene, 50% 3-methylbutanol. In 25% benzene, K(CoCl<sub>2</sub>+L)=1.91,  
 K(CoCl<sub>2</sub>+2L)=4.33. In 75% benzene, 2.45 and 4.70  
 -----

Co++ sp non-aq ? 100% U I M 1971AMc (36579)1232  
 K(CoCl<sub>2</sub>+L)=2.20  
 K(CoCl<sub>2</sub>+2L)=4.60  
 Medium: 50% CCl<sub>4</sub>, 50% 3-methylbutanol. With 0% CCl<sub>4</sub>, K(CoCl<sub>2</sub>+L)=1.85,  
 K(CoCl<sub>2</sub>+2L)=4.01; 25% CCl<sub>4</sub>, K values: 2.06, 4.30; 75% CCl<sub>4</sub>: 2.29, 4.88  
 -----

Co++ nmr non-aq 38°C 100% U M 1970HMb (36580)1233  
 K(CoL<sub>4</sub>Cl<sub>2</sub>=CoL<sub>2</sub>Cl<sub>2</sub>+2L)=0.36  
 -----

Co++ sp non-aq ? 100% U M 1970Lda (36581)1234  
 K(CoCl<sub>2</sub>+L)=3.2  
 K(CoCl<sub>2</sub>+2L)=5.77  
 K(CoBr<sub>2</sub>+L)=3.44  
 K(CoBr<sub>2</sub>+2L)=5.81  
 Medium: cyclohexanone. Data also for CH<sub>3</sub>CN, 2-chloroethanol, HO.CH<sub>2</sub>.CH<sub>2</sub>.OH  
 -----

Co++ ISE alc/w 25°C 50% U I K1=1.66 B2=2.46 1970NBa (36582)1235  
 Medium: 0-96% EtOH, 0.5 M LiNO<sub>3</sub>. Data also for 25-90% propanol, 25-90% acetone  
 -----

Co++ EMF oth/un 25°C 0.50M U K1=1.23 B2=1.70 1969NSb (36583)1236  
 K3=0.24  
 K4=-0.16  
 Medium: LiNO<sub>3</sub>  
 -----

Co++ dis R4N.X 20°C 1.0M U M K1=1.35 B2=1.95 1966FLc (36584)1237  
 B3=2.25  
 B4=2.35  
 B(Co(NH<sub>3</sub>)L)=3.22  
 B(Co(NH<sub>3</sub>)L<sub>2</sub>)=3.50  
 Medium: NH<sub>4</sub>NO<sub>3</sub>. B(Co(NH<sub>3</sub>)L<sub>3</sub>)=3.85; B(Co(NH<sub>3</sub>)<sub>2</sub>L)=4.2; B(Co(NH<sub>3</sub>)<sub>2</sub>L<sub>2</sub>)=4.50;  
 B(Co(NH<sub>3</sub>)<sub>2</sub>L<sub>3</sub>)=5.40; B(Co(NH<sub>3</sub>)<sub>2</sub>L<sub>4</sub>)=5.35 plus others and ternary with EDTA  
 -----

Co++ sp non-aq 20°C 100% U H 1965NSb (36585)1238  
 K(CoL<sub>2</sub>I<sub>2</sub>+2L)=0.37  
 Medium: CH<sub>3</sub>Cl<sub>3</sub>. By calorimetry: DH=-69.4 kJ mol<sup>-1</sup>, DS=-230 J K<sup>-1</sup> mol<sup>-1</sup>  
 -----

Co++ sp non-aq 20°C 100% U HM 1963Kka (36586)1239

K(CoL2Cl2+2L)=1.10  
K'(CoL2Br2+2L)=0.956  
K''(CoL2I2+2L)=0.365  
K'''(CoL2A2+2L)=4.92

Medium: CHCl3. By calorimetry: DH(K)=-63.5 kJ mol<sup>-1</sup>, DS=-195.6 J K<sup>-1</sup> mol<sup>-1</sup>  
DH(K')=-65.2, DS=-204; DH(K'')=-69.4, DS=-229; DH(K'''), A=NCS, =-69.4, DS=-143

Co++ sp non-aq 20°C 100% U M 1963Kka (36587)1240

K(CoL2Cl2+2L)=-0.40  
K(CoL2(NCS)2+2L)=3.55  
K(CoL2(NCSe)2+2L)=4.44

Medium: CH3NO2. In CHCl3: K(CoL2(NCSe)2+2L) > 5; K(CoL2(NCO)2+2L)=1.37

Co++ sp mixed ? 100% U I K1=3.49 1959ANb (36588)1241

Medium: 100% acetone. K1=1.26(0%), 1.34(50%), 1.47(85%). In 100% MeOH: K1=1.49  
In EtOH: K1=1.43(85%), 2.36(100%). In n-propanol: K1=1.28(50%) 2.75(100%)

Co++ gl oth/un 25°C 0.50M U K1=1.14 B2=1.54 1950BJa (36589)1242

Medium: 0.5 M C5H5N.HNO3

\*\*\*\*\*

C5H5NO L 3-Pyridinol CAS 109-00-2 (1475)

3-Hydroxypyridine; C5H4N.OH

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

Co++ gl KNO3 25°C 0.50M U K1=0.98 B2=1.58 1978LRa (36706)1243

B3=1.88

\*\*\*\*\*

C5H5NOS L CAS 1121-31-9 (3052)

3-Mercaptopyridine 1-oxide; C5H4N(-O)(SH)

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

Co++ gl oth/un 20°C 0.01M U K1=5.5 B2=10.0 1956ARb (36730)1244

\*\*\*\*\*

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

Co++ gl KCl 25°C 0.10M U K1=4.85 B2=8.83 1993LMc (36748)1245

K3=2.74

Co++ gl oth/un 20°C 0.01M U K1=5.3 B2=9.6 1956ARb (36749)1246

\*\*\*\*\*

C5H5NO2 HL CAS 16867-04-2 (2316)

2,3-Dihydroxypyridine, 3-Hydroxypyridin-2(1H)-one; C5H3N(OH)2

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

-----  
Co++ gl diox/w 25°C 50% U K1=6.61 B2=11.53 1970GDa (36776)1247  
Medium: 50% dioxan, 0.1 M NaClO4  
-----

Co++ gl NaClO4 25°C 0.10M U K1=5.24 B2=9.42 1970GDa (36777)1248  
\*\*\*\*\*  
C5H5NO2 HL CAS 35940-93-3 (3618)  
3-Furancarboxaldehyde oxime (3-Furfuraldoxime); C4H3O.CH(:N.OH)  
-----

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

Co++ gl diox/w 20°C 60% U I K1=5.68 B2=11.78 1979GBd (36811)1249  
B(CoHL2)=22.76  
-----

\*\*\*\*\*  
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  
-----

Co++ cal NaNO3 25°C 1.00M U H 1981ARb (36837)1250  
DH(K1)=-0.04 kJ mol<sup>-1</sup>; DS(K1)=31.2.  
-----

Co++ gl none 25°C 0.00 U K1=2.45 1972LUc (36838)1251  
\*\*\*\*\*

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  
-----

Co++ gl NaNO3 25°C 0.50M C K1=0.09 2002KSb (36857)1252  
\*\*\*\*\*

C5H5N3O4 H2L 5-Aminoorotic CAS 7164-43-4 (3619)  
1,2,3,6-Tetrahydro-2,6-dioxo-5-amino-4-pyrimidinecarboxylic acid;  
-----

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

Co++ gl R4N.X 25°C 0.10M U K1=5.23 1967TKc (36865)1253  
Medium: Me4NBr  
-----

\*\*\*\*\*  
C5H5N3O4 H2L CAS 59048-06-5 (6096)  
N-Methylvioluric acid;  
-----

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

Co++ gl NaNO3 25°C 0.50M C K1=2.00 B2= 5.03 1984HNb (36875)1254  
-----

Co++ gl NaNO3 25°C 0.50M C K1=2.08 B2=5.0 1978VNa (36876)1255  
\*\*\*\*\*

C5H5N5 L Adenine CAS 73-24-5 (237)  
6-Aminopurine; H2N.C5H3N4  
-----

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3  25°C 0.10M C    M   K1=8.28      2000SSd (36956)1256
          K(Co+HL)=3.05
          K(Co+HL+OH)=12.02
          K(CoHL+OH)=8.03

```

Also data for ternary complexes.

```

-----
Co++      gl  NaNO3  25°C 0.10M U          K1=4.52      1996SGa (36957)1257
-----
Co++      gl  NaClO4 25°C 0.10M M          K(Co+HL)=1.18
          K(Co(atp)+HL)=1.61

```

```

-----
Co++      gl  NaNO3  37°C 0.10M U    M   K1=8.26      1994MGd (36959)1259
          B(CoAL)=11.72
          *K(CoAL)=-7.55
          *K(Co(OH)AL)=-8.96

```

HA is 6-aminopenicillanic acid.

```

-----
Co++      gl  KNO3   35°C 0.10M U    M   K1=1.90      1989SRe (36960)1260
          B(CoHLAsp)=8.02
          B(CoLAsp)=6.45
          K(CoL+Gly)=5.15

```

```

-----
Co++      gl  KNO3   35°C 0.10M U T H          K(Co+HL)=1.90
          K(Co+2HL)=3.15

```

```

-----
Co++      gl  KNO3   30°C 0.10M U          K1=6.8       1983SKa (36962)1262

```

```

-----
Co++      gl  NaCl   37°C 0.15M C          K(Co+HL)=1.38

```

```

-----
Co++      gl  KNO3   45°C 0.10M U          K1=8.14      1971TKc (36964)1264

```

```

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

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3  37°C 0.10M U    M   K1=8.48      1994MGd (36996)1265
          B(CoAL)=11.98
          *K(CoAL)=-7.45
          *K(Co(OH)AL)=-8.82

```

HA is 6-aminopenicillanic acid.

```

*****
C5H5N5O          L          CAS 700-02-7 (3033)
Adenine N-Oxide;

```



```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  oth/un 25°C    ?  U          K1=3.13      1960PEb (37002)1266
*****
C5H5N5S          H3L    6-Thioguanine    CAS 3647-48-1 (4307)
2-Amino-6-mercaptipurine;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   45°C 0.10M U          K(Co+H2L)=3.1  1973TKa (37010)1267
*****
C5H5N5S          H3L          CAS 154-42-7 (4308)
2-Mercapto-6-aminopurine;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   45°C 0.10M U          K(Co+H2L)=3.2  1973TKa (37018)1268
*****
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
-----
Co++      gl  NaClO4 25°C 0.50M C          K(Co+HL=CoL+H)=-2.55  1983HOb (37046)1269
-----
Co++      dis NaClO4 25°C 1.0M C    M    K1=3.50  B2= 5.60  1977SMe (37047)1270
          K(CoL2(org)+A(org))=5.36
          K(CoL2(org)+2A(org))=7.76
Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylposphine
oxide (A). K(Co+2HL(org)=CoL2(org)+2H)=-8.34.
-----

```

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-----
Co++      dis NaClO4 25°C 1.00M U          K1=3.50  B2=5.60  1971MSb (37048)1271
*****
C5H6          HL    Cyclopentadiene    CAS 542-92-7 (4288)
Cyclopentadiene; cyclo(-CH:CH.CH2.CH:CH-)
-----

```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp  NaClO4 25°C 0.10M U          B2=12.5      1972BSf (37072)1272
*****
C5H6N2          L          CAS 1072-63-5 (8709)
1-Vinylimidazole;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.50M U          K1=2.25  B2= 4.00  1989LKc (37086)1273
-----

```

B3=5.25  
B4=6.17  
B5=6.37

\*\*\*\*\*  
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
Co++	gl	NaNO3	25°C	0.50M	C			K1=0.25	2002KSb (37120)	1274
Co++	gl	KNO3	25°C	0.10M	U	TIH		K1=3.06 B2=4.87	1976BBe (37121)	1275

\*\*\*\*\*  
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
Co++	gl	KNO3	25°C	0.50M	U			K1=1.23 B2=2.07 B3=2.51	1978LRa (37161)	1276

\*\*\*\*\*  
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
Co++	sp	non-aq	25°C	100%	U	M		K(CoA(ClO4)+L)=3.8	1980MAb (37175)	1277

Medium: CH2Cl2. A= 1,19-Dimethyl-AD-didehydrocorrin.  
In H2O, K(CoA(CN)+L)=3.38

\*\*\*\*\*  
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
Co++	gl	KNO3	20°C	0.10M	U	TIH		K1=3.26 B2= 6.13	1982KMe (37190)	1278

Data for 0.05-0.20 M KNO3. At I=0, K1=3.58, K2=3.12.  
Data for 30 and 40 C. DH(B2)=-35.1 kJ mol<sup>-1</sup>, DS(B2)=-2.3 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*  
C5H6N2O HL (3035)  
2-Aminopyridine 1-oxide; C5H4N(-O)(NH2)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	NaClO4	25°C	0.50M	U			K(Co+HL)=0.93	1963SBd (37201)	1279

\*\*\*\*\*  
C5H6N2OS 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
-----
Co++      sp  NaClO4 25°C 0.10M U          K1=3.31      1981BPc (37209)1280
-----
Co++      sp  oth/un 20°C 0.10M U          K(Co+HL)=2.64
                                         K(Co+3HL)=7.00

```

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*****
C5H6N2O2          HL      Thymine          CAS 65-71-4 (413)
2,4-Dihydroxy-5-methylpyrimidine; C4HN2(CH3)(OH)2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3  37°C 0.10M U      M      K1=3.79      1994MGd (37268)1282
                                         B(CoAL)=7.22
                                         *K(CoAL)=-7.49

```

HA is 6-aminopenicillanic acid.

```

-----
Co++      gl  KNO3   35°C 0.10M U      M      K1=4.10      1989SRc (37269)1283
                                         K(Co(thiamine)+L)=3.17
-----

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```

-----
Co++      gl  KNO3   25°C 0.10M U T H      K1=4.30      1983KSa (37270)1284
-----

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```

-----
Co++      gl  KNO3   35°C 0.10M U          K1=4.17      B2=7.87      1982TSa (37271)1285
-----

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```

-----
Co++      gl  KNO3   45°C 0.10M U          K1=3.7       1974KKa (37272)1286
*****

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```

C5H6N2O2          HL          CAS 3326-71-4 (2607)
2-Furanecarboxylic acid hydrazide; C4H3O.CONH.NH2
-----

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```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w RT  50% C I      K1=3.094     1993BKe (37301)1287
Medium: 50% v/v dioxane/H2O. Data for 10-60% v/v dioxane/H2O and DMF/H2O.
Temperature not stated.
-----

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-----
Co++      gl  KNO3   25°C 0.10M U      M      K1=3.92      B2=7.63      1990NAa (37302)1288
                                         KCo(Oxine)+L)=4.18
-----

```

```

-----
Co++      sp  NaClO4 25°C 0.10M U          K1=3.39      1981BPc (37303)1289
*****

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```

C5H6N2O2          HL          CAS 645-65-8 (3620)
4(or 5)-Imidazolylethanoic acid; C3H3N2.CH2.COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl    40°C 0.25M U T H      K1=3.68      B2=6.31      1965AZa (37317)1290
K1=3.94(0 C),4.00(15 C),3.83(25 C); K2=3.04(0 C),3.03(15 C),2.98(25 C)
At 15 C: DH(K1)=-9.6 kJ mol-1, DH(K2)=-14.2

```

\*\*\*\*\*

C5H6N2O2S HL CAS 15112-09-1 (8298)  
N-Methyl-2-thiobarbituric acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 31°C 0.10M U T H K1=6.24 B2=11.28 1984SJa (37324)1291  
Also data for 18 and 42 C. DH(K1)=-72.8 kJ mol<sup>-1</sup>, DS(K1)=-120 J K<sup>-1</sup> mol<sup>-1</sup>  
DH(K2)=-48.9, DS(K2)=-64.9.

\*\*\*\*\*

C5H6N6 HL Diaminopurine CAS 1904-98-9 (4290)  
2,6-Diaminopurine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 45°C 0.10M U K1=7.6 1973TKa (37336)1292  
\*\*\*\*\*  
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  
-----  
Co++ gl NaClO4 25°C 0.10M U K1=3.50 1972RVh (37385)1293  
\*\*\*\*\*  
C5H6O4S3 H2L (7055)  
Trithiocarboglycolic acid; HOOC.CH2.S.CS.S.CH2.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 20% U T H K1=6.67 B2=11.18 1994BSc (37465)1294  
\*\*\*\*\*  
C5H6O7 H3L (8107)  
Carboxymethyltartronic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M C K1=3.87 1984MMg (37487)1295  
K(CoL+H)=2.81  
\*\*\*\*\*  
C5H7NOF6 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  
-----  
Co++ gl oth/un 25°C 0.10M U K1=4.21 1977Cwa (37499)1296  
\*\*\*\*\*  
C5H7NO2 HL Glutarimide CAS 1121-89-7 (4312)  
Piperidine-2,6-dione;

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

-----  
Co++ gl alc/w 45°C 50% C K1=5.95 1996MMc (37508)1297  
Medium: 50% v/v MeOH/H2O, 0.10 M KNO3.

\*\*\*\*\*  
C5H7NO3 HL (4313)  
Isonitrosoacetylacetone; HO.N:CH.CO.CH2.CO.CH3  
-----

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

Co++ gl NaClO4 25°C 0.10M U I K1=1.36 B2=4.28 1985CFa (37521)1298

\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 0.50M U K1=-0.70 B2=0.72 1982GKa (37569)1299

\*\*\*\*\*  
C5H7N3 L CAS 42166-50-7 (4291)  
2-Pyridylhydrazine; C5H4N.NH.NH2  
-----

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

Co++ EMF NaNO3 20°C 0.10M U K1=5.89 B2=10.86 1971ANa (37582)1300  
K3=4.02

\*\*\*\*\*  
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  
-----

Co++ gl diox/w 25°C 50% U K1=6.35 B2=12.00 1979PDa (37596)1301

\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 0.50M U K1=1.17 1981LKa (37615)1302

-----  
Co++ sp non-aq 23°C 100% U M K(CoA+L)=1.84 1980ELa (37616)1303  
Medium: toluene. A= "Capped" porphyrin.  
-----

Co++ sp non-aq 23°C 100% U M K(CoA+L)=1.93 1980ELa (37617)1304

-----  
Medium: toluene. A= "Homologous capped" porphyrin.  
-----

Co++ sp non-aq 25°C 100% U M K(CoA+L)=1.93 1980ELa (37618)1305

Medium: toluene. A="Homologous capped" porphyrin

-----  
Co++ gl KNO3 25°C 0.50M U K1=1.13 B2=2.39 1980LBa (37619)1306  
B3=3.81  
B4=4.32  
-----

Co++ sp non-aq 23°C 100% U T 1979BEa (37620)1307  
K(CoA+L)=1.93

Medium: toluene. CoA=a substituted porphyrinato-Co(II)

-----  
Co++ sp non-aq 20°C 100% U M 1978CBa (37621)1308  
K(CoP+L)=3.15

P=meso-tetra(alpha,alpha,alpha,alpha-ortho-pivalamidophenyl)-porphin.

Medium: toluene.

\*\*\*\*\*

C5H8N2 L CAS 7098-07-9 (2053)  
1-Ethylimidazole; C3H3N2.C2H5

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

Co++ gl KNO3 25°C 0.50M U K1=2.32 B2=4.17 1979LBa (37638)1309  
B3=5.42  
B4=7.02  
B5=7.42

\*\*\*\*\*

C5H8N2 L CAS 1072-62-4 (929)  
2-Ethylimidazole; C3H3N2.C2H5

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

Co++ gl KNO3 25°C 0.50M U K1=1.48 B2=1.78 1982LKb (37661)1310  
B3=3.30

\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.50M U K1=0.62 B2=0.99 1977LGb (37676)1311  
B3=1.10

-----  
Co++ vlt alc/w 25°C 100% U T K1=-0.22 B2=0.43 1966CRb (37677)1312  
Medium: MeOH(?), 0.1 M KNO3

\*\*\*\*\*

C5H8N2O L (1429)  
5-Amino-3,4-dimethylisoxazole; C3NO(CH3)2(NH2)

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

Co++ ISE KNO3 25°C 0.50M U K1=0.83 1983Gwa (37686)1313

Constant determined by means of the competitive potentiometric method using Ag(I) as the auxilliary cation, silver electrode applied.

\*\*\*\*\*

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
Co++	gl	KCl	25°C	0.10M	C			K1=2.62 B(CoH-1L)=-4.83 B(CoH-2L2)=-11.58	1994JBa (37697)	1314

\*\*\*\*\*

C5H8N2S L CAS 34631-53-3 (3621)  
4-(2'-Aminoethyl)-1,3-thiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	oth/un	25°C	.02M	U			K1=4.1	1960HJa (37723)	1315

C5H8O2 HL Acetylacetone CAS 123-54-6 (164)  
Pentane-2,4-dione; CH3.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	dis	oth/un	30°C	0.26M	U	I		Keff=4.74	1990SBa (37887)	1316

In NH4 acetate, pH 7.24 using HPLC. Data also given for 20% MeOH/water

Co++	dis	NaClO4	25°C	0.10M	C			K1=5.3	1986SNa (37888)	1317
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Method: rate of distribution of volatile ligand between aqueous phase and inert gas phase. K(H+L)=9.17 assumed.

Co++	oth	NaClO4	25°C	0.10M	C	I	R	K1=5.10 B2=9.08	1982SLc (37889)	1318
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IUPAC evaluation. I=0 corr.: K1=5.4, B2=9.4

Co++	gl	diox/w	24°C	50%	U			K1=6.3	1979ACa (37890)	1319
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Co++	EMF	diox/w	25°C	50%	U			K1=7.10 B2=12.43	1977AHd (37891)	1320
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Co++	dis	NaClO4	25°C	1.0M	C	M		K(CoL2(org))+A(org))=1.46	1977SMe (37892)	1321
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Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylposphine oxide (A).

Co++	dis	NaClO4	25°C	1.00M	U			K2=3	1971MSe (37893)	1322
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Co++	gl	diox/w	25°C	21%	U	I		K1=5.44 B2=9.82	1969SYa (37894)	1323
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Medium: 0-32% dioxan, 0.1 M LiClO4. K1(0%)=5.18, K1(9.5%)=5.32, K1(32%)=5.56  
B2(0%)=9.42, B2(9.5%)=9.64, B2(32%)=10.0

Co++ EMF oth/un 25°C 0.10M U K1=6.80 B2=12.60 1968BDb (37895)1324

Co++ gl alc/w 25°C var U I K1=7.27 B2=12.69 1968GDc (37896)1325  
Medium: 0.61 mol fraction MeOH, 0.0172 NaCl. 0 MF: K1=5.51, K2=4.23; 0.295MF:  
K1=6.29, K2=4.60; 0.485: K1=6.84, K2=5.20. Data also in PrOH/H2O

Co++ gl oth/un 20°C 0.0 U T H K1=5.40 B2=9.57 1955IFb (37897)1326  
DH(K1)=-5.0 kJ mol<sup>-1</sup>, DS=88; DH(K2)=-21, DS=10. 10 C: K1=5.58, K2=4.34;  
30 C: K1=5.40, K2=4.11; 40 C: K1=5.34, K2=3.96

Co++ gl diox/w 30°C 75% U K1=9.22 B2=17.08 1953UFb (37898)1327

Co++ gl diox/w 25°C 50% U K1=6.30 B2=11.18 1949MMa (37899)1328  
\*\*\*\*\*

C5H8O3 HL Laevulinic acid CAS 123-76-2 (941)  
4-Ketopentanoic acid; CH3.CO.CH2.CH2.COOH

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

Co++ gl KCl 25°C 0.10M U K1=0.80 B2=1.89 1983LTa (38169)1329  
\*\*\*\*\*

C5H8O4 H2L CAS 595-46-0 (1144)  
Dimethylmalonic acid; HOOC.C(CH3)2.COOH

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

Co++ gl NaClO4 25°C 0.10M U K1=1.90 19700Va (38206)1330  
\*\*\*\*\*

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

Co++ gl NaClO4 25°C 0.10M U K1=2.51 19680Va (38233)1331  
\*\*\*\*\*

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

Co++ gl NaClO4 20°C 1.00M M K1=4.13 B2=6.93 1989MKa (38304)1332  
K(Co+HL)=2.74  
K(Co+2HL)=3.05

Co++ gl oth/un 25°C 0.0 U K1=2.21 1965MOb (38305)1333

Co++ ix oth/un 25°C 0.0 U K1=2.35 1965SMf (38306)1334  
\*\*\*\*\*

C5H8O4S H2L CAS 36303-63-6 (988)  
3-Thiahexane-1,6-dioic acid; HOOC.CH2.S.CH2.CH2.COOH



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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=2.11 1975LPa (38381)1335  
\*\*\*\*\*  
C5H9NOS2 HL (4338)  
Morpholinodithiocarbamic acid; C4H8NO.CSSH  
-----

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp oth/un 20°C 0.10M U B3=15.80 1971GKd (38460)1336  
\*\*\*\*\*  
C5H9NO2 H2L CAS 69651-97-4 (1164)  
2-Amino-(2-allyl)ethanoic acid; H2N.CH(CH2.CH:CH2)COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=4.21 B2=7.65 1975IPb (38467)1337  
\*\*\*\*\*  
C5H9NO2 HL CAS 14401-90-2 (6205)  
Pent-2,4-dione monoxime; CH3.CO.CH2.C(:NOH).CH3  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 75% U K1=6.6 B2=10.10 1986BTa (38470)1338  
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  
-----  
Co++ gl KNO3 25°C 0.10M C K1=5.13 1999BIa (38595)1339  
-----  
Co++ nmr none 27°C 0.0 U K1=5.05 B2=9.30 1987GFb (38596)1340  
B3=10.75  
K(Co+HL)=1.01  
K(Co+2HL)=1.62  
K(CoL+HL)=1.41  
K(CoL2+HL)=0.11.  
-----

-----  
Co++ gl KNO3 25°C 0.10M U K1=5.05 B2=9.27 1973KLa (38597)1341  
-----

-----  
Co++ gl KCl 20°C 0.10M U K1=4.89 1970GVa (38598)1342  
-----

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Co++ gl oth/un 20°C 0.03M U B2=9.3 1950ALa (38599)1343  
\*\*\*\*\*  
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
Co++	vlt	NaClO4	25°C	0.10M	C		B2=9.62	1983KVb (38716)	1344
Method: polarography. pH 8.0									
Co++	gl	KNO3	30°C	0.10M	C		K1=4.58 B2=8.61	1979HAa (38717)	1345
Co++	gl	KNO3	25°C	0.10M	U		K1=4.81 B2=8.62	1973KLa (38718)	1346
*****									
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
Co++	gl	KCl	25°C	0.20M	C		K1=2.93 B2=7.03 B3=9.47 B(CoH-1L)=-5.3 B(CoH-1L2)=-2.11	1983HSa (38783)	1347
Co++	gl	KNO3	22°C	0.10M	U		K1=4.37 B2= 8.12	1975SHa (38784)	1348
*****									
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
Co++	gl	KNO3	25°C	0.10M	C	M	K1=4.56 K(CoL+A)=3.54	2003AHa (39031)	1349
HA is 3-amino-5-mercapto-1,2,4-triazole.									
Co++	gl	KCl	30°C	0.16M	U	I	K1=4.62 B2= 8.06	2001BRa (39032)	1350
Data for 5.8-36.8% w/w urea/H2O, 0.16 M KCl. At 36.8%, K1=4.15, B2=7.39.									
Co++	gl	NaNO3	25°C	0.10M	C	M	K1=4.96 B2= 8.58 K(CoA+L)=5.19	2000KAb (39033)	1351
H2A=Dipicolinic acid.									
Co++	gl	KNO3	25°C	0.10M	C	M	K1=4.30 K(CoL+A)=3.84 B(CoLA)=8.14 K(CoL+B)=3.65 B(CoLB)=7.95	1999AAa (39034)	1352
K(CoL+C)=3.46, B(CoLC)=7.76. HA=MOPSO, HB=MOPS, HC=DIPSO.									
Co++	gl	KNO3	25°C	0.10M	C		K1=4.50	1999BIa (39035)	1353
Co++	gl	alc/w	25°C	20%	M	M	K1=4.68 K(CoL+oxine)=7.98	1998ABa (39036)	1354
Medium: 20% w/w EtOH/H2O, 0.1 M KNO3.									

-----  
 Co++ gl alc/w 20°C 50% M M K1=4.96 1995AMb (39037)1355  
 K(CoA+L)=6.85

Medium: 50% v/v EtOH/H2O, 0.20 M NaClO4. A is 2,2',2''-terpyridine.

-----  
 Co++ gl NaClO4 25°C 0.20M C K1=4.70 1993BAb (39038)1356  
 -----

Co++ gl NaClO4 25°C 1.0M M B2=5.09 1991MKa (39039)1357  
 K(Co+2HL)=1.25

-----  
 Co++ gl KNO3 25°C 0.10M U M K1=4.72 1989MAc (39040)1358  
 K(CoA+L)=7.30

H4A is adenosine-5'-triphosphoric acid.

-----  
 Co++ gl KNO3 25°C 0.10M C M K1=4.65 1989MAd (39041)1359  
 K(CoA+L)=8.42  
 B(CoAL)=15.47

H2A is N-(2-acetamido)imino diethanoic acid.

-----  
 Co++ gl NaClO4 25°C 0.10M U M 1985NSd (39042)1360  
 K(CoL+uracil)=3.68  
 K(CoL+thymine)=4.12

-----  
 Co++ gl KNO3 25°C 0.10M M K1=4.56 B2= 7.67 1981GVa (39043)1361  
 -----

Co++ vlt KNO3 25°C 1.00M U 1977HDa (39044)1362  
 K1eff=5.27

Keff at pH 7

-----  
 Co++ gl KNO3 25°C 0.10M U K1=4.67 B2=8.41 1976GPd (39045)1363  
 -----

Co++ EMF oth/un 18°C 0.20M U K1=4.49 B2=7.36 1969KAd (39046)1364  
 -----

Co++ gl NaNO3 20°C 0.10M U K1=4.6 B2=7.40 1965DRa (39047)1365  
 -----

Co++ gl KNO3 25°C 0.10M U K1=4.56 B2=7.85 1965RWa (39048)1366  
 -----

Co++ oth KNO3 20°C 0.10M U K1=4.9 B2=8.00 1964J0a (39049)1367

Method: paper electrophoresis

-----  
 Co++ gl oth/un 30°C 0.10M U K1=4.49 1959NCa (39050)1368  
 -----

Co++ gl oth/un 25°C 0.02M U K1=5.06 B2=8.46 1954REa (39051)1369  
 -----

Co++ gl oth/un 20°C 0.01M U B2=8.1 1952ALa (39052)1370

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C5H9NO4 H2L CAS 1948-48-7 (3038)

3-Carboxymethylaminopropanoic acid; HOOC.CH2.NH.CH2.CH2.COOH

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

-----  
 Co++ gl KCl 30°C 0.10M U K1=6.17 B2=10.46 1952Cmb (39156)1371  
 \*\*\*\*\*  
 C5H9NO4 H2L MIDA CAS 4408-64-4 (190)  
 N-Methyliminodiethanoic acid; CH3.N(CH2.COOH)2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C	M	K1=7.60 K(CoL+A)=4.54 B(CoLA)=12.14	1990DAb (39224)	1372

H2A: salicylaldehyde

Co++	gl	KNO3	25°C	0.10M	C	M	K1=7.60 K(CoL+A)=3.57 B(CoAL)=11.17	1990DAc (39225)	1373
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HL: benzohydroxamic acid

Co++	gl	KNO3	25°C	0.10M	U		K1=7.62	1977TIa (39226)	1374
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Co++	gl	KNO3	25°C	0.10M	U	T M	K(CoL+Pro)=4.26	1973IVa (39227)	1375
------	----	------	------	-------	---	-----	-----------------	-----------------	------

K(15 C)=4.37, K(37 C)=4.13, K(55 C)=3.90

Co++	gl	KNO3	25°C	0.10M	U	T M	K(CoL+A)=3.60	1972IVa (39228)	1376
------	----	------	------	-------	---	-----	---------------	-----------------	------

K(15 C)=3.68, K(37 C)=3.51, K(55 C)=3.41. HA=cycloserine

Co++	cal	KNO3	20°C	0.10M	U	H		1965ANa (39229)	1377
------	-----	------	------	-------	---	---	--	-----------------	------

DH(K1)=-7.7 kJ mol<sup>-1</sup>, DS=119.5 J K<sup>-1</sup> mol<sup>-1</sup>, DH(K2)=-22.9, DS=188.1

-----  
 Co++ gl KCl 20°C 0.10M U K1=7.62 B2=13.91 1955SAa (39230)1378  
 \*\*\*\*\*  
 C5H9NO4S H2L (1736)  
 3-(Carboxymethyl)thio-L-alanine; HOOC.CH2.S.CH2.CH(NH2)COOH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	2.00M	U		K1=5.05 B2=9.11	1980MAc (39309)	1379

Co++	gl	KNO3	25°C	0.10M	C		K1=4.90 B2=8.52	1974NBb (39310)	1380
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\*\*\*\*\*  
 C5H9NS2 HL CAS 25769-03-3 (3623)  
 Pyrrolidine-N-carboxydithioic acid; C4H8N-CSSH  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	alc/w	25°C	75%	U		B3=15.90	1970PNa (39331)	1381

Medium: 75% MeOH, 0.3 M NaClO4

\*\*\*\*\*

C5H9N3 L Isohistamine CAS 19225-96-8 (4294)  
2-(2'-Aminoethyl)imidazole;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 25°C 0.10M U K1=5.56 B2=9.58 1969EHc (39342)1382  
B3=12.3

\*\*\*\*\*

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  
-----  
Co++ gl NaClO4 25°C 0.10M C M K1=5.08 B2=8.83 1997GHa (39514)1383  
B(1,1,1,0)=11.19  
B(2,4,-1,1)=19.17  
B(2,4,-2,1)=9.37  
B(2,4,-3,1)=-1.69

B(p,q,r,s): pCo+qL+rH+sO2=CopLqHr(O2)s

-----  
Co++ gl KCl 25°C 0.10M C R K1=5.16 B2=8.81 1997SJa (39515)1384  
IUPAC evaluation

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Co++ gl NaNO3 25°C 0.10M U K1=5.55 B2=10.35 1993GAa (39516)1385

-----  
Co++ gl KNO3 35°C 0.10M C M K1=5.98 1985RRc (39517)1386  
B(CoL(cytidine))=11.87

-----  
Co++ gl KCl 25°C 0.10M U M K1=5.07 B2=9.34 1984DMc (39518)1387  
B(CoL(ATP))=7.37  
B(CoL(AMP))=6.41

-----  
Co++ gl KNO3 25°C 0.50M U K1=5.30 1983LWa (39519)1388

-----  
Co++ gl KNO3 25°C 0.20M U T K1=5.16 B2=8.80 1971Rmd (39520)1389  
K1(15 C)=5.25, K1(40 C)=4.98, K2(15 C)=3.74, K2(40 C)=3.46

-----  
Co++ gl oth/un 25°C 0.10M U K1=5.03 B2=8.77 1969EHc (39521)1390

-----  
Co++ gl KNO3 37°C 0.15M U K1=4.89 B2=8.43 1969PSb (39522)1391

-----  
Co++ gl oth/un 25°C .02M U K1=5.2 1960HJa (39523)1392

-----  
Co++ gl oth/un 20°C 0.0 U T H K1=5.16 B2=8.93 1960NFa (39524)1393  
10 C: K1=5.52, K2=4.01; 30 C: 5.08, 3.76; 40 C: 5.01, 3.63  
DH(K1)=-28.6 kJ mol<sup>-1</sup>, DS=4.2; DH(K2)=-20.1, DS=4

-----  
Co++ gl KNO3 30°C 1.0M U T H K1=5.34 B2=9.09 1956HFb (39525)1394  
K3=1.88

DH(K1)=20.9 kJ mol<sup>-1</sup>, DS=33.5; DH(K2)=-41.8, DS=-67; DH(K3)=-29.3, DS=-63  
50 C: K1=5.10, K2=3.32, K3=1.56

-----  
Co++ gl KCl 25°C .135M U T K1=5.27 B2=8.95 1955MAb (39526)1395  
K3=2.03

0 C: K1=5.37, K2=3.81, K3=2.07

-----  
Co++ gl oth/un 20°C .015M U B2=8.7 1952ALa (39527)1396

-----  
Co++ gl KNO3 30°C 1.0M U T K1=5.34 B2=9.10 1952HAa (39528)1397  
K3=1.88

50 C: K1=5.10, K2=3.32, K3=1.56

\*\*\*\*\*

C5H9N3O4S H2L CAS 16907-58-7 (2106)

Thiosemicarbazone-diethanoic acid; H2N.CS.NH.N(CH2.COOH)2

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

-----  
Co++ gl KCl 30°C 0.10M U K1=5.4 1967GNb (39562)1398  
K(Co+HL)=4.1

-----  
Co++ cal KNO3 30°C 0.10M U H 1967Gnc (39563)1399

DH(K1)=10.9 kJ mol<sup>-1</sup>, DS=138 J K<sup>-1</sup> mol<sup>-1</sup>

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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

-----  
Co++ gl KCl 30°C 0.10M U K1=5.9 1967GNb (39592)1400  
K(Co+HL)=4.6

-----  
Co++ cal KNO3 30°C 0.10M U H 1967Gnc (39593)1401

DH(K1)=2.9 kJ mol<sup>-1</sup>, DS=121

\*\*\*\*\*

C5H9N3S HL (1822)

2-Mercaptohistamine;

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

-----  
Co++ gl NaClO4 25°C 0.10M U K1=6.14 B2=12.20 1977STc (39606)1402

\*\*\*\*\*

C5H10NO7P H4L PMID CAS 5994-61-6 (2433)

N-(Phosphonomethyl)iminodiethanoic acid; H2O3P.CH2.N(CH2.COOH)2

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

-----  
Co++ gl KNO3 25°C 0.10M C K1=11.9 2000SDa (39659)1403

K(CoL+H)=5.24

K(CoHL+H)=2.9

K(CoL+OH)=2.5

-----  
Co++ oth KNO3 RT 0.10M C 1980MVa (39660)1404

K(Co+HL)=5.7

Method: paper electrophesis.

\*\*\*\*\*

C5H10N2O2 HL (3039)  
Dimethylglyoxime O-methyl ether; CH3.C(:N.OH).C(:N.O.CH3).CH3

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

-----  
Co++ gl diox/w 25°C 50% U K1=9.80 B2=16.05 1958BPa (39706)1405

-----  
Co++ gl diox/w 25°C 50% U K1=10.00 B2=17.1 1952FRb (39707)1406

\*\*\*\*\*

C5H10N2O2 HL CAS 4775-86-4 (3040)  
Ethylmethylglyoxime (Pentane-2,3-dione dioxime)

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

-----  
Co++ gl diox/w 25°C 50% U K1=12.1 B2=22.3 1958BPa (39715)1407

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C5H10N2O2 HL CAS 2762-32-5 (3041)  
Piperazine-2-carboxylic acid; C4H9N2.COOH

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

-----  
Co++ gl KCl 22°C 0.10M U K1=3.5 1960REb (39722)1408

\*\*\*\*\*

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

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

-----  
Co++ gl KNO3 25°C 0.10M C K1=4.06 1999BIa (39806)1409

-----  
Co++ gl NaClO4 25°C 0.20M C K1=4.05 1993BAb (39807)1410

-----  
Co++ gl NaClO4 25°C 0.10M U K1=4.06 B2=7.24 1973TSb (39808)1411

-----  
Co++ gl NaClO4 25°C 3.00M U T K1=4.52 B2=8.36 1973WIa (39809)1412  
B3=11.41

-----  
Co++ gl KNO3 25°C 0.10M U T K1=4.05 B2=7.35 1965RWa (39810)1413

\*\*\*\*\*

C5H10N2O3 HL Ala-Gly CAS 687-69-4 (55)  
Alanyl-glycine; H2N.CH(CH3).CO.NH.CH2.COOH

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

Co++ gl NaCl04 20°C 0.10M U M K1=3.74 B2= 6.21 1991KUb (39886)1414  
K(CoH-1L+H)=9  
K(CoH-1L2+H)=8.0  
K(Co(H-1L)2+H)=10.8

K(2Co(H-1L)2+O2=Co2(H-1L)4O2)=13.4

\*\*\*\*\*

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  
-----

Co++ gl NaCl 25°C 0.12M U K1=3.05 B2=5.92 1977PNa (39909)1415

\*\*\*\*\*

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  
-----

Co++ gl NaCl 25°C 0.12M U K1=3.28 B2=5.92 1977PNa (39934)1416

Co++ gl oth/un 26°C 0.05M U K1=3.23 B2=5.59 1955GOa (39935)1417

\*\*\*\*\*

C5H10N2O3 HL Gly-Ala CAS 3695-73-6 (56)  
Glycyl-alanine; H2N.CH2.CO.NH.CH(CH3).COOH

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

Co++ gl KNO3 25°C 0.1M U 2003PGa (40001)1418

K(Co+HL)=3.23  
K(CoL+H)=11.39  
K(CoHL+HL)=2.13  
K(CoHL2+H)=10.78

K(CoL2+H)=11.03; K(CoL+HL)=2.74

-----  
Co++ gl NaCl04 20°C 0.10M U M K1=3.35 B2= 5.36 1991KUb (40002)1419

K(CoH-1L+H)=9  
K(CoH-1L2+H)=8

K(2Co(H-1L)2+O2=Co2(H-1L)4O2)=7.6

-----  
Co++ gl NaCl 25°C 0.12M U K1=3.28 B2= 5.92 1976PNa (40003)1420

Co++ gl NaCl 25°C 0.10M U K1=3.10 B2=5.68 1959BRb (40004)1421

\*\*\*\*\*

C5H10N2O3 HL Gly-Sar CAS 29816-01-1 (2331)  
Glycyl-sarcosine; H2N.CH2.CO.N(CH3).CH2.COOH

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

Co++ gl oth/un 25°C 0.02M U K1=3.91 B2=7.41 1956DRb (40027)1422

\*\*\*\*\*





3-Ethylthiopropionic acid; CH3.CH2.S.CH2.CH2.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 50% U K1=2.8 B2=4.8 1956IFa (40241)1429  
\*\*\*\*\*  
C5H10O6 HL D-Ribonic acid CAS 18315-89-4 (6941)  
2R,3S,4R,5-Tetrahydroxopentanoic acid; D-Ribonic acid;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 20°C 0.10M C K1=3.07 1994ESa (40378)1430  
B(CoH-1L)=-1.72  
\*\*\*\*\*  
C5H11N L CAS 1003-03-8 (304)  
Cyclopentylamine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 37°C 0.15M C K1=5.7 1974Mwb (40392)1431  
\*\*\*\*\*  
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  
-----  
Co++ sp non-aq 25°C 100% U M 1993SSc (40440)1432  
K(CoA+L)=3.211  
K(CoB+L)=3.500  
K(CoC+L)=3.773  
Medium:Toluene. H2A:Octaethylporphyrin. H2B: t-Octaethylchlorin.  
H2C: a mixture of tct- and ttt-octaethylisobacteriochlorin.  
-----

-----  
Co++ sp non-aq 25°C 100% U TIHM 1982RWb (40441)1433  
K(CoA+L)=2.83  
Medium: CH3Cl. A=Tetra(4-Methoxyphenyl)porphyrin, In ClCH2.CH2Cl: K=3.42;  
in CH2Cl2: K=2.83; in DMF: 2.80. Also DH and DS  
-----

-----  
Co++ sp non-aq 21°C 100% U T M 1978DBa (40442)1434  
K(CoA+L)=3.70  
Medium: toluene. A=Protoporphyrin IX dimethyl-ester. Also enthalpy data for  
O2 adduct. At 30 C: K(CoA+L)=3.47; 39 C: 3.26; 49 C: 3.04  
-----

-----  
Co++ sp diox/w ? 95% U I M 1973MRa (40443)1435  
K(CoBr2+L)=2.00  
K(CoBr2+2L)=4.52  
K(CoBr2+3L)=7.02  
Medium: 5% HCON(CH3)2, 95% dioxan, 0.005 M CoBr2. Conductivity also used  
In 100% HCON(CH3)2, values are 1.85, 4.44 and 6.51  
-----

Co++ sp non-aq ? 100% U I M 1971MAe (40444)1436  
 K(CoCl2+L)=1.27  
 K(CoCl2+2L)=3.43

Medium: 50% benzene/50% HCON(CH3)2. In 0% benzene, K(CoCl2+L)=1.82;  
 25%: K(CoCl2+L)=1.35, K(CoCl2+2L)=3.20; 75%: 0.80 and 3.45

\*\*\*\*\*

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  
 -----

Co++ gl KNO3 25°C 0.20M U T HM K1=4.24 1996JLd (40679)1437  
 K(Co(bpy)+L)=3.54

Data for 25-45 C. DH(K1)=-87.9 kJ mol<sup>-1</sup>, DS(K1)=214 J K<sup>-1</sup> mol<sup>-1</sup>;  
 DH(Co(bpy)L)=-80.8, DS(Co(bpy)L)=203.

-----  
 Co++ gl alc/w 20°C 50% M K1=4.67 1995AMb (40680)1438  
 Medium: 50% v/v EtOH/H2O, 0.20 M NaClO4.

-----  
 Co++ gl KNO3 30°C 0.10M U K1=4.34 1994RSa (40681)1439  
 -----

Co++ gl NaClO4 25°C 0.20M C K1=5.03 1993BAb (40682)1440  
 -----

Co++ gl KNO3 25°C 0.10M U M K1=4.67 1989MAc (40683)1441  
 K(CoA+L)=3.90

H4A is adenosine-5'-triphosphoric acid.

-----  
 Co++ gl KNO3 25°C 0.10M C M K1=4.67 1989MAd (40684)1442  
 K(CoA+L)=4.09  
 B(CoAL)=11.14

H2A is N-(2-acetamido)imino diethanoic acid.

-----  
 Co++ gl KNO3 35°C 0.20M U M K1=4.24 B2=7.80 1989RVa (40685)1443  
 K(CoA+L)=3.81

A=bis(imidazol-2-yl)methane

-----  
 Co++ oth NaClO4 35°C 0.10M U M K1=4.60 B2=8.01 1984SYa (40686)1444  
 B(Co(NTA)+L)=3.25

Method: paper electrophoresis

\*\*\*\*\*

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  
 -----

Co++ gl NaNO3 25°C 0.10M C M K1=4.80 B2= 8.45 2000KAb (40827)1445  
 K(CoA+L)=3.05

H2A=Dipicolinic acid.

-----  
 Co++ gl KNO3 25°C 0.20M U T HM K1=4.44 1996JLd (40828)1446

K(Co(bpy)+L)=4.11

Data for 25-45 C. DH(K1)=-107 kJ mol<sup>-1</sup>, DS(K1)=275 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(Co(bpy)L)=-113, DS(Co(bpy)L)=299.

-----  
Co++ gl KNO3 25°C 0.15M U K1=4.22 B2=7.7 1987FZa (40829)1447  
-----

Co++ gl KNO3 25°C 0.10M C T K1=4.15 B2=7.62 1975IPb (40830)1448  
-----

Co++ gl KCl 25°C 0.05M U M T K1=4.29 B2=7.81 1972GSc (40831)1449  
B(CoL(Phe))=8.02  
B(CuHL(Tyr))=8.03  
-----

Co++ gl oth/un 25°C 0.02M U K1=4.80 B2=8.38 1954REa (40832)1450  
\*\*\*\*\*

C5H11NO2 HL DL-Valine CAS 516-06-3 (186)  
DL-2-Amino-3-methylbutanoic acid; H2N.CH(CH(CH3)2).COOH  
-----

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

Co++ gl KNO3 37°C 0.15M C M K1=4.243 B2= 7.56 1989KKd (40892)1451  
B(CoH-2L)=-14.20  
B(Co(imidazole)L)=6.50  
\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.10M C M K1=5.25 1999AAa (41066)1452  
K(CoL+A)=3.71  
B(CoLA)=8.95  
K(CoHL+B)=1.89  
K(CoL+C)=1.20

HA=MOPSO, HB=MOPS, HC=DIPSO.  
-----

Co++ gl KNO3 25°C 0.10M C I R K1=4.14 B2=7.28 1995BEa (41067)1453  
IUPAC evaluation  
-----

Co++ gl KNO3 25°C 0.10M U M K1=4.50 1989MAc (41068)1454  
K(CoA+L)=4.05

H4A is adenosine-5'-triphosphoric acid.  
-----

Co++ gl KNO3 35°C 0.20M U M K1=3.98 B2=7.50 1989RVa (41069)1455  
K(CoA+L)=3.57

A=bis(imidazol-2-yl)methane  
-----

Co++ gl KCl 25°C 0.50M M T H K1=6.00 B2=10.56 1988MAa (41070)1456  
Data for 25-40 C. DH(K1)=-82.47 kJ mol<sup>-1</sup>, DS(K1)=-392 J K<sup>-1</sup> mol<sup>-1</sup>.  
DH(K2)=35.0, DS(K2)=-29.6.  
-----

Co++ gl KNO3 25°C 0.15M U K1=4.16 B2=7.62 1987FZa (41071)1457  
 -----  
 Co++ gl KCl 25°C 0.20M U K1=4.20 B2=7.75 1982FGa (41072)1458  
 -----  
 Co++ gl KNO3 25°C 0.10M C T K1=4.16 B2=7.60 1975IPb (41073)1459  
 -----  
 Co++ oth KNO3 20°C 0.10M U K1=4.5 B2=7.60 1964JOa (41074)1460  
 K3=1.9

Method: paper electrophoresis

Co++ gl KNO3 25°C 0.10M U K1=4.12 B2=7.56 1964LMa (41075)1461  
 -----

Co++ gl oth/un 20°C 0.01M U B2=7.9 1950ALa (41076)1462  
 \*\*\*\*\*

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  
 -----

Co++ oth NaClO4 35°C 0.10M U K1=9.20 B2=18.18 1998GAc (41249)1463  
 Method: electrophoresis. Medium: 0.10 M HClO4, 0.01 M H2L

Co++ gl KNO3 32°C 0.0 U 1992BKf (41250)1464  
 K(Co+H2L=CoL+2H)=-9.93  
 K(Co+2H2L=CoL2+4H)=-22.77

Medium: 0.005 M KNO3

Co++ gl KCl 25°C 0.20M C M K1=8.98 B2=16.88 1983HSa (41251)1465  
 B(CoHL2)=23.32  
 B(Co2L3)=28.35  
 B(CoL(Gly))=12.84  
 B(CoL(en))=14.09

B(CoL(His))=15.05. Spectrophotometry also used.

\*\*\*\*\*

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  
 -----

Co++ oth NaClO4 25°C 1.0M U K1=3.97 B2= 7.92 1982CSc (41293)1466  
 B(CoH-1L2)=-2.35

Method: recalculation of literature data.

Co++ gl NaClO4 25°C 1.00M C I K1=3.97 B2=7.92 1981CPb (41294)1467  
 B(CoH-1L)=-2.35

In 2 M NaClO4: K1=4.25, B2=7.93

\*\*\*\*\*

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
Co++	gl	KCl	20°C	0.10M	U			K1=3.80 B2=5.80	1964ULa	(41309)1468
*****										
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
Co++	ISE	non-aq	25°C	100%	U			K1=10.2 B2=20.7	1984LSb	(41344)1469
Medium: DMSO, 0.1 M NaClO4; Ag-electrode. In MeOH: K1=10.6, B2=21.1										
Co++	sp	alc/w	25°C	75%	U			B3=14.40	1970PNa	(41345)1470
Medium: 75% MeOH, 0.3 M NaClO4										

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
Co++	gl	NaNO3	25°C	0.10M	C			K1=2.00	1988MSa	(41417)1471
*****										
C5H12NO3P		H2L						PYPH (223)		
Piperidine-2-phosphonic acid; C5H10N.PO3H2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	24°C	0.10M	U			K1=5.10 K(Co+HL)=1.70	1989YKa	(41433)1472
*****										
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
Co++	gl	NaClO4	23°C	0.10M	U			K1=4.58	1990YTa	(41442)1473
*****										
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
Co++	gl	NaClO4	25°C	0.02M	U			K(Co+HL)=8.99	1982PNa	(41469)1474
*****										
C5H12N2O		L						(3046)		
Sarcosine dimethylamide; CH3.NH.CH2.CO.N(CH3)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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-----  
Co++ gl oth/un 25°C 0.01M U K1=2.80 B2=5.08 1959DLb (41474)1475  
\*\*\*\*\*

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  
-----

Co++ gl KCl 30°C 0.16M U I K1=5.89 B2= 8.70 1997BSb (41564)1476  
B(CoHL)=14.07  
B(CoH2L2)=27.55

Also data for 5.8-36.8% w/w urea/H2O.

-----  
Co++ gl KNO3 25°C 0.10M C K1=5.01 B2=8.49 1976BPb (41565)1477  
B(CoHL)=14.17  
B(CoH2L2)=27.78  
B(CoHL2)=18.65

-----  
Co++ gl NaCl 25°C 0.02M C 1975KPa (41566)1478  
K(Co+HL)=3.48  
K(CoHL+HL)=2.96  
K(CoHL+L)=3.42

K(2CoHL2+O2 = (CoHL2)2O2) = 7.17.

-----  
Co++ gl KNO3 25°C 0.10M U I 1970CMc (41567)1479  
K(Co+HL)=3.54  
K(CoHL+HL)=3.33

I=1.0 M, K(Co+HL)=3.52, K(CoHL+HL)=2.80

-----  
Co++ gl KNO3 25°C 0.10M U K1=5.6 1970CMc (41568)1480  
K(CoL+H)=9.0

-----  
Co++ gl oth/un 25°C 0.02M U 1954REa (41569)1481  
K(Co+HL)=4.02  
K(Co+2HL)=6.92

-----  
Co++ gl oth/un 20°C 0.01M U 1952ALa (41570)1482  
K(Co+2HL)=6.3

\*\*\*\*\*  
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  
-----

Co++ gl KCl 25°C 0.50M C K1=6.185 B2=10.59 1986LEb (41590)1483  
B(CoH-1L2)=1.266

\*\*\*\*\*  
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
Co++	gl	KNO3	25°C	0.10M	C			1974NBb (41614)	1484

K(Co+HL)=3.46  
 K(CoL+HL)=2.61  
 K(CoHL=CoL+H)=-6.94  
 K(CoHL2=CoL2+H)=-9.09

\*\*\*\*\*  
 C5H13NO7P2                      H4L                      CAS 32545-75-8 (6890)  
 N-Methylenedi(phosphonic acid)tetrahydrooxazine; OC4H8N.CH(P(O)3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	M		K1=7.12	1978GMF (41764)	1485

K(Co+HL)=6.10

\*\*\*\*\*  
 C5H13N2O4P                      H2L                      (7122)  
 (S,S)-Alanyl-1-aminoethylphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	U		K1=3.013	1995HLA (41786)	1486

B(CoH-1L)=-5.92

For the (S,R) isomer, K1=2.566, B(CoH-1L)=-6.23.

\*\*\*\*\*  
 C5H13N3                                      L                                      (1866)  
 cis-3,5-Diaminopiperidine; C5H9N(NH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C		K1=8.44    B2=15.51	2000PSb (41794)	1487

\*\*\*\*\*  
 C5H13OPS2                      HL                      CAS 1000-64-2 (4339)  
 O-Butyl hydrogen-P-methylphosphonodithioate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	ISE	alc/w	25°C	90%	U		K1=2.30    B2=4.06	1972TCa (41809)	1488

Medium: 90% EtOH, 0.3 M NaClO4

\*\*\*\*\*  
 C5H14NO2P                      HL                      (7265)  
 Aminomethyl(butylphosphinic acid); H2NCH2PO(OH)C4H9

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C		K1=3.17	1996RLA (41817)	1489

\*\*\*\*\*  
 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
Co++	cal	alc/w	25°C	100%	U	H		K1=2.49	1985BUd (41863)	1490
Medium: MeOH, 0.05 M Et4N.NO3. DH=-25.7 kJ mol <sup>-1</sup>										
*****										
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
Co++	gl	KNO3	0°C	1.0M	U	T		K1=5.41 B2=8.93	1956HFb (41874)	1491
30 C: K1=4.88, K2=3.07; 50 C: K1=4.38. DH(K1)=-29 kJ mol <sup>-1</sup> , DS=0; DH(K2)=-25										
*****										
Co++	gl	KNO3	0°C	1.0M	U	T		K1=5.41 B2=8.93	1952HAa (41875)	1492
50 C: K1=5.41. In 1 M KCl, 30 C: K1=4.88, K2=3.07										
*****										
C5H14N2								(4303)		
N,N,N'-Trimethyl-1,2-diaminoethane;										L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	non-aq	25°C	100%	C	H		K1=4.28	2002CMA (41889)	1493
Medium: DMSO, 0.10 M Et4NClO4. By calorimetry: DH(K1)=-45.7 kJ mol <sup>-1</sup> , DS(K1)=-71.5 J K <sup>-1</sup> mol <sup>-1</sup> .										
*****										
C5H14N2O		L						CAS 52319-87-1	(3628)	
N-(2'-Hydroxyethyl)-1,3-diaminopropane; H2N.CH2.CH2.CH2.NH.CH2.CH2.OH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	EMF	KNO3	25°C	0.50M	U			K1=5.21 B2=9.56	1971KPa (41908)	1494
*****										
Co++	gl	KNO3	25°C	0.50M	U			K1=4.76 B2=7.98 K3=1.93	1970MLb (41909)	1495
*****										
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
Co++	gl	KCl	25°C	1.0M	U			K1=6.11 B2=10.84	1950EDa (41914)	1496
*****										
C5H14N2O		L						CAS 36753-45-4	(3051)	
N-(3-Hydroxypropyl)ethylenediamine; H2N.CH2.CH2.NH.CH2.CH2.CH2.OH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	1.0M	U			K1=7.15 B2=12.42 B3=15.13	1953EDa (41917)	1497
*****										

C5H15N07P2 H4L AMOK CAS 63132-39-8 (1350)  
1-Hydroxy-3-N,N-dimethylaminopropane-1,1-diphosphonic acid;  
Me2N.CH2.CH2.C(OH)(PO3H2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M M K1=9.01 1978KMa (41953)1498  
K(Co+HL)=7.89  
K(Co+H2L)=4.74

\*\*\*\*\*

C5H15N07P2 H4L (1348)  
1-Hydroxy-3-N-ethylaminopropylidenediphosphonic acid;  
CH3.CH2.NH.CH2.CH2.C(OH)(PO3H2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M M K1=10.15 1978KMa (41962)1499  
K(Co+HL)=8.88  
K(Co+H2L)=5.23

\*\*\*\*\*

C5H15N3 L CAS 13531-52-7 (738)  
1,4,8-triazaoctane, N-(2-Aminoethyl)propane-1,3-diamine; H2NCH2CH2NHCH2CH2CH2NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=8.5 B2=13.2 1973AHc (42003)1500

\*\*\*\*\*

C5H16N4 L (3614)  
Tetrakis(aminomethyl)methane; C(CH2.NH2)4

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=7.6 1968ZBa (42013)1501  
K(CoL+H)=7.8  
K(CoHL+H)=5.5

\*\*\*\*\*

C5H17N013P4 H5L ADOPPH CAS 82372-37-0 (228)  
1-Hydroxy-3-(N,N-bis(methylenephosphonic)-aminopropylidene-1,1-diphosphonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 1.0M U K1=12.7 1982SBa (42018)1502  
K(Co+HL)=10.7  
K(Co+H2L)=7.6  
K(Co+H3L)=5.7  
K(Co+H4L)=4.9

\*\*\*\*\*

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

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	oth/un	21°C	0.40M	U		B2=2.85	1955BKa (42087)	1503
Medium:0.2-0.6(some EtOH)									
*****									
C6H4N2		L					CAS 100-48-1	(321)	
4-Cyanopyridine; C5H4N.CN									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	non-aq	25°C	100%	U	M		1993SSc (42194)	1504
							K(CoA+L)=2.734		
							K(CoB+L)=3.079		
							K(CoD+L)=3.288		
Medium:Toluene. H2A:Octaethylporphyrin. H2B:t-Octaethylchlorin.									
H2D:tct-Octaethylisobacteriochlorin.									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	non-aq	25°C	100%	U	M		1980MAb (42195)	1505
							K(CoA(ClO4)+L)=2.3		
Medium: CH2Cl2. A= 1,19-Dimethyl-AD-didehydrocorrin.									
In H2O K(CoA(CN)+L)=1.04									
*****									
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
Co++	gl	KCl	25°C	0.10M	M		K1=6.43 B2=11.21 B3=14.49	1986HAd (42261)	1506
*****									
C6H4N4O		HL					CAS 900-47-0	(3083)	
4-Hydroxypteridine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	oth/un	20°C	0.01M	U		K1=3.8 B2=6.6	1953ALa (42276)	1507
*****									
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
Co++	gl	oth/un	20°C	0.01M	U		K1=3.2	1953ALa (42285)	1508
*****									
C6H5ClS		HL		Cl-Thiophenol			CAS 106-54-7	(6177)	
4-Chlorothiophenol;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	none	25°C	0.0	U		K1=8.3 B2=7.77	1988KDb (42338)	1509

B3=11.78

B4=16.32

\*\*\*\*\*

C6H5NO L Picolinaldehyde CAS 1121-60-4 (1186)

2-Pyridinecarboxaldehyde; C5H4N.CHO

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

Co++ gl KNO3 25°C 0.10M U M K1=1.75 B2= 3.45 1999NDa (42383)1510

Data for ternary complexes with histidine.

-----  
Co++ gl KNO3 25°C 0.10M U M 1999NMb (42384)1511

B(Co(val)L)=10.21  
B(Co(val)L2)=12.22  
B(Co(val)2L2)=15.96  
K(CoL+val)=8.46

K(Co(val)+L)=5.77, K(Co(val)L+L)=2.01.

-----  
Co++ gl KNO3 25°C 0.10M U M 1999NMb (42385)1512

B(Co(phe)L)=10.11  
B(Co(phe)L2)=12.09  
B(Co(phe)2L2)=15.87  
K(CoL+phe)=8.36

K(Co(phe)+L)=5.66, K(Co(phe)L+L)=1.98.

-----  
Co++ gl KNO3 25°C 0.10M U M 1999NMb (42386)1513

B(Co(trp)L)=10.09  
B(Co(trp)L2)=12.32  
B(Co(trp)2L2)=15.93  
K(CoL+trp)=8.34

K(Co(trp)+L)=5.63, K(Co(trp)L+L)=2.23.

-----  
Co++ sp KCl 30°C 0.50M U 1977EEa (42387)1514

B(CoH-1L)=-6.02  
B(CoH-2L)=-17.42  
B(CoH-2L2)=-14.28

\*\*\*\*\*

C6H5NO2 HL Picolinic acid CAS 98-98-6 (391)

2-Pyridine-carboxylic acid; C5H4N.COOH

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

Co++ gl KNO3 25°C 0.10M U T K1=4.34 1988NSc (42483)1515

At 40 C, K1=4.19.

-----  
Co++ sp oth/un 25°C 0.10M U T HM 1981HKa (42484)1516

K(CoA+L)=2.79

Phosphate medium, A= Bovine carbonic anhydrase protein

-----  
Co++ gl NaClO4 25°C 0.10M U K1=6.60 B2=10.58 1974BGa (42485)1517

B3=14.55

In 50% dioxan K1=5.91, B2=11.00, B3=15.57, in 75% acetone K1=5.68, B2=11.00 B3=15.65 and in 75% acetonitrile K1=5.54, B2=10.45 and B3=15.20.

-----  
Co++ sp non-aq ? 100% U I K1=2.79 B2=6.17 1971AMd (42486)1518  
Medium: 3-methylbutanol.  
-----

Co++ sp non-aq ? 100% U I K1=2.28 B2=6.33 1971AMd (42487)1519  
Medium: 50% benzene,50% 3-methylbutanol. With 25% benzene, K1=2.44, B2=6.27;  
75% benzene: K1=1.90, B2=6.34. Data also for CCl4-methylbutanol mixtures  
-----

Co++ gl NaNO3 20°C 0.10M U K1=5.74 B2=10.44 1960ANb (42488)1520  
K3=3.65  
-----

Co++ gl oth/un 25°C 0.0 U K1=4.69 B2=10.53 1957LUa (42489)1521  
-----

Co++ gl oth/un 25°C 0.02M U I K1=6.0 B2=10.8 1955HCa (42490)1522  
In 50% dioxan: K1=5.9, K2=5.4  
-----

\*\*\*\*\*  
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  
-----

Co++ gl NaCl 25°C 0.10M U K1=2.29 2001DSb (42661)1523  
-----

Co++ sp oth/un 25°C 0.10M U T HM 1981HKa (42662)1524  
K(CoA+L)=0.96  
-----

Phosphate medium, A= Bovine carbonic anhydrase protein  
-----

\*\*\*\*\*  
C6H5NO2S HL CAS 1849-36-1 (4397)  
4-Nitrothiophenol; NO2.C6H4.SH  
-----

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

Co++ sp none 25°C 0.0 U K1=5.22 B2=9.45 1988KDb (42709)1525  
B3=13.53  
B4=17.81  
-----

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

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

Co++ gl NaClO4 25°C 0.10M U T K1=3.48 B2=6.36 1981RRb (42829)1526  
Temp range 25-50. K1 at 50 C = 3.30; K2 at 50 C = 2.76  
-----

\*\*\*\*\*  
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
Co++	gl	KCl	25°C	0.10M	M			K1=7.84 B2=13.58 B3=16.6	1986HAb	(42853)1527

\*\*\*\*\*

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
Co++	gl	KNO3	25°C	0.10M	C	M		K1=7.35 K(CoA+L)=6.10 B2=12.51 B(CoAL)=14.21	1989DAa	(42905)1528

H2A: 8-hydroxyquinoline-5-sulfonic acid.

Co++	gl	KNO3	35°C	0.20M	U	M		K1=6.25 K(CoA+L)=5.81 B2=11.27	1989RVa	(42906)1529
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A=bis(imidazol-2-yl)methane

Co++	gl	NaClO4	30°C	0.05M	U	TIH		K1=8.26 I=0.1, 40 C: K1=7.53, B2=13.38; I=0.1, 30 C: K1=7.17, B2=12.90 I=0.1, 30 C: K1=7.78, B2=14.05; I=0.2, 30 C: K1=7.67, B2=13.49	1986NDa	(42907)1530
------	----	--------	------	-------	---	-----	--	--	---------	-------------

Co++	gl	KCl	25°C	0.10M	M			K1=7.48 B2=12.72	1984HAc	(42908)1531
------	----	-----	------	-------	---	--	--	---------------------	---------	-------------

Co++	gl	KNO3	30°C	0.10M	U			K1=7.48 K3=3.14 B2=12.79	1964MTb	(42909)1532
------	----	------	------	-------	---	--	--	--------------------------------	---------	-------------

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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
Co++	gl	NaClO4	30°C	0.10M	U	T		K1=3.82 B2=6.35	1982RRa	(42968)1533

\*\*\*\*\*

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
Co++	gl	KNO3	25°C	0.50M	U			K1=1.60 B2=2.76 B3=3.49	1981LMb	(42988)1534

\*\*\*\*\*

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
Co++	gl	KNO3	30°C	0.10M	U			K1=7.64 K3=4.23 B2=14.01	1964MTb	(43081)1535

\*\*\*\*\*

C6H5O4Cl HL Chlorokojic aci (3086)  
3-Chloro-5-hydroxy-2-hydroxymethyl-4-pyrone;

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

Co++ gl diox/w 30°C 75% U K1=8.87 B2=16.01 1960KFc (43127)1536

\*\*\*\*\*

C6H6NBr L (8782)  
5-Bromo-2-methylpyridine;

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

Co++ gl NaNO3 25°C 0.50M C K1=-0.01 2002KSb (43192)1537

\*\*\*\*\*

C6H6NCl L CAS 10445-91-7 (8781)  
4-(Chloromethyl)pyridine;

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

Co++ gl NaNO3 25°C 0.50M C K1=1.23 2002KSb (43208)1538

\*\*\*\*\*

C6H6NCl L p-Chloroaniline CAS 106-47-8 (3090)  
4-Chloroaminobenzene; Cl.C6H4.NH2

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

Co++ sp non-aq ? 100% U I M 1971ZDa (43215)1539

K(CoCl2+L)=2.21  
K(CoCl2+2L)=3.72

Medium: CH3CN. In DMF, values are 2.05, 3.60

\*\*\*\*\*

C6H6NO6P H2L CAS 330-13-2 (5865)  
4-Nitrophenylphosphoric acid; NO2.C6H4.O.PO.(OH)2

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

Co++ gl NaNO3 25°C 0.10M C K1=1.65 1988MSa (43243)1540

\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.50M U K1=1.04 B2=1.60 1974WAb (43258)1541

\*\*\*\*\*

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  
-----

-----  
Co++ gl NaClO4 25°C 0.30M U K1=8.8 B2=17.60 1966BEa (43288)1542  
By spectrophotometry: K1=8.6, K2=8.6  
-----

Co++ gl KNO3 24°C 0.10M U K1=9.6 B2=18.30 1962BEa (43289)1543  
\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 0.50M U K1=2.00 B2=3.1 1976WAa (43315)1544  
\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 0.50M U K1=0.87 B2=1.28 1981LRa (43339)1545  
-----

Co++ EMF NaNO3 25°C 0.50M U K1=0.72 1977BNb (43340)1546  
\*\*\*\*\*  
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  
-----

Co++ gl KNO3 35°C 0.15M U T H K1=2.86 1980SKb (43352)1547  
Temperature range is 25-45C. At 35C, DH1=-12.68 kJ mol-1;  
DS1=13.47 J mol-1 K-1  
-----

Co++ gl diox/w 35°C 50% U K1=3.37 1980SKb (43353)1548  
\*\*\*\*\*  
C6H6N2O2 HL (8281)  
3-Hydroxy-2-amidocarboxypyridine, Hydroxypicolinamide;  
-----

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

Co++ gl KNO3 25°C 0.10M C K1=5.68 B2=11.09 1990ARa (43371)1549  
\*\*\*\*\*  
C6H6N2O2 L m-Nitroaniline CAS 99-09-2 (464)  
3-Nitroaminobenzene; H2N.C6H4.NO2  
-----

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

Co++ sp non-aq 25°C 100% U M 1971ZDa (43386)1550  
K(CoCl2+L)=2.03  
K(CoCl2+2L)=3.72  
-----

Medium: CH3CN. In DMF, values are 3.79, 4.66  
\*\*\*\*\*



C6H6N2O2 L p-Nitroaniline CAS 100-01-6 (465)  
4-Nitroaminobenzene; H2N.C6H4.NO2

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

Co++ sp non-aq ? 100% U I 1971ZDa (43403)1551

K(CoCl2+L)=2.78

K(CoCl2+2L)=3.80

Medium: CH3CN. In DMF, K(CoCl2+L)=3.44, K(CoCl2+2L)=4.92

\*\*\*\*\*

C6H6N2O2 HL CAS 5657-61-4 (1430)

Nicotinylhydroxamic acid; C5H4N.CO.NH.OH

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

Co++ gl NaClO4 35°C 0.10M U K1=4.06 B2=7.75 1983ABa (43435)1552

\*\*\*\*\*

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  
-----

Co++ gl diox/w 30°C 50% U K1=4.77 B2=8.40 1966VMa (43445)1553

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C6H6N2O4 L Methyl orotate CAS 6153-44-2 (2612)

2,4-Dihydroxypyrimidine-6-carboxylic acid methyl ether

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

Co++ gl NaCl 19°C 0.15M U K1=3.88 1979DZc (43458)1554

\*\*\*\*\*

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  
-----

Co++ sp oth/un 20°C 0.10M C K1=6.70 1981LGc (43468)1555

Medium: acetate (0.1 M) or phosphate (0.1 M) buffers.

-----  
Co++ gl NaCl 20°C 0.15M U K1=6.16 1979DZc (43469)1556

K(Co+HL)=2.33

\*\*\*\*\*

C6H6N4 L 9-Methylpurine CAS 20427-22-9 (2480)

9-Methylpurine;

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

Co++ gl NaClO4 25°C 1.00M U K1=1.04 1983ALa (43491)1557

-----

Co++ sp NaClO4 25°C 0.18M U H K1=0.9 1983ALb (43492)1558  
DH(K1)=-20.4 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  
-----

Co++ gl KNO3 20°C 0.10M U K1=2.15 19660Ca (43497)1559

\*\*\*\*\*

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  
-----

Co++ gl KNO3 30°C 0.10M U K1=7.47 1994RSa (43702)1560

Co++ gl KNO3 25°C 0.10M C M K1=8.25 B2=14.75 1989DAa (43703)1561

K(CoA+L)=7.60

B(CoAL)=15.71

H2A: 8-hydroxyquinoline-5-sulfonic acid.

-----  
Co++ gl KNO3 35°C 0.20M U M K1=7.69 B2=14.17 1989RVa (43704)1562

K(CoA+L)=7.49

A=bis(imidazol-2-yl)methane

-----  
Co++ gl KNO3 35°C 0.10M U M K1=4.46 1989SRe (43705)1563

K(CoL+Cytosine)=4.48

-----  
Co++ gl NaClO4 30°C 0.10M M TIH K1=7.81 B2=13.99 1986DNa (43706)1564

Data for 0.05-0.20 M NaClO4. Extrapol. to I=0.0, K1=8.45, B2=15.05.

Data for 30-50 C. DH(K1)=-15.3 kJ mol-1.

-----  
Co++ gl KNO3 35°C 0.10M C 1985RRh (43707)1565

K(Co+HL)=4.40

-----  
Co++ gl KCl 25°C 0.20M C M K1=8.60 B2=14.94 1983KGb (43708)1566

B(Co(ala)L)=11.98

-----  
Co++ gl NaClO4 25°C 0.10M U K1=8.61 B2=15.33 1971GSb (43709)1567

-----  
Co++ gl KNO3 25°C 1.0M U 1968TMa (43710)1568

K(Co+H2L=CoL+2H)=-13.959

K(CoL+H2L=CoL2+2H)=-15.856

-----  
Co++ gl KCl 25°C 0.10M U K1=8.40 B2=14.20 1966JNa (43711)1569

\*\*\*\*\*

C6H6O2S HL (3683)

2-Acetyl-3-hydroxythiophene; C4H2S(CO.CH3)OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U	M		K1=5.13 K(Co(bpy)+L)=5.20	1967SIb (43907)	1570

Medium: 50% dioxan, 0.1 M NaClO4

Co++	sp	diox/w	25°C	10%	U			K1=3.98	1966PSb (43908)	1571
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Medium: 10% dioxan, 0.1 M NaClO4. By glass electrode, K1=3.92

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C6H6O3		H3L	Pyrogallol	CAS 87-66-1	(696)
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1,2,3-Trihydroxybenzene; C6H3(OH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	NaClO4	30°C	0.10M	M	TIH		K(Co+HL)=8.10 K(Co+2HL)=13.86	1986DNa (43945)	1572
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Data for 0.05-0.20 M NaClO4. Extrapolated to I=0.0, K(Co+HL)=8.55, K(Co+2HL)=15.10. Data for 30-50 C. DH(Co+HL)=-14.2 kJ mol<sup>-1</sup>.

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C6H6O3		H3L	Phloroglucinol	CAS 6099-90-7	(2525)
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1,3,5-Trihydroxybenzene; C6H3(OH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	sp	none	25°C	0.0	C			K(Co+H2L)=6.67	1983EEa (44011)	1573
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Medium pH 6.5. Extrapolated from data for I=0.15-0.25 M. K(H2L+H)=8.45.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	NaClO4	25°C	2.00M	U	H		K1=5.12 B2=9.19 K3=2.40	1978GHa (44071)	1574
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DH(K1)=-14.51 kJ mol<sup>-1</sup>, DH(K2)=-14.71, DH(K3)=-23.03

Co++	gl	diox/w	30°C	50%	U			K1=7.67 B2=13.29	1957CWa (44072)	1575
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C6H6O4		HL	Kojic acid	CAS 501-30-4	(1800)
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5-Hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	diox/w	25°C	40%	C			K1=4.51 B2= 8.02	1990SHb (44185)	1576
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Medium: 40% v/v dioxane/H2O, 0.03 M KCl.

Co++	sp	NaCl	25°C	0.10M	C			K1=4.72 B2= 9.91	1976KIc (44186)	1577
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Co++ gl NaClO4 25°C 2.00M C T H K1=4.55 B2=8.26 1975GHa (44187)1578  
B3=10.70

DH(K1)=-11.7 kJ mol<sup>-1</sup>; DS(K1)=47.7 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-9.6, DS(K2)=38.5  
DH(K3)=-15.5; DS(K3)=-4.2. 20 C, K1=4.64, B2=8.35, B3=10.92; 40 C, K1=4.49

-----  
Co++ gl diox/w 30°C 75v% U K1=9.46 B2=16.95 1960KFc (44188)1579  
-----

Co++ gl diox/w 30°C 50% U K1=7.11 B2=12.18 1957Cwa (44189)1580  
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Co++ gl diox/w 30°C 50% U K1=6.8 B2=12.0 1954BFa (44190)1581  
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C6H6O5S H2L (8129)

2,3-Dihydroxybenzenesulfonic acid;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ gl KNO3 25°C 0.10M C M K1=8.00 B2=13.92 1989DAa (44271)1582

K(CoA+L)=6.85

B(CoAL)=14.96

H2A: 8-hydroxyquinoline-5-sulfonic acid.

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C6H6O5S H3L CAS 7134-09-0 (3687)

3,4-Dihydroxybenzenesulfonic acid; (HO)2.C6H3.SO3H

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ gl KNO3 30°C 0.10M U K1=8.54 B2=14.40 1963Mnc (44278)1583

K3=3.08

\*\*\*\*\*  
C6H6O8S2 H4L Tiron CAS 149-45-1 (104)

4,5-Dihydroxybenzene-1,3-disulfonic acid; (HO)2.C6H2(SO3H)2

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

Co++ gl KNO3 25°C 0.10M C M K1=7.72 B2=13.18 1989DAa (44391)1584

K(CoA+L)=6.20

B(CoAL)=14.31

H2A: 8-hydroxyquinoline-5-sulfonic acid.

-----  
Co++ gl NaClO4 30°C 0.05M U TIH K1=9.49 B2=16.91 1986NDa (44392)1585

I=0.1, 40 C: K1= 8.73, B2=15.96; 50 C: K1= 8.54, B2=15.67

I=0.1, 30 C:K1= 8.91, B2=16.22; I=0.2, 30 C:K1= 8.73, B2=15.94

-----  
Co++ gl KNO3 25°C 0.10M C M K1=9.37 B2=13.74 1983Oza (44393)1586

B(CoHL)=15.74

B(CoH-1L)=4.88

B(CoL(bpy))=17.33

B(CoH-1L(bpy))=5.99

-----  
Co++ gl KCl 20°C 0.10M U K1=9.49 1964PCa (44394)1587

K(Co+HL)=3.08

-----  
Co++ gl NaClO4 25°C 1.0M U K1=8.19 B2=14.41 1960NAF (44395)1588  
\*\*\*\*\*  
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  
-----

Co++ gl KCl 25°C 0.10M C K1=4.55 1984MMg (44534)1589  
K(CoL+H)=3.20

\*\*\*\*\*  
C6H6S HL Thiophenol CAS 108-98-5 (883)  
Phenyl mercaptan, thiophenol; C6H5.SH  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp none 25°C 0.0 U K1=4.99 B2=4.7 1988KDb (44545)1590  
B3=13.93  
B4=18.46

\*\*\*\*\*  
C6H7N L Picoline CAS 109-06-8 (320)  
2-Methylpyridine; C5H4N.CH3  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ gl NaNO3 25°C 0.50M C K1=0.05 2002KSb (44594)1591  
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Co++ cal non-aq 25°C 100% C H K1=0.68 2000KKb (44595)1592  
Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-41.2 kJ mol<sup>-1</sup>, DS=-125 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Co++ sp non-aq 25°C 100% U M 1993SSc (44596)1593  
K(CoA+L)=0.289  
K(CoB+L)=0.702

Medium:Toluene. H2A:Octaethylporphyrin. H2B:t-Octaethylchlorin. Data for  
other porphyrin ligands  
-----

Co++ sp non-aq 25°C 100% U M 1980MAb (44597)1594  
K(CoA(ClO4)+L)=0.96

Medium: CH2Cl2. A= 1,19-Dimethyl-AD-didehydrocorrin.  
-----

Co++ sp non-aq ? 100% U I M 1972ADc (44598)1595  
K(CoCl2+2L)=4.83

Medium: acetone. In acetonitrile: K(CoCl2+2L)=4.19;  
In cyclohexanone: K(CoCl2+2L)=5.14; In HCON(CH3): K(CoCl2+2L)=3.79  
-----

Co++ sp non-aq ? 100% U I M 1971ADb (44599)1596  
K(CoCl2+L)=1.57  
K(CoCl2+2L)=3.75

Medium: n-butanol. In t-butanol: K(CoCl2+L)=1.76, K(CoCl2+2L)=3.80

Medium: cyclohexanone: K(CoCl<sub>2</sub>+L)=2.53, K(CoCl<sub>2</sub>+2L)=5.13

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.50M	C			K1=1.38	2002KSb (44683)	1597
Co++	cal	non-aq	25°C	100%	C	H		K1=3.87 2.11 1.38	B2= 6.89 2000KKb (44684)	1598

Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-33.1 kJ mol<sup>-1</sup>, DS=-37 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(K2)=-29.6, DS=-42; DH(K3)=-27, DS=-49; DH(K4)=-22; DS=-49.

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Co++	gl	KNO3	25°C	0.50M	U			K1=1.40 B2=2.22 B3=2.54	1978LRb (44685)	1599
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Co++	sp	non-aq	?	100%	U	I	M	K(CoCl <sub>2</sub> +2L)=4.90	1972ADc (44686)	1600
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Medium: acetone. In acetonitrile: K(CoCl<sub>2</sub>+2L)=4.62; In HCON(CH)<sub>2</sub>  
K(CoCl<sub>2</sub>+2L)=4.06; In cyclohexanone: K(CoCl<sub>2</sub>+2L)=5.14

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Co++	sp	non-aq	?	100%	U	I	M	K(CoCl <sub>2</sub> +L)=2.14	1971ADb (44687)	1601
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Medium: s n-butanol. In t-butanol: K(CoCl<sub>2</sub>+L)=2.24, K(CoCl<sub>2</sub>+2L)=4.47;  
In cyclohexanone: K(CoCl<sub>2</sub>+L)=3.00, K(CoCl<sub>2</sub>+2L)=5.60

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Co++	sp	non-aq	20°C	100%	U		HM	K(CoL <sub>2</sub> Cl <sub>2</sub> +2L)=0.35 K'(CoL <sub>2</sub> (NCO) <sub>2</sub> +2L)=0.79 K''(CoL <sub>2</sub> (NCS) <sub>2</sub> +2L)=4.20	1966CKb (44688)	1602
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Medium: CHCl<sub>3</sub>. DH(K)=-56.0 kJ mol<sup>-1</sup>, DS=-184 J K<sup>-1</sup> mol<sup>-1</sup>  
DH(K')=-43.5, DS=-133; DH(K'')=-63.5, DS=-138

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	NaClO4	25°C	1.0M	C		M	K(CoA+L)=0.26	2001LHa (44800)	1603
Co++	cal	non-aq	25°C	100%	C	H		K1=3.96 2.39 1.65	B2= 7.24 2000KKb (44801)	1604

Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-34.4 kJ mol<sup>-1</sup>, DS=-40 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(K2)=-29, DS=-36, DH(K3)=-29, DS=-51; DH(K4)=-27, DS=-60.

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Co++ sp non-aq 25°C 100% U M 1993SSc (44802)1605

K(CoA+L)=2.870

K(CoB+L)=3.280

K(CoC+L)=3.482

K(CoD+L)=3.461

Medium: Toluene. H2A:Octaethylporphyrin. H2B:t-Octaethylchlorin. H2C: tct-Octaethylisobacteriochlorin. H2D:ttt-Octaethylisobacteriochlorin.

Co++ sp non-aq 25°C 100% U M 1980MAb (44803)1606

K(CoA(C104)+L)=3.7

Medium: CH2Cl2. A= 1,19-Dimethyl-AD-didehydrocorrin.

In H2O, K(CoA(CN)+L)=2.57

Co++ sp non-aq ? 100% U I K1=3.13 B2=5.70 1973ADb (44804)1607

Medium: cyclohexanone. In acetone: K1=3.36, B2=5.14;

In acetonitrile: K1=2.91, B2=4.98; In HCON(CH3)2: K1=2.20, B2=4.13

Co++ sp non-aq ? 100% U I M 1973ADd (44805)1608

K(CoCl2+L)=2.46

K(CoCl2+2L)=4.51

Medium: t-butanol. Similar data available for the following solvents:  
n-butanol, ethanol, ClCH2CH2OH, ethylene glycol

Co++ ISE alc/w 25°C 50% U I K1=1.44 B2=2.15 1973NBa (44806)1609

B3=2.63

Medium: 0-96% (v/v) ethanol, 0.5 M LiNO3

K1(0%)=1.56, K1(96%)=1.56, B2(0%)=2.51, B2(96%)=2.50, B3(0%)=2.94, B4(0%)=3.17

Co++ ISE mixed 25°C 50% U I K1=1.16 B2=1.18 1973NBa (44807)1610

Medium: 0-90% (v/v) propanol, 0.5 M LiNO3

K1(0%)=1.56, K1(90%)=1.48, B2(0%)=2.51, B2(90%)=2.25, B3(0%)=2.94, B4(0%)=3.17

Co++ ISE mixed 25°C 50% U I K1=1.36 B2=2.23 1973NBa (44808)1611

B3=2.69

B4=2.79

Medium: 0-90% (v/v) acetone, 0.5 M LiNO3

K1(0%)=1.56, K1(90%)=1.91, B2(0%)=2.51, B2(90%)=3.07, B3(0%)=2.94, B4(0%)=3.17

Co++ gl KNO3 25°C 1.00M U K1=1.59 B2=2.58 1969LWc (44809)1612

Co++ gl diox/w 25°C 50% U M K1=1.53 1967SIb (44810)1613

K(Co(bpy)+L)=1.3

Medium: 50% dioxan, 0.1 M NaClO4

Co++ sp non-aq 20°C 100% U HM 1966CKb (44811)1614

K(CoL2Cl2+2L)=1.05

K'(CoL2(NCO)2+2L)=1.18

K''(CoL2(NCS)2+2L)=4.89

Medium: CHCl3. DH(K)=-65.6 kJ mol<sup>-1</sup>, DS=-202 J K<sup>-1</sup> mol<sup>-1</sup>;

DH(K')=-55.6, DS=-167; DH(K'')=-69.8, DS=-142

\*\*\*\*\*

C6H7N L Aniline CAS 62-53-3 (583)  
Aminobenzene, aniline; C6H5.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	non-aq	?	100%	U	M			1972ZDa (44865)	1615
									K(CoCl2+L)=0.21	
									K(CoCl2+2L)=1.74	

Medium: t-butanol

Co++	sp	non-aq	25°C	100%	U	I	M		1971ZDb (44866)	1616
									K(CoCl2+2L)=4.17	

Medium: acetone. Similar data available for the following solvents:  
cyclohexanone, n-butanol, CH3CN, HCON(CH3)2, CH3OH

\*\*\*\*\*

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
Co++	gl	diox/w	30°C	50%	U	M			1990DSc (44921)	1617
									B(CoL(NTA))=5.92	
									B(CoL(IMDA))=5.47	

Co++	gl	none	20°C	0.0	U			K1=4.7	1959SIb (44922)	1618
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Co++	gl	diox/w	25°C	50%	U			K1=5.81 B2=10.50	1952CFa (44923)	1619
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C6H7NO L CAS 586-98-1 (3094)  
2-Hydroxymethylpyridine (2-pyridylmethanol); C5H4N.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	NaCl	25°C	0.10M	U	M			1991YBa (44964)	1620
									K(CoA+L=CoAL)=1.06	
									K(CoA02+L=CoA02L)=3.03	
									K(CoAL+02=CoAL02)=0.85	

A=2,9,10,17,19,25,33,34-Octamethyl-3,6,13,16,20,24,27,31-octaazapentacyclo-octatriaconta-1,8,10,17,19,24,26,31,33-nonaene

Co++	gl	KNO3	25°C	0.10M	U			K1=2.1	1965MTa (44965)	1621
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C6H7NO L Pyridylcarbinol CAS 100-55-0 (2036)  
3-(Hydroxymethyl)azine; C5H4N.CH2OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U			K1=1.25 B2=1.93	1981LRa (44983)	1622
									B3=2.03	



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C6H7NO L CAS 586-95-8 (1476)  
4-(Hydroxymethyl)pyridine; C5H4N.CH2OH

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ gl KNO3 25°C 0.50M U K1=1.41 B2=2.42 1987KLb (45008)1623

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C6H7NO2 HL (4362)  
3-Cyanoacetylacetone; CH3.CO.CH(CN).CO.CH3

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

Co++ gl diox/w 25°C 75% U I K1=3.67 B2=6.87 1968CSa (45033)1624

K3=2.86

Medium: 75% dioxan, 0.08 M KCl

I=0.04: K1=3.80, K2=3.30, K3=2.90; I=0.15: K1=3.55, K2=3.08, K3=2.81

\*\*\*\*\*

C6H7NO4S H2L CAS 3343-41-7 (3711)  
1-Hydroxy-1-(2'-pyridyl)methanesulfonic acid;

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

Co++ gl NaClO4 25°C 0.10M U K1=4.92 B2=8.45 1964BGa (45076)1625

\*\*\*\*\*

C6H7NO4S H2L CAS 4812-14-0 (3712)  
1-Hydroxy-1-(3'-pyridyl)methanesulfonic acid;

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

Co++ gl NaClO4 25°C 0.10M U K1=7.54 B2=14.51 1964BGa (45081)1626

\*\*\*\*\*

C6H7N3O L CAS 1452-63-7 (3097)  
Pyridine-2-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ gl oth/un 20°C 0.01M U K1=9.6 B2=17.4 1956ARd (45099)1627

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C6H7N3O L CAS 553-53-7 (4361)  
Pyridine-3-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

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

Co++ gl oth/un 20°C 0.01M U K1=5.4 1956ARd (45106)1628

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C6H7N3O L Isonicotinic hy CAS 54-85-3 (1267)  
Pyridine-4-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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 Co++ gl oth/un 20°C 0.01M U K1=4.8 1956ARd (45123)1629  
 \*\*\*\*\*  
 C6H7N3O2I2 HL (7181)  
 2,5-Diiodo-histidine;  
 -----

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

Co++ gl NaNO3 25°C 0.50M C K1=3.76 1994WCa (45139)1630  
 B(CoH-1L)=-2.59  
 B(CoH-1L2)=1.25  
 B(CoH-2L2)=-6.39  
 B(CoH-3L2)=-18.16

\*\*\*\*\*  
 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  
 -----

Co++ gl KNO3 25°C 0.10M C M 1993FJa (45148)1631  
 B(Co(phen)L)=9.91  
 B(Co(phen)L2)=13.65  
 B(Co(phen)2L)=17.10

-----  
 Co++ gl NaNO3 25°C 0.50M C K1=2.34 B2= 5.52 1984HNb (45149)1632  
 -----

Co++ gl NaNO3 25°C 0.50M C K1=2.34 B2=5.50 1977VNa (45150)1633  
 \*\*\*\*\*

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  
 -----

Co++ gl NaNO3 25°C 0.10M C K1=1.94 1988MSa (45228)1634  
 \*\*\*\*\*

C6H8NO4P H2L (3713)  
 2-Pyridylmethanephosphoric acid (1'-picolyl phosphate)  
 -----

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

Co++ gl KNO3 25°C 0.10M U K1=2.27 1968MTd (45245)1635  
 \*\*\*\*\*

C6H8N2 L CAS 95-54-5 (2899)  
 1,2-Diaminobenzene, 1,2-Phenylenediamine; C6H4(NH2)2  
 -----

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

Co++ gl diox/w 25°C 70% C M K1=1.95 1988MMd (45268)1636  
 K(Co+LA2)=14.91  
 K(CoLA2+H)=6.94

Medium: 70% v/v dioxan/H2O, 0.1 M KCl. B(2Co+2L+4A+2B+O2)=(CoLA2B)2O2)=38.68  
 A=3-Fluorosalicyladehyde, B=4-Methylpyridine

-----  
 Co++ gl KNO3 20°C 0.10M C T H K1=3.08 19800Ma (45269)1637  
 DH(K1)=-20.5 kJ mol-1; DS=-10.8 J K-1 mol-1. Data up to 32 C  
 \*\*\*\*\*  
 C6H8N2 L CAS 108-45-2 (6105)  
 1,3-Diaminobenzene, 1,3-Phenylenediamine; C6H4(NH2)2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ gl KNO3 20°C 0.10M C T H K1=3.11 19800Ma (45275)1638  
 DH(K1)=-19.6 kJ mol-1; DS=-7.4 J K-1 mol-1. Data up to 32 C  
 \*\*\*\*\*  
 C6H8N2 L Diaminobenzene CAS 106-50-3 (2869)  
 1,4-Phenylenediamine; H2N.C6H4.NH2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ gl KNO3 20°C 0.10M C T H K1=3.22 19800Ma (45279)1639  
 DH(K1)=-38.5 kJ mol-1; DS=-70.8 J K-1 mol-1. Data up to 32 C  
 \*\*\*\*\*  
 C6H8N2 L CAS 31410-01-2 (7717)  
 1-Allylimidazole;

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

Co++ gl KNO3 25°C 0.50M C K1=2.45 B2= 4.30 2000KGc (45283)1640  
 B3=5.70  
 B4=7.20  
 \*\*\*\*\*  
 C6H8N2 L 2-Picolylamine CAS 29722-36-9 (502)  
 2-(Aminomethyl)pyridine; C5H4N.CH2NH2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ cal NaCl 25°C 0.15M C H K1=5.469 B2=10.109 1987ENa (45341)1641  
 B3=13.563  
 DH(K1)=-29.1 kJ mol-1, DS=7 J K-1 mol-1; DH(B2)=-60.6, DS=-10; DH(B3)=-91.9,  
 DS=-4.9

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ EMF NaNO3 20°C 0.10M U K1=5.68 B2=10.38 1971ANa (45343)1643  
 K3=3.60

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ gl KNO3 25°C 0.50M U K1=5.54 B2=10.33 1971GEa (45344)1644  
 K3=3.50

Co++ vlt diox/w 25°C 50% U H B2=10.39 1966WRb (45345)1645  
Medium: 50% dioxan, 0.1 M KNO3. By calorimetry, DH(B2)=-69.8 kJ mol-1,  
DS=-35.1 J K-1 mol-1

-----  
Co++ gl KNO3 25°C 0.10M U K1=5.3 1964LMb (45346)1646  
-----

Co++ gl KNO3 25°C 0.10M U K1=5.3 1964LMb (45347)1647  
-----

Co++ gl oth/un 25°C .015M U K1=5.8 1960HJa (45348)1648  
-----

Co++ gl oth/un 20°C ->0 U T H K1=5.51 B2=10.21 1959GFa (45349)1649  
K3=3.45

DH(K1)=-28.3 kJ mol-1,DS=8.4 J K-1 mol-1; DH(K2)=-29.8,DS=-13; DH(K3)=-25.7  
10 C: K1=5.75, K2=4.92, K3=3.63; 30 C: 5.41, 4.52, 3.33; 40 C:5.28,4.39,3.17  
\*\*\*\*\*

C6H8N2 L CAS 2851-95-8 (4349)  
2-Methyl-1-vinylimidazole;

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

Co++ gl KNO3 25°C 0.50M C K1=1.30 B2= 2.40 2000KGa (45375)1650  
\*\*\*\*\*

C6H8N2O4 H2L (3100)  
Cyanomethyliminodiethanoic acid; NC.CH2.N(CH2.COOH)2

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

Co++ gl KCl 20°C 0.10M U K1=5.38 B2=9.96 1955SAa (45414)1651  
\*\*\*\*\*

C6H8N2S HL CAS 22325-27-5 (8521)  
4,6-Dimethyl-2-mercaptopyrimidine;

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

Co++ gl KNO3 35°C 0.10M C M K1=4.46 1996RRa (45426)1652

B(CoAL)=7.30  
B(CoBL)=7.17  
B(Co(bpy)L)=9.22  
B(Co(phen)L)=9.48

B(Co(en)L)=7.30. H2A is oxalic acid, H2B is malonic acid.  
\*\*\*\*\*

C6H8N3O2I HL (7180)  
5-Monoiodo-histidine;

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

Co++ gl NaNO3 25°C 0.50M C I K1=5.75 B2=10.4 1994WCa (45432)1653

B(CoH-1L2)=0.83  
B(CoH-2L2)=-9.62

In 0.5 M NaCl: K1=5.70; B2=10.35; B(CoH-1L2)=0.81, B(CoH-2L2)=-9.85

\*\*\*\*\*

C6H8N4B- L (7237)  
Bis(pyrazol-1-yl)borate; (C3H3N2)2BH2-

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

Co++ dis non-aq 25°C 100% U 1996KSa (45437)1654  
K(Co+2HL=CoL2(org)+2H)=-1.09

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  
-----

Co++ gl alc/w 30°C 5% U M 1995RRb (45451)1655

K(CoA+L)=6.71

B(CoAL)=12.66

Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. H2A is thioglycolic acid.

-----  
Co++ gl KNO3 30°C 0.10M U HM K1=3.76 B2= 7.16 1994RSa (45452)1656

B(Co(ala)L)=7.80

B(Co(val)L)=7.59

B(Co(en)L)=9.62

B(Co(bpy)L)=9.35

DH(K1)=-15.6 kJ mol<sup>-1</sup>, DS(K1)=20.5 J K<sup>-1</sup> mol<sup>-1</sup>. B(CoAL)=8.09, B(CoBL)=  
10.65, K(Co(bpy)+L)=3.37, K(CoA+L)=3.10. H2A=oxalic acid, H2B=catechol.

\*\*\*\*\*

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

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

Co++ gl KNO3 25°C 0.10M C K1=2.29 1975IPa (45463)1657

\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.10M U K1=2.20 B2=3.20 1969PJb (45502)1658

-----  
Co++ gl NaClO4 25°C 0.10M U K1=2.23 19660Cb (45503)1659

\*\*\*\*\*

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  
-----

Co++ gl NaClO4 20°C 0.10M U K1=2.44 1964COB (45557)1660



K1eff=4.12

Medium: 0.3 M NaCl, pH=6.0. Also data for 1.0-5.0 M NaCl.

-----

Co++	ix	NaNO3	?	0.50M	U	K1=4.08	1972KCb (45981)	1668
						K(Co+HL)=2.64		
						K(Co+H2L)=1.20		

-----

Co++	oth	KNO3	?	0.70M	U		1970BCa (45982)	1669
						K(Co+H3L=CoH2L+H)=-1.44		
						K(CoH2L=CoH-1L+3H)=-12.9		

Method: zone electrophoresis

-----

Co++	sp	oth/un	?		?	U	1970TGa (45983)	1670
							K(Co+2HL)=2.57	

-----

Co++	gl	NaClO4	20°C	0.10M	U	K1=5.00	1964COB (45984)	1671
						K(Co+HL)=3.02		
						K(Co+H2L)=1.25		

-----

Co++	gl	NaClO4	33°C	0.25M	U		1961PPa (45985)	1672
						K(Co+H3L=CoHL+2H)=-4.1		
						K(CoL+H)=4.2		
						K(CoH-1L+H)=8.0		

-----

Co++	ix	R4N.X	25°C	0.16M	U	K1=4.7	1960LWa (45986)	1673
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Co++	vlt	oth/un	25°C	0.10M	U	K1=4.83	1959LLa (45987)	1674
						K(Co+HL)=3.19		

-----

Co++	gl	KNO3	25°C	2.0M	U	K1=4.41	1958MSb (45988)	1675
						K(Co+H-1L)=7.08		

-----

Co++	sp	oth/un	?	0.20M	U	K1=4.51	1957HEa (45989)	1676
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Co++	ix	oth/un	25°C	0.16M	U	K1=4.16	1957LWc (45990)	1677
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C6H8O7P2	H3L	CAS 101378-64-7	(7666)
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Phenyldiphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	NaNO3	25°C	0.10M	M			K1=3.68	1999SSa (46343)	1678
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C6H9NO6	H3L	CAS 41035-84-1	(4367)
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N-Carboxymethyl-L-aspartic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	KNO3	25°C	1.0M	U			K1=8.21 B2=11.54	2004GKc (46372)	1679
								B(CoHL)=12.76		

K(Co(OH)+L)=8.98

For 0.5 mol/L KNO3 K1=8.34; B2=11.66; B(CoHL)=13.03; K(Co(OH)+L)=9.17

For 0.1 mol/L KNO3 K1=8.70; B2=12.34; B(CoHL)=13.45; K(Co(OH)+L)=9.60

\*\*\*\*\*

C6H9NO6 H3L NTA CAS 139-13-9 (191)

Nitrilotriethanoic acid; N(CH2.COOH)3

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

Co++ oth NaClO4 35°C 0.10M U M K1=10.60 1998GAc (46644)1680  
K(CoL+A)=5.16

Method: electrophoresis. Medium: 0.10 M HClO4, 0.01 M H2L

H2A: penicillamine.  
-----

Co++ gl NaNO3 25°C 0.10M M K1=7.91 1996KSc (46645)1681  
-----

Co++ kin NaClO4 25°C 1.00M C 1994BCb (46646)1682  
K(CoLCO3+H=CoLHCO3)=0.07

K(CoLOH2OCO2H+H=CoL(OH)2+CO2)=0.08  
-----

Co++ gl KNO3 25°C 1.0M C T M 1994CBa (46647)1683  
K(CoL+H)=3.49  
K(CoL+bpy)=2.28  
K(CoL+phen)=2.54

Data for 20-35 C.  
-----

Co++ cal KNO3 25°C 0.50M U H 1991VOa (46648)1684  
DH(K1)=-2.3 kJ mol-1, DS=181 J K-1 mol-1; DH(B2)=-18.9, DS=206  
-----

Co++ gl KNO3 25°C 0.10M C M K1=10.38 1990DAb (46649)1685  
K(CoL+A)=4.24  
B(CoLA)=14.62

H2A: salicylaldehyde  
-----

Co++ gl KNO3 25°C 0.10M C M K1=10.38 1990DAc (46650)1686  
K(CoL+A)=3.40  
B(CoAL)=13.78

HL: benzohydroxamic acid  
-----

Co++ oth NaClO4 35°C 0.10M C K1=10.38 1986SYa (46651)1687  
Method: paper electrophoresis. Medium pH 8.5.  
-----

Co++ oth NaClO4 35°C 0.10M C M K1=10.38 1985SGc (46652)1688  
K(CoL+his)=3.77

Method: paper electrophoresis. Medium pH 8.5.  
-----

Co++ oth NaClO4 35°C 0.10M U K1=10.38 1984SYa (46653)1689  
Method: paper electrophoresis  
-----

Co++ gl NaNO3 25°C 0.10M C M 1981BKb (46654)1690



K(CoL+py)=1.29  
K(CoL+A)=2.41  
K(CoL+NH3)=1.82  
K(CoL+CH3COO) < 0.3

A=1,3-diazole. K(CoL+HB)=<0.4, H3B=H3PO4

---

Co++ gl KNO3 25°C 0.10M U T M 1981SVa (46655)1691

K(CoL+Gly)=3.55

At 20 C: K(CoL+Gly)=3.61; 30 C: 3.49; 40 C: 3.37

---

Co++ sp KCl 25°C 0.10M U K1=10.05 B2=14.32 1978KV a (46656)1692

---

Co++ vlt KNO3 25°C 1.00M U 1977HDa (46657)1693

K1eff=11.68

Keff at pH 7

---

Co++ gl KNO3 25°C 0.10M U T M 1971ICa (46658)1694

K(CoL+Pro)=3.85

K(CoL+Gly)=3.38

15 C, K(CoL+Pro)=3.95; 70 C, K=3.23

---

Co++ gl KNO3 25°C 0.10M U T M 1971ICb (46659)1695

K(CoL+A)=3.30

HA=piperidine-2-carboxylic acid. 15 C, K(CoL+A)=3.09; 70 C, K=2.69

---

Co++ gl KNO3 25°C 0.10M U T M 1971ICc (46660)1696

K(Co(OH)L+H)=10.80

K(CoL+A)=3.10

HA=1-aminocyclopentanecarboxylic acid. 70 C, K(Co(OH)L+H)=9.80, K(CoL+A)=2.68

---

Co++ gl KNO3 25°C 0.10M U T M 1971IVb (46661)1697

K(CoL+Sar)=3.13

K(CoL+A)=3.30

HA=dimethylglycine. 15 C, K(CoL+Sar)=3.26, K(CoL+A)=3.42.

70 C, K(CoL+Sar)=2.74, K(CoK+A)=2.83

---

Co++ gl NaClO4 25°C 0.10M U M 1969AIa (46662)1698

K(CoL+Trp)=3.08

---

Co++ gl NaClO4 25°C 0.10M U M 1969BIa (46663)1699

K(CoL+histamine)=3.76

K(CoL(histamine)+H)=7.93

---

Co++ gl KNO3 25°C 0.05M U M 1968HAa (46664)1700

K(CoL+Gly)=3.65

K(CoL+A)=1.88

A=ethyl valinate

---

Co++ gl KNO3 25°C 0.08M U M 1968HAa (46665)1701

K(CoL+A)=1.88

K(CoL+Gly)=3.65

I=0.0-0.08 M, A=ethyl valinate

-----  
Co++ gl NaCl04 25°C 0.10M U M 1968ICa (46666)1702  
K(CoL+Arg)=3.13  
K(CoL+Ser)=3.18  
-----

Co++ gl NaCl04 25°C 0.10M U M 1968ICa (46667)1703  
K(CoL+A)=2.08  
K(CoLA=CoLA(OH)+H)=-10.80  
K(CoL=CoL(OH)+H)=-10.80

HA=glycylglycine

-----  
Co++ gl NaCl04 25°C 0.10M U M 1968ICb (46668)1704  
K(CoL+Asp)=3.21  
K(CoL+Glu)=2.96  
-----

Co++ sp NaCl04 25°C 0.20M U K1=10.44 1967BDb (46669)1705  
-----

Co++ cal KNO3 20°C 0.10M U H 1964HDa (46670)1706  
DH(K1)=-0.6 kJ mol<sup>-1</sup>, DS=196.9 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ oth KNO3 20°C 0.10M U K1=10.0 B2=13.90 1964JOa (46671)1707  
Method: paper electrophoresis  
-----

Co++ dis NaCl04 20°C 0.10M U K1=10.81 B2=14.28 1963STc (46672)1708  
-----

Co++ vlt KNO3 20°C 0.10M U T K1=10.4 1956SGa (46673)1709  
-----

Co++ vlt KNO3 20°C 0.10M U T K1=10.38 1955SAa (46674)1710  
-----

Co++ gl KCl 20°C 0.10M U K1=10.6 1951SFa (46675)1711  
-----

Co++ gl KCl 20°C 0.10M U K1=10.7 B2=14.6 1948SBa (46676)1712  
K(CoLOH+H)=12  
-----

\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.10M C M K1=6.40 1999AAa (47487)1713  
K(CoL+A)=3.60  
B(CoLA)=10.00  
K(CoL+B)=3.68  
B(CoLB)=10.08

K(CoHL+C)=1.60, K(CoL+D)=3.66, B(CoLD)=10.06.  
HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.  
-----

Co++ gl KNO3 25°C 0.10M C K1=7.06 1999BIa (47488)1714

Co++	gl	KNO3	25°C	0.10M	U		B2=11.96	1997POa (47489)	1715		
							K(Co+2HL)=2.78				
							K(Co+HL+L)=8.95				
Co++	gl	NaNO3	25°C	0.50M	C	I	K1=6.73	B2=12.05	1994WCa (47490)	1716	
							B(CoH-1L2)=0.61				
		In 0.5 M NaCl:					K1=6.66; B2=12.12; B(CoH-1L2)=0.94				
Co++	gl	KNO3	0°C	0.10M	C		K1=7.60	B2=13.87	1993KSa (47491)	1717	
Co++	nmr	KNO3	25°C	1.0M	U		K1=6.86	B2=12.44	1992SZb (47492)	1718	
							B3=13.59				
							K(Co+HL)=2.50				
							K(CoL+HL)=9.14				
Co++	gl	KNO3	35°C	0.10M	U	M	K1=6.93		1989RSb (47493)	1719	
							B(CoL(thiodipropoate))=17.89				
							K(Co(TDPA)+L)=6.75				
Co++	gl	KNO3	35°C	0.20M	U	M	K1=8.11		1989RVa (47494)	1720	
							K(CoA+L)=7.32				
		A=bis(imidazol-2-yl)methane									
Co++	oth	none	25°C	0.0	U	M			1987VZb (47495)	1721	
							K(CoL2+N2)=1.51				
		Method: gas pressure measurements under gaseous N2.									
Co++	gl	KNO3	35°C	0.10M	C	M	K1=7.00		1985RRc (47496)	1722	
							B(CoL(cytidine))=12.69				
Co++	gl	KNO3	35°C	0.10M	C		K1=7.00		1985RRh (47497)	1723	
Co++	oth	NaCl04	35°C	0.10M	C		K1=6.50	B2=12.89	1985SGc (47498)	1724	
		Method: paper electrophoresis. Medium pH 8.5.									
Co++	gl	KCl	25°C	0.20M	C	M			1984KDb (47499)	1725	
							K(Co(DOPA)+L)=5.86				
							B(CoHL(DOPA))=24.96				
							K(Co(Dopamine)+L)=5.91				
							B(CoHL(Dopamine))=25.01				
		K(CoA+L)=5.89, B(CoHLA)=23.87; K(CoB+L)=5.86, B(CoHLB)=24.46									
		A=Noradrenaline, B=Adrenaline, H3DOPA=3,4-dihydroxyphenylalanine									
Co++	gl	KCl	25°C	0.10M	C	TIH	R	K1=6.88	B2=12.35	1984PEa (47500)	1726
		IUPAC evaluation. DH(B2)=-49.0 kJ mol <sup>-1</sup>									
		37 C and 0.15 mol dm <sup>-3</sup> : K1(tentative)=6.71, B2=12.06									
Co++	gl	KCl	25°C	0.20M	C	M	K1=6.76	B2=12.18	1983HSa (47501)	1727	
							B(CoHL)=10.98				

B(CoHL2)=17.36

B(CoLA)=15.05

H2A=D-penicillamine

-----  
Co++ gl KNO3 35°C 0.10M C M K1=7.21 1983KSc (47502)1728

K(Co+HA+L)=10.48

K(Co+HB+L)=10.97

A is adenine; HB is cytosine.

-----  
Co++ gl NaNO3 37°C 0.15M U K1=6.518 B2=12.053 1982ESa (47503)1729

B(CoHL)=12.056

B(CoHL2)=19.042

-----  
Co++ gl NaNO3 37°C 0.15M U M 1982ESa (47504)1730

B(CoHL(pyridoxamine))=21.089

B(CoH2L(pyridoxamine))=29.743

B(CoH3L(pyridoxamine))=37.027

B(CoH4L(pyridoxamine))=43.028

B(CoH3L2(pyridoxamine))=43.489, B(CoH4L2(pyridoxamine))=49.963

-----  
Co++ gl KCl 25°C 0.10M U K1=6.82 B2=12.18 1980DMa (47505)1731

-----  
Co++ gl KCl 25°C 0.10M U M K1=6.82 B2=12.18 1980DMc (47506)1732

-----  
Co++ gl NaCl 25°C 0.20M U TIH K1=6.85 B2=12.30 1979KKc (47507)1733

B3=14.3

-----  
Co++ vlt KNO3 25°C 1.00M U 1977HDa (47508)1734

K1eff=10.20

Keff at pH 7

-----  
Co++ gl KNO3 25°C 0.10M C K1=6.82 B2=12.35 1976PSb (47509)1735

B(CoHL)=11.44

B(CoHL2)=18.36

Calorimetry: DH(B2)=-48.92 kJ mol<sup>-1</sup>

-----  
Co++ gl KNO3 25°C 0.10M C K1=6.83 B2=12.34 1976PSb (47510)1736

B(CoHL)=11.43

B(CoHL2)=18.29

Ligand: D-His. by calorimetry: DH(B2)=-49.14 kJ mol<sup>-1</sup>

-----  
Co++ gl KCl 25°C 0.10M C T K1=6.899 B2=12.394 1976RIa (47511)1737

K(Co+D/L-His)=6.887

B(Co(DL-His)2)=12.514

-----  
Co++ gl KNO3 37°C 0.15M U K1=6.56 B2=11.82 1975APb (47512)1738

-----  
Co++ gl none 21°C 0.0 M K1=6.88 B2=12.71 1974YAa (47513)1739

-----  
Co++ gl KNO3 25°C 0.10M U K1=6.92 B2=12.42 1970MMF (47514)1740

DL-histidine: K1=6.94, K2=5.62

-----  
Co++ gl NaClO4 25°C 3.00M U K1=7.44 B2=13.48 1970WIa (47515)1741  
-----

Co++ gl KNO3 25°C 0.10M U T K1=6.86 B2=12.25 1969RGc (47516)1742  
DL-histidine: K1=6.87, K2=5.52  
-----

Co++ gl KNO3 25°C 0.20M U T K1=7.20 B2=12.84 1969Rmb (47517)1743  
K1(15 C)=7.31, K1(40 C)=7.04, K2(15 C)=5.77, K2(40 C)=5.46  
-----

Co++ gl KNO3 37°C 0.15M U K1=6.71 B2=12.06 1967PSd (47518)1744  
-----

Co++ EMF oth/un 25°C ? U K1=6.9 B2=12.60 1966PAa (47519)1745  
-----

Co++ gl KCl 40°C 0.25M U T HM K1=6.56 B2=11.50 1965AZa (47520)1746  
K1=7.30(0 C),7.10(15 C),6.77(25 C); K2=6.07(0 C),5.62(15 C),5.13(25 C).  
At 15 C: DH(K1)=-33.4 kJ mol<sup>-1</sup>, DH(K2)=-52.7  
-----

Co++ gl KCl 15°C 0.25M U HM 1965AZa (47521)1747  
DH(CoA+L=CoL+A)=33.4 kJ mol<sup>-1</sup>, TDS=45.1 kJ mol<sup>-1</sup>. A=histidine methyl ester  
-----

Co++ gl oth/un 25°C 0.01 U K1=6.92 B2=12.45 1959LRa (47522)1748  
-----

Co++ gl oth/un 25°C 0.01 U B2=13.86 1950MMa (47523)1749  
-----

Co++ gl oth/un 25°C ? U K1=7.30 B2=14.63 1949HBa (47524)1750  
\*\*\*\*\*

C6H9N3O2S H2L Thiohistidine CAS 13552-61-9 (5659)  
1-Amino-2-(2-Mercaptoimidazole)-propionic acid;  
-----

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

Co++ gl NaClO4 25°C 0.10M U K1=7.64 B2=12.43 1982TSb (47638)1751  
\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.50M U K1=0.60 1983LWa (47648)1752  
\*\*\*\*\*

C6H9O6P H3L CAS 4408-72-4 (7015)  
Phosphotriethanoic acid; P(CH2.COOH)3  
-----

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

Co++ gl NaClO4 25°C 0.10M U I K1=3.14 B2=5.32 1979POa (47657)1753  
B(CoHL)=5.32

In 50% v/v dioxan/H2O: K1=5.27  
\*\*\*\*\*

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
Co++	gl	KNO3	25°C	0.50M	U			K1=2.38 B3=5.44 B4=6.90 B5=7.88 B6=8.40	1979LBa (47678)	1754

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\*\*\*\*\*

C6H10N2 L CAS 931-36-2 (1419)  
2-Ethyl-4-methyl-1,3-diazole; C3H2N2(CH3)(C2H5)

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U			K1=0.54 B3=2.07 B4=4.60	1982LKB (47684)	1755

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\*\*\*\*\*

C6H10N2O2 HL Nioxime CAS 492-99-9 (1098)  
Cyclohexane-1,2-dione-dioxime; C6H8(:NOH)2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	vlt	alc/w	25°C	10%	U			K1=10.00 B2=19.43	1974ANb (47701)	1756
Co++	sp	NaClO4	?	6.0M	U	I M		K(CoHL2+I)=4.00 K(CoHL2+2I)=6.00 K(CoHL2+I)=2.66(I=1), 2.80(I=2), 2.92(I=3), 3.07(I=4), 3.52(I=5) K(CoHL2+2I)=4.7(I=1), 5.00(I=2), 5.24(I=3), 5.5(I=4), 5.6(I=5)	1968BPa (47702)	1757

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Co++	gl	diox/w	25°C	50%	U			K1=13.0 B2=25.5	1958PBa (47703)	1758
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\*\*\*\*\*  
C6H10N2O4 H2L CAS 96705-91-8 (3103)  
Piperazine-2,5-dicarboxylic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	22°C	0.10M	U			K1=4.9	1964PCa (47726)	1759

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\*\*\*\*\*

C6H10N2O4 H2L (3104)  
Piperazine-2,6-dicarboxylic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	22°C	0.10M	U			K1=4.8 B2=7.06	1964PCa (47734)	1760

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\*\*\*\*\*

C6H10N2O4 H2L CAS 89601-09-2 (3102)

trans-Piperazine-2,3-dicarboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 22°C 0.10M U K1=7.0 B2=11.9 1964PCa (47746)1761  
\*\*\*\*\*  
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  
-----  
Co++ gl KNO3 25°C 0.10M C K1=4.10 1977HMd (47758)1762  
Oxygenation constant:  $K\{2CoL+O2=[Co2(H-1L)2(O2)(OH)]+3H\} = -20.7$   
\*\*\*\*\*  
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  
-----  
Co++ gl KNO3 25°C 0.10M C K1=3.57 1977HMd (47778)1763  
 $K[Co(H-1L)+H]=9.26$   
Oxygenation constant:  $K\{2CoL+O2=[Co2(H-1L)2(O2)(OH)]+3H\} = -20.1$   
\*\*\*\*\*  
C6H10N2O5 H2L ADA CAS 26239-55-4 (2747)  
N-(2-Acetamido)iminodiethanoic acid; H2N.CO.CH2.N(CH2.COOH)2  
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-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C M K1=6.50 2003AHa (47826)1764  
 $K(CoL+A)=3.60$   
HA is 3-amino-5-mercapto-1,2,4-triazole.  
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-----  
Co++ gl NaNO3 25°C 0.10M C K1=6.90 2000KHb (47827)1765  
-----

-----  
Co++ gl alc/w 25°C 20% M M K1=6.48 1998ABa (47828)1766  
 $K(CoL+oxine)=8.22$   
Medium: 20% w/w EtOH/H2O, 0.1 M KNO3.  
-----

-----  
Co++ gl KNO3 25°C 0.10M M M K1=6.50 1996AEa (47829)1767  
Data for ternary complexes with dipicolinic acid  
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-----  
Co++ gl NaNO3 25°C 0.10M M K1=9.26 1996KSc (47830)1768  
-----

-----  
Co++ gl alc/w 25°C 20% C 1994IMa (47831)1769  
 $K(CoL+bpy)=3.90$   
 $K(CoL+phen)=4.45$   
Medium: 20% w/w MeOH/H2O, 0.10 M KNO3.  
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-----  
Co++ gl KNO3 25°C 0.10M C K1=7.05 1989MAd (47832)1770  
-----

Co++ gl KNO3 25°C 0.10M C K1=6.72 B2= 9.34 1983LRc (47833)1771  
\*K(CoL2)=-10.03  
\*K(CoH-1L2)=-11.34

Co++ gl KNO3 25°C 0.10M U K1=6.72 B2=9.34 1981LRb (47834)1772  
K(CoL2=CoH-1L2+H)=-10.03  
K(CoH-1L2=CoH-2L2+H)=-11.34

Co++ gl KNO3 25°C 0.10M C K1=6.72 1979NAb (47835)1773

Co++ gl KCl 20°C 0.10M U K1=6.91 B2=10.21 1955SAa (47836)1774

\*\*\*\*\*  
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

Co++ gl KNO3 25°C 0.10M U K1=9.11 1990GKa (47870)1775  
K(Co+HL)=7.71  
K(Co+H2L)=4.86

\*\*\*\*\*  
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

Co++ EMF KNO3 25°C 0.50M U K1=1.06 1976LWa (47879)1776  
Ag(Hg)/Ag+ cell, competitive measurement. K1 by spectrophotometry=1.07

\*\*\*\*\*  
C6H10N4O5 L (2622)  
4,5-Dimethyl-2,4,6,8-tetraazabicyclo[3,3,0]-octane-3-one-7-thione;

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

Co++ gl KNO3 25°C 0.10M U K1=4.65 1986KKa (47889)1777

\*\*\*\*\*  
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

Co++ gl KCl 25°C 0.50M C B2=12.784 1987LEa (47905)1778  
B(CoHL)=14.036  
B(CoH2L2)=26.633  
B(CoHL2)=20.861

\*\*\*\*\*  
C6H10N8O L (8205)  
Bis(5-tetrazolyethylene)oxide;

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



-----  
 Co++ gl NaNO3 20°C 0.1M U K1=5.5 1979ESa (47915)1779  
 \*\*\*\*\*  
 C6H10N8S L (8206)  
 Bis(5-tetrazolyethane)sulphide;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl NaNO3 20°C 0.1M U K1=5.14 1979ESa (47920)1780  
 \*\*\*\*\*  
 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  
 -----  
 Co++ gl diox/w 30°C 75% U K1=9.35 1962MMb (47945)1781  
 \*\*\*\*\*  
 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  
 -----  
 Co++ gl NaClO4 25°C 0.10M U K1=1.57 B2=2.57 1967PRb (47984)1782  
 \*\*\*\*\*  
 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  
 -----  
 Co++ gl diox/w 30°C 75% U K1=9.32 1973AAa (48009)1783  
 \*\*\*\*\*  
 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  
 -----  
 Co++ oth NaClO4 40°C 0.10M U K1=2.8 1981SSe (48058)1784  
 Method: Paper electrophoresis.  
 -----

Co++ vlt NaClO4 38°C 0.50M U T H B2=4.15 1968GGd (48059)1785  
 B2=4.07(30.5 C); DH(B2)=8.5 kJ mol<sup>-1</sup>  
 -----

Co++ gl oth/un 25°C 0.0 U K1=2.15 1965MOb (48060)1786  
 -----

Co++ ix oth/un 25°C 0.0 U K1=2.23 1965SMf (48061)1787  
 -----

Co++ dis NaCl 25°C 0.08M U I K1=1.60 1961MMa (48062)1788  
 K1=2.40(I=0), 1.78(I=0.04)  
 \*\*\*\*\*  
 C6H10O4S H2L CAS 42715-54-8 (986)  
 -----

2,2'-Thiodipropanoic acid; HOOC.CH(CH3).S.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KN03	25°C	0.10M	C			K1=3.14 K(Co+HL)=2.21	1975LPa (48125)	1789

\*\*\*\*\*

C6H1004S H2L CAS 111-17-1 (139)  
3,3'-Thiodipropanoic acid; HOOC.CH2.CH2.S.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KN03	35°C	0.10M	C	M		K1=2.46 B(CoAL)=4.60	1999DSb (48175)	1790

A is thiamine hydrochloride.

Co++	gl	NaCl04	25°C	0.10M	U	TIH		K1=2.97	1983DBb (48176)	1791
Co++	gl	KN03	25°C	0.05M	M			K1=3.17	1975DPb (48177)	1792
Co++	gl	KN03	25°C	0.10M	C			K1=2.25 K(Co+HL)=1.87	1975LPa (48178)	1793

Co++	gl	NaCl04	25°C	0.10M	U			K1=1.6	1968SKd (48179)	1794
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C6H1004S2 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
Co++	gl	NaCl04	25°C	0.10M	U			K1=3.13 K(Co+HL)=1.95	1971FPa (48233)	1795

\*\*\*\*\*

C6H1004S2 H2L CAS 1119-62-6 (3697)  
3,3'-Di(thiopropanoic acid); HOOC.CH2.CH2.S.S.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl04	20°C	0.10M	U	T H		K1=3.34 B2= 6.33	1984SGd (48267)	1796

K values by Bjerrum's method. By least squares, K1=3.31, K2=2.96.  
Also data for 30 and 40 C. DH(B2)=-74.6 kJ mol<sup>-1</sup>, DS(B2)=-110 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C6H1004Se H2L CAS 80030-00-8 (987)  
2,2'-Selenodipropanoic acid; HOOC.CH(CH3).Se.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KN03	25°C	0.10M	C			K1=2.20 K(Co+HL)=1.1	1975LPa (48282)	1797

\*\*\*\*\*

C6H1004Se H2L CAS 2168-88-9 (982)  
3,3'-Selenodipropionic acid; HOOC.CH2.CH2.Se.CH2.CH2.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=1.82 1975LPa (48293)1798  
K(Co+HL)=1.43  
\*\*\*\*\*

C6H1004Te H2L CAS 2168-91-4 (983)  
3,3'-Tellurodipropionic acid; HOOC.CH2.CH2.Te.CH2.CH2.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=2.36 1975LPa (48304)1799  
K(Co+HL)=1.9  
\*\*\*\*\*

C6H1005 H2L CAS 5961-83-1 (981)  
3,3'-Oxodipropionic acid; HOOC.CH2.CH2.O.CH2.CH2.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=1.69 1975LPa (48313)1800  
\*\*\*\*\*

C6H1006 H2L CAS 23243-68-7 (242)  
1,2-Bis(carboxymethoxy)ethane; HOOC.CH2.O.CH2.CH2.O.CH2.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=1.69 1975MTc (48328)1801  
\*\*\*\*\*

C6H1007 HL Galacturonic CAS 685-73-4 (290)  
D-Galacturonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 20°C 0.10M C B(CoH-2L)=-15.1  
\*\*\*\*\*

C6H1007 HL Glucuronic acid CAS 6556-12-3 (599)  
D-Glucuronic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 20°C 0.10M C B(CoH-2L)=-15.0  
\*\*\*\*\*

C6H1008 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

-----  
 Co++ gl NaNO3 25°C 0.05M C K1=3.08 B2= 5.90 2002SFa (48435)1804  
 B(CoH-1L)=-6.57  
 B(CoH-2L)=-13.52  
 B(CoH-1L2)=-2.4  
 B(CoH-2L2)=-10.8  
 -----

\*\*\*\*\*  
 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  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	NaClO4	25°C	0.10M	U			K1=3.29 K(Co+H2L=CoL+2H)=-4.08 *K(CoL)=-7.38	1997PPa (48463)	1805
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Co++	gl	NaClO4	25°C	0.10M	U	M		K1=3.65 K(Co(edta)+L)=3.33	1997PPc (48464)	1806
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Co++	gl	KNO3	25°C	1.00M	U			K(Co+H2L=CoH-1L+3H)=-8.27	1976V0a (48465)	1807
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Co++	sp	KNO3	25°C	1.0M	C			K(Co+H-1L)=8.27	1975V0a (48466)	1808
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Authors assume that K(H-1L+H)=14.0.

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C6H11NO2 HL CAS 52-52-8 (3105)  
 1-Aminocyclopentanecarboxylic acid; H2N.C5H8.COOH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	KCl	20°C	0.10M	U			K1=4.46 B2=8.16	1963IPa (48502)	1809
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C6H11NO2 HL CAS 16258-05-2 (1128)  
 2-Amino-hex-5-enoic acid; CH2:CH.CH2.CH2.CH(NH2).COOH  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	KNO3	25°C	0.10M	U			K1=4.24 B2=7.75	1975IPb (48512)	1810
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C6H11NO2 HL Pipecolinic acid CAS 3105-95-1 (1125)  
 2-Piperidine carboxylic acid; C5H10N.COOH  
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	oth/un	30°C	0.10M	U	H		K1=4.8 B2=8.80	1985RRe (48535)	1811
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DH(K1)=-64 kJ mol<sup>-1</sup>, DS=117 J K<sup>-1</sup> mol<sup>-1</sup>

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C6H11NO4 H2L (1232)  
 2,2'-Iminodipropanoic acid; HN(CH(CH3)COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=6.4 B2=11.30 1987AKa (48576)1812  
\*\*\*\*\*  
C6H11NO4 H2L (3106)  
Iminodipropionic acid; HN(CH2.CH2.COOH)2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 30°C 0.10M U K1=4.92 B2=8.18 1952CMA (48590)1813  
\*\*\*\*\*  
C6H11NO4S H3L CAS 58033-48-5 (3124)  
N-2-Mercaptoethyliminodiethanoic acid; HS.CH2.CH2.N(CH2.COOH)2  
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-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 20°C 0.10M U K1=14.67 1955SAa (48608)1814  
K(Co+HL)=7.42  
\*\*\*\*\*  
C6H11NO4S H2L CAS 104640-54-2 (2460)  
S-Carboxyethyl-L-cysteine; H2N.CH(CH.S.CH2.CH2.COOH).COOH  
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-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 2.00M U K1=4.46 B2=8.04 1980MAc (48621)1815  
\*\*\*\*\*  
C6H11NO5 H2L HIMDA CAS 93-62-9 (192)  
N-(2-Hydroxyethyl)iminodiethanoic acid; HO.CH2.CH2.N(CH2.COOH)2  
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-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ cal KNO3 25°C 0.3M U T H 1986VRa (48677)1816  
DH(K1)=-8.85 kJ mol-1  
DH(B2)=-16.65  
Also for 0.5 M KNO3 DH(K1)=-9.92 kJ mol-1; DH(B2)=-17.33  
for 1.0 M KNO3 DH(K1)=-9.9 kJ mol-1; DH(B2)=-18.05  
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-----  
Co++ gl KCl 20°C 0.1M U K1=8.05 B2=12.13 1979KVa (48678)1817  
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Co++ oth KNO3 20°C 0.10M U K1=9.0 B2=13.40 1965JMa (48679)1818  
Method: electrophoresis  
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Co++ gl KCl 20°C 0.10M U K1=7.90 B2=12.09 1955SAa (48680)1819  
K(CoLOH+H)=9.81  
-----

-----  
Co++ gl KCl 30°C 0.10M U K1=8.27 B2=12.71 1952CCa (48681)1820  
\*\*\*\*\*  
C6H11NO5 H2L (1233)  
N-Hydroxyimino-2,2'-dipropionic acid; HO.N(CH(CH3)COOH)2  
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.10M C          K1=4.72  B2=8.72  1987AKa (48838)1821
*****
C6H11N3           L                      CAS 34392-54-6 (4350)
4-(2-Methylaminoethyl)imidazole;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl    25°C 0.10M U          K1=4.45  B2=7.25  1973BDb (48864)1822
*****
C6H11N3           L                      CAS 16227-10-4 (8351)
4-Butyl-4H-1,2,4-triazole;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaClO4 25°C 0.10M U TIH  K1=2.68  B2= 5.21  1981RPb (48869)1823
Medium: KClO4. Also data for 35 C and for 0.05 M KClO4.
Also DH and DS values.
*****
C6H11N3O4           HL  Gly-Gly-Gly      CAS 556-33-2 (415)
Glycyl-glycyl-glycine; H2N.CH2.CO.NH.CH2.CO.NH.CH2.COOH
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  oth/un 25°C 0.15M U          K1=3.14  B2=5.44  1957LDb (48968)1824
-----
Co++      ix  oth/un 25°C 0.15M U          K1=2.95  B2=5.46  1957LDb (48969)1825
-----
Co++      gl  KCl    25°C .058M U          B2=5.96          1957LYa (48970)1826
-----
Co++      EMF none 25°C 0.0 U          K1=2.98  B2=4.59  1955EMa (48971)1827
*****
C6H11N9           L                      (7008)
Di(2-(5-tetrazolyl)ethyl)amine; ((CHN4)CH2.CH2)2NH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3  20°C 0.10M U          K1=5.80          1981ESa (49004)1828
-----
Co++      gl  NaNO3  20°C 0.1M U          K1=5.8          1979ESa (49005)1829
*****
C6H12N2O3           HL  B-Ala-B-Ala      CAS 34322-87-7 (2118)
3-Alanyl-3-alanine; H2N.CH2.CH2.CO.NH.CH2.CH2.COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaCl   25°C 0.12M U          K1=3.00          1977PNa (49060)1830
*****

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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  
-----

Co++ gl KNO3 25°C 0.10M C T K1=3.28 2000RNb (49102)1831  
Data for 35 and 45 C.

-----  
Co++ gl NaCl04 20°C 0.10M U M K1=3.11 B2= 5.72 1991KUb (49103)1832  
K(CoH-1L+H)=9  
K(CoH-1L2+H)=7.9  
K(2Co(H-1L)2+O2=Co2(H-1L)4O2)=9.8  
-----

Co++ gl NaCl 25°C 0.12M U K1=2.53 B2=4.42 1977PNa (49104)1833  
-----

Co++ gl NaCl 25°C 0.12M U K1=3.00 1976PNa (49105)1834  
L=beta-alanyl-beta-alanine  
-----

Co++ gl NaCl 25°C 0.12M U K1=2.53 B2= 4.42 1976PNa (49106)1835  
L=L-alpha-alanyl-L-alpha-alanine  
-----

Co++ gl oth/un 25°C 0.15M U K1=2.63 1960LMa (49107)1836  
\*\*\*\*\*

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  
-----

Co++ gl oth/un 25°C 0.15M U K1=2.83 1960LMa (49116)1837  
\*\*\*\*\*

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  
-----

Co++ gl NaCl 25°C 0.12M U K1=2.65 B2=4.75 1977PNa (49128)1838  
\*\*\*\*\*

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  
-----

Co++ gl oth/un 25°C 0.02M U K1=2.22 B2=4.0 1956DRb (49141)1839  
\*\*\*\*\*

C6H12N2O3 HL CAS 3544-43-2 (3109)  
N,N-Dimethylglycylglycine; (CH3)2N.CH2.CO.NH.CH2.CO.OH

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

Co++ gl oth/un 25°C 0.02M U K1=2.08 B2=4.24 1956DRb (49146)1840

\*\*\*\*\*

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
Co++	gl	oth/un	25°C	0.01M	U		K1=3.38 B2=6.23	1959DLb	(49151)1841

\*\*\*\*\*  
C6H12N2O3S H2L Ala-Cys (670)  
Alanyl-cysteine; NH2.CH(CH3).CO.NH.CH(CH2.SH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	U		B2=8.73 B(CoH2L2)=24.4 B(CoHL2)=17.44	1990CRa	(49158)1842

\*\*\*\*\*

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
Co++	gl	KNO3	25°C	0.50M	U		K1=10.79 B(CoHL)=14.0 *B(CoL(H2O))=0.2	1990ASd	(49216)1843

Protonation constants used : K1=9.54, B2=16.09, B3=18.55

Co++	gl	KNO3	25°C	0.10M	U	M	K1=11.78	1975ITa	(49217)1844
------	----	------	------	-------	---	---	----------	---------	-------------

Co++	gl	KNO3	25°C	0.10M	C		K1=11.20 K(CoL+H)=4.20 K(CoLOH+H)=10.60 K(2CoL+O2=Co2L2(O2)OH+H)=-4.24	1975MMd	(49218)1845
------	----	------	------	-------	---	--	---	---------	-------------

Co++	gl	KNO3	25°C	0.10M	U	M		1972IVb	(49219)1846
							K(CoL+Gly)=3.35		

Co++	gl	KNO3	25°C	0.10M	U	M	K1=11.25	1970DNa	(49220)1847
							K(CoL+en)=4.36		

Co++	gl	KCl	30°C	0.10M	U		K1=11.2	1952CMc	(49221)1848
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\*\*\*\*\*  
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
Co++	gl	KNO3	25°C	0.10M	C		K1=11.59 K(CoL+H)=4.95 K(CoLOH+H)=10.75	1975MMd	(49296)1849



K(2CoL+O2=Co2L2(O2)OH+H)=-5.3

-----  
Co++ gl KCl 20°C 0.10M U K1=11.78 B2=15.91 1955SAa (49297)1850  
K(Co+HL)=4.95

\*\*\*\*\*

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

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

-----  
Co++ gl NaNO3 25°C 0.10M C K1=7.35 1989EHa (49330)1851  
B(CoHL)=14.37

\*\*\*\*\*

C6H12N2O4S2 H2L Cystine CAS 923-32-0 (1404)  
DL-Dithio-bis(2-amino-3-propanoic acid); (HOOC.CH(NH2).CH2.S)2

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

-----  
Co++ gl KCl 25°C 0.50M M T H K1=5.18 B2=10.32 1988MAa (49363)1852  
Data for 25-40 C. DH(K1)=-12.9 kJ mol<sup>-1</sup>, DS(K1)=-143 J K<sup>-1</sup> mol<sup>-1</sup>.  
DH(K2)=22.0, DS(K2)=-27.2.

\*\*\*\*\*

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

-----  
Co++ sp none 25°C 0.0 U K1=5.22 1976AMc (49375)1853

\*\*\*\*\*

C6H12N4 L Methenamine CAS 100-97-0 (619)  
Hexamethylenetetramine;

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

-----  
Co++ sp non-aq 30°C 100% U M 1982SOa (49385)1854  
K(CoA2+L)=3.4

Medium: CCL4. HA=0,0'-diethyldithiophosphoric acid

\*\*\*\*\*

C6H12N4O6 H3L (2677)  
Nitrilotriacetohydroxamic acid; N(CH2.CO.NH.OH)3

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

-----  
Co++ gl KCl 25°C 0.10M M K1=13.01 B2=19.90 1979LSd (49400)1855  
B(CoH3L)=30.79  
B(CoH2L)=23.93  
B(CoHL)=19.21  
B(CoH2L2)=36.30

\*\*\*\*\*

C6H12O7 HL Galactonic acid (6942)

2R,3S,4S,5R,6-Pentahydroxo-hexanoic acid, D-Galactonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 20°C 0.10M C 1994ESa (49645)1856  
B(CoH-1L)=-6.00

\*\*\*\*\*

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  
-----  
Co++ gl NaNO3 20°C 0.10M C 1994ESa (49692)1857  
B(CoH-1L)=-4.95  
B(CoH-2L)=-8.33  
B(CoH-1L3)=-1.27  
B(CoH-2L3)=-7.94

B(Co2H-3L2)=-17.89

-----  
Co++ gl KCl 25°C 0.20M U K1=2.34 1981FDb (49693)1858

\*\*\*\*\*

C6H13N L CAS 108-91-8 (314)  
Cyclohexylamine; C6H11.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 37°C 0.15M C K1=5.28 1974Mwb (49801)1859

\*\*\*\*\*

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  
-----  
Co++ gl KNO3 25°C 0.20M U T HM K1=4.51 1996JLd (49893)1860  
K(Co(bpy)+L)=4.16

Data for 25-45 C. DH(K1)=-21 kJ mol<sup>-1</sup>, DS(K1)=16 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(Co(bpy)L)=-8.8, DS(Co(bpy)L)=8.8.

-----  
Co++ gl alc/w 20°C 50% M K1=4.59 1995AMb (49894)1861  
Medium: 50% v/v EtOH/H2O, 0.20 M NaClO4.

-----  
Co++ gl NaNO3 25°C 0.10M U T K1=4.59 B2=8.93 1981ISb (49895)1862  
K values for D, L and DL isomers. For the allo isomer, K1=4.10, K2=3.36

-----  
Co++ cal NaNO3 25°C 0.10M C H 1978ISc (49896)1863

For L-Ile: DH(K1)=-18.5 kJ mol<sup>-1</sup>, DS(K1)=26 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-3.5,  
DS(K2)=71. For D-allo-Ile: DH(K1)=-12.6, DS(K1)=36; DH(K2)=-4.2, DS=50

\*\*\*\*\*

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  
-----

Co++ gl NaNO3 25°C 0.10M U K1=4.80 1997ISd (50048)1864  
-----

Co++ gl KNO3 25°C 0.20M U T HM K1=5.11 1996JLd (50049)1865  
K(Co(bpy)+L)=4.60

Data for 25-45 C. DH(K1)=-29.7 kJ mol<sup>-1</sup>, DS(K1)=2.5 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(Co(bpy)L)=-66.9, DS(Co(bpy)L)=134.

-----  
Co++ gl KNO3 25°C 0.10M U I K1=4.52 B2=8.35 1990Rab (50050)1866  
Data also for 10% w/w EtOH/H2O (B1=4.68; B2=9.03) and 25% (4.99; 9.50)  
-----

Co++ gl KNO3 25°C 0.10M U M K1=5.07 1989MAc (50051)1867  
K(CoA+L)=4.40

H4A is adenosine-5'-triphosphoric acid.

-----  
Co++ gl KNO3 35°C 0.20M U M K1=4.27 B2=7.93 1989RVa (50052)1868  
K(CoA+L)=3.86

A=bis(imidazol-2-yl)methane

-----  
Co++ oth KNO3 20°C 0.10M U K1=5.2 B2=8.40 1964JOa (50053)1869  
K3=2.3

Method: paper electrophoresis

-----  
Co++ gl oth/un 25°C 0.01M U T K1=4.49 B2=8.07 1959DLb (50054)1870  
-----

Co++ gl oth/un 25°C 0.01M U T K1=4.55 B2=8.26 1949MMa (50055)1871  
\*\*\*\*\*

C6H13NO2 HL Norleucine CAS 616-06-8 (602)  
2-Amino-hexanoic acid (2-Aminocaproic acid) CH3.(CH2)3.CH(NH2).COOH

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

Co++ gl KNO3 25°C 0.10M C T K1=4.26 B2=7.79 1975IPb (50166)1872  
-----

Co++ gl oth/un 20°C 0.01M U B2=9.4 1950ALa (50167)1873  
\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.10M U K1=5.13 B2=9.47 1964LMa (50262)1874  
\*\*\*\*\*

C6H13NO3 HL CAS 28120-18-5 (1896)  
2-Amino-oxy-4-methyl-pentanoic acid; CH3.CH(CH3).CH2.CH(O.NH2).COOH

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

Co++ gl KNO3 25°C 0.50M U K1=1.71 1985WTa (50272)1875  
\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.50M U K1=1.73 1985WTa (50278)1876  
\*\*\*\*\*

C6H13NO4 HL Bicine CAS 150-25-4 (2124)  
N,N-Bis(2-hydroxyethyl)glycine; (HO.CH2.CH2)2N.CH2.COOH

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

Co++ gl KNO3 25°C 0.10M C K1=3.51 1995AEb (50330)1877

Co++ sp KNO3 25°C 1.00M U M K1=5.08 1992CSb (50331)1878  
K(Co(ATP)+L)=4.53

-----  
Co++ gl KNO3 25°C 0.10M C K1=5.30 B2=8.68 1991KNa (50332)1879

-----  
Co++ gl KNO3 30°C 0.10M U M K1=5.11 1984GHb (50333)1880  
K(CoH-1L+H)=5.19  
K(Co(phen)+L)=4.49

-----  
Co++ sp NaClO4 20°C 0.10M U K1=5.5 1967SKb (50334)1881  
K(CoH-2L+L+2H=CoL2)=11.9

By paper electrophoresis

-----  
Co++ oth KNO3 20°C 0.10M U K1=6.1 B2=9.60 1964JMa (50335)1882  
Method: paper electrophoresis

-----  
Co++ gl KCl 30°C 0.10M U K1=5.25 B2=8.77 1957FCa (50336)1883

-----  
Co++ gl KCl 30°C 0.10M U K1=5.26 B2=8.78 1953CCa (50337)1884  
\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.10M C 1990KBa (50439)1885  
B(CoH-2L2)=-11.06

-----  
Co++ vlt NaClO4 25°C 0.15M C K1=2.50 B2= 5.70 1990UKb (50440)1886  
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
Co++	vlt	NaClO4	25°C	0.15M	C			K1=2.30 B2= 4.95	1988UKa (50458)	1887

Method: d.c. polarography.

Co++	gl	NaCl	25°C	0.15M	U				1986LDc (50459)	1888
------	----	------	------	-------	---	--	--	--	-----------------	------

B(CoH-2L2)=-12.20

Co++	gl	NaNO3	25°C	0.10M	U	I		K1=1.71 B2=4.76	1984GMa (50460)	1889
------	----	-------	------	-------	---	---	--	-----------------	-----------------	------

\*\*\*\*\*  
 C6H13NO5 L D-Galactosamine CAS 1772-03-8 (2553)  
 D-Galactosamine, 2-Amino-2-deoxy-D-galactopyranose. chondrosamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.15M	U			B2=6.50	1988Rkb (50473)	1890

B(CoH-2L2)=-12.01

\*\*\*\*\*  
 C6H13NO5 HL Tricine CAS 5704-04-1 (1239)  
 N-(Tris(hydroxymethyl)methyl)glycine; (HO.CH2)3C.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U	TIH		K1=4.51	2004EAa (50497)	1891

Data for 5-45 C. DH(K1)=-32.34 kJ mol<sup>-1</sup>, DS=-22.2 J K<sup>-1</sup> mol<sup>-1</sup>. Values for 0.02-0.15 M KNO3 and 60-75% v/v acetone, 75% EtOH and 75% dioxane/H2O

Co++	gl	KNO3	25°C	0.10M	C	M		K1=4.49	2003AHa (50498)	1892
------	----	------	------	-------	---	---	--	---------	-----------------	------

K(CoL+A)=3.45  
 HA is 3-amino-5-mercapto-1,2,4-triazole.

Co++	gl	KNO3	30°C	0.10M	U	M		K1=4.71	1987TGb (50499)	1893
------	----	------	------	-------	---	---	--	---------	-----------------	------

K(Co(phen)+L)=4.65

Co++	gl	KNO3	30°C	0.10M	U	M		K1=4.71	1985TGa (50500)	1894
------	----	------	------	-------	---	---	--	---------	-----------------	------

K(Co+L)=5.38  
 K(Co(bpy)+L)=4.31

\*\*\*\*\*  
 C6H13NO6 HL CAS 84518-56-9 (4387)  
 2-Amino-2-deoxy-D-gluconic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	30°C	0.10M	U			K1=4.5 B2=8.40	1966MSa (50529)	1895

\*\*\*\*\*

C6H13N3O3 HL Citrulline (579)  
 2-Amino-5-ureidovaleic acid; H2N.CO.NH.CH2.CH2.CH2.CH(NH2).COOH

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

Co++ gl KNO3 25°C 0.10M U K1=3.94 B2=6.48 1970CMc (50570)1896  
\*\*\*\*\*

C6H13O3N HL (7070)  
NN-Dimethylthreonine; (CH3)2N.CH(CH(OH)CH3)COOH

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

Co++ gl KCl 25°C 0.10M C K1=2.65 1994BPb (50596)1897  
\*\*\*\*\*

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  
-----

Co++ ix NaClO4 25°C 0.10M U K1=2.18 1966DTa (50618)1898  
Medium: KClO4. By glass electrode K1=2.12  
\*\*\*\*\*

C6H14NO2P HL (6465)  
Piperidinemethylphosphinic acid; C5H10N.CH2.PO2H2

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

Co++ gl NaClO4 25°C 0.10M C K1=4.231 B2=8.30 1992Lba (50634)1899  
B3=11.87  
\*\*\*\*\*

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  
-----

Co++ gl KCl 25°C 0.20M U K1=3.75 B2=6.87 1982FGa (50642)1900  
K[Co+2(H-1L)]=12.63  
\*\*\*\*\*

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  
-----

Co++ gl KCl 20°C 0.10M U K1=5.79 B2=10.34 1956SBa (50672)1901  
K3=2.84  
\*\*\*\*\*

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  
-----

Co++ gl KCl 20°C 0.10M U K1=6.37 B2=11.74 1956BFd (50692)1902  
K3=3.48  
\*\*\*\*\*

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
Co++	gl	NaCl04	25°C	1.0M	C			K1=6.15 B2=11.28	1999UGa	(50710)1903
Co++	gl	KNO3	25°C	0.10M	U			K1=6.33 B2=11.63	1990CCa	(50711)1904
*****										
C6H14N2O		L						CAS 10466-61-2	(3116)	
L-Leucine amide; H2N.CH(CH2.CH(CH3)2).CO.NH2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	oth/un	25°C	0.01M	U			K1=1.97 B2=3.67	1959DLb	(50725)1905
*****										
C6H14N2O2		HL			Lysine			CAS 56-87-1	(41)	
2,6-Diaminohexanoic acid; H2N.(CH2)4.CH(NH2)COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C			K1=4.80	1999BIa	(50811)1906
Co++	gl	NaCl04	25°C	0.10M	C			B2=8.45	1987LMa	(50812)1907
B(CoHL)=14.53										
B(CoH2L2)=28.38										
B(CoH3L3)=40.84										
B(CoHL2)=19.08										
Co++	gl	KNO3	25°C	0.10M	C			B2=8.46	1976BPb	(50813)1908
B(CoHL)=14.50										
B(CoH2L2)=28.41										
B(CoH3L3)=41.43										
B(CoH2L3)=31.6										
B(CoHL2)=18.50										

Co++	gl	KNO3	25°C	1.00M	U			K(Co+HL)=3.62	1971SLa	(50814)1909
K(Co+2HL)=6.68										

Co++	gl	oth/un	20°C	0.01M	U			B2=6.8	1952ALa	(50815)1910
*****										
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
Co++	gl	KCl	25°C	0.50M	C			K1=5.50 B2=9.46	1993LEb	(50844)1911
B(CoHL)=12.26										
B(CoH-1L)=-1.71										
*****										

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  
-----  
Co++ gl KCl 25°C 0.50M C K1=6.423 B2=10.96 1988LEa (50850)1912  
B(CoH-1L2)=1.77

\*\*\*\*\*  
C6H14N2O3 HL 5-Hydroxylysine CAS 13204-98-3 (1585)  
2,6-Diamino-5-hydroxyhexanoic acid; H2N.CH2.CH(OH).CH2.CH2.CH(NH2).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.10M U K1=3.73 B2=6.94 1965Nca (50870)1913  
\*\*\*\*\*

C6H14N2S L (5635)  
1-Thia-4,7-diazacyclononane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=8.06 B2=15.40 1992Wlb (50887)1914  
-----  
Co++ gl NaNO3 25°C 0.10M U K1=7.85 1987Hda (50888)1915  
\*\*\*\*\*

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  
-----  
Co++ gl diox/w RT 50% C I K1=3.039 B2= 5.69 1993BKe (50904)1916  
B(CoHL)=5.912  
Medium: 50% v/v dioxane/H2O. Data for 10-60% v/v dioxane/H2O and DMF/H2O.  
Temperature not stated.

-----  
Co++ gl NaNO3 25°C 0.20M U K1=1.79 B2=3.44 1974FSa (50905)1917  
\*\*\*\*\*

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  
-----  
Co++ gl KNO3 25°C 0.10M U K1=3.30 1969BMc (50927)1918  
\*\*\*\*\*

C6H14N4O2 HL Arginine CAS 74-79-3 (40)  
2-Amino-5-guanidopentanoic acid; H2N.CH((CH2)3.NH.C(:NH)(NH2)COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C 1976BPb (50994)1919  
B(CoHL)=15.93



B(CoH2L2)=31.05

B(CoH3L3)=45.53

-----  
Co++ gl KNO3 25°C 0.10M U K1=4.02 B2=7.24 1970CMc (50995)1920  
-----

Co++ gl oth/un 17°C ? U T K1=3.79 B2=6.89 1960PEd (50996)1921  
K3=2.10  
30 C: K1=3.73; 40 C: K1=3.68, K2=2.95, K3=2.00  
-----

Co++ gl KNO3 25°C 0.15M U K1=3.87 B2=7.07 1953TSa (50997)1922  
K3=2.08  
-----

Co++ gl oth/un 20°C 0.01M U B2=7.40 1952ALa (50998)1923  
\*\*\*\*\*  
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  
-----

Co++ gl KCl 25°C 0.50M C K1=6.96 B2=11.69 1990LEa (51033)1924  
B(Co2HL)=27.32  
-----

\*\*\*\*\*  
C6H15N L CAS 37007-11-7 (4353)  
Diisopropylamine; ((CH3)2.CH)2.NH  
-----

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

Co++ ISE R4N.X 25°C 2.00M U K1=2.17 B2=3.71 1969MPd (51149)1925  
K3=1.29  
K4=1.43  
-----

Medium: NH4NO3

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

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

Co++ gl NaNO3 25°C 0.10M U K1=2.25 1984HNa (51279)1926  
-----

Co++ gl oth/un 25°C 0.43M U K1=2.70 B2=4.35 1966SKe (51280)1927  
Medium: CH2OHCH2.NH3NO3  
-----

Co++ gl KNO3 25°C 0.50M U K1=1.73 1947BRa (51281)1928  
\*\*\*\*\*  
C6H15NO5S HL BES CAS 10191-18-1 (2788)  
N,N-Bis(2-hydroxyethyl)-2-aminoethanesulfonic acid;  
-----

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

Co++ gl KNO3 25°C 0.10M C K1=3.03 1995AEb (51315)1929  
-----

\*\*\*\*\*

C6H15N06P2 H4L (6891)  
Piperidine-N-Methylenedi(phosphonic acid); C5H10N.CH(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	M			K1=7.64 K(Co+HL)=5.72	1978GMF (51321)	1930

\*\*\*\*\*

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
Co++	gl	KNO3	25°C	0.10M	C			K1=3.06	1995AEb (51336)	1931
Co++	gl	KNO3	20°C	0.05M	U			K1=2.43	1986VGa (51337)	1932
Co++	gl	KNO3	20°C	0.05M	U			K1=2.43	1986VGb (51338)	1933

\*\*\*\*\*

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
Co++	gl	NaClO4	20°C	0.10M	U	TI		K1=5.05	1986NDb (51351)	1934

\*\*\*\*\*

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
Co++	gl	NaClO4	25°C	1.0M	C			K1=12.47 B2=20.62	1999UGa (51400)	1935
Co++	gl	KNO3	20°C	0.10M	U	T H		K1=14.63 B2=21.66	1997BAa (51401)	1936
At 32 C, K1=14.01. DH(K1)=-85.5 kJ mol-1, DS(K1)=281 J K-1 mol-1.										

Co++	gl	KNO3	25°C	0.10M	U			K1=11.2 B2=19.00	1973AHc (51402)	1937
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\*\*\*\*\*

C6H15N3O2 HL CAS 52760-35-7 (6670)  
Lysine hydroxamic acid; H2N.(CH2)4.CH(NH2)CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	C			B2=10.13 B(CoHL)=15.38 B(CoH2L2)=29.83 B(CoHL2)=20.41 B(CoH-1L2)=-2.2	2002ECa (51422)	1938

\*\*\*\*\*

Co++ gl KCl 25°C 0.50M C K1=8.68 1993LEa (51423)1939  
B(CoHL)=15.72  
B(CoH2L2)=29.72  
B(CoH2L)=22.68

\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.50M U K1=12.35 1990ASd (51435)1940  
B(CoHL)=17.11  
\*B(CoL(H2O))=1.55

Protonation constants used : K1=10.72, B2=20.40 B3=23.60

-----  
Co++ gl KNO3 25°C 0.10M C K1=12.11 1975MMe (51436)1941  
K(CoL+H)=5.20  
K(CoLOH+H)=10.24  
K(2Co+2L+O2=Co2L2O2OH+H)=23.71

-----  
Co++ gl KNO3 20°C 0.20M U K1=11.69 1973CFa (51437)1942

\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.10M C K1=9.10 B2=15.68 1998GMa (51446)1943

\*\*\*\*\*

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  
-----

Co++ gl KCl 25°C 0.50M C K1=5.48 B2=9.87 1991LNa (51470)1944  
B(CoH2L2)=24.03  
B(CoH-1L)=-1.73

\*\*\*\*\*

C6H15O2PS2 HL (2059)  
O,O'-Dipropyl dithiophosphoric acid; (C3H7O)2P(S)SH

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

Co++ ISE alc/w 25°C 90% U K1=2.07 B2=3.68 1972TCa (51486)1945  
Medium: 90% EtOH, 0.3 M NaClO4

\*\*\*\*\*

C6H15O2PS2 HL CAS 25134-38-7 (4401)  
Phosphorodithioic acid O,O-diisopropyl ester; (CH3.CH(CH3)O)2PS.SH

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

-----  
Co++ ISE alc/w 25°C 90% U K1=2.23 B2=3.98 1972TCa (51499)1946  
Medium: 90% EtOH, 0.3 M NaClO4

\*\*\*\*\*  
C6H15O3P L CAS 122-52-1 (1723)  
Triethylphosphite; (C2H5O)3P  
-----

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

Co++ sp non-aq 23°C 100% U M K(CoA+L)=1.25 1980ELa (51509)1947

Medium: toluene. A= "Capped" porphyrin.  
\*\*\*\*\*  
C6H15PS2 HL CAS 22689-71-0 (4395)  
P,P-Dipropylphosphinodithioic acid; (CH3.CH2.CH2)2.PS.SH  
-----

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

Co++ ISE alc/w 25°C 90% U K1=2.58 B2=4.73 1972TCa (51554)1948  
Medium: 90% EtOH, 0.3 M NaClO4

\*\*\*\*\*  
C6H16NO4P HL CAS 387383-55-3 (8776)  
N,N,N-Trimethyl-2-(phosphonomethoxy)ethylamine;  
-----

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

Co++ gl NaNO3 25°C 0.10M M K1=1.80 2002FGb (51571)1949

\*\*\*\*\*  
C6H16N2 L CAS 124-09-4 (358)  
1,6-Diaminohexane; H2N.(CH2)6.NH2  
-----

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

Co++ cal alc/w 25°C 100% U H K1=2.48 1985BUd (51583)1950  
Medium: MeOH, 0.05 M Et4N.NO3. DH=-26.7 kJ mol-1

\*\*\*\*\*  
C6H16N2 L Tetraemeen 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  
-----

Co++ sp non-aq 25°C 100% C H K1=3.07 2002CMa (51644)1951  
Medium: DMSO, 0.10 M Et4NClO4. By calorimetry: DH(K1)=-36 kJ mol-1,  
DS(K1)=-62.1 J K-1 mol-1.

\*\*\*\*\*  
C6H16N2O2 L CAS 93798-65-3 (3119)  
3,6-Diaza-1,8-dihydroxyoctane; HO.CH2.CH2.NH.CH2.CH2.NH.CH2.CH2.OH  
-----

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

Co++ EMF KNO3 25°C 0.50M U K1=4.84 B2=7.61 1972MPb (51686)1952  
B(CoHL)=11.0  
B(CoHL2)=15.1

-----  
Co++ gl oth/un 25°C 0.50M U K1=5.13 B2=9.13 1960HDa (51687)1953  
\*\*\*\*\*  
C6H16N2O2 L CAS 929-59-4 (915)  
3,6-Dioxaoctane-1,8-diamine; H2N.CH2.CH2.O.CH2.CH2.O.CH2.CH2.NH2

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

Co++ cal alc/w 25°C 100% U H K1=2.51 1985BUd (51700)1954  
Medium: MeOH, 0.05 M Et4N.NO3. DH=-7.2 kJ mol-1  
\*\*\*\*\*  
C6H16N2O4P2 H2L (6466)  
Piperazine-1,4-diylbis(methylene)bis(phosphinic acid); H2O2P.CH2.C4H8N2.CH2.PO2H2

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

Co++ gl NaClO4 25°C 0.10M C K1=1.72 1992Lba (51708)1955  
B(CoH2L2)=15.9  
\*\*\*\*\*  
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  
-----

Co++ gl NaClO4 25°C 0.10M U K1=4.500 B2=7.61 1977ASg (51759)1956  
-----  
Co++ gl KNO3 30°C 1.0M U K1=4.89 1954GFa (51760)1957  
\*\*\*\*\*  
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  
-----

Co++ gl KCl 25°C 0.10M U 1967KLa (51789)1958  
K(Co+HL)=4.57  
B(Co2L)=9.86  
K(2Co+HL)=7.73  
\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 1.00M M 1982Bgb (51811)1959  
K(Co+HL)=4.34  
\*\*\*\*\*  
C6H17N2O3P H2L (7486)

N,N,N'-Trimethyldiaminoethane-N'-methylphosphonic acid;  
 (CH<sub>3</sub>)<sub>2</sub>N.CH<sub>2</sub>CH<sub>2</sub>.N(CH<sub>3</sub>)CH<sub>2</sub>PO<sub>3</sub>H<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO <sub>3</sub>	25°C	0.10M	C			K <sub>1</sub> =7.91 K(CoL+H)=4.2 K(CoL+OH)=3.4	2001DSa (51822)	1960
Co++	gl	KNO <sub>3</sub>	25°C	0.10M	C			K <sub>1</sub> =7.91 K(CoL+H)=4.2 K(CoL+OH)=3.4	2001DSa (51823)	1961

\*\*\*\*\*

C<sub>6</sub>H<sub>17</sub>N<sub>3</sub> L CAS 56-18-8 (968)  
 1,5,9-Triazanonane, 4-azaheptane-1,7-diamine; H<sub>2</sub>N.CH<sub>2</sub>.CH<sub>2</sub>.CH<sub>2</sub>.NH.CH<sub>2</sub>.CH<sub>2</sub>.CH<sub>2</sub>.NH<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO <sub>3</sub>	25°C	0.10M	U			K <sub>1</sub> =6.6 B <sub>2</sub> =9.80	1973AHc (51895)	1962
Co++	cal	KCl	25°C	0.10M	U	H			1966PNa (51896)	1963
DH(K <sub>1</sub> )=-32.6 kJ mol <sup>-1</sup> , DS=23.4 J K <sup>-1</sup> mol <sup>-1</sup>										
Co++	gl	KCl	25°C	0.10M	U			K <sub>1</sub> =6.92	1966VAa (51897)	1964
Co++	gl	KNO <sub>3</sub>	30°C	1.0M	U	T H		K <sub>1</sub> =6.63	1956HFb (51898)	1965
DH(K <sub>1</sub> )=-37.7 kJ mol <sup>-1</sup> , DS=4 J K <sup>-1</sup> mol <sup>-1</sup> . K <sub>1</sub> =7.51(0 C), 6.36(50 C)										

\*\*\*\*\*

C<sub>6</sub>H<sub>17</sub>N<sub>3</sub> L CAS 4432-89-7 (7982)  
 2,5,8-Triazanonane, N,N''-Dimethyl-diethylenetriamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	ISE non-aq		25°C	100%	C	H		K <sub>1</sub> =8.30 B <sub>2</sub> =14.10	2001CGc (51905)	1966
Method: Cd ion selective electrode. Medium: DMSO, 0.10 M Et <sub>4</sub> NClO <sub>4</sub> . By calorimetry: DH(K <sub>1</sub> )=-66.0 kJ mol <sup>-1</sup> , DH(B <sub>2</sub> )=-127.										

\*\*\*\*\*

C<sub>6</sub>H<sub>18</sub>N<sub>2</sub>O<sub>6</sub>P<sub>2</sub> H<sub>4</sub>L (1363)  
 N,N'-Dimethyldiaminoethane-N,N'-dimethylphosphonic acid;  
 CH<sub>3</sub>N(CH<sub>2</sub>PO<sub>3</sub>H<sub>2</sub>).CH<sub>2</sub>.CH<sub>2</sub>.N(CH<sub>2</sub>.PO<sub>3</sub>H<sub>2</sub>)CH<sub>3</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO <sub>3</sub>	25°C	0.10M	C			K <sub>1</sub> =12.80 K(CoL+H)=5.60 K(CoL+OH)=2.1 K(CoHL+H)=4.7	2001DSa (51946)	1967
Co++	gl	KNO <sub>3</sub>	25°C	0.10M	C			K <sub>1</sub> =12.80 K(CoL+H)=5.60	2001DSa (51947)	1968



K(Co+H2L)=3.6

-----  
Co++ cal KCl 25°C 0.10M U H 1961SPb (52086)1978  
DG(K1)=-59.31 kJ mol<sup>-1</sup>, DH=-44.56, DS=60.7 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ gl KNO3 40°C 1.0M U T H 1952JHa (52087)1979  
B(Co3L2)=3.07  
Medium: 1 M (KNO3+KCl). B(Co3L2)=3.19(30C), DH=-16.7 kJ mol<sup>-1</sup>  
-----

Co++ gl oth/un 30°C 1.0M U T K1=11.21 1952JHa (52088)1980  
K1=10.79(40 C)  
-----

Co++ gl KCl 20°C 0.10M U K1=11.0 1950SCa (52089)1981  
K(Co+HL)=6.8  
-----

\*\*\*\*\*  
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  
-----

Co++ gl NaCl04 25°C 1.00M C K1=13.08 1994AGa (52181)1982  
K(Co+HL)=8.47  
-----

Co++ kin NaCl04 25°C 1.00M C 1994BCb (52182)1983  
K(CoLCO3+H=CoLHCO3)=-0.21  
K(CoLOH2OCO2H+H=CoL(OH2)2+CO2)=-0.20  
-----

Co++ gl oth/un 20°C ????? M T H 1993GEa (52183)1984  
K(CoL(H2O)+H=CoL(H3O))=3.70  
K(CoHL(H2O)+H=CoHL(H3O))=2.23  
Also values at 10, 30 and 40 C. Medium: phosphate-citrate buffer.  
-----

Co++ gl KNO3 25°C 0.50M U K1=12.42 1990ASd (52184)1985  
B(CoHL)=18.80  
\*B(CoL(H2O))=2.10  
Protonation constants used : K1=10.23, B2=19.89, B3=28.57  
-----

Co++ oth KCl 25°C 0.10M U M 1985BMd (52185)1986  
K(2CoL+O2=CoL(OH)(O2)CoL+H)=4.4. Method: amperometric O2 electrode.  
-----

Co++ gl diox/w 25°C 70% U K1=14.74 1984MMe (52186)1987  
-----

Co++ gl oth/un 25°C 0.10M C K1=12.7 1982MMb (52187)1988  
K(CoLOH+H)=9.9  
-----

Co++ gl R4N.X 25°C 0.10M C K1=12.42 1975JTa (52188)1989  
-----

Co++ gl KNO3 25°C 0.10M C K1=12.69 1975MMb (52189)1990  
-----

Co++ cal KCl 25°C 0.10M U H 1960PCa (52190)1991  
-----







C7H4N4O4 L CAS 50365-37-2 (7762)  
5,6-Dinitrobenzimidazole;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 25°C 0.50M M K1=0.84 1999KSa (52515)2009  
K(Co+H-1L)=2.73  
\*K(CoL)=-7.03

\*\*\*\*\*  
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  
-----  
Co++ gl NaClO4 30°C 0.10M U T K1=5.63 1975JKa (52540)2010  
\*\*\*\*\*

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  
-----  
Co++ gl NaClO4 30°C 0.10M U T K1=5.40 1975JKa (52553)2011  
\*\*\*\*\*

C7H5NOS HL CAS 7405-23-4 (3177)  
4-Hydroxybenzothiazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=6.88 B2=13.48 1960FFa (52589)2012  
\*\*\*\*\*

C7H5N04 H2L Quinolinic acid CAS 89-00-9 (567)  
2,3-Pyridinedicarboxylic acid; C5H3N.(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=5.2 B2=9.20 1978HKa (52618)2013  
\*\*\*\*\*

C7H5N04 H2L CAS 499-80-9 (566)  
2,4-Pyridinedicarboxylic acid; C5H3N.(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=5.5 B2=9.90 1978HKa (52647)2014  
\*\*\*\*\*

C7H5N04 H2L CAS 100-26-5 (2528)  
2,5-Pyridinedicarboxylic acid, Isocinchomeric acid; C5H3N.(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 20°C 0.10M U T H K1=4.35 B2=7.84 1983PSd (52663)2015

30 C: K1=4.26, K2=3.41; 40 C: K1=4.15, K2=3.32

\*\*\*\*\*

C7H5N04 H2L Dipicolinic aci CAS 449-83-2 (418)  
2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2

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

Co++ gl KNO3 35°C 0.10M C M K1=4.94 1999DSb (52741)2016  
B(CoAL)=7.88

A is thiamine hydrochloride.

-----  
Co++ gl KNO3 25°C 0.10M M M K1=5.54 1996AEa (52742)2017  
Data for ternary complexes with aspartic acid, serine, asparagine and  
N-(2-acetamido)iminodiacetic acid

-----  
Co++ EMF NaNO3 20°C 0.10M U K1=6.65 B2=12.70 1960ANb (52743)2018  
-----

Co++ gl KCl 30°C 0.10M U K1=7.0 B2=12.5 1957TBb (52744)2019  
\*\*\*\*\*

C7H5N04S2 H2L (3178)  
4-Hydroxybenzothiazole-7-sulfonic acid;

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

Co++ gl diox/w 25°C 50% U K1=7.9 B2=13.7 1962FFa (52948)2020  
\*\*\*\*\*

C7H5N05 H2L Nitrosalicylic CAS 85-38-1 (1416)  
2-Hydroxy-3-nitrobenzoic acid; HO.C6H3(NO2).COOH

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

Co++ sp none 25°C 0.0 C K1=5.76 1983SGd (52968)2021  
-----

Co++ gl NaCl04 30°C 0.10M U T K1=5.24 1975JKa (52969)2022  
-----

Co++ EMF NaCl04 30°C 0.10M U K1=5.24 1972JKa (52970)2023  
-----

Co++ oth diox/w 30°C 25% U K1=5.65 B2=10.95 1972KAe (52971)2024  
Medium: 25% dioxan, 0.1 M NaCl04

\*\*\*\*\*

C7H5N05 H2L Nitrosalicylic CAS 619-19-2 (1288)  
2-Hydroxy-4-nitrobenzoic acid; HO.C6H3(NO2).COOH

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

Co++ sp none 25°C 0.0 C K1=5.37 1983SGd (52985)2025  
\*\*\*\*\*

C7H5N05 H2L Nitrosalicylic CAS 96-97-9 (148)  
2-Hydroxy-5-nitrobenzoic acid; HO.C6H3(NO2).COOH  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	kin	NaNO3	25°C	0.30M	U	T M		K1=4.79 K(Co(IDA)+L)=3.73 K(Co(NTA)+L)=2.83 K(Co(dien)+L)=4.20 K(Co(trien)+L)=3.41	1994HWa (53029)	2026
------	-----	-------	------	-------	---	-----	--	--	-----------------	------

Also K1 at 15-31C. By spectrophotometry, K1=4.84 at 25C. K(Co(N,N'-EDDA)+L)=3.15, K(Co(N,N-EDDA)+L)=3.00, K(Co(tripolyphosphate)+L)=3.00

Co++	gl	NaClO4	35°C	0.10M	U	M		K1=4.98 B2=8.06 K(Co(bpy)+L)=5.11 K(Co(phen)+L)=5.25	1983ABa (53030)	2027
------	----	--------	------	-------	---	---	--	--	-----------------	------

Co++	gl	KCl	25°C	0.10M	U	T H		K1=5.57	1975DNb (53031)	2028
------	----	-----	------	-------	---	-----	--	---------	-----------------	------

DH(K1)=-19.9 kJ mol<sup>-1</sup> and DS(K1)=189.6 J mol<sup>-1</sup> K<sup>-1</sup>.  
Values also available at 35 and 45 C

Co++	gl	NaClO4	30°C	0.10M	U			K1=5.18	1975JKa (53032)	2029
------	----	--------	------	-------	---	--	--	---------	-----------------	------

Co++	oth	diox/w	30°C	75%	U			K1=5.38 B2=10.42	1973KAc (53033)	2030
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Medium: 75% dioxan, 0.1 M NaClO4

Co++	EMF	NaClO4	30°C	0.10M	U			K1=5.18	1972JKa (53034)	2031
------	-----	--------	------	-------	---	--	--	---------	-----------------	------

\*\*\*\*\*  
C7H5N05 H3L CAS 499-51-4 (3150)  
4-Hydroxypyridine-2,6-dicarboxylic acid; HO.C5H2N(COOH)2

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

Co++	gl	oth/un	20°C	0.10M	U			K1=8.4 B2=16.2 K(CoL+H)=5.74 K(CoL2+H)=6.0 K(CoHL2+H)=5.3	1963AND (53070)	2032
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\*\*\*\*\*  
C7H5NS L Benzothiazole CAS 95-16-9 (618)  
Benzothiazole;

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

Co++	nmr	non-aq	30°C	100%	U	M		K(CoA2+L)=2.2	1982SOa (53081)	2033
------	-----	--------	------	------	---	---	--	---------------	-----------------	------

Medium: CHCl3. HA=0,0'-diethyldithiophosphoric acid

\*\*\*\*\*  
C7H5N3O2 L CAS 94-52-0 (7761)  
5-Nitrobenzimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	NaNO3	25°C	0.50M	M			K1=1.25	1999Ksa (53099)	2034
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K(Co+H-1L)=3.67

\*K(CoL)=-8.16

\*\*\*\*\*

C7H5O2Cl HL (3747)  
2-Hydroxy-6-chlorobenzaldehyde (6-chlorosalicylaldehyde)

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

Co++ gl diox/w 30°C 75% U K1=4.52 1978RJa (53156)2035

\*\*\*\*\*

C7H5O2Cl HL CAS 1927-94-2 (3143)  
3-Chlorosalicylaldehyde; HO.C6H3(Cl).CHO

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

Co++ gl diox/w 30°C 75% U K1=7.09 B2=11.80 1978RJa (53188)2036

\*\*\*\*\*

C7H5O2F HL CAS 455-38-9 (3147)  
3-Fluorosalicylaldehyde; HO.C6H3(F).CHO

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

Co++ gl diox/w 25°C 70% C K1=3.77 B2=8.74 1988MMd (53248)2037

\*\*\*\*\*

C7H5O2I HL CAS 60032-63-5 (6282)  
5-Iodo-salicylaldehyde; I(OH)C6H3.CHO

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

Co++ gl diox/w 30°C 75% U K1=3.55 1978RJa (53269)2038

\*\*\*\*\*

C7H5O3As HL CAS 50722-40-2 (8008)  
2-Arsenosobenzoic acid;

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

Co++ gl alc/w 35°C 20% U K1=3.19 1973SPf (53277)2039

Medium: 20% EtOH/H2O, 0.1 M KNO3.

\*\*\*\*\*

C7H5O3Br H2L CAS 3883-95-2 (1111)  
3-Bromosalicylic acid; Br.C6H3(OH).COOH

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

Co++ gl NaClO4 30°C 0.10M U T K1=5.38 1975JKa (53288)2040

\*\*\*\*\*

C7H5O3Br HL CAS 85-55-4 (1194)  
5-Bromosalicylic acid; Br.C6H3(OH).COOH

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

-----  
 Co++ sp none 25°C 0.0 C K1=6.43 1983SGd (53306)2041  
 \*\*\*\*\*  
 C7H5O3Cl H2L CAS 321-14-2 (1113)  
 5-Chlorosalicylic acid; Cl.C6H3(OH).COOH  
 -----

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

Co++ sp none 25°C 0.0 C K1=6.43 1983SGd (53334)2042  
 -----

Co++ gl NaClO4 30°C 0.10M U T K1=6.21 1975JKa (53335)2043  
 \*\*\*\*\*  
 C7H6NO2Cl HL CAS 7120-43-6 (3782)  
 5-Chloro-2-hydroxybenzaldehyde oxime (5-chlorosalicylaldoxime)  
 -----

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

Co++ gl diox/w 20°C 75% U K1=6.3 B2=13.30 1965BEb (53386)2044  
 Medium: 75% dioxan, 0.1 M NaClO4  
 -----

C7H6NO3Br H2L CAS 87353-69-3 (207)  
 4-Bromosalicylhydroxamic acid; Br.C6H3(OH).CO.NH.OH  
 -----

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

Co++ EMF diox/w 30°C 50% U K1=4.05 1977DJa (53394)2045  
 Medium: 50% dioxan, 0.1 M NaClO4  
 -----

C7H6NO3Br H2L CAS 5798-94-7 (206)  
 5-Bromosalicylhydroxamic acid; Br.C6H3(OH).CO.NH.OH  
 -----

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

Co++ EMF diox/w 30°C 50% U K1=3.98 1977DJa (53405)2046  
 Medium: 50% dioxan, 0.1 M NaClO4  
 -----

C7H6NO3Cl H2L (205)  
 3-Chlorosalicylhydroxamic acid; Cl.C6H3(OH).CO.NH.OH  
 -----

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

Co++ EMF diox/w 30°C 50% U K1=3.54 1977DJa (53414)2047  
 Medium: 50% dioxan, 0.1 M NaClO4  
 -----

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

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

Co++ gl NaNO3 25°C 0.10M C M K1=2.98 2000MSa (53465)2048

B(CoAL)=8.94  
 B(CoH-1AL)=0.46  
 B(Co2A2L)=19.33  
 B(Co2H-1A2L)=12.34

H2A is aspartic acid.

-----  
 Co++ gl KNO3 35°C 0.10M C M K1=2.10 1997PSb (53466)2049  
 K(CoL+A)=5.46

H2A is thiamine orthophosphoric acid.

-----  
 Co++ sp non-aq 25°C 100% U B2=2.16 1984DPa (53467)2050  
 Medium: DMSO

-----  
 Co++ gl KNO3 25°C 0.50M U K1=1.68 B2=3.00 1981LMb (53468)2051  
 B3=3.93

\*\*\*\*\*

C7H6N2O HL (1926)

8-Hydroxyimidazo[1,2-a]-pyridine;

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

-----  
 Co++ gl diox/w 25°C 50% C K1=5.88 B2=10.88 1993YDa (53481)2052  
 In 50% v/v dioxan/water. Electrolyte: 0.1M KNO3.

\*\*\*\*\*

C7H6N2OS HL CAS 26278-79-5 (3179)

2-Amino-4-hydroxybenzothiazole;

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

-----  
 Co++ gl diox/w 25°C 50% U K1=7.8 B2=14.6 1962FFa (53486)2053

\*\*\*\*\*

C7H6N2O4 HL CAS 1595-15-9 (3754)

2-Hydroxy-5-nitrobenzaldehyde oxime (5-nitrosalicylaldoxime)

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

-----  
 Co++ gl diox/w 20°C 75% U K1=6.3 B2=12.90 1965BEb (53491)2054  
 Medium: 75% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C7H6N2O4 H2L CAS 2683-49-0 (3753)

4-Aminopyridine-2,6-dicarboxylic acid (4-aminodipicolinic acid)

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

-----  
 Co++ gl KNO3 20°C 0.10M U K1=7.36 B2=14.33 1965ABa (53502)2055

\*\*\*\*\*

C7H6N2O5 H2L CAS 831-51-6 (208)

5-Nitrosalicylhydroxamic acid; O2N.C6H3(OH).CO.NH.OH

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



-----  
Co++ EMF diox/w 30°C 50% U K1=2.86 1977DJa (53521)2056  
Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*  
C7H60S HL Thiobenzoic CAS 98-91-9 (6294)  
Thiobenzoic acid; C6H5.COSH  
-----

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

Co++ gl diox/w 30°C 60% U K1=4.3 B2=8.2 19720Tc (53554)2057  
Medium: 60% v/v dioxan, 1 M (K,Na)NO3

\*\*\*\*\*  
C7H602 HL Salicylaldehyde CAS 90-02-8 (193)  
2-Hydroxybenzaldehyde, Salicylaldehyde; HO.C6H4.CHO  
-----

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

Co++ gl diox/w 30°C 75% U K1=5.46 1978RJa (53611)2058  
-----

Co++ gl KCl 25°C 0.50M U K1=3.22 1969HLA (53612)2059  
-----

Co++ gl alc/w ? 50% U B2=8.21 1957HSa (53613)2060  
-----

Co++ gl diox/w 25°C 50% U K1=4.67 B2=8.30 1949MMa (53614)2061

\*\*\*\*\*  
C7H602 HL Tropolone CAS 533-75-5 (3129)  
2-Hydroxycyclohepta-2,4,6-trien-1-one;  
-----

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

Co++ gl diox/w 30°C 50% U M K1=11.30 B2=17.60 1980KSa (53660)2062  
B(Co(bpy)+L)=6.27  
-----

Co++ sp NaClO4 25°C 0.10M U K1=5.59 19680Wa (53661)2063  
-----

Co++ gl diox/w 30°C 50% U K1=7.0 B2=12.9 1953BFa (53662)2064  
k3=3.8

\*\*\*\*\*  
C7H602 HL Benzoic Acid CAS 65-85-0 (462)  
Benzenecarboxylic acid; C6H5.COOH  
-----

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

Co++ gl NaClO4 25°C 1.00M U T H K1=0.54 1991BAa (53815)2065  
K1 also at 30, 35 and 40C. DH=14.2 kJ mol<sup>-1</sup>, DS=58 J K<sup>-1</sup> mol<sup>-1</sup>.

Co++ gl NaClO4 25°C 0.00 U I K1=1.69 1979TPa (53816)2066  
-----

Co++ gl KNO3 30°C 0.40M U K1=0.55 1970BTa (53817)2067

\*\*\*\*\*

C7H6O2S H2L Thiosalicylic CAS 147-93-3 (236)  
2-Mercaptobenzoic acid; HS.C6H4.COOH

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

Co++ gl alc/w 25°C 50% M T H K1=5.81 1992MSf (53899)2068  
B(Co(en)L)=11.09

Medium: 50% v/v MeOH/H2O, 0.10 M NaClO4. Data for 40 and 55 C.  
DH(K1)=29.8 kJ mol-1, DS(K1)=211 J K-1 mol-1.

-----  
Co++ sp NaClO4 20°C 0.10M U K1=4.3 B2=7.7 1977LSb (53900)2069  
-----

Co++ gl alc/w 50°C 45% U T H K1=6.35 B2=11.05 1968RSh (53901)2070

Medium: 45% EtOH, 0.15 M. K1=6.03(30 C),6.20(40 C); K2=4.44(30 C),4.55(40C)  
DH(K1)=30.5 kJ mol-1, DS=217 J K-1 mol-1; DH(K2)=20.9, DS=160

-----  
Co++ sp alc/w 30°C 40% U 1966KNa (53902)2071  
B3=11.76

Medium: 40% EtOH

\*\*\*\*\*

C7H6O2S2 H2L CAS 89677-36-1 (5448)  
3-(2-Thiophene)-2-mercaptopropenoic acid; C4H3S.CH:C(SH).COOH

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

Co++ gl diox/w 25°C 0.10M U K1=9.22 B2=16.70 1977WVa (53929)2072

\*\*\*\*\*

C7H6O3 H2L CAS 95-01-2 (4407)  
2,4-Dihydroxybenzaldehyde; (OH)2.C6H3.CHO

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

Co++ gl diox/w 30°C 75% U K1=10.47 B2=18.94 1978RJa (53939)2073  
-----

Co++ gl diox/w 30°C 50% U 1969VMa (53940)2074

K(Co+HL)=3.70  
K(CoHL+HL)=2.30

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C7H6O3 H2L CAS 1194-98-5 (4408)  
2,5-Dihydroxybenzaldehyde; (OH)2.C6H3.CHO

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

Co++ gl diox/w 30°C 50% U 1969VMa (53947)2075

K(Co+HL)=4.25  
K(CoHL+HL)=3.05

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C7H6O3 H2L Salicylic acid CAS 69-72-7 (14)

2-Hydroxybenzoic acid, Salicylic acid; HO.C6H4.COOH

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

Co++ gl alc/w 24°C 20% C M 1996MIa (54122)2076  
 K(Co(ada)+L)=2.90

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

-----  
 Co++ cal alc/w 25°C 100% U H 1990PJa (54123)2077  
 Medium: MeOH. DG(K1)=-26.9 kJ mol<sup>-1</sup>, DH=21.8; DG(B2)=-41.7; DH=29.9

-----  
 Co++ gl alc/w 25°C 100% M 1988LTa (54124)2078  
 K(Co+HL)=4.7  
 K(Co+2HL)=7.3

Medium: MeOH

-----  
 Co++ gl NaNO3 35°C 0.10M U M T K1=6.83 1985KSc (54125)2079  
 K(CoL+CMP)=0.84

H2CMP=cytidine-5'-monophosphoric acid

-----  
 Co++ sp none 25°C 0.0 C K1=8.09 1983SGd (54126)2080

-----  
 Co++ gl NaClO4 25°C 0.10M U T K1=6.15 1980MSa (54127)2081

-----  
 Co++ gl NaClO4 30°C 0.10M U K1=8.68 1975JKa (54128)2082

-----  
 Co++ gl KCl 20°C 0.10M U K1=6.72 B2=11.42 1958PEe (54129)2083

-----  
 Co++ gl KCl 20°C 0.10M U 1953BBb (54130)2084  
 K(2Co+HL)=10.4

\*\*\*\*\*

C7H6O3S H2L CAS 55927-33-8 (5445)

3-Furyl-2-mercaptopropenoic acid; C4H3O.CH:C(SH).COOH

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

Co++ gl alc/w 30°C 10% C K1=8.12 B2=14.65 1986IGc (54445)2085

Medium: 10% v/v EtOH/H2O, 0.1 M KNO3

\*\*\*\*\*

C7H6O4 H3L Resorcylic acid CAS 89-86-1 (876)

2,4-Dihydroxybenzoic acid, b-Resorcylic acid; C6H3(OH)2.COOH

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

Co++ gl NaClO4 30°C 0.10M U K1=10.48 1975JKa (54512)2086  
 B(CoHL)=10.48

-----  
 Co++ gl diox/w 30°C 50% U 1971VMa (54513)2087  
 K(Co+HL)=9.30

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C7H6O4 H3L CAS 409-79-9 (1115)  
2,5-Dihydroxybenzoic acid; C6H3(OH)2.COOH

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

Co++ gl NaClO4 30°C 0.10M U T K1=8.64 1975JKa (54578)2088

Co++ gl diox/w 30°C 50% U 1971VMa (54579)2089  
K(Co+HL)=8.90

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C7H6O4 H3L Protocatechuic CAS 99-50-3 (875)  
3,4-Dihydroxybenzoic acid; C6H3(OH)2.COOH

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

Co++ gl NaNO3 30°C 0.10M U K1=7.46 B2=11.74 1968JHa (54653)2090  
K3=3.27

Co++ gl KNO3 30°C 0.10M U K1=7.96 B2=13.36 1963Mnc (54654)2091  
K3=4.06

\*\*\*\*\*

C7H6O5S H2L CAS 29848-93-9 (3151)  
Salicylaldehyde-5-sulfonic acid; (5-Sulfosalicylaldehyde)

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

Co++ gl oth/un 25°C 0.10M U K1=3.42 B2=5.6 1948Cma (54795)2092

\*\*\*\*\*

C7H6O6S H3L CAS 5965-83-3 (399)  
5-Sulfosalicylic acid, 2-Hydroxy-5-sulfobenzoic; HO3S.C6H3(OH).COOH

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

Co++ nmr KNO3 25°C 1.00M U K1=5.0 1993POa (54921)2093

Co++ gl KCl 25°C 0.20M U M K1=6.20 1992ASa (54922)2094  
K(CoL+ser)=4.00  
K(CoL+thr)=3.70  
K(CoL+asp)=9.35  
K(CoL+A)=4.20

K(CoL+gln)=4.10, K(CoL+HB)=4.40, K(CoL+pro)= 4.20. HA is asparagine,  
HB is lysine.

-----  
Co++ sp none 25°C 0.0 C K1=6.12 1983SGd (54923)2095  
-----

Co++ ix oth/un 25°C 0.10M U K1=6.8 B2=9.82 1979CPa (54924)2096  
K(CoL+H)=6.7

K(CoL+2H)<7

-----  
Co++ ix oth/un 80°C 0.50M U K1=6.3 B2=11.1 1968GIa (54925)2097  
-----

Co++ gl KCl 25°C 0.10M U K1=6.47 B2=10.77 1962NAa (54926)2098  
-----

Co++ gl NaClO4 25°C 0.10M U K1=6.13 B2=9.82 1960BSb (54927)2099  
-----

Co++ gl KCl 20°C 0.10M U K1=6.00 B2=9.60 1958PEe (54928)2100  
-----

\*\*\*\*\*

C7H7N L CAS 100-69-6 (299)

2-Vinylpyridine; C5H4N.CH:CH2  
-----

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

Co++ gl KNO3 25°C 0.10M U K1=0.8 1974ILa (55116)2101  
-----

\*\*\*\*\*

C7H7N L CAS 100-43-6 (294)

4-Vinylpyridine; C5H4N.CH:CH2  
-----

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

Co++ gl KNO3 25°C 0.10M U K1=1.6 1974ILa (55124)2102  
-----

\*\*\*\*\*

C7H7NO L CAS 350-03-8 (1479)

3-Acetylpyridine; C5H4N.CO.CH3  
-----

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

Co++ gl KNO3 25°C 0.50M U K1=0.86 B2=1.51 1986BLa (55139)2103  
-----

\*\*\*\*\*

C7H7NO L CAS 1122-54-9 (494)

4-Acetylpyridine; C5H4N.CO.CH3  
-----

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

Co++ gl KNO3 25°C 0.50M U K1=0.97 B2=1.38 1983LRa (55148)2104  
-----

\*\*\*\*\*

C7H7NO2 HL Anthranilic CAS 118-92-3 (1589)

2-Aminobenzoic acid, Anthranilic acid; H2N.C6H4.COOH  
-----

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

Co++ gl alc/w 24°C 20% C M 1996MIa (55203)2105

K(Co(ada)+L)=2.93

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

ada: N-(acetamido)-iminodiethanoic acid.  
-----

Co++ sol none 25°C 0.0 C T 1982SSh (55204)2106

Kso(CoL2)=-14.87

Method: 57Co radiometry. Data for 0-55 C.

-----  
Co++ gl oth/un 25°C 0.0 U 1960LUa (55205)2107  
Kso=-10.97  
-----

Co++ gl oth/un 25°C ->0 U K1=1.56 1958LUa (55206)2108  
-----

Co++ gl diox/w 35°C 50% U K1=2.8 1958YSa (55207)2109  
\*\*\*\*\*  
C7H7NO2 H2L Salicylaldoxime CAS 94-67-7 (1486)  
2-Hydroxybenzaldehyde oxime; HO.C6H4.CH:N.OH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C M K1=6.15 B2=10.76 1990DAb (55301)2110  
Also ternary complexes with bpy, ida, mida, ada and nta.  
-----

Co++ gl KNO3 25°C 0.10M C K1=6.15 B2=10.76 1990DAb (55302)2111  
-----

Co++ gl diox/w 20°C 75% U 1965BEb (55303)2112  
K(Co+HL)=6.4  
K(CoHL+HL)=7.1(?)  
-----

Medium: 75% dioxan, 0.1 M NaClO4

-----  
Co++ gl oth/un 25°C ->0 U 1956BJa (55304)2113  
K(Co+2HL)=8.13  
-----

\*\*\*\*\*  
C7H7NO2 HL 2-Pyridylacetic CAS 16179-97-8 (2211)  
2-Pyridylethanoic acid; C5H4N.CH2.COOH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp oth/un 25°C 0.10M U T HM 1981HKa (55346)2114  
K(CoA+L)=1.90  
Phosphate medium, A= Bovine carbonic anhydrase protein  
-----

Co++ gl NaClO4 25°C 0.50M U K1=2.74 B2=5.17 1971FLa (55347)2115  
-----

Co++ gl diox/w 35°C 50% U T K2=3.77 1966WRb (55348)2116  
Medium: 50% dioxan, 0.1 M KNO3. K2=6.25(15 C), 5.55(25 C)  
-----

\*\*\*\*\*  
C7H7NO2 HL CAS 99-05-8 (1374)  
3-Aminobenzoic acid; H2N.C6H4.COOH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ EMF KNO3 25°C 1.0M U K1=3.0 B2=6.60 1961GKa (55358)2117  
\*\*\*\*\*

C7H7NO2 HL 3-Pyridylacetic CAS 6419-36-9 (2212)  
3-Pyridylethanoic acid; C5H4N.CH2.COOH

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

Co++ sp oth/un 25°C 0.10M U T HM 1981HKa (55361)2118

K(CoA+L)=1.60

Phosphate medium, A= Bovine carbonic anhydrase protein

\*\*\*\*\*

C7H7NO2 HL CAS 150-13-0 (1376)

4-Aminobenzoic acid; H2N.C6H4.COOH

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

Co++ EMF KNO3 25°C 1.0M U K1=3.4 B2=6.30 1961GKa (55372)2119

\*\*\*\*\*

C7H7NO2 HL CAS 3222-47-7 (3154)

6-Methylpyridine-2-carboxylic acid; CH3.C5H3N.COOH

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

Co++ gl NaNO3 20°C 0.10M U K1=4.65 B2=8.45 1960ANb (55423)2120

Co++ gl oth/un 25°C 0.02M U K1=4.5 B2=7.8 1955HCa (55424)2121

Co++ gl diox/w 25°C 50% U K1=6.6 B2=12.1 1955HCb (55425)2122

\*\*\*\*\*

C7H7NO2 HL CAS 495-18-1 (184)

Benzohydroxamic acid; C6H5.CO.NH.OH

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

Co++ gl NaNO3 25°C 0.10M M M K1=4.66 B2= 8.47 1996KSc (55488)2123

K(Co(nta)+L)=3.32

K(Co(ida)+L)=3.93

K(Co(ada)+L)=3.89

H2ada: N-(2-acetamido)iminodiethanoic acid.

Co++ gl KNO3 25°C 0.10M C M K1=5.02 B2= 8.70 1990DAc (55489)2124

Also ternary complexes with bpy, ida, mida, ada and nta.

Co++ gl KNO3 25°C 0.10M C K1=5.02 B2= 8.70 1990DAc (55490)2125

Co++ gl KNO3 25°C 0.10M C M 1989DAc (55491)2126

B(CoA+L)=4.84

B(CoB+L)=5.21

B(CoC+L)=4.78

A: 2,2'-dipyridylamine; B: 5-nitro-1,10-phenanthroline;

C: 5-methyl-1,10-phenanthroline.

-----  
Co++ gl NaClO4 35°C 0.10M U K1=4.35 B2=8.30 1983ABa (55492)2127

\*\*\*\*\*

C7H7NO3 H2L CAS 89-57-6 (2675)  
2-Hydroxy-5-aminobenzoic acid, 5-Aminosalicylic acid; H2N.C6H3(OH).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 37°C 0.15M C K1=4.44 1993WWa (55546)2128  
B(CoH-1L)=-2.15

\*\*\*\*\*  
C7H7NO3 H2L CAS 89-73-6 (204)  
2-Hydroxybenzohydroxamic acid (salicylhydroxamic acid); HO.C6H4.CO.NHOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 25°C 0.10M C K1=6.62 2000KHa (55583)2129  
-----  
Co++ gl NaNO3 25°C 0.10M M M K1=6.60 B2=10.78 1996KSc (55584)2130  
K(Co(nta)+L)=3.62  
K(Co(nta)+H+L)=11.72  
K(Co(ida)+L)=5.48  
K(Co(ida)+H+L)=12.64

K(Co(ada)+L)=4.74, K(Co(ada)+H+L)=12.39  
H2ada: N-(2-acetamido)iminodiethanoic acid.

-----  
Co++ EMF diox/w 30°C 50% U K1=6.10 1977DJa (55585)2131  
Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*  
C7H7NO3 HL CAS 548-93-6 (3156)  
3-Hydroxyanthranilic acid (2-Amino-3-hydroxybenzoic acid)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 20°C ? U K1=4.4 1959SIb (55625)2132  
-----  
\*\*\*\*\*

C7H7NO3 H2L (1112)  
4-Aminosalicylic acid; H2N.C6H3(OH).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 1.0M U K1=4.2 B2=7.90 1961GKa (55635)2133  
-----  
\*\*\*\*\*

C7H7NO3 HL CAS 1197-10-0 (3759)  
6-(Hydroxymethyl)pyridine-2-carboxylic acid; HO.CH2.C5H3N.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 25°C ? U K1=4.28 B2=8.51 1962G0a (55649)2134  
-----  
\*\*\*\*\*

C7H7NO4 HL CAS 17209-50-6 (886)  
4-Methoxypyridine-2-carboxylic acid N-oxide; C5H3N(O)(OCH3).COOH

-----



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl04	30°C	0.10M	U	T	K1=3.86 B2=6.40	1982RRa (55661)	2135

\*\*\*\*\*  
 C7H7N05S H2L CAS 3577-63-7 (3181)  
 5-Sulfoanthranilic acid; (5-sulfo-2-aminobenzoic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	oth/un	35°C	0.01M	U		K1=2.82 B2=5.14	1956HSb (55675)	2136

\*\*\*\*\*  
 C7H7N202F3S HL CAS 73255-69-3 (559)  
 2-(Trifluoromethanesulfonamidomethyl)pyridine; C5H4NCH2S(:O)2NHCF3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	45%	U		K1=5.95 B2=10.69	1982MYb (55713)	2137

\*\*\*\*\*  
 C7H7N3 L (6358)  
 7-Methyl-4-azabenzimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl04	25°C	0.10M	C		K1=1.77	1992RKa (55731)	2138

\*\*\*\*\*  
 C7H7N303 L CAS 606-26-8 (2643)  
 2-Nitrobenzoic acid hydrazide; O2N.C6H4.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	NaCl04	25°C	0.10M	U		K1=3.30	1981BPc (55746)	2139

\*\*\*\*\*  
 C7H7N303 L CAS 618-94-0 (2644)  
 3-Nitrobenzoic acid hydrazide; O2N.C6H4.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	NaCl04	25°C	0.10M	U		K1=3.09	1981BPc (55751)	2140

\*\*\*\*\*  
 C7H7N303 L CAS 636-97-5 (2645)  
 4-Nitrobenzoic acid hydrazide; O2N.C6H4.CO.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	NaCl04	25°C	0.10M	U		K1=3.01	1981BPc (55756)	2141

\*\*\*\*\*  
 C7H8N20 L CAS 3724-16-1 (1948)  
 3-Acetamidopyridine; C5H4N.CH2.CO.NH2

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.50M U          K1=1.22  B2=1.56  1974WAb (55804)2142
*****
C7H8N2O          L                      (2035)
3-N-Acetylaminoazine; C5H4N.NH.CO.CH3
-----

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.50M U          K1=1.10  B2=1.22  1981LRa (55810)2143
                      B3=2.46
*****
C7H8N2O          HL                     CAS 88-68-6 (4438)
Benzamide oxime; C6H5.C(:N.OH)NH2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  mixed  22°C 70% U          B2=15.81  1978MGd (55820)2144
Medium: 0.1 M KNO3 in 70% (v/v) dioxane in H2O
*****
C7H8N2O          L  Benzhydrazide  CAS 613-94-5 (2565)
Benzoic acid hydrazide; C6H5.CO.NH.NH2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3  25°C 0.20M U          K1=1.86  B2=2.75  1974FSa (55834)2145
*****
C7H8N2O          L                      CAS 114-33-0 (1506)
N-Methylnicotinamide, N-methyl-pyridine-3-carboxylic acid amide;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.50M U          K1=0.92  B2=1.41  1987Klb (55838)2146
*****
C7H8N2O          HL  Salicylaldazone CAS 3291-00-7 (3760)
Salicylaldehyde-hydrazone; 2-(OH).C6H4.CH:N.NH2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  mixed  28°C 20% U  I          K1=4.010 B2=6.97  1987RRa (55847)2147
                      B(CoHL)=10.382
In 20% DMF. In 40% DMF, K1=4.505, K2=3.210, B(MCoHL)=10.957;
in 60% DMF, K1=5.180, K2=3.462, B(CoHL)=11.382
*****
C7H8N2O          HL  Salicylic hydra CAS 936-02-7 (2646)
2-Hydroxybenzoic acid hydrazide; HO.C6H4.CO.NH.NH2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Co++ gl KNO3 30°C 0.10M U M K1=3.77 1993RDa (55868)2148  
Also data for ternary complexes with alanine, phenylalanine, bipyridyl,  
catechol, oxalate and 1,2-diaminoethane.

-----  
Co++ sp NaClO4 25°C 0.10M U K1=8.74 B2=16.34 1981BPc (55869)2149  
B3=22.78  
-----

Co++ gl diox/w 25°C 25% U K1=5.02 B2=9.80 1975GSb (55870)2150  
\*\*\*\*\*  
C7H8N2O2 L CAS 3569-99-1 (1950)  
N-(Hydroxymethyl)isonicotinamide; C5H4N.CO.NH.CH2.OH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.50M U K1=0.98 B2=1.49 1974WAb (55925)2151  
\*\*\*\*\*  
C7H8N2O3S H2L (3783)  
2-Ethylthio-1H-1,3-diazin-4-one-5-carboxylic acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M U 1961TDb (55933)2152  
K(Co+HL)=2.47  
\*\*\*\*\*  
C7H8N4 L CAS 85180-62-7 (2481)  
2,9-Dimethylpurine;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 1.00M U K1=0.80 1983ALa (55957)2153  
\*\*\*\*\*  
C7H8N4 L (2641)  
4,4'-(5,5')-Bisimidazolymethane; C3H3N2.CH2.C3H3N2  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 30°C 0.16M U K1=5.72 B2=10.53 1965DFa (55964)2154  
\*\*\*\*\*  
C7H8N4 L CAS 14675-46-8 (2484)  
6,9-Dimethylpurine;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 1.00M U K1=<0.2 1983ALa (55970)2155  
\*\*\*\*\*  
C7H8N4 L CAS 85180-61-6 (2482)  
8,9-Dimethylpurine;  
-----

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

Co++ gl NaClO4 25°C 1.00M U K1=0.78 1983ALa (55978)2156  
\*\*\*\*\*

C7H8N4 L (1928)  
Bis(imidazol-2-yl)methane; C3H3N2.CH2.C3H3N2

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

Co++ gl KNO3 35°C 0.20M U M 1990RMA (55993)2157

K(CoL2+Gly)=3.53  
K(CoL2+Ala)=3.33  
K(CoL2+Val)=3.20  
K(CoL2+nor-Val)=3.26

K(CoL2+Leu)=3.28, K(CoL2+nor-Leu)=3.12, K(CoL2+Phe)=3.11  
K(CoL2+Trp)=3.74, K(CoL2+Ser)=3.12, K(CoL2+Thr)=3.07

-----  
Co++ gl KNO3 35°C 0.20M U M K1=5.40 B2=9.88 1989RVA (55994)2158  
\*\*\*\*\*

C7H8N4S L CAS 3608-75-1 (1799)  
2-Pyridinecarboxaldehyde thiosemicarbazone; C5H4N.CH:N.NH.CS.NH2

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

Co++ sp oth/un 25°C 0.10M U 1975LMb (56021)2159

B(CoH3L2)=32.7  
B(CoH4L2)=36.9

\*\*\*\*\*

C7H8O3S H2L FMPA (6145)  
3-(2-Furyl)-2-mercaptopropanoic acid;

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

Co++ gl alc/w 25°C 10% C K1=5.48 B2=11.01 1986IGc (56108)2160

Medium: 10% v/v EtOH/H2O, 0.1 M KNO3

\*\*\*\*\*

C7H8O3S L CAS 55832-65-0 (3763)  
3-Hydroxythiophene-2-carboxylic acid ethyl ester

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

Co++ sp diox/w 25°C 10% U K1=4.17 1965CSa (56114)2161

Medium: 10% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C7H8O3S HL CAS 6192-52-5 (561)  
4-Toluenesulfonic acid; CH3.C6H4.SO3H

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

Co++ sol oth/un 20°C ? U B2=7.7 1986YAa (56118)2162

\*\*\*\*\*

C7H8O8P2 H4L (6892)

1,2-((Phenylenedioxy)methylene)diphosphonic acid); C6H4O2C(P03H2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl R4N.X 25°C 0.50M U K1=6.93 1985GMb (56164)2163  
K(Co+HL)=3.70

Medium: 0.5 M Me4NCl

\*\*\*\*\*

C7H8S HL p-Thiocresol CAS 106-45-6 (884)  
4-Mercaptotoluene; CH3.C6H4.SH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp none 25°C 0.0 U K1=5.23 B2=9.88 1988KDb (56175)2164  
B3=14.13  
B4=18.44

\*\*\*\*\*

C7H9N L 2,4-Lutidine CAS 108-37-4 (319)  
2,4-Dimethylpyridine; C5H3N.(CH3)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 25°C 100% U M 1993SSc (56197)2165  
K(CoA+L)=0.841  
K(CoB+L)=1.097  
K(CoC+L)=1.409

Medium:Toluene. H2A:Octaethylporphyrin. H2B:t-Octaethylchlorin.  
H2C:a mixture of tct- and ttt-Octaethylisobacteriochlorin.

-----  
Co++ oth KNO3 ? 0.50M U K1=3.19 1971LWb (56198)2166  
-----  
C7H9N L 2,6-Lutidine CAS 108-44-1 (723)  
2,6-Dimethylpyridine; C5H3N.(CH3)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq ? 100% U I M 1971ADb (56218)2167  
K(CoCl2+L)=1.70  
K(CoCl2+2L)=4.99

Medium: n-butanol. K(CoCl2+nL): in t-butanol(n=1)=1.87,(n=2)=3.20  
Data also for cyclohexanone, etc.

-----  
Co++ sp non-aq ? 100% U I M 1970DAa (56219)2168  
K(CoCl2+2L)=4.73

Medium: acetone. In HCON(CH3)2: K(CoCl2+2L)=3.46;  
In CH3CN: K(CoCl2+2L)=4.10; In cyclohexanone: K(CoCl2+2L)=4.83

\*\*\*\*\*

C7H9N L 3,4-Lutidine CAS 583-58-4 (2056)  
3,4-Dimethylpyridine; C5H3N.(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U			K1=1.43 B2=2.45 B3=3.11	1979LRa (56256)	2169

Co++	sp	non-aq	20°C	100%	U	H		K(CoL2Cl2+2L)=0.20 K(CoL2(NCS)2+2L)=4.26	1966CKb (56257)	2170
------	----	--------	------	------	---	---	--	---	-----------------	------

Medium: CHCl3. By calorimetry: DH=-70.2 kJ mol<sup>-1</sup>, DS=-158.8 J K<sup>-1</sup> mol<sup>-1</sup>  
 \*\*\*\*\*  
 C7H9N L 3,5-Lutidine (323)  
 3,5-Dimethylpyridine; C5H3N.(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.50M	C			K1=1.51	2002KSb (56281)	2171
Co++	gl	KNO3	25°C	1.00M	U			K1=1.25 B2=2.04 B3=2.35	1978LRb (56282)	2172

Co++	sp	non-aq	20°C	100%	U	H		K(CoL2Cl2+2L)=-0.46 K(CoL2(NCS)2+2L)=3.70	1966CKb (56283)	2173
------	----	--------	------	------	---	---	--	--	-----------------	------

Medium: CHCl3. By calorimetry: DH=-61.0 kJ mol<sup>-1</sup>, DS=-137.9 J K<sup>-1</sup> mol<sup>-1</sup>  
 \*\*\*\*\*  
 C7H9N L 3-Ethylpyridine CAS 536-78-7 (2038)  
 3-Ethylazine, 3-Ethylpyridine; C5H4N.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	non-aq	20°C	100%	U	HM		K(CoL2Cl2+2L)=0.36 K(CoL2(NCS)2+2L)=4.34	1966CKb (56297)	2174

Medium: CHCl3. By calorimetry: DH(CoL2Cl2+2L)=-55.5 kJ mol<sup>-1</sup>, DS=-180 J K<sup>-1</sup> mol<sup>-1</sup>; DH(Co(CNS)2L2+2L)=-64.0, DS=-135  
 \*\*\*\*\*  
 C7H9N L 3-Methylaniline CAS 108-44-1 (755)  
 3-Methylaniline (3-Toluidine); CH3.C6H4.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	non-aq	?	100%	U	M		K(CoCl2+L)=2.28 K(CoCl2+2L)=3.75	1971ZDa (56306)	2175

Medium: CH3CN

Co++	sp	non-aq	?	100%	U	M		K(CoCl2+L)=2.17 K(CoCl2+2L)=3.58	1971ZDa (56307)	2176
------	----	--------	---	------	---	---	--	-------------------------------------	-----------------	------

Medium: dimethylformamide

-----  
Co++ sp non-aq ? 100% U M 1971ZDa (56308)2177  
K(CoCl2+L)=2.25  
K(CoCl2+2L)=3.32

Medium: t-butanol

\*\*\*\*\*

C7H9N L 4-Ethylpyridine CAS 536-75-4 (2055)  
4-Ethylazine, 4-Ethylpyridine; C5H4N.C2H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp KNO3 25°C 1.00M U K1=1.22 B2=2.02 1971LWa (56324)2178  
-----  
Co++ EMF KNO3 25°C 1.00M U K1=1.23 B2=2.06 1971LWa (56325)2179  
-----

Co++ sp non-aq 20°C 100% U H 1966CKb (56326)2180  
K(CoL2Cl2+2L)=1.05  
K(CoL2(NCS)2+2L)=4.89

Medium: CHCl3. By calorimetry: DH(CoL2Cl2+2L)=-66.9 kJ mol<sup>-1</sup>, DS=-209 J K<sup>-1</sup> mol<sup>-1</sup>; DH(CoL2(CNS)2+2L)=-69.0, DS=-142.1

\*\*\*\*\*

C7H9N L 4-Methylaniline CAS 106-49-0 (754)  
4-Methylaniline (4-Toluidine); CH3.C6H4.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq ? 100% U M 1971ZDa (56341)2181  
K(CoCl2+L)=2.36  
K(CoCl2+2L)=4.02

Medium: CH3CN. In DMF, values are 2.10, 3.53

-----  
Co++ sp non-aq ? 100% U M 1971ZDa (56342)2182  
K(CoCl2+L)=1.44  
K(CoCl2+2L)=2.44

Medium: t-butanol

\*\*\*\*\*

C7H9N L Benzylamine CAS 100-46-9 (3132)  
Benzylamine; C6H5.CH2.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 20°C 100% U T HM 1984JCa (56358)2183  
K(CoA2+L)=1.22

In toluene.HA=N-Benzylsalicylaldehyde, DH=-30.2 kJ mol<sup>-1</sup>, DS=-76.7 J K<sup>-1</sup> mol<sup>-1</sup>  
At 2 C, K=1.57; 32 C, K=1.03

-----  
Co++ sp non-aq 10°C 100% U T HM 1984JCa (56359)2184  
K(CoA2+L)=0.66

In DMF, A=N-Benzylsalicylaldehyde, DH=-24.9 kJ mol<sup>-1</sup>, DS=-75.0 J K<sup>-1</sup> mol<sup>-1</sup>  
At -14 C, K=1.08; -7 C, K=0.95; 2 C, K=0.79

\*\*\*\*\*  
C7H9NO L o-Anisidine CAS 90-04-0 (2474)  
2-Methoxyaniline; CH3O.C6H4.NH2

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

Co++ gl diox/w 25°C 85% C K1=<1.30 1983HBa (56387)2185

\*\*\*\*\*

C7H9NO L p-Anisidine CAS 104-94-7 (3764)

4-Methoxyaniline; CH3O.C6H4.NH2

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

Co++ sp non-aq ? 100% U M 1971ZDa (56395)2186

K(CoCl2+L)=2.10

K(CoCl2+2L)=4.00

Medium: CH3CN. In DMF, values are: 3.90, 3.32.

-----  
Co++ sp non-aq ? 100% U M 1971ZDa (56396)2187

K(CoCl2+L)=1.85

K(CoCl2+2L)=3.50

Medium: t-butanol

\*\*\*\*\*

C7H9NO3S2 HL (940)

2-(Thiophene-2-aldimino)ethane sulfonic acid; C4H3S.CH:N.CH2.CH2.SO3H

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

Co++ gl NaClO4 25°C 0.10M U K1=4.96 B2=8.80 1982MSa (56455)2188

\*\*\*\*\*

C7H9NO4S H2L (3784)

Hydroxy(6-methyl-2-pyridyl)methanesulfonic acid;

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

Co++ gl NaClO4 25°C 0.10M U K1=4.25 B2=7.83 1964BGa (56463)2189

\*\*\*\*\*

C7H9NS L CAS 3145-77-5 (3768)

2-(Methylthiomethyl)pyridine; C5H4N.CH2.S.CH3

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

Co++ gl diox/w 25°C 50% U M K1=1.1 1967SIb (56484)2190

K(Co(bpy)+L)=1.1

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C7H9N3O2S2 L (6945)

1-Ethoxycarbonyl-3-thiazole-2-ylthiourea; C3H2NS.NHCSNHCOOC2H5

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



-----  
Co++ gl alc/w 25°C 60% U K1=4.27 1994KEa (56500)2191  
Medium: 60 % EtOH/H2O, 0.1 M NaNO3

\*\*\*\*\*  
C7H10NO2P HL (7267)  
Aminomethyl(phenylphosphinic acid); H2NCH2PO(OH)C6H5  
-----

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

Co++ gl KNO3 25°C 0.10M C K1=2.39 1996RLa (56538)2192  
B(CoH-1L)=-6.5

\*\*\*\*\*  
C7H10NO6ClP2 H4L (6895)  
N-(4-Chlorophenyl)aminomethylenedi(phosphonic acid); ClC6H4.NH.CH(PO3H2)2  
-----

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

Co++ gl KNO3 25°C 0.10M U K1=9.4 1990GKa (56554)2193  
K(Co+HL)=5.1

\*\*\*\*\*  
C7H10N2 L CAS 13173-22-3 (8012)  
1-Allyl-2-methylimidazole ;  
-----

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

Co++ gl KNO3 25°C 0.50M C K1=1.20 B2= 2.30 2001KGa (56562)2194  
B3=3.80  
B4=4.30

\*\*\*\*\*  
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  
-----

Co++ gl oth/un 25°C .015M U K1=3.8 1960HJa (56591)2195

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

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

Co++ gl KNO3 25°C 0.50M U K1=5.22 B2=9.20 1971GEa (56608)2196

Co++ cal diox/w 25°C 50% U H 1966WRb (56609)2197  
Medium: 50% dioxan, 0.1 M KNO3. DH(B2)=-70.6 kJ mol-1  
-----

Co++ gl oth/un 20°C ->0 U T H K1=5.26 B2=9.10 1959GFa (56610)2198  
K3=2.53

DH(K1)=-27.6 kJ mol-1, DS=4 J K-1 mol-1; DH(K2)=-23.5,DS=-4; DH(K3)=-11,DS=8  
10 C: K1=5.35,K2=4.05,K3=2.49; 30 C: 5.10,3.84,2.63; 40 C: 4.86,2.59,2.23

\*\*\*\*\*

C7H10N2 L CAS 20173-04-0 (2039)  
3-(N,N-Dimethylamino)pyridine; C5H4N.N(CH3)2

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

Co++ gl KNO3 25°C 0.50M U K1=1.23 B2=2.28 1981LRa (56622)2199

\*\*\*\*\*

C7H10N2 L CAS 1122-58-3 (492)  
4-(N,N-Dimethylamino)pyridine; C5H4N.N(CH3)2

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

Co++ sp non-aq 25°C 100% U HM 1993SSc (56628)2200

K(CoA+L)=3.309

K(CoB+L)=3.667

Medium:Toluene. T: 15-65 C. H2A:Octaethylporphyrin. DH=-43.2 kJ mol-1;

DS=-81.2. H2B:t-Octaethylchlorin. Data for other porphyrins

\*\*\*\*\*

C7H10N2 L CAS 496-72-0 (4419)  
4-Methyl-1,2-diaminobenzene; CH3.C6H3(NH2)2

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

Co++ gl KCl 25°C 0.10M C 1999RNa (56639)2201

K(Co2A+L)=14.80

\*K(Co2AL)=-7.23

\*K(Co2(OH)AL)=-8.58

A: 1,4,7,13,16,19-Hexaaza-10,22-dioxacyclotetracosane

-----  
Co++ gl KNO3 20°C 0.10M C T H K1=3.25 19800Ma (56640)2202

DH(K1)=-27.4 kJ mol-1; DS=-30.4 J K-1 mol-1. Data up to 32 C

\*\*\*\*\*

C7H10N2 L CAS 95-80-7 (6106)  
4-Methyl-1,3-diaminobenzene, 4-Methyl-1,3-phenylenediamine;

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

Co++ gl KNO3 20°C 0.10M C T H K1=3.50 19800Ma (56643)2203

DH(K1)=-38.3 kJ mol-1; DS=-63.9 J K-1 mol-1. Temperatures up to 32 C

\*\*\*\*\*

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  
-----

Co++ EMF NaNO3 20°C 0.10M U K1=3.82 1971ANa (56654)2204

-----  
Co++ vlt diox/w 25°C 50% U H B2=7.00 1966WRb (56655)2205

Medium: 50% dioxan, 0.1 M KNO3. By calorimetry: DH(B2)=-44.3 kJ mol-1,

DS=-14.2 J K-1 mol-1

\*\*\*\*\*

C7H10N2O L (7890)

1-Propyl-2-imidazolecarboxaldehyde;

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

Co++ gl KNO3 25°C 0.5M C K1=1.23 B2= 1.59 1999BKa (56661)2206  
B3=3.03

\*\*\*\*\*

C7H10N2O L CAS 102-51-2 (4444)

4-Methoxy-1,2-diaminobenzene; CH3O.C6H3(NH2)2

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

Co++ gl KNO3 25°C 0.10M C M K1=2.82 2003AZa (56669)2207  
K(Co2A+L)=4.76  
K(Co2A(OH)+L)=1.86  
K(Co2A(OH)2+L)=3.83

A is 3,6,9,17,20,23-hexaazatricyclo[23.3.1.1]triaconta-1(29),11(30),12,14,  
25,26,27-hexaene (C24H38N6).

-----  
Co++ gl KCl 25°C 0.10M C 1999RNa (56670)2208

K(Co2A+L)=13.72

\*K(Co2AL)=-7.66

\*K(Co2(OH)AL)=-8.88

A: 1,4,7,13,16,19-Hexaaza-10,22-dioxacyclotetracosane

\*\*\*\*\*

C7H10N2O2S HL (560)

2-(Methanesulfonamidomethyl)pyridine; C5H4N.CH2S(:O)2NHCH3

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

Co++ gl KNO3 30°C 0.1M U K1=6.09 B2=11.14 1982MYb (56683)2209  
In 45% v/v dioxan/H2O, 0.01 M KNO3 K1=7.49, B2=14.10

\*\*\*\*\*

C7H10N2O3S HL CAS 71691-06-0 (1247)

2-(N-Pyrrolideneimino)ethane sulfonic acid; C4H4N.CH:N.CH2.CH2.SO3H

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

Co++ gl NaClO4 25°C 0.10M U T K1=9.15 B2=15.35 1979GSa (56692)2210

\*\*\*\*\*

C7H10O3 H2L (793)

Heptane-2,4,6-trione; CH3.CO.CH2.CO.CH2.CO.CH3

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

Co++ gl alc/w 25°C 70% C 1985HWa (56716)2211

B(CoHL)=18.46

B(Co2L2)=22.97

Medium: 70% v/v MeOH/H2O

\*\*\*\*\*

C7H10O4 H2L CAS 5802-62-3 (71)

Cyclopentane-1,1-dicarboxylic acid; C5H8.(COOH)2

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

Co++ gl NaClO4 25°C 0.10M U K1=1.92 1972RVh (56728)2212

\*\*\*\*\*

C7H10O4 H2L CAS 5164-76-1 (959)

Pent-1-ene-5-dioic acid; CH2:CH.CH2.CH2.CH(COOH)2

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

Co++ gl KNO3 25°C 0.10M C K1=2.32 1975IPa (56745)2213

\*\*\*\*\*

C7H10O6 H3L CAS 57056-39-0 (5947)

2-(Carboxymethyl)glutaric acid; HOOC.CH2.CH(CH2.COOH)2

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

Co++ gl KNO3 25°C 0.50M U K1=1.89 1983Wka (56754)2214

B(CoHL)=6.32

B(CoH2L)=9.98

\*\*\*\*\*

C7H11NO3 L (3356)

3-(N-Acetylimido)pentane-2,4-dione; CH3COCH(NHCOCH3)COCH3

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

Co++ sp NaClO4 25°C 0.50M C K1=4.34 1996HPa (56775)2215

K(CoL+H)=2.42

\*\*\*\*\*

C7H11NO4 H2L CAS 16598-06-4 (965)

N-(Prop-2-enyl)iminodiethanoic acid; CH2:CH.CH2.N(CH2.COOH)2

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

Co++ gl KNO3 25°C 0.10M C K1=7.52 B2=13.45 1975IPa (56786)2216

Co++ gl KCl 25°C 0.10M U K1=7.20 B2=12.75 1966SIb (56787)2217

\*\*\*\*\*

C7H11NO4 H2L CAS 5626-40-4 (2803)

N-Carboxymethylpyrrolidine-2-carboxylic acid; HOOC.C4H7N-CH2COOH

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

Co++ gl KNO3 25°C 1.00M U K1=8 B2=14 1974MIb (56794)2218

\*\*\*\*\*

C7H11N04 H2L CAS 499-82-1 (3163)  
Piperidine-2,6-dicarboxylic acid; C5H9N(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 30°C 0.10M U K1=5.4 B2=9.5 1957TBb (56801)2219  
\*\*\*\*\*

C7H11N05 H2L (3164)  
1-Amino-2-propanone-N,N-diethanoic acid; CH3.CO.CH2.N(CH2.COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=6.37 B2=10.87 1965AUa (56827)2220  
Previously published as K1=6.40, K2=4.52

-----  
Co++ gl KNO3 25°C 0.10M U K1=6.2 B2=10.7 1963ANa (56828)2221  
\*\*\*\*\*

C7H11N06 H3L CAS 40199-58-4 (3165)  
N-(2'-Carboxyethyl)iminodiethanoic acid; HOOC.CH2.CH2.N(CH2.COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=10.00 1967UKa (56873)2222

-----  
Co++ gl KCl 30°C 0.10M U K1=10.1 1953CMA (56874)2223  
\*\*\*\*\*

C7H11N06 H3L MNTA (1026)  
Nitrilo(2-propanoic)-diethanoic acid; HOOC.CH(CH3).N(CH2.COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 20°C 0.10M U K1=11.05 1974RMF (56901)2224  
\*\*\*\*\*

C7H11N06P2 H4L DPHP (226)  
2,6-bis(Dioxyphosphorylmethyl)pyridine; C5H3N.(CH2.PO3H2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M U K1=7.58 1988KPa (56928)2225  
K(Co+HL)=4.13  
K(Co+H2L)=2.07  
\*\*\*\*\*

C7H11N06P2 H4L CAS 4712-06-5 (4470)  
Amino(phenyl)methylenediphosphonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M U K1=10.63 1969DMd (56936)2226  
K(Co+HL)=7.36  
B(Co2L)=15.72

\*\*\*\*\*

C7H11N3O2 L CAS 7389-87-9 (3162)  
Histidine methyl ester

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	EMF	oth/un	25°C	?	U			K1=5.9 B2=11.40	1966PAa	(57000)2227

Co++	gl	KCl	0°C	0.25M	U T HM			K1=5.68 B2=10.18 K3=2.67	1965AZa	(57001)2228
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K1=5.00(15 C),4.24(25 C),4,10(40 C); K2=3.57(15 C),3.12(25 C),2.96(40 C); K3=2.18(15 C). DH(K1)=DH(K2)=-66.9 kJ mol<sup>-1</sup>. Ternary complexes with histidine  
\*\*\*\*\*

C7H11N3O2 HL L-N-MeHistidine CAS 31632-58-3 (1192)  
L-N-Methylhistidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C			K1=6.816 B2=12.101	1976RIa	(57015)2229

K(Co(DL-N-Me-His))=6.814  
B(Co(DL-N-Me-His)<sub>2</sub>)=12.422

\*\*\*\*\*

C7H12N2 L CAS 4316-42-1 (8409)  
1-Butyl-1H-imidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	M			K1=2.75 B2= 4.75	1977LBc	(57038)2230

B3=6.00  
B4=6.54

\*\*\*\*\*

C7H12N2 L (7888)  
1-Propyl-2-methylimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.5M	C			K1=1.61 B2= 2.00	1999BKa	(57042)2231

B3=3.08  
B4=5.40

\*\*\*\*\*

C7H12N2 L (1420)  
4,5-Diethyl-1,3-diazole; C3H2N2.(C2H5)<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U			K1=1.37	1982LKB	(57046)2232

\*\*\*\*\*

C7H12N2O L (7889)  
1-Propyl-2-Hydroxymethylimidazole;

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.5M	C			K1=1.99 B2= 3.85 B3=4.56 B4=6.23	1999BKa (57050)	2233

\*\*\*\*\*  
 C7H12N2O2                      H2L    Heptoxime                      CAS 530-97-2    (1304)  
 1,2-Cycloheptanedione dioxime; C7H10(:NOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	20°C	75%	U			K1=13.03    B2=24.23	1981HFa (57065)	2234
Co++	gl	NaClO4	20°C	0.10M	C			K(Co+HL)=10.18 K(Co+2HL)=19.70	1980MHa (57066)	2235

\*\*\*\*\*  
 C7H12N2O2                      HL    (6181)  
 2-(N-2-Pyrrolidimino)propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	U	TIH		B2=17.40	1988GRb (57073)	2236

35 C:B2=17.56, 45 C:17.72. DH(B2)=29.0 kJ mol<sup>-1</sup>, DS=431 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*  
 C7H12N2O3                      HL    Gly-Pro                      CAS 704-15-4    (257)  
 Glycyl-proline; H2N.CH2.CO.NC4H7.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	oth/un	25°C	0.02M	U			K1=3.90    B2=6.85	1956DRb (57115)	2237

\*\*\*\*\*  
 C7H12N2O5                      H2L    Gly-Glu                      CAS 7412-78-4    (280)  
 Glycyl-glutamic acid; H2N.CH2.CO.NH.CH(CH2.CH2.CO0H).CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	20°C	0.10M	U			K1=8.13    B2=12.18	1980BBc (57172)	2238

\*\*\*\*\*  
 C7H12N3O5P                      H2L    PMEC                      CAS 117087-39-5    (8366)  
 1-[2-(Phosphonomethoxy)ethyl]cytosine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	M			K1=2.30	1999BHb (57198)	2239

\*\*\*\*\*  
 C7H12N4                                      L    CAS 18102-76-6    (3732)  
 1-Cyclohexyltetrazole;

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp non-aq 25°C 100% U          K1=2.16  B2=3.50  1963GBa (57205)2240
Medium: THF
*****
C7H12N4O          L          (6725)
Glycyl-histamine
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl NaCl04 25°C 0.10M C    M    K1=3.13  B2=5.65  1997GHa (57212)2241
          B(1,1,1,0)=10.10
          B(1,1,-1,0)=-5.18
          B(1,1,-2,0)=-15.41
          B(1,2,-1,0)=-2.26
B(2,2,-3,1)=-8.00, B(2,2,-4,1)=-17.28, B(2,4,-3,1)=-1.50
B(p,q,r,s): pCo+qL+rH=S02=CopLqHr(O2)s
-----

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-----
Co++      gl NaCl04 25°C 0.10M C          K1=3.13  B2=5.65  1995GHa (57213)2242
          B(CoHL)=10.10
          B(CoH-1L)=-5.18
          B(CoH-2L)=-15.41
          B(CoH-1L2)=-2.26
*****
C7H12O2          HL          CAS 7424-54-6 (4421)
Heptane-3,5-dione; CH3.CH2.CO.CH2.CO.CH2.CH3
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl NaCl04 25°C 0.5M C          K1=5.22          1989BHc (57239)2243
-----
Co++      gl diox/w 25°C 50% U T      K1=7.31  B2=13.12  1973AHb (57240)2244
Temp.range 5-45 C. K1(5 C)=7.34, K1(45 C)=7.24, K2(5 C)=5.85, K2(45 C)=5.70
*****
C7H12O4          HL          CAS 96740-23-7 (2249)
1,5-Dimethoxy-pent-2,4-dione, CH3.O.CH2.CO.CH2.CO.CH2.O.CH3
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl diox/w 24°C 50% U          K1=6.2          1979ACa (57287)2245
*****
C7H12O4          H2L      Pimelic acid      CAS 111-16-0 (985)
1,7-Heptanedioic acid; HOOC.(CH2)5.COOH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl KNO3 25°C 0.10M C          K1=1.50          1975LPa (57304)2246
*****
C7H12O4          H2L          CAS 534-59-8 (480)
-----

```



Butylpropanedioic acid (Butylmalonic acid); HOOC.CH(C4H9).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=2.57 1975IPa (57332)2247  
\*\*\*\*\*  
C7H12O4 H2L CAS 510-20-3 (482)  
Diethylpropanedioic acid (Diethylmalonic acid); HOOC.C(C2H5)2.COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.10M U K1=2.25 19700Va (57355)2248  
\*\*\*\*\*  
C7H13NO2 HL (3170)  
1-Aminocyclohexanecarboxylic acid; H2N.C6H10.COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 20°C 0.10M U K1=4.47 B2=8.17 1963IPa (57430)2249  
\*\*\*\*\*  
C7H13NO2 HL CAS 103067-99-4 (1127)  
2-Amino-hept-6-enoic acid; CH2:CH.CH2.CH2.CH2.CH(NH2).COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=4.22 B2=7.68 1975IPb (57437)2250  
\*\*\*\*\*  
C7H13NO2 HL CAS 99571-58-1 (6223)  
6-Methylpiperidine-2-carboxylic acid; CH3.C5H9N.COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 30°C 0.10M U H K1=4.65 1985RRe (57450)2251  
DH(K1)=-29 kJ mol<sup>-1</sup>, DS= 5 J K<sup>-1</sup> mol<sup>-1</sup>  
\*\*\*\*\*  
C7H13NO2S HL (6377)  
2-Propylthiazolidine-4-carboxylic acid;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 30°C 0.10M U TIH K1=3.01 B2= 5.22 1983RKb (57464)2252  
At I=0.0, K1=3.10, K2=2.32. Data for 25-50 C. DH(K1)=-14.4 kJ mol<sup>-1</sup>,  
DS(K1)=10.5 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-12.4, DS(K2)=1.4.  
\*\*\*\*\*  
C7H13NO3 HL (7175)  
3,3'-Dimethylglutaramide; HOOCCH2C(CH3)2CH2CONH2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U B2=4.40 1995Mwb (57471)2253  
-----

\*\*\*\*\*

C7H13NO3S H2L CAS 59-53-0 (1269)  
N-Acetyl-penicillamine; CH3.CO.NH.CH(COOH)C(CH3)2SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	C			K1=4.63 B2=10.10	1988SKc	(57488)2254

Co++	gl	KCl	25°C	0.20M	U			K1=4.63 B2=10.10	1983HSa	(57489)2255
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\*\*\*\*\*

C7H13NO4 H2L CAS 16578-07-5 (341)  
N-Propyliminodiethanoic acid; CH3.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C			K1=7.40 B2=13.81	1975IPa	(57526)2256

Co++	gl	KCl	25°C	0.10M	U			K1=7.55 B2=13.40	1966SIb	(57527)2257
------	----	-----	------	-------	---	--	--	------------------	---------	-------------

\*\*\*\*\*

C7H13NO4S HL (6310)  
Acetylacetone-2-aminoethane sulfonic acid schiff base;  
CH3.CO.CH2.C(CH3):N.CH2.CH2.HSO3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U T H			K1=8.20	19760Ma	(57535)2258

\*\*\*\*\*

C7H13NO4S H2L (3184)  
N-(2-Methylthioethyl)iminodiethanoic acid; CH3.S.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	20°C	0.10M	U			K1=8.51 B2=12.87	1955SAa	(57543)2259

\*\*\*\*\*

C7H13NO5 H2L CAS 62117-07-1 (3171)  
N-(2-Methoxyethyl)iminodiethanoic acid; CH3.O.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	EMF	KCl	20°C	0.10M	U			K1=7.96 B2=12.90	1955SAa	(57571)2260

Method: H electrode

\*\*\*\*\*

C7H13NO5 H2L CAS 59881-62-1 (339)  
N-(3-Hydroxypropyl)iminodiethanoic acid; HO.(CH2)3.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	30°C	0.10M	U			K1=7.8 B2=13.2	1954CMa	(57587)2261

\*\*\*\*\*

C7H13NO5 H2L CAS 41433-03-8 (4451)

N-(Carboxymethyl)-N-(2'-hydroxyethyl)alanine;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      EMF KNO3   20°C 0.10M U           K1=8.03   B2=12.21  1968MRb (57595)2262
*****
C7H13NO6          H2L                      CAS 32013-58-4 (6079)
N-(2,3-Dihydroxypropyl)iminodiethanoic acid; HO.CH2.CH(OH).CH2.N(CH2.COOH)2
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   20°C 0.10M U           K1=7.70   B2=11.41  1980MRc (57606)2263
*****
C7H13N3          L                      CAS 673-46-1 (4424)
4-(2-Dimethylaminoethyl)imidazole;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl    25°C 0.10M U           K1=2.82                   1973BDb (57638)2264
*****
C7H13N3O4        HL   Ala-Asn          CAS 1999-41-3 (5934)
Alanyl-asparagine; NH2.CH(CH3.CO.NH.CH(CH2.CO.NH2)).COOH
-----
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaCl   20°C 0.15M U           K1=2.56                   1989DKa (57647)2265
D/L-Ala-D/L-Asn stereoisomer
*****
C7H14N2O3        HL   Gly-norVal      CAS 2325-17-9 (3776)
Glycyl-DL-norvaline; H2N.CH2.CO.NH.CH(CH2.CH2.CH3).COOH
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.1M U           K(Co+HL)=3.18
K(CoL+H)=11.19
K(CoHL+HL)=2.09
K(CoHL2+H)=10.61
K(CoL2+H)=10.83; K(CoL+HL)=2.67
*****
C7H14N2O3        HL   Gly-Val         CAS 7963-21-9 (973)
Glycyl-valine; H2N.CH2.CO.NH.CH(CH(CH3)2).COOH
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.1M U           K(Co+HL)=3.32
K(CoL+H)=11.14
K(CoHL+HL)=2.49
K(CoHL2+H)=10.84
-----
```

K(CoL2+H)=10.62; K(CoL+HL)=2.76

-----  
Co++ gl NaCl 25°C 0.12M U K1=3.32 B2=5.81 1977PNa (57751)2268  
-----

Co++ gl NaCl 25°C 0.12M U K1=3.32 B2= 5.81 1976PNa (57752)2269  
\*\*\*\*\*

C7H14N2O3S HL Gly-Met CAS 554-94-9 (726)  
Glycyl-methionine; H2N.CH2.CO.NH.CH(CH2.CH2.S.CH3).COOH  
-----

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

Co++ gl KNO3 25°C 0.15M C K1=3.03 B2= 5.69 1981AEa (57792)2270  
-----

Co++ gl NaCl 25°C 0.12M U K1=3.13 B2=5.83 1977PNa (57793)2271  
-----

Co++ gl NaCl 25°C 0.12M U K1=3.13 B2= 5.83 1976PNa (57794)2272  
-----

Co++ gl KCl 25°C .058M U T B2=6.00 1957LYa (57795)2273  
B2=6.60(0 C)  
\*\*\*\*\*

C7H14N2O4S2 H2L CAS 28052-93-7 (526)  
S,S'-Methylenebis(L-cysteine); H2N(HOOC)CH.CH2.S.CH2.S.CH2.CH(COOH)NH2  
-----

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

Co++ gl KCl 25°C 0.10M U K1=6.28 B2=8.90 1981BLa (57827)2274  
B(CoHL)=12.85  
\*\*\*\*\*

C7H14N4O4P H2L CAS 550359-20-1 (9059)  
[[2-(4-Amino-2-imino-1(2H)-pyrimidinyl)ethoxy]methyl]phosphonic acid;  
-----

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

Co++ gl NaNO3 25°C 0.10M M K1=1.86 2003FHa (57840)2275  
\*\*\*\*\*

C7H14O8 HL Glucoheptonic CAS 23351-51-1 (6940)  
2R,3R,4S,5R,6R,7-Hexahydroxo-heptanoic acid, glucoheptonic acid,  
glucosemonocarboxylic acid;  
-----

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

Co++ gl NaNO3 20°C 0.10M C 1994ESa (57895)2276

B(CoH-1L)=-4.95  
B(CoH-2L)=-8.60  
B(CoH-1L2)=-2.24  
B(CoH-2L2)=-8.98  
\*\*\*\*\*

C7H15N04 HL CAS 41244-51-3 (4459)  
N,N-Bis(2'-hydroxyethyl)alanine; (HO.CH2.CH2)2.N.CH(CH3)COOH  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	EMF	KNO3	20°C	0.10M	U			K1=4.93	1968MRb (57931)	2277
*****										
C7H15NO4S		HL		MOPS				CAS 1132-61-2	(2792)	
3-(N-Morpholino)propanesulfonic acid; C4H8ON-CH2.CH2.CH2.SO3H										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C			K1=3.39	2001A0a (57960)	2278
Co++	gl	KNO3	25°C	0.10M	C	M		K1=3.41	1999AAa (57961)	2279
								K(Co(Ser)+2L)=6.30		
								K(Co(Asp)+2L)=6.69		
								K(Co(Glu)+2L)=6.47		
								K(Co(His)+2L)=6.54		
*****										
C7H15NO5		L						(6007)		
1-Methoxy-D-glucosamine;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.15M	U			K1=2.93	1987PDa (57967)	2280
								B(CoH-1L2)=-1.945		
								B(CoH-2L2)=-10.77		
*****										
C7H15NO5S		HL		MOPSO				CAS 68399-77-9	(1967)	
3-(N-Morpholino)-2-hydroxypropane sulfonic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C	M			1999AAa (57991)	2281
								K(Co(Gly)+2L)=7.01		
								K(Co(Ser)+2L)=7.14		
								K(Co(Met)+2L)=6.91		
								K(Co(Asp)+2L)=7.64		
K(Co(Glu)+2L)=7.51, K(Co(His)+2L)=7.41.										
*****										
C7H15NO7		HL						(6519)		
2-Amino-2-deoxy-D-glycero-D-gulo-heptonic acid;HOOCH(NH2).(CHOH)4.CH2OH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	U			K1=4.20 B2=12.05	1992DGa (58003)	2282
								B(CoH2L2)=21.70		
*****										
C7H15NO7		HL						(7135)		
2-Amino-2-deoxy-D-glycero-L-glucoheptonic acid; HOOCH(NH2)(CHOH)4CH2OH										

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



B(CoHL2)=24.40

\*\*\*\*\*

C7H17N07S HL TAPSO CAS 68399-81-5 (167)  
3-[N-(Tris(hydroxymethyl)methyl)amino]-2-hydroxypropane sulfonic acid

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

Co++ gl KNO3 25°C 0.10M C M K1=3.45 2001AAa (58172)2291  
Also data for ternary complexes with 5'-GMP, 5'-IMP and 5'-CMP.

-----  
Co++ gl KNO3 25°C 0.10M C K1=3.53 2000ADa (58173)2292  
-----

Co++ gl KNO3 25°C 0.10M C K1=3.42 1999AAa (58174)2293  
-----

\*\*\*\*\*  
C7H17N203P HL (7919)  
(Glycylamino)methyl(t-butylphosphinic acid);

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

Co++ gl KNO3 25°C 0.10M C K1=3.09 B2= 5.40 2001LKa (58188)2294  
B(CoHL)=9.4

\*\*\*\*\*  
C7H17N204P H2L Leu-Gly(P) CAS 60668-11-3 (7119)  
Leucylaminomethylphosphonic acid;

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

Co++ gl KNO3 25°C 0.10M C K1=2.739 1995HLA (58195)2295  
B(CoH-1L)=-5.71

\*\*\*\*\*  
C7H17N204PS H2L CAS 82611-22-1 (7392)  
Methionyl-1-aminoethylphosphonic acid; H2L

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

Co++ gl KNO3 25°C 0.10M C K1=3.152 B2=5.49 1997LBA (58200)2296  
B(CuHL)=9.88  
B(CuH-1L)=-5.477

Data are for (S,S)-isomer. For (S,R)-isomer K1=2.73, B(CoHL)=9.36  
B(CoH-1L)=-5.78

\*\*\*\*\*  
C7H17N3 L (101)  
1,4,7-Triazacyclodecane; cyclo(.NHCH2CH2NHCH2CH2NHCH2CH2CH2.)

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

Co++ gl NaClO4 25°C 1.0M C K1=10.73 B2=19.12 1999UGa (58223)2297  
-----

\*\*\*\*\*  
C7H19N06P2 H4L (7464)  
N-(3-Methylbutyl)imino-bis(methylenephosphonic acid);

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl      25°C 0.20M C          K1=8.08      2000KKa (58270)2298
                               B(CoHL)=15.42
                               B(CoH2L)=19.98
                               B(CoH-1L)=-3.02

```

```

*****
C7H19NO7P2      H4L      CAS 63161-30-8 (1349)
1-Hydroxy-3-N,N-diethylaminopropylydenediphosphonic acid;
(C2H5)2N.CH2.CH2.C(OH)(PO3H2)2
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl      25°C 0.10M M          K1=7.71      1978KMa (58278)2299
                               K(Co+HL)=6.94
                               K(Co+H2L)=4.20

```

```

*****
C7H19N3      L      CAS 1985-81-5 (969)
4-Aza-4-methylheptane-1,7-diamine; H2N.(CH2)3.N(CH3).(CH2)3.NH2
-----

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```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  none     10°C 0.0 U          K1=5.95      B2=9.83      1959GFb (58320)2300

```

```

*****
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
-----
Co++      gl  NaCl04  35°C 0.20M U      M      K1=13.51      1983MKb (58353)2301
Ternary complex with dioxygen: B(Co2L2(O2))=31.04
-----

```

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Co++      gl  oth/un  25°C ? U          K1=12.36      B2=15.70      1976NGa (58354)2302
-----

```

```

Co++      gl  NaCl04  25°C ? U          K1=12.36      B2=15.70      1976NGe (58355)2303

```

```

*****
C7H20N4      L      (3012)
N,N-Bis(2-aminoethyl)-1,3-diaminopropane; N(CH2CH2NH)2CH2CH2CH2NH2
-----

```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl      25°C 0.10M C          K1=12.15      2003KDa (58367)2304
                               B(CoH-1L)=1.14

```

```

*****
C7H22N2O13P4      H8L      DPPH      CAS 54622-43-4 (2651)
2-Hydroxy-1,3-diaminopropane-N,N,N'N'-tetramethylphosphonic acid;
HO.CH(CH2.N(CH2.PO3H2)2)2
-----

```

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

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-----  
 Co++ gl NaCl 25°C 0.10M U K1=15.39 1987KMb (58383)2305  
 B(CoHL)=25.77  
 B(CoH2L)=33.10  
 B(CoH3L)=38.87  
 B(CoH4L)=44.40

B(CoH5L)=47.64; B(CoH6L)=52.61;B(Co2L)=21.83. Calculated assuming literature values are Natural log values.

\*\*\*\*\*  
 C8H5NO2 HL Isatin CAS 91-56-5 (7844)  
 2,3-Indolinedione;

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

Co++ gl alc/w 30°C 5% U M 1995RRb (58407)2306  
 K(CoA+L)=6.36  
 B(CoAL)=12.31

Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. H2A is thioglycolic acid.

-----  
 Co++ gl alc/w 30°C 5% M M K1=4.66 B2= 8.64 1994RRa (58408)2307  
 Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. K(CoA+L)=4.33 (A=Gly), 4.31 (Ala),  
 4.28 (Val), 4.37 (en), 4.40 (bpy), 4.12 (oxalate), 4.20 (catecholate).

\*\*\*\*\*  
 C8H5NO2 HL Phthalimide CAS 85-41-6 (4496)  
 Phthalimide;

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

Co++ gl alc/w ? 100% U B2=6.05 1971MSc (58417)2308  
 Medium: MeOH

\*\*\*\*\*  
 C8H5NO3 L CAS 524-38-9 (8323)  
 N-Hydroxyphthalimide;

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

Co++ gl alc/w 30°C 5% U M 1995RRb (58422)2309  
 K(CoA+L)=4.06  
 B(CoAL)=10.01

Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. H2A is thioglycolic acid.

\*\*\*\*\*  
 C8H5NO6 H2L CAS 603-11-2 (1171)  
 3-Nitro-phthalic acid; O2N.C6H3(COOH)2

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

Co++ gl oth/un 35°C dil U K1=3.16 1970NPb (58432)2310  
 \*\*\*\*\*

C8H5NO6 H2L CAS 610-22-5 (1172)  
 4-Nitro-phthalic acid; O2N.C6H3(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 25°C 0.03M U K1=2.87 1971NPc (58444)2311  
\*\*\*\*\*  
C8H5N5O6 H3L Murexide (453)  
Purpuric acid (Murexide is ammonium salt);  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 25°C 100% U TIH K1=5.28 B2=9.70 1995GSa (58482)2312  
Medium: 10% w/w MeCN/DMSO. DH(K1)=4.5 kJ mol<sup>-1</sup>, DS=116 J K<sup>-1</sup> mol<sup>-1</sup>;  
DH(K2)=-25.5, DS=-1  
-----

-----  
Co++ sp KNO3 25°C 0.10M U K1=5.81 1984OWa (58483)2313  
B(CoHL)=11.81  
-----

-----  
Co++ sp KNO3 12°C 0.10M U 1965GEa (58484)2314  
K(Co+H2L)=2.46  
\*\*\*\*\*  
C8H5O2F3S HL TTA CAS 326-91-0 (165)  
4,4,4-Trifluoro-1-(2-thienyl)butane-1,3-dione; F3C.CO.CH2.CO.C4H3S  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ dis NaNO3 25°C 0.10M C K1=3.5 1994SDc (58593)2315  
Method: solvent extraction into CHCl3  
-----

-----  
Co++ dis non-aq 25°C 100% U M 1972KKd (58594)2316  
K(CoL2+bpy)=5.34  
Medium: benzene  
-----

-----  
Co++ EMF oth/un 25°C 1.0M U 1971JFa (58595)2317  
K(Co+HL=CoL+H)=-2.85  
-----

-----  
Co++ gl diox/w 30°C 75% U K1=7.81 B2=14.91 1965RGa (58596)2318  
\*\*\*\*\*  
C8H6N2OF6 L CAS 64139-77-1 (5452)  
N-(2-Pyridyl)-bis(trifluoromethyl)aminomethanol; C5H4N.NH.C(CF3)2.OH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 25°C 0.10M U B2=7.95 1977Cwa (58783)2319  
\*\*\*\*\*  
C8H6N2O2 HL (6681)  
9-Hydroxy-pyrido(1,2-a)pyrimidin-4-one;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=6.54 B2=12.75 1993YDa (58788)2320  
-----

Data also in 50% v/v dioxan/water. Electrolyte: 0.1M KNO3.

B1= 6.97, B2= 12.94.

\*\*\*\*\*

C8H6N2S L CAS 53911-41-4 (3815)

4-(2'-Pyridyl)-1,3-thiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	oth/un	25°C	0.10M	U		K1=5.00 B2=9.35 B3=13.10	1968EHa (58801)	2321

\*\*\*\*\*

C8H6O4 H2L Phthalic acid CAS 88-99-3 (113)

Benzene-1,2-dicarboxylic acid; C6H4(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	24°C	20%	C	M	K(Co(ada)+L)=4.72	1996MIa (58933)	2322

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

Co++	gl	oth/un	25°C	0.10M	U		K1=2.29	1989SCa (58934)	2323
In 60% v/v EtOH/H2O: K1 = 3.20									
Co++	gl	NaClO4	25°C	0.50M	C	TIH	K1=1.492	1975LKb (58935)	2324
Co++	gl	oth/un	25°C	0.0	U		K1=2.86	1965MOB (58936)	2325
Co++	ix	oth/un	25°C	0.0	U		K1=2.76 B2=3.66	1965SMF (58937)	2326

Co++ EMF oth/un 25°C 0.0 U T H K1=2.831 1962DNa (58938)2327  
Method: H electrode. 0-45 C. DH(K1)=7.8 kJ mol<sup>-1</sup>, DS=80.3 J K<sup>-1</sup> mol<sup>-1</sup>  
K1=5.690-0.02374T+0.00004752T<sup>2</sup>

Co++ sp oth/un 20°C 0.40M U K1=1.81 1953BBa (58939)2328

\*\*\*\*\*

C8H7NOS L CAS 2942-13-4 (4553)

2-Hydroxymethylbenzothiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	alc/w	?	100%	U	M	K(Co(NO3)2+2L)=2.23 K(CoCl2+2L)=2.70 K(Co(CNS)2+2L)=1.61	1973SKc (59090)	2329

Medium: MeOH

\*\*\*\*\*

C8H7NO2Cl2 HL CAS 13538-26-6 (6286)

3,5-Dichloro-2-hydroxyacetophenone oxime; Cl2(HO)C6H2.C(CH3):NOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	27°C	75%	U	I	K1=7.20 B2=13.05	1976LGa	(59116)2330

Data in 75% EtOH. Data also in 75% acetone and 75% dioxan

\*\*\*\*\*  
 C8H7NO4 HL CAS 1450-76-7 (1143)  
 2-Hydroxy-5-nitroacetophenone; HO.C6H3(NO2).CO.CH3

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

Co++	sp	diox/w	40°C	50%	U		K1=3.31	1975PSa	(59141)2331
------	----	--------	------	-----	---	--	---------	---------	-------------

\*\*\*\*\*  
 C8H7NS L CAS 120-75-2 (4501)  
 2-Methylbenzothiazole;

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

Co++	sp	alc/w	?	100%	U	M		1973ASb	(59168)2332
------	----	-------	---	------	---	---	--	---------	-------------

K(Co(CNS)2+2L)=3.39

Medium: MeOH

\*\*\*\*\*  
 C8H7N3 L CAS 18653-75-3 (3792)  
 2-(2'-Pyridyl)imidazole;

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

Co++	gl	KNO3	25°C	0.10M	C		K1=5.43 B2=10.27 B3=14.55 B4=16.40	1992RKa	(59181)2333
------	----	------	------	-------	---	--	--	---------	-------------

Co++	EMF	KNO3	25°C	0.10M	U		K1=5.263 B2=10.048 B3=13.871	1967EHc	(59182)2334
------	-----	------	------	-------	---	--	---------------------------------	---------	-------------

\*\*\*\*\*  
 C8H7N3 L CAS 16576-78-6 (3793)  
 4-(2'-Pyridyl)imidazole;

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

Co++	gl	KNO3	25°C	0.10M	U		K1=5.811 B2=11.321 B3=15.71	1967EHb	(59189)2335
------	----	------	------	-------	---	--	--------------------------------	---------	-------------

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

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

Co++	gl	diox/w	40°C	50%	U		K1=5.25	1975PPa	(59212)2336
------	----	--------	------	-----	---	--	---------	---------	-------------

\*\*\*\*\*  
 C8H8NO2Cl HL CAS 5465-90-7 (632)  
 N-(4-Chlorophenyl)aminoethanoic acid; Cl.C6H4.NHCH2COOH

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaClO4 25°C 0.10M U    M              1984Cma (59275)2337
              K(Co(phen)+L)=3.39
*****
C8H8N2          L              CAS 615-15-6 (5668)
1-Methylbenzimidazole;

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp  non-aq 25°C 100% U      B2=2.18        1984DPa (59294)2338
Medium: DMSO
-----
Co++      gl  alc/w 35°C 60% U I      K1=3.11        1984MLa (59295)2339
value at I=0.1 M KNO3; I=0.04, K=3.02, I=0.18, K=3.20, I=0.26, K=3.27
*****
C8H8N2O2        HL  Phenylglyoxime (3222)
Phenylglyoxime; C6H5.C(:N.OH).CH:N.OH

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 25°C 50% U      K1=10.3 B2=19.3 1958PBa (59331)2340
*****
C8H8N2O6S        H2L          CAS 15054-42-9 (3843)
N-(2'-Nitrobenzenesulfonyl)aminoethanoic acid; O2N.C6H4.SO2.NH.CH2.COOH

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3 25°C 0.10M C    M    K1=5.75        2000SIa (59374)2341
              B(CoHL)=12.81
              B(CoH2L2)=25.8
              B(CoHL(bpy))=19.36
              B(CoL(bpy))=12.34
B(CoHL(bpy)2)=24.49, B(CoL(bpy)2)=17.50.
*****
C8H8N2S          HL              CAS 7152-24-1 (6200)
2-(Methylmercapto)benzimidazole;

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaClO4 30°C 0.10M M    M              1995Rma (59391)2342
              K(Co(bpy)+L)=8.64
              K(Co(phen)+L)=8.44
              K(CoA+L)=6.72

```

A is 1,2-diaminobenzene.

```

-----
Co++      gl  NaClO4 30°C 0.10M M              1995Rma (59392)2343
*****
C8H8N2S          L              CAS 2941-62-0 (4511)

```

6-Amino-2-methylbenzothiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	non-aq	?	100%	U	M			1973ASb (59394)	2344
								K(CoCl2+L)=2.61 K(CoBr2+2L)=2.76 K(Co(NO3)2+2L)=2.23		

Medium: MeOH

\*\*\*\*\*

C8H8N4 L Hydralazine CAS 86-54-4 (3197)  
1-Hydrazinophthalazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	oth/un	22°C	0.10M	U			K1=5.8 B2=10.8 B3=15.0	1957FEa (59401)	2345

\*\*\*\*\*

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	40°C	50%	U			K1=5.25	1975PPa (59453)	2346
Co++	gl	diox/w	27°C	75%	U			K1=11.33 B2=21.39	1973KDC (59454)	2347

Medium: 75% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H8O2 HL CAS 613-84-3 (3189)  
5-Methylsalicylaldehyde (5-Methyl-2-hydroxybenzaldehyde)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=8.46 B2=14.70	1978RJa (59508)	2348

\*\*\*\*\*

C8H8O2 HL Phenylacetic CAS 103-82-2 (1361)  
Phenylethanoic acid; C6H5.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	EMF	NaClO4	25°C	2.00M	U			K1=0.623 B2=0.522	1979NTa (59538)	2349

\*\*\*\*\*

C8H8O2 HL CAS 1004-72-4 (3190)  
alpha-Methyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	50%	U			K1=8.0 B2=14.3	1954BFb (59579)	2350

\*\*\*\*\*

C8H8O2 HL CAS 583-80-2 (3191)

beta-Methyltropolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 50% U K1=7.9 B2=14.1 1954BFb (59590)2351  
\*\*\*\*\*  
C8H8O2S HL 3-Thenoylacetone CAS 21808-13-9 (2736)  
3-Thenoylacetone, 1-(3'-Thienyl)butane-1,3-dione; C4H3S.CO.CH2.CO.CH3  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=10.29 B2=18.39 1965RGa (59645)2352  
\*\*\*\*\*  
C8H8O2S HL CAS 13205-48-6 (4506)  
4-(Methylthio)benzoic acid; CH3.S.C6H4.COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ ISE KNO3 25°C 0.10M C K1=0.76 1972FGb (59653)2353  
By competition with Ag+ using Ag ISE  
\*\*\*\*\*  
C8H8O2Se HL CAS 17893-46-8 (4507)  
(Phenylseleno)ethanoic acid; C6H5.Se.CH2.COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ ISE KNO3 25°C 0.10M C K1=0.63 1972FGb (59661)2354  
By competition with Ag+ using Ag ISE  
\*\*\*\*\*  
C8H8O3 H2L CAS 490-78-8 (6324)  
2,5-Dihydroxyacetophenone; (HO)2C6H3.CO.CH3  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 40°C 50% U K1=4.38 1975PPa (59673)2355  
\*\*\*\*\*  
C8H8O3 HL Mandelic Acid CAS 611-72-3 (80)  
2-Phenyl-2-hydroxyethanoic acid; C6H5.CH(OH).COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 2.0M U K1=1.19 B2= 2.07 1985MFa (59804)2356  
By quinhydrone electrode, K1=1.26, B2=1.95.  
-----

-----  
Co++ gl KNO3 25°C 0.10M U T K1=1.75 1984JSa (59805)2357  
-----

-----  
Co++ sp oth/un ? ? U K1=7.0 1976SCb (59806)2358  
-----

-----  
Co++ sp NaClO4 30°C 0.10M U K1=2.36 B2=4.26 1975KAd (59807)2359  
-----

Co++ vlt NaClO4 20°C 2.0M U K1=1.23 B2=1.15 1968FLa (59808)2360  
B3=2.76

By EMF K1=1.22, B2=1.74, B3=2.67

-----  
Co++ oth oth/un ? 0.04M U I B2=3.30 1968VBa (59809)2361  
I=0.01: B2=2.61. Measured using circular dichroism.

\*\*\*\*\*

C8H8O3 HL CAS 673-22-3 (3194)  
4-Methoxysalicylaldehyde; CH3O.C6H3(OH).CHO

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

-----  
Co++ gl diox/w 30°C 75% U K1=4.97 B2=7.55 1967KBb (59977)2362  
Medium: 75% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H8O4 HL CAS 520-45-6 (4478)  
3-Acetyl-2-hydroxy-6-methylpyran-4-one, Dehydroethanoic acid;

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

-----  
Co++ gl diox/w 35°C 50% U K1=3.32 B2=6.06 1971MAa (60080)2363  
Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H9N L CAS 17618-94-9 (300)  
2-Allylpyridine; C5H4N.CH2.CH:CH2

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

-----  
Co++ gl KNO3 25°C 0.10M U K1=1.5 1974ILa (60146)2364

\*\*\*\*\*

C8H9NO2 HL C-Phenylglycine CAS 2835-06-5 (6511)  
2-Amino-2-phenylethanoic acid, 2-aminophenylethanoic acid; C6H5.CH(NH2)COOH

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

-----  
Co++ gl KNO3 25°C 0.10M M K1=3.89 B2=7.04 1990SMa (60173)2365

\*\*\*\*\*

C8H9NO2 HL CAS 56-91-7 (3225)  
2-Aminomethylbenzoic acid; H2N.CH2.C6H4.COOH

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

-----  
Co++ gl diox/w 35°C 50% U K1=4.4 B2=8.6 1958YSa (60180)2366

\*\*\*\*\*

C8H9NO2 HL (6326)  
2-Hydroxy-5-amino-acetophenone; (H2N)(HO)C6H3.CO.CH3

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

-----  
Co++ gl diox/w 40°C 50% U K1=6.20 1975PPa (60187)2367



Data also for 5 other 5-substituted analogues

\*\*\*\*\*

C8H9NO2 HL CAS 1726-86-9 (1487)

2-Hydroxy-5-methylbenzaldehyde oxime; CH3.C6H3(OH).CH:NOH

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

Co++ gl NaClO4 20°C 0.10M U K1=6.8 B2=14.30 1965BEb (60194)2368

\*\*\*\*\*

C8H9NO2 HL CAS 17194-82-0 (1382)

2-Hydroxyacetophenone oxime; HO.C6H4.C(CH3):NOH

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

Co++ gl diox/w 30°C 50% U K1=7.37 1982UVa (60211)2369

Co++ gl diox/w 30°C 75% U K1=11.43 B2=20.86 1976IKa (60212)2370

Medium: 75% Dioxan/H2O, 0.1 M KNO3. Data also for 8 phenyl substituted analogues (3-Me, 5-Me, 3-Cl, 5-Cl, 5-Br, 3-Br, 5-I, 5-NO2)

-----  
Co++ gl diox/w 30°C 75% U K1=11.20 B2=20.68 1958KVa (60213)2371  
K3=7.65

Medium: 75% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C8H9NO2 L CAS 1849-49-6 (5907)

5'-Deoxyipyridoxal

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

Co++ gl KNO3 25°C 0.10M M K1=2.90 1990SMa (60245)2372

K(CoL+H)=6.26

\*\*\*\*\*

C8H9NO2 HL CAS 119-68-6 (1275)

N-Methyl-anthranilic acid; CH3.NH.C6H4.COOH

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

Co++ gl diox/w 35°C 50% U K1=3.0 B2=5.6 1958YSa (60263)2373

\*\*\*\*\*

C8H9NO2 HL Phenyl-glycine CAS 103-01-5 (626)

N-Phenylaminoethanoic acid; C6H5.NHCH2COOH

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

Co++ gl NaClO4 25°C 0.10M U M 1984CMa (60313)2374

K(Co(phen)+L)=3.61

\*\*\*\*\*

C8H9NO2 HL CAS 5330-97-2 (6248)

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

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	30°C	0.10M	U	T H		K1=4.26	1981RSc (60334)	2375
Data for 30-50 C. DH(K1)=-16.3 kJ mol <sup>-1</sup> , DS(K1)=28 J K <sup>-1</sup> mol <sup>-1</sup> . K(Co(bpy)+L)=4.12, DH=-14.7, DS=30. K(Co(phen)+L)=4.07, DH=-15.3, DS=27.										
Co++	gl	NaClO4	30°C	0.10M	U	M		K1=4.26 B2=7.92	1980RSb (60335)	2376
K(Co(phen)+L)=4.07										
Co++	gl	KNO3	30°C	0.10M	U	M		K1=4.26	1980RSc (60336)	2377
K(Co(His)+L)=3.80										
Co++	gl	NaClO4	30°C	0.10M	U	T H			1980RSe (60337)	2378
DH(K1)=-16.3 kJ mol <sup>-1</sup> , DS(K1)=28 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-16.7, DS(K2)=15. *****										
C8H9NO2S HL CAS 104-18-7 (4575) (4-Aminophenylthio)ethanoic acid; H2N.C6H4.S.CH2.COOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.05M	M			K1=3.27	1975DPb (60370)	2379
*****										
C8H9NO2S HL CAS 6310-11-8 (4576) 3-Mercaptoacetamidophenol; HS.CH2.CO.NH.C6H4.OH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	oth	alc/w	20°C	50%	U			K1=8.74 B2=15.12	1972KPc (60381)	2380
Medium: 50% EtOH, 0.1 M NaClO4 *****										
C8H9NO3 HL CAS 5663-54-7 (1095) 2,4-Dihydroxy-acetophenone oxime; (HO)2.C6H3.C(CH3):NOH										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	27°C	60%	U	I		K1=7.65 B2=14.00	1974SRa (60396)	2381
In 60% acetone: K1=7.20, B2=10.60; 60% 2-EtOEtOH: 4.80, 6.90										
Co++	gl	diox/w	30°C	60%	U			B2=10.50	1967SRa (60397)	2382
*****										
C8H9NO3 HL Pyridoxal CAS 65-22-5 (110) 3-Hydroxy-5-(hydroxymethyl)-2-methyl-4-pyridinecarboxaldehyde;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.50M	U			K1=1.68	1976EEa (60423)	2383
*****										
C8H9NO3 H2L CAS 26071-07-8 (209) 5-Methylsalicylhydroxamic acid; CH3.C6H3(OH).CO.NH.OH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	EMF	diox/w	30°C	50%	U		K1=5.10	1977DJa (60436)	2384
Medium: 50% dioxan, 0.1 M NaClO4									
*****									
C8H9NO3			HL				CAS 2292-53-7	(8860)	
Mandelohydroxamic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	20°C	0.10M	U		K1=4.25 B2= 7.65	1989SMc (60444)	2385
*****									
C8H9NO3			HL				CAS 676256-92-1	(9133)	
N-(2-Furanylmethylene)alanine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	1.0M	U		K1=4.27	2003SGa (60451)	2386
*****									
C8H9NO3S			HL				CAS 72678-98-9	(8333)	
2-(2-Furanyl)-4-thiazolidinecarboxylic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	30°C	0.10M	U	TIH	K1=7.62 B2=14.18	1983Rkb (60457)	2387
At I=0.0, K1=7.79, K2=6.71. Data for 25-50 C. DH(K1)=-44.5 kJ mol <sup>-1</sup> , DS(K1)=42.5 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)=-38.4, DS(K2)=25.6.									
*****									
C8H9NO4			HL				CAS 78257-51-9	(887)	
4-Ethoxyppyridine-2-carboxylic acid N-oxide; C2H5O.C5H3N-O(COOH)									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	30°C	0.10M	U	T	K1=3.84 B2=6.38	1982RRa (60477)	2388
*****									
C8H9NO4			H2L				(4520)		
Dehydroethanoic acid oxime;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	35°C	50%	U			1971MAa (60486)	2389
							K(Co+HL)=8.35		
							K(Co+2HL)=15.94		
Medium: 50% dioxan, 0.01 M NaClO4									
*****									
C8H9NO5S			H2L				(6513)		
2-Amino-4-sulfobenzeneethanoic acid; NH2.CH(C6H4HSO3)COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++ gl KNO3 25°C 0.10M M K1=4.01 B2=6.78 1990Sma (60522)2390  
\*\*\*\*\*

C8H9N2O2F3S HL CAS 58157-03-2 (212)  
2-(Trifluoromethanesulfonamidoethyl)pyridine; C5H4NCH2CH2S(:O)2NHCF3

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

Co++ gl diox/w 30°C 45% M K1=7.4(5) B2=8.8(4) 1984MYa (60530)2391  
\*\*\*\*\*

C8H9N2O2SF3 L CAS 507483-51-4 (9291)  
2-(Trifluoromethylsulfonylaminoethyl)-6-methylpyridine;

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

Co++ gl alc/w 25°C 80% C K1=5.11 B2=10.30 2003CKa (60534)2392  
Medium: 80% MeOH/H2O, 0.1 M Me4NNO3.  
\*\*\*\*\*

C8H9N3 L CAS 7471-05-8 (3198)  
2,2'-Pyridylimidazoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ gl diox/w 25°C 50% U K1=6.4 B2=12.0 1956HFa (60542)2393  
B3=16.8  
\*\*\*\*\*

C8H9N3O5 L (4573)  
1-Benzoylthiosemicarbazide; C6H5.CO.NH.NH.CS.NH2

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

Co++ gl alc/w 25°C 80% U TIH K1=8.67 1985BAAb (60551)2394  
In 0.067 M KCl. When I=0.133, K=8.83; I=0.200, K=8.99. DH=-41.5 kJ mol<sup>-1</sup>,  
DS=23 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ sp mixed rt 50% U K1=1.80 1969CFb (60552)2395  
Medium: 50% acetone  
\*\*\*\*\*

C8H9N3O2 L (4519)  
N-(2-Picolyl)oxamide; C5H4N.CH2.NH.CO.CO.NH2

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

Co++ gl KNO3 20°C 0.25M U 1970DGa (60575)2396  
K(CoH-1L+H)=6.01  
K(CoH-2L2+H)=4.84  
\*\*\*\*\*

C8H9N3O7 H2L Uramildiacetic CAS 13055-06-5 (185)  
5-Amino-2,4,6-trioxo-1,3-perhydrodiazimino-N,N-diethanoic acid;

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

-----  
Co++ cal KNO3 25°C 0.1M C H 1981CSb (60610)2397  
DH(K1)=-17.6 kJ mol<sup>-1</sup>, DS=167 K J mol<sup>-1</sup>  
-----

Co++ gl KNO3 25°C 0.10M U T M 1981SVa (60611)2398  
K(CoL+Gly)=3.51  
At 20 C: K(CoL+Gly)=3.55; 30 C: 3.47; 40 C: 3.33  
-----

Co++ oth KNO3 25°C 0.10M U K1=11.84 1972FVa (60612)2399  
-----

Co++ gl oth/un 20°C 0.0 U K2=3.2 1948SBa (60613)2400  
\*\*\*\*\*  
C8H9O3P H2L CAS 1707-08-0 (1969)  
2-Styrylphosphonic acid; C6H5.CH:CH.PO3H2  
-----

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

Co++ gl KNO3 25°C 0.12M U K1=2.56 1979RZb (60670)2401  
\*\*\*\*\*  
C8H10N06P H3L Codecarboxylase CAS 41468-25-1 (2555)  
Pyridoxal-5-phosphoric acid;  
-----

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

Co++ gl KNO3 25°C 0.10M M K1=3.88 1990SMa (60700)2402  
K(CoL+H)=6.96  
K(CoHL+H)=5.2  
\*\*\*\*\*  
C8H10N2O HL CAS 7658-80-2 (4522)  
2-Methyl(benzamidoxime); CH3.C6H4.C(:N.OH)NH2  
-----

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

Co++ sp alc/w 25°C 40% U K1=4.61 B2=4.22 1969MKf (60718)2403  
Medium: 40% EtOH, I=1.0 M KBr  
\*\*\*\*\*  
C8H10N2O HL CAS 13050-47-0 (4523)  
3-Methyl(benzamidoxime); CH3.C6H4.C(:N.OH)NH2  
-----

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

Co++ sp alc/w 25°C 60% U B2=4.15 1971MVb (60721)2404  
Medium: 60% MeOH, alkaline soln  
\*\*\*\*\*  
C8H10N2O HL CAS 3619-12-5 (4524)  
4-Methyl(benzamidoxime); CH3.C6H4.C(:N.OH)NH2  
-----

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

Co++ sp oth/un 25°C 0.02M U K1=5.47 B2=6.81 1969MKg (60723)2405

\*\*\*\*\*

C8H10N2O2 HL CAS 2444-13-5 (2763)  
2-(2'-Pyridyl)-2-aminopropanoic acid; C5H4N.C(CH3)(NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	M			K1=5.30 B2=9.80	1976RNa (60733)	2406

B2=10.61 (racemic ligand)

\*\*\*\*\*

C8H10N2O2 HL CAS 75345-75-5 (4525)  
3-Dimethylamino-6-nitrosophenol; (CH3)2N.C6H2(OH).N:O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	KCl	25°C	0.10M	U			B3=26.77	1971MOB (60735)	2407

\*\*\*\*\*

C8H10N2O2 HL (3227)  
N-(2'-Pyridylmethyl)glycine; C5H4N.CH2.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U			K1=8.1	1965Lca (60744)	2408

\*\*\*\*\*

C8H10N4O HL CAS 34375-07-0 (3827)  
5-Methyl-6-ethyl-7-hydroxy[1,2,4]triazolo[1,5-a][1,3]diazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	20°C	0.10M	U			K1=2.40	19660Ca (60793)	2409

\*\*\*\*\*

C8H10N4O HL CAS 40775-87-9 (3826)  
5-Propyl-7-hydroxy[1,2,4]triazolo[1,5-a][1,3]diazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	20°C	0.10M	U			K1=2.39	19660Ca (60797)	2410

\*\*\*\*\*

C8H10N6 L Dihydralazine CAS 484-23-1 (713)  
1,4-Dihydrazinophthalazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	none	25°C	0.0	U			K1=4.68	1988XGa (60811)	2411

In the presence cationic surfactant CTMAB, PH=7-8

\*\*\*\*\*

C8H10O5 H2L CAS 145-73-7 (138)  
7-Oxa-bicyclo[2.2.1]-heptan-2,3-dicarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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 Co++ gl KNO3 30°C 0.10M U K1=4.95 1995KFa (60863)2412  
 \*\*\*\*\*  
 C8H10O7 H2L (2958)  
 5,6-Dihydroxy-7-oxa-bicyclo[2.2.1]heptan-2,3-dicarboxylic acid;  
 -----

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

Co++ gl KNO3 30°C 0.10M U K1=4.32 1995KFa (60884)2413  
 \*\*\*\*\*  
 C8H11N L CAS 69376-33-6 (542)  
 2,4,6-Trimethylpyridine; C5H2N.(CH3)3  
 -----

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

Co++ sp non-aq 25°C 100% U M 1980MAb (60943)2414  
 K(CoA+L)=0.92  
 Medium: CH2Cl2. A= 1,19-Dimethyl-AD-didehydrocorrin perchlorate  
 \*\*\*\*\*  
 C8H11N L 2,6-Xylidine CAS 87-62-7 (3200)  
 2,6-Dimethylaniline; H2N.C6H3(CH3)2  
 -----

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

Co++ sp non-aq ? 100% U M 1972ZDa (60951)2415  
 K(CoCl2+L)=1.10  
 K(CoCl2+2L)=2.40  
 Medium: t-butanol  
 \*\*\*\*\*  
 C8H11N L CAS 622-39-9 (303)  
 2-(n-Propyl)pyridine; C5H4N.CH2.CH2.CH3  
 -----

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

Co++ gl KNO3 25°C 0.10M U K1=1.4 1974ILa (60959)2416  
 \*\*\*\*\*  
 C8H11N L CAS 529-21-5 (2002)  
 3-Ethyl-4-methylpyridine; CH3.C5H3N.C2H5  
 -----

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

Co++ gl KNO3 25°C 0.50M U K1=1.28 B2=2.14 1975LPc (60973)2417  
 \*\*\*\*\*  
 C8H11N L CAS 1122-81-2 (3802)  
 4-Propylpyridine; C5H4N.CH2.CH2.CH3  
 -----

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

Co++ sp non-aq 20°C 100% U HM 1966CKb (60979)2418  
 K(CoL2Cl2+2L)=1.07

K(CoL2(NCS)2+2L)=4.90

Medium: CHCl3. DH(CoL2Cl2+2L)=-66.0 kJ mol<sup>-1</sup>, DS=-205 J K<sup>-1</sup> mol<sup>-1</sup>

DH(CoL2(CNS)2+2L)=-68.6, DS=-142

\*\*\*\*\*

C8H11N L CAS 104-90-5 (4480)

5-Ethyl-2-methylpyridine; CH3.C5H3N.CH2.CH3

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	sp	non-aq	?	100%	U	M			1971ADb (60983)	2419
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K(CoCl2+L)=1.76

K(CoCl2+2L)=3.91

Medium: n-butanol. In t-butanol, values are 2.06, 3.97. In cyclohexanone,

2.64, 5.10. In ethanol, 1.22, 2.80. In ethylene chlorohydrin, 0.73, 2.34

\*\*\*\*\*

C8H11N L DiMethylaniline CAS 121-69-7 (1343)

N-Phenyl-N,N-dimethylamine; C6H5.N(CH3)2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	sp	non-aq	?	100%	U	M			1972ZDa (60988)	2420
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K(CoCl2+L)=2.30

K(CoCl2+2L)=3.52

Medium: t-butanol

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C8H11NO L CAS 20609-07-8 (298)

2-(2'-Hydroxypropyl)pyridine; C5H4N.CH2.CH(OH).CH3

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	KNO3	25°C	0.10M	U			K1=1.55	1974ILa (60997)	2421
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\*\*\*\*\*

C8H11NO L (5433)

2-(2-Pyridyl)-2-propanol; CH3.C(OH)(C5H4N).CH3

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	diox/w	25°C	50%	U			K1=1.99	1981CBa (61002)	2422
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C8H11NO HL CAS 6623-41-2 (3229)

2-Amino-4,5-dimethylphenol; H2N.C6H2(CH3)2.OH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	none	20°C	0.0	U			K1=5.3	1959SIb (61018)	2423
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C8H11NO L CAS 2859-67-8 (2037)

3-(3-Pyridyl)-1-propanol; C5H4N.CH2.CH2.CH2OH

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ g1 KNO3 25°C 0.50M U K1=1.18 B2=2.05 1981LRa (61026)2424  
B3=3.61

\*\*\*\*\*  
C8H11NO2 H2L Dopamine CAS 579-59-9 (251)  
2-(3',4'-Dihydroxyphenyl)ethylamine; (HO)2.C6H3.CH2.CH2.NH2  
-----

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

Co++ g1 NaClO4 25°C 1.0M C 1997GCa (61070)2425  
K(Co+H2L=CoHL+H)=-5.67  
K(Co+H2L=CoL+2H)=-13.37  
K(Co+H2L=CoH-1L+3H)=-22.81  
K(Co+2H2L=CoL2+4H)=-29.0

Ligand defined as H2L. K(Co+2H2L=CoH-2L2+6H)=-49.14, K(CoL=CoH-1L+H)=-9.44,  
K(CoHL=CoL+H)=-7.70, K(Co+2H2L=CoH-1L2+5H)=-38.74 etc.

-----  
Co++ nmr oth/un 27°C ? U M 1977GFa (61071)2426  
Keff(Co(ATP)+L)=1.04

In D20, pD=6.8

\*\*\*\*\*  
C8H11NO3 HL Vitamin B6 CAS 65-23-6 (254)  
5-Hydroxy-6-methyl-3,4-pyridinedimethanol, Pyridoxine;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ g1 KCl 25°C 0.50M U K1=1.95 1976EEa (61113)2427

\*\*\*\*\*  
C8H11NO3 H2L Noradrenaline CAS 138-65-8 (253)  
Norepinephrine, 3,4-Dihydroxyphenylethanolamine; (HO)2C6H3.CH(CH2.NH2).OH  
-----

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

Co++ g1 KCl 25°C 0.20M C K1=8.69 B2=14.76 1981GKb (61154)2428  
B(CoHL)=17.98  
B(CoH2L2)=34.01  
B(CoHL2)=24.61

-----  
Co++ nmr oth/un 27°C ? U M 1978GRb (61155)2429  
Keff(Co(ATP)+L)=1.2

In D20, pD=6.4

-----  
Co++ g1 KCl 25°C 0.10M U K1=9.36 B2=16.36 1966JNa (61156)2430  
K1 adjusted to give hypothetical microscopic constant

-----  
Co++ g1 KCl 25°C 0.06M U T H K1=4.83 B2=7.36 1962ALa (61157)2431  
At 0 C: K1=5.32, K2=3.62, B2=8.64. DH(B2)=-79.4 kJ mol<sup>-1</sup>, DS=-125 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ g1 KCl 0°C .058M U T B2=8.64 1957LYa (61158)2432  
At 25 C: B2=7.36

\*\*\*\*\*  
C8H11N08 H4L CAS 7408-20-0 (2608)  
Amino-di(butanedioic acid);HN(CH(COOH)CH2.COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=9.96 1998VKa (61198)2433  
K(Co+HL)=4.35

\*\*\*\*\*  
C8H11N08P2 H5L (6894)  
N-(4-Carboxyphenyl)aminomethylenedi(phosphonic acid); H0OC.C6H4.NH.CH(P03H2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=9.63 1990GKa (61227)2434  
K(Co+HL)=4.48

\*\*\*\*\*  
C8H11N303 HL CAS 2497-02-1 (3230)  
Acetyl-L-histidine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 25°C 0.16M U K1=2.35 B2=4.15 1960MEa (61274)2435

\*\*\*\*\*  
C8H11N503 HL Acyclovir CAS 59277-89-3 (8696)  
2-Amino-1,9-dihydro-9-[(2-hydroxyethoxy)methyl]-6H-purin-6-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ cal NaNO3 25°C 0.10M C HM 2001HCa (61291)2436  
K(Co+HL)=0.96

DH(Co+HL)=-19.7 kJ mol<sup>-1</sup>, DS(Co+HL)=-50 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*  
C8H1102F3 HL CAS 22767-90-4 (1249)  
1,1,1-Trifluoro-5,5-dimethyl-2,4-hexanedione; F3C.CO.CH2.CO.CH(CH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=7.25 B2=13.95 1972UDa (61299)2437  
Medium: 75% v/v dioxan, 0.01 M Me4NClO4

\*\*\*\*\*  
C8H12N03P H2L Phosphono-Phe CAS 6324-00-1 (6008)  
1-Amino-2-phenylethanephosphonic acid; C6H5.CH2.CH(NH2)P03H2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.20M C K1=4.70 B2=8.02 1987KBb (61339)2438

\*\*\*\*\*  
C8H12N04P H3L Phosphono-Tyr CAS 16802-71-4 (6009)  
1-Amino-2-(4-hydroxyphenyl)ethanephosphonic acid; HO.C6H4.CH2.CH(NH2)P03H2



Co++ gl NaNO3 37°C 0.15M U M 1983ERa (61413)2446  
 B(CoHLA)=16.947  
 B(CoLA3)=14.502  
 B(CoL2A2)=16.517  
 B(CoH2L2A2)=33.93

A=imidazole

Co++ gl NaNO3 37°C 0.15M U M 1983ERa (61414)2447  
 B(CoL(Gly)A)=13.174  
 B(CoHL(Gly)A)=21.958  
 B(CoH2L(Gly)A)=29.321  
 B(CoHL(Gly)A2)=24.644

B(CoH2L(Gly)A2)=32.589. A=imidazole

Co++ gl NaNO3 37°C 0.15M U K1=5.591 B2=10.255 1982ESa (61415)2448  
 B(CoHL)=13.330  
 B(CoH2L2)=27.435

Co++ gl NaNO3 30°C 0.50M M M B2=9.91 1982MAd (61416)2449  
 B(CoHL)=14.09  
 B(CoH-1L)=5.06  
 B(CoH2L2)=26.94  
 B(Co(en)L)=11.23

B(CoH(en)L)=19.78, B(CoH2(en)L)=26.63, B(CoH2(en)2L)=33.37,  
 B(CoH6(en)L3)=70.08

Co++ gl KNO3 30°C 0.50M M M K1=5.06 B2=9.91 1979EMa (61417)2450  
 B(CoHL)=14.09  
 B(CoH2L2)=26.94

Data for ternary complexes with Gly, DL-Val, DL-Ala and Phe

Co++ gl KCl 25°C 0.50M U K1=5.55 B2=9.21 1976EEa (61418)2451

Co++ gl KNO3 25°C 0.10M U K1=5.09 B2=9.60 1957GMa (61419)2452

\*\*\*\*\*

C8H12N2O3S HL CAS 551-16-6 (6858)

6-Aminopenicillanic acid;

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

Co++ gl NaNO3 37°C 0.10M U M K1=3.13 1994MGc (61462)2453  
 B(Co(gly)L)=8.57  
 \*K(Co(gly)L)=-7.62  
 \*K(Co(OH)(gly)L)=-10.52  
 B(Co(bpy)L)=9.45

\*K(Co(bpy)L)=-7.40, \*K(Co(OH)(bpy)L)=-10.10. B(CoAL)=5.94,

\*K(CoAL)=-7.83, \*K(Co(OH)AL)=-8.55. A is imidazole

Co++ gl NaNO3 37°C 0.10M U K1=3.13 1991MGb (61463)2454  
 \*K(CoL(H2O)2)=-9.93

\*\*\*\*\*

C8H12N2O7 H3L CAS 43101-36-6 (669)  
Glycylglycine-N,N-diethanoic acid; (HOOC.CH2)2N.CH2.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C			K1=7.44 K(CoL+H)=3.03 K(CoH-1L+H)=9.35	1974MMb (61476)	2455

\*\*\*\*\*

C8H12N2O8 H4L CAS 35039-85-1 (4537)  
1,2-Diaminoethane-N,N'-dimalonic acid; (HOOC)2.CH.NH.CH2.CH2.NH.CH(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	vlt	KNO3	25°C	0.10M	U			K1=11.90	1973SGa (61487)	2456
Co++	EMF	KNO3	25°C	0.10M	U			K1=12.32	1973SGa (61488)	2457
Co++	ISE	KNO3	25°C	0.10M	U			K1=12.53	1973SGa (61489)	2458

Constant obtained with Hg electrode. With Cu/Hg electrode, K1=12.10

\*\*\*\*\*

C8H12N4B- L (7238)  
(Pyrazol-1-yl) dihydro(3,5-dimethylpyrazol-1-yl) borate; C3H3N2.BH2.C3HN2(CH3)2-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	dis	non-aq	25°C	100%	U			K(Co+2HL=CoL2(org)+2H)=0.86	1996KSa (61543)	2459

By solvent extraction into CHCl3

\*\*\*\*\*

C8H12N4O3 HL Gly-His CAS 3486-76-8 (273)  
Glycyl-histidine; H2N.CH2.CO.NH.CH(CH2.C3H3N2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	0°C	0.10M	C			K1=3.71 B(CoH-1L)=-4.56	1993KSa (61589)	2460
Co++	gl	KCl	25°C	0.20M	C	M		K1=3.44 B2=6.57 B(CoHL)=10.61 B(CoH-1L)=-3.96 B(CoH-1L2)=-1.49 B(CoH-2L)=-15.45	1983FSc (61590)	2461

B(CoHL(His))=16.95; B(CoL(His))=9.63; B(CoH-1L(His))=0.90

Co++	gl	KNO3	25°C	0.10M	C			K1=3.32 K[Co(H-1L)+H]=7.24	1977HMd (61591)	2462
------	----	------	------	-------	---	--	--	-------------------------------	-----------------	------

Oxygenation constant: K{2CoL+O2=[Co2(H-1L)2(O2)(OH)]+3H}= -13.5

-----

Co++ gl KNO3 37°C 0.15M U K1=3.37 B2=6.28 1975APb (61592)2463  
K(Co+HL)=2.23  
K(CoH-1L+H)=7.19

\*\*\*\*\*  
C8H12N4O3 HL His-Gly CAS 2578-58-7 (274)  
Histidyl-glycine; H2N.CH(CH2.C3H3N2).CO.NH.CH2.COOH

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

Co++ gl KNO3 0°C 0.10M C K1=5.82 1993Ksa (61624)2464  
B(CoH-1L)=-0.17

Alternative model: K1=6.11, B2=10.95.

-----  
Co++ gl KCl 25°C 0.20M C K1=5.22 B2=9.28 1983FSc (61625)2465  
-----

Co++ gl KNO3 25°C 0.10M C K1=5.19 1977Hmd (61626)2466  
K[Co(H-1L)+H]=7.15

Oxygenation constant:  $K\{2CoL+O2=[Co2(H-1L)2(O2)(OH)]+3H\} = -16.6$

-----  
Co++ gl KNO3 37°C 0.15M U K1=4.54 B2=8.16 1975APb (61627)2467  
K(Co+HL)=2.17

-----  
Co++ gl none 21°C 0.0 M K1=5.52 B2=9.75 1974YAa (61628)2468

\*\*\*\*\*  
C8H12N5O4P H2L CAS 106941-25-7 (6693)  
9-(2-(Phosphonylmethoxy)ethyl)adenine; H2O3P.CH2.O.CH2.CH2.adenine

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

Co++ gl NaNO3 25°C 0.10M M M K1=1.61 2000KLb (61647)2469  
K(PtLA+Co)=1.61

A=diethylenetriamine

-----  
Co++ gl NaNO3 25°C 0.10M M K1=2.37 1992SCa (61648)2470  
B(CoHL)=7.49  
K(Co+HL)=0.59

\*\*\*\*\*  
C8H12O4 H2L CAS 1127-08-8 (72)  
Cyclohexane-1,1-dicarboxylic acid; C6H10.(COOH)2

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

Co++ gl NaClO4 25°C 0.10M U K1=1.96 1972RVh (61702)2471

\*\*\*\*\*  
C8H12O4 H2L CAS 6018-58-3 (960)  
Hex-1-ene-6-dioic acid; CH2:CH.CH2.CH2.CH2.CH(COOH)2

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

Co++ gl KNO3 25°C 0.10M C K1=2.54 1975IPa (61727)2472

\*\*\*\*\*  
 C8H13NO3 H3L (4539)  
 (1-Acetyl)ethylideneiminopropanoic acid;

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

Co++ EMF oth/un ? ? U K1=7.42 1972Mgb (61747)2473  
 \*\*\*\*\*

C8H13NO6 H3L (3835)  
 2-Amino-2-carboxypropane-N,N-diethanoic acid; H00CC(CH3)2N(CH2COOH)2

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

Co++ gl KNO3 20°C 0.10M U K1=9.03 1974RMF (61755)2474  
 \*\*\*\*\*

C8H13NO6 H3L (5681)  
 2-Aminobutanoic-N,N-diethanoic acid; CH3CH2CH(COOH)N(CH2COOH)2

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

Co++ gl KNO3 20°C 0.10M U K1=10.42 1974RMF (61781)2475  
 \*\*\*\*\*

C8H13NO6 H3L (3232)  
 N-(Carboxymethyl)iminodipropoic acid; H00C.CH2.N(CH2.CH2.COOH)2

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

Co++ gl KCl 30°C 0.10M U K1=7.9 1953Cma (61807)2476  
 \*\*\*\*\*

C8H13NO6S H3L (5675)  
 2-Mercapto-1-aminoethane-N,N,S-triethanoic acid; H00C.CH2.S.CH2.CH2.N(CH2COOH)2

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

Co++ gl NaClO4 25°C 0.10M U K1=11.06 1975POa (61816)2477  
 K(Co+HL)=3.08  
 \*\*\*\*\*

C8H13N3 L CAS 20947-95-7 (3205)  
 N-2'-Pyridylmethylethylenediamine; C5H4N.CH2.NH.CH2.CH2.NH2

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

Co++ gl KNO3 25°C 0.10M U K1=8.49 B2=16.10 1970Dga (61850)2478  
 \*\*\*\*\*

C8H13N3O2 HL DiMe-Histidine (1193)  
 N-Dimethylhistidine; (CH3)2N.CH(CH2.C3H3N2).COOH

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

Co++ gl KCl 25°C 0.10M C K1=6.885 B2=10.300 1976RIa (61861)2479

K(Co(DL-L))=6.874  
B(Co(DL-L)2)=10.830

\*\*\*\*\*

C8H13N3O6 H4L CAS 79507-77-0 (8187)

1-Bis(carboxymethyl)aminobutane-2,3-dione dioxime;

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

Co++ g1 KNO3 25°C 0.10M C 1981UMa (61866)2480

K(Co+H2L)=8.00

\*\*\*\*\*

C8H13N6O4P H2L (7462)

9-[2-(Phosphonomethoxy)ethyl]-2,6-diaminopurine;

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

Co++ g1 NaNO3 25°C 0.10M M K1=2.43 1999BSa (61873)2481

K(Co+HL)=0.96

\*\*\*\*\*

C8H14N2 L (6727)

1-Butyl-2-methylimidazole

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

Co++ g1 KNO3 25°C 0.50M C K1=1.73 B2=2.08 1993BKc (61887)2482

B3=2.76

B4=5.65

\*\*\*\*\*

C8H14N2O L (6728)

1-Butyl-2-hydroxymethylimidazole

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

Co++ g1 KNO3 25°C 0.50M C K1=2.18 B2=4.03 1993BKc (61892)2483

B3=4.67

B4=6.65

\*\*\*\*\*

C8H14N2O2 H2L Octoxime CAS 18310-14-0 (1303)

1,2-Cyclooctanedione dioxime; C8H12(:NOH)2

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

Co++ g1 diox/w 20°C 75% U K1=12.80 B2=24.03 1981HFa (61896)2484

Co++ g1 NaClO4 20°C 0.10M C 1980MHa (61897)2485

K(Co+HL)=9.87

K(Co+2HL)=19.09

\*\*\*\*\*

C8H14N2O3 HL (6599)

2,3-Dehydro-N-glycyl-leucine; NH2.CH2.CO.NH.C(COOH):CH.CH(CH3)2



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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl    25°C 0.10M C          K1=2.94  B2=5.28  1994JBa (61904)2486
                                     B(CoH-1L)=-6.02

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*****
C8H14N2O3          HL                      (6601)
2,3-Dehydro-N-valyl-alanine; NH2.CH(CH(CH3)2)CO.NH.C(COOH):CH2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl    25°C 0.10M C          K1=1.84                      1994JBa (61909)2487
                                     B(CoH-1L)=-5.54
                                     B(CoH-1L2)=-3.34
                                     B(CoH-2L2)=-12.13

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*****
C8H14N2O6P2        HL                      (7465)
N-(3-Pyridylmethyl)imino-bis(methylphosphonic acid);
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl    25°C 0.20M C          K1=7.75                      2000Kka (61966)2488
                                     B(CoHL)=13.78
                                     B(CoH2L)=18.73
                                     B(CoH3L)=22.86
                                     B(CoH-1L)=-3.22

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*****
C8H14N4O          L   Carcinine          (260)
B-Alanyl-histamine; NH2.CH2.CH2.CO.NH.CH2CH2.C3H3N2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaCl04 25°C 0.10M C          K1=2.81  B2= 5.31  1992GHb (61976)2489
                                     B(CoHL)=11.06

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*****
C8H14N4O          L                      (6726)
Sarcosyl-histamine
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaCl04 25°C 0.10M C          M  K1=2.84  B2=4.78  1997GHa (61983)2490
                                     B(1,1,1,0)=10.17
                                     B(1,1,-1,0)=-5.19
                                     B(1,1,-2,0)=-15.66
                                     B(1,2,-1,0)=-3.07
B(2,2,-3,1)=-9.99, B(2,2,-4,1)=-19.38, B(2,4,-3,1)=-3.76
B(p,q,r,s): pCo+qL+rH+sO2=CopLqHr(O2)s
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Co++      gl  NaCl04 25°C 0.10M C          K1=2.84  B2=4.78  1995GHa (61984)2491
                                     B(CoHL)=10.17

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B(CoH-1L)=-5.19  
B(CoH-2L)=-15.66  
B(CoH-1L2)=-3.07

\*\*\*\*\*  
C8H14N4O5                    HL    Tetraglycine            CAS 637-84-3 (1849)  
Glycyl-Glycyl-Glycyl-Glycine; H2N.CH2.CO.NH.CH2.CO.NH.CH2.CO.NH.CH2.COOH

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
Co++            g/l KNO3    25°C 0.15M U            K1=3.00    B2=5.50    1957LDa (62020)2492  
\*\*\*\*\*

C8H14O2                    HL                                    CAS 7307-04-2 (3208)  
5,5-Dimethylhexane-2,4-dione; CH3.CO.CH2.CO.C(CH3)3

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
Co++            g/l diox/w 30°C 75% U            K1=9.04    B2=17.57    1972UDa (62042)2493  
Medium: 75% v/v dioxan, 0.01 M Me4NC1O4

\*\*\*\*\*  
C8H14O4S3                    H2L                                    (2526)  
3,6,9-Trithiaundecanedioic acid; HOOC.CH2.S.C2H4.S.C2H4.S.CH2.COOH

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
Co++            g/l NaClO4 25°C 0.10M U            K1=2.28            1971PPc (62120)2494  
K(Co+HL)=1.58

\*\*\*\*\*  
C8H14O5S2                    H2L                                    CAS 4408-66-6 (8332)  
Oxybis(ethylenethio)diethanoic acid;

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
Co++            g/l KNO3    20°C 0.10M U            K1=2.60            1977CAc (62134)2495

\*\*\*\*\*  
C8H14O7                    H2L                                    (241)  
Di(carboxymethoxy)ethyl ether; (HOOC.CH2.O.CH2.CH2)2O

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
Co++            g/l KNO3    25°C 0.10M U            K1=2.29            1975MTc (62145)2496

\*\*\*\*\*  
C8H15NO2                    HL                                    CAS 6949-77-5 (3235)  
1-Aminocycloheptanecarboxylic acid; C6H10(NH2).COOH

-----  
Metal            Mtd Medium Temp Conc Cal Flags Lg K values            Reference ExptNo  
-----  
Co++            g/l KCl      20°C 0.10M U            K1=4.17    B2=7.9      1963IPa (62157)2497

\*\*\*\*\*  
C8H15NO2                    HL                                    CAS 6051-21-4 (8043)  
Cyclohexylacetohydroxamic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp NaNO3 25°C 0.10M C B2=9.91 1997NWa (62164)2498  
\*\*\*\*\*  
C8H15N04 H2L CAS 33994-68-7 (347)  
N-Butyliminodiethanoic acid; C4H9.N(CH2.COOH)2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=7.71 B2=13.78 1975IPa (62189)2499  
\*\*\*\*\*  
C8H15N05 H2L (3234)  
N-(2-Hydroxyethyl)iminodipropanoic acid; HO.CH2.CH2.N(CH2.CH2.COOH)2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 30°C 0.10M U K1=4.4 1954CMa (62201)2500  
\*\*\*\*\*  
C8H15N06 H2L CAS 92511-22-3 (6074)  
N-(1,1-Di(hydroxymethyl)ethyl)iminoethanoic acid; (HO.CH2)2C(CH3).N(CH2.COOH)2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 1.0M C K1=7.54 B2= 9.91 1981ASb (62215)2501  
B(CoH-1L)=-0.57  
\*\*\*\*\*  
C8H15N304 HL Gly-Ala-Ala CAS 6491-25-4 (6783)  
Glycyl-alanyl-alanine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=9.95 1983IMb (62248)2502  
K(CoL+H)=8.95  
K(CoHL+H)=5.20  
\*\*\*\*\*  
C8H16N203 HL CAS 83874-82-2 (3838)  
6-Acetylamino-2-aminohexanoic acid; CH3.CO.NH.(CH2)4.CH(NH2).COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.10M U K1=4.27 1970GPa (62291)2503  
\*\*\*\*\*  
C8H16N203 HL DL-Ala-DL-Val CAS 1999-46-8 (2122)  
DL-Alanyl-DL-valine; H2N.CH(CH3).CO.NH.CH(CH(CH3)2).COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaCl 25°C 0.12M U K1=2.66 B2=4.68 1977PNa (62302)2504  
-----

Co++ gl NaCl 25°C 0.12M U K1=2.66 B2= 4.68 1976PNa (62303)2505  
L=DL-alpha-alanyl-DL-leucine

\*\*\*\*\*

C8H16N2O3 HL Gly-norLeu CAS 1504-41-2 (3837)  
Glycyl-DL-norleucine; H2N.CH2.CO.NH.CH(CH2CH2CH2CH3).COOH

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

Co++ gl KNO3 25°C 0.1M U 2003PGa (62314)2506

K(Co+HL)=3.15  
K(CoL+H)=11.09  
K(CoHL+HL)=2.14  
K(CoHL2+H)=10.66

K(CoL2+H)=10.84; K(CoL+HL)=2.63

\*\*\*\*\*

C8H16N2O3 HL Gly-Leu CAS 869-19-2 (255)  
Glycyl-leucine; H2N.CH2.CO.NH.CH(CH2.CH(CH3)2).COOH

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

Co++ gl KNO3 25°C 0.1M U 2003PGa (62381)2507

K(Co+HL)=3.25  
K(CoL+H)=11.02

K(CoL2+H)=10.51; K(CoL+HL)=2.91

-----  
Co++ gl KNO3 20°C 0.10M U K1=3.15 B2= 6.08 1991KUa (62382)2508

K(CoH-1L+H)=8.72  
K(CoH-1L2+H)=7.81  
K(Co(H-1L)2+H)=9.17

-----  
Co++ gl NaCl 25°C 0.12M U K1=3.34 B2=5.99 1977PNa (62383)2509

-----  
Co++ gl NaCl 25°C 0.12M U K1=3.34 B2= 5.99 1976PNa (62384)2510

-----  
Co++ gl NaCl04 20°C 0.10M U K1=3.25 B2=6.02 1972PGb (62385)2511

\*\*\*\*\*

C8H16N2O3 HL Leu-Gly CAS 686-50-0 (1248)  
Leucyl-glycine; H2N.CH(CH2.CH(CH3)2).CO.NH.CH2.COOH

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

Co++ gl KNO3 20°C 0.10M U M K1=2.62 B2= 4.89 1991KUa (62428)2512

K(CoH-1L+H)=10.26  
K(CoH-1L2+H)=9.31  
K(Co(H-1L)2+H)=10.36

By manometry at 0 C: K(2Co(H-1L)2+O2+OH=Co2(H-1L)4(O2)OH)=4.13.

-----  
Co++ gl NaCl04 20°C 0.10M U K1=2.42 B2=4.42 1972PGb (62429)2513

-----  
Co++ gl oth/un 25°C 0.01M U K1=2.50 B2=4.83 1959DLb (62430)2514

\*\*\*\*\*

C8H16N2O4 H2L (267)  
1,2-Diaminoethane-N,N'-di(2-propanoic acid); ((CH3)(COOH).CH.NH.CH2)2

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

Co++ gl KCl 20°C 0.10M U K1=10.2 1958ISa (62467)2515

\*\*\*\*\*

C8H16N2O4 H2L CAS 13288-40-9 (3237)  
1,2-Diaminoethane-N,N'-di(3-propanoic acid); (HOOCCH2CH2NHCH2.)2

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

Co++ gl NaCl 25°C 0.10M C K1=7.16 1999DFa (62495)2516

B(CoH-1L)=-0.83  
B(CoH-2L)=-10.54  
B(Co2H-2L)=0.73

Additional method: spectrophotometry.

-----  
Co++ gl KNO3 25°C 0.10M U M 1970DNa (62496)2517

K(CoL+en)=3.95

-----  
Co++ gl KCl 20°C 0.10M U K1=10.2 1958ISa (62497)2518  
-----

Co++ gl KCl 30°C 0.10M U K1=7.3 1953CCb (62498)2519

\*\*\*\*\*

C8H16N2O4 H2L (266)  
N,N'-Dimethylethylenediamine-N,N'-diethanoic acid;

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

Co++ gl KNO3 25°C 0.10M C K1=12.79 1993WLa (62523)2520

\*\*\*\*\*

C8H16N2O4S2 H4L (6947)  
2,7-Dicarboxy-3,6-diaza-1,8-octanedithiol;  
HS.CH2.CH(COOH)NH.CH2CH2.NH.CH(COOH)CH2.SH

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

Co++ gl KCl 25°C 0.10M C K1=16.84 1996LMa (62547)2521

B(CoHL)=27.59  
B(CoH2L)=32.58

\*\*\*\*\*

C8H16N2O4S2 H2L CAS 462-10-2 (527)  
DL-4,4'-Dithiobis(2-aminobutanoic acid); (HOOC.CH(NH2).CH2.CH2.S.)2

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

Co++ gl KCl 25°C 0.10M U K1=5.77 B2=9.41 1981BLb (62561)2522

B(CoHL)=13.53

\*\*\*\*\*  
 C8H16N2O5                    H2L    CAS 20811-97-6 (5461)  
 1,9-Dicarboxy-2,8-diaza-5-oxanonane (HOOC.CH2.NH.CH2.CH2)2O

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

Co++            gl    KNO3    25°C 0.10M C                    K1=9.46                    1982BTb (62567)2523  
 \*\*\*\*\*

C8H16N2O6                    H2L    CAS 50730-95-5 (4548)  
 Ethylenediiminobis(3-hydroxy-2-propanoic acid);

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

Co++            EMF oth/un 20°C 0.10M U                    K1=10.02                    1972DKa (62580)2524  
 -----

Co++            gl    KNO3    20°C 0.10M U                    K1=10.12                    1970DKa (62581)2525  
 \*\*\*\*\*

C8H16N10                    L    (7005)  
 N,N'-Di(2-(5-tetraazoly)ethyl)-1,2-diaminoethane;

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

Co++            gl    NaNO3    20°C 0.10M U                    K1=14.39                    1981ESa (62613)2526  
 \*\*\*\*\*

C8H16O4                    L                    12-Crown-4                    CAS 294-93-9 (174)  
 1,4,7,10-Tetraoxacyclododecane; cyclo(-O.(CH2.CH2.O)3.CH2.CH2-)

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

Co++            nmr non-aq 27°C 100% C                    K1=2.64                    2000SMg (62656)2527  
 Medium: acetonitrile. Method: competitive 7Li nmr technique.  
 \*\*\*\*\*

C8H17NO4                    H2L    CAS 6353-68-6 (3238)  
 N,N-Di-(2-Hydroxypropyl)glycine; (HO.CH2.CH2)2N.CH2.COOH

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

Co++            gl    oth/un 30°C 0.10M U                    K1=5.16    B2=8.51    1957FCa (62782)2528  
 \*\*\*\*\*

C8H18N2O                    L    (6585)  
 4,7-Dimethyl-1-oxa-4,7-diazacyclononane;

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

Co++            gl    NaClO4 25°C 1.0M C                    K1=5.48                    1999UGa (62819)2529  
 -----

Co++            gl    KNO3    25°C 0.10M U                    K1=5.76                    1990CCa (62820)2530  
 \*\*\*\*\*

C8H18N2O2                    L    CAS 294-92-8 (654)  
 1,7-Dioxo-4,10-diazacyclododecane;

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

Co++ gl R4N.X 25°C 0.10M U K1=6.01 1985NSb (62841)2532  
B(CoH-1L)=-4.3  
-----

Co++ gl R4N.X 25°C 0.10M C K1=5.76 1983Lca (62842)2532  
\*\*\*\*\*  
C8H18N2O6S2 H2L PIPES CAS 5625-37-6 (2798)  
Piperazine-1,4-bis(2-ethanesulfonic acid); C4H8N2-(CH2.CH2.SO3H)2  
-----

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

Co++ gl KNO3 25°C 0.10M C K1=3.30 2001A0a (62886)2533  
\*\*\*\*\*  
C8H18N2O10P2 H6L CAS 2310-83-0 (5667)  
1,2-Diaminoethane-N,N-diethanoic-N',N'-dimethylphosphonic acid;  
(HOOC.CH2)2NCH2CH2N(CH2.PO3H2)2  
-----

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

Co++ gl KNO3 25°C 0.10M U K(Co+H2L)=3.70 1976TIa (62915)2534  
-----

Co++ gl KNO3 25°C 0.10M U M K1=16.03 1975ITa (62916)2535  
\*\*\*\*\*  
C8H18N4O2 L CAS 3216-87-3 (2882)  
N,N'-Bis(2-carbamoylethyl)-1,2-diaminoethane;  
-----

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

Co++ gl KNO3 25°C 0.10M U K1=5.39 1983LIa (62957)2536  
\*\*\*\*\*  
C8H18N4O2 L (6627)  
N,N'-Bis(3-aminopropyl)oxamide; (CO.NH.(CH2)3.NH2)2  
-----

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

Co++ gl NaNO3 25°C 0.10M C M 1992LJb (62966)2537  
B(CoCuL)=24.3  
B(CoCu2L2)=47.8  
B(CoCu3L3)=70.7  
\*\*\*\*\*

C8H19NO2 L CAS 102-79-4 (3841)  
N-Butyl-2,2'-iminodiethanol (butyldiethanolamine);  
-----

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

Co++ gl oth/un 25°C 0.43M U K1=2.50 B2=4.07 1966SKe (63032)2538  
K3=1.23

Medium: CH2OHCH2NH2.HNO3

\*\*\*\*\*

C8H19N05 L Bis-tris CAS 6976-37-0 (2827)  
Bis-(2-hydroxyethyl)imino-tris(hydroxymethyl)methane;

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

Co++ gl KNO3 25°C 1.0M C K1=1.78 1980SAb (63051)2539  
K(Co(ATP)+L)=1.33

\*\*\*\*\*

C8H19N06P2 H4L CAS 5995-40-4 (1338)  
N-Cyclohexyliminobis(methylenephosphonic) acid; C6H11.N(CH2PO3H2)2

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

Co++ gl KCl 25°C 0.20M C 2000Kka (63081)2540  
B(CoHL)=15.97  
B(CoH2L)=21.03  
B(CoH-1L)=-2.42

-----  
Co++ gl KNO3 25°C 1.00M M 1982Bgb (63082)2541

K(Co+HL)=2.80

\*\*\*\*\*

C8H19N204P H2L (1577)  
1-(N-L-Leucylamino)ethanephosphonic acid; H2NCH(CH2CH(CH3)2)CONHCH(CH3)PO3H2

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

Co++ gl KCl 25°C 0.10M U K1=2.834 1995HLA (63095)2542  
B(CoH-1L)=-5.68

For the (S,R) isomer, K1=2.736, B(CoH-1L)=-5.801.

\*\*\*\*\*

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

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

Co++ gl NaClO4 25°C 1.0M C K1=9.30 1999UGa (63100)2543

\*\*\*\*\*

C8H19N30 L (4430)  
1-Oxa-4,7,10-triazacyclododecane;

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

Co++ gl KNO3 25°C 0.10M U K1=10.541 1991ACa (63134)2544  
B(CoH-1L)=2.84  
K(CoL+OH)=6.12

\*\*\*\*\*

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



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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaClO4 35°C 0.20M C    M    K1=11.11      1984KKa (63143)2545
K(2CoL+O2=(CoL)2O2) = 5.7
*****
C8H19O2PS2          HL                      CAS 2253-44-3 (2060)
O,0'-Dibutyl dithiophosphoric acid; (C4H9O)2P(S)SH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      ISE alc/w 25°C 90% U      K1=2.18  B2=3.73  1972TCa (63154)2546
Medium: 90% EtOH, 0.3 M NaClO4
*****
C8H19O2PS2          HL                      CAS 2253-52-3 (4584)
O,0-Di-isobutyl phosphorodithioic acid; ((CH3)2.CH.CH2O)2P(S)SH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      ISE alc/w 25°C 90% U      K1=1.94  B2=3.45  1972TCa (63166)2547
Medium: 90% EtOH, 0.3 M NaClO4
*****
C8H19PS2           HL                      CAS 32435-51-5 (4552)
Di-n-butyl phosphinedithioic acid; (C4H9)2PSSH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      ISE alc/w 25°C 90% U      K1=2.62  B2=4.88  1972TCa (63206)2548
Medium: 90% EtOH, 0.3 M NaClO4
*****
C8H20N2           L                      CAS 373-44-4 (5746)
1,8-Diaminooctane; NH2.(CH2)8.NH2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      cal alc/w 25°C 100% U    H    K1=2.47      1985BUd (63213)2549
Medium: MeOH, 0.05 M Et4N.NO3. DH=-26.4 kJ mol-1
*****
C8H20N2O2         L                      CAS 82502-45-2 (3239)
N,N'-Di-(2-Hydroxypropyl)ethylenediamine; (CH3.CH(OH).CH2.NH.CH2.)2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  oth/un 25°C 0.50M U      K1=5.02  B2=9.5    1960HDa (63225)2550
*****
C8H20N2O3         L                      (5747)
1,11-Diamino-3,6,9-trioxaundecane; NH2.C2H4.0.C2H4.0.C2H4.0.C2H4.NH2
-----

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

Co++ cal alc/w 25°C 100% U H K1=2.25 1985BUd (63229)2551  
Medium: MeOH, 0.05 M Et4N.NO3. DH=-16.2 kJ mol-1

\*\*\*\*\*

C8H20N4 L Cyclen CAS 294-90-6 (10)  
1,4,7,10-Tetraazacyclododecane; cyclo(-(NH.CH2.CH2.)4-)

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

Co++ cal NaClO4 25°C 0.15M U H 1999CCa (63281)2552  
By calorimetry, DH(Co+L=CoL)=-46.3 kJ mol-1.

-----  
Co++ kin NaClO4 25°C 1.00M C 1994BCb (63282)2553  
K(CoLCO3+H=CoLHCO3)=0.15  
K(CoLOH2OCO2H+H=CoL(OH2)2+CO2)=0.15

-----  
Co++ gl NaClO4 35°C 0.20M U K1=13.79 1980KKa (63283)2554  
B(Co2H-1L4(O2))=28.45

\*\*\*\*\*

C8H22N2O6P2 H4L CAS 13516-59-1 (3850)  
2,2'-(Ethylenedi-imino)bis(propylphosphonic acid);

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

Co++ gl KCl 25°C 0.10M U K1=11.39 1965DKb (63332)2555  
K(Co+HL)=3.84

\*\*\*\*\*

C8H22N2O6P2 H4L (2114)  
Hexamethylenediamine-N,N-dimethylphosphonic acid; H2N(CH2)6N(CH2PO3H2)2

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

Co++ gl KNO3 25°C 0.10M U K(Co+HL)=7.07 1977TIa (63361)2556

\*\*\*\*\*

C8H22N4 L CAS 35513-90-7 (1545)  
1,4,9,12-Tetraazadodecane; NH2.(CH2)2.NH.(CH2)4.NH.(CH2)2.NH2

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

Co++ gl KNO3 25°C 1.00M C H K1=12.20 1982ABc (63381)2557  
By calorimetry: DH1=-56.5 kJ mol-1, DS1=43.1

\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.10M C H K1=11.04 1994CCc (63400)2558  
DH(K1)=-51.3 kJ mol-1; TdS(K1)=11.7

\*\*\*\*\*

C8H22N4O L CAS 80042-24-6 (5464)  
1,4,10,13-Tetraaza-7-oxatridecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C M K1=9.47 1982BTb (63409)2559  
K(CoL+H)=6.20

Ternary complex with O2

\*\*\*\*\*

C8H22N4S L CAS 80042-28-0 (5465)  
1,4,10,13-Tetraaza-7-thiatridecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C M K1=11.46 1982BTb (63414)2560  
K(CoL+H)=4.29

Ternary complex with O2

\*\*\*\*\*

C8H23N5 L Tetren CAS 112-57-2 (715)  
1,4,7,10,13-Pentaazatridecane (Tetraethylenepentamine);

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ cal KNO3 25°C 0.10M U HM 1984CCa (63459)2561  
DH(K1)=-59.6 kJ mol<sup>-1</sup>; DH(Co2L2O2)=-290.3 kJ mol<sup>-1</sup>

-----  
Co++ cal KNO3 25°C 0.10M C 1982Tmd (63460)2562  
DH1=-75.8 kJ/mol

-----  
Co++ gl NaClO4 25°C 0.50M C M 1978KPa (63461)2563  
K(CoL+H)=6.4  
K(CoHL+H)=5.9

Oxygen-bound species: K(Co2L2(O2)+2H)=12.9  
K(2(CoHL)+O2)=8.1; K(2CoL+O2)=8.0

-----  
Co++ gl KNO3 25°C 0.10M U M K1=13.20 1972NMb (63462)2564  
K(Co+HL)=8.93  
B(Co2L2(O2))=38.7

[O2] is in atmospheres

-----  
Co++ cal KCl 25°C 0.10M U H 1964PVa (63463)2565  
DH(K1)=-57.9 kJ mol<sup>-1</sup>, DS=60.6 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ gl KCl 25°C 0.10M U K1=13.30 1963PVa (63464)2566  
K(Co+H2L)=4.9

-----  
Co++ gl none 25°C 0.0 U T K1=15.07 1958JSa (63465)2567  
K1=14.97(35 C), 14.87(45 C)

\*\*\*\*\*

C9H4N2F4 L CAS 124005-68-1 (7590)

N-(2,3,5,6-Tetrafluorophenyl)imidazole;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  NaNO3  25°C 0.50M M          K1=1.83      1998KSa (63503)2568
*****
C9H5NOBr2          HL                      CAS 521-74-4 (3279)
5,7-Dibromo-8-hydroxyquinoline;
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  diox/w 35°C 75% U          K1=8.82     B2=16.55    1970GMh (63515)2569
Medium: 75% v/v dioxan, 0.2 M NaClO4
*****
C9H5NOCl2         HL                      CAS 773-76-2 (3278)
5,7-Dichloro-8-hydroxyquinoline;
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  diox/w 35°C 75% U          K1=8.63     B2=16.22    1970GMh (63539)2570
Medium: 75% dioxan, 0.2 M NaClO4
*****
C9H5NOI2          HL                      CAS 83-73-8 (3280)
5,7-Di-iodo-8-hydroxyquinoline;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  diox/w 35°C 75% U          K1=8.75     B2=16.45    1971MAb (63555)2571
Medium: 75% v/v dioxan, 0.1 M NaClO4
*****
C9H5NO2Br2        HL                      CAS 16846-41-1 (4666)
5,7-Dibromo-8-hydroxyquinoline N-oxide;
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  diox/w 35°C 75% U          K1=6.05     B2=11.48    1970GMh (63581)2572
Medium: 75% v/v dioxan, 0.2 M NaClO4
*****
C9H5NO2Cl2        HL                      CAS 21168-33-2 (4665)
5,7-Dichloro-8-hydroxyquinoline N-oxide;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  diox/w 35°C 75% U          K1=5.89     B2=11.21    1970GMh (63591)2573
Medium: 75% v/v dioxan, 0.1 M NaClO4
*****
C9H5N3O5          HL                      CAS 1084-32-8 (4608)
5,7-Dinitro-8-hydroxyquinoline;
-----
```

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

-----  
Co++ gl diox/w 35°C 75% U K1=6.13 B2=10.94 1970GMh (63626)2574  
Medium: 75% dioxan, 0.2 M NaClO4

\*\*\*\*\*  
C9H6N04IS H2L Ferron CAS 547-91-1 (275)  
7-Iodo-8-hydroxyquinoline-5-sulfonic acid; (HO)(HO3S)C9H4NI  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 35°C 0.10M U K1=7.24 B2=14.48 1983ABb (63769)2575  
-----

Co++ gl oth/un 20°C 0.03M U K1=7.85 1977KCb (63770)2576  
K1=7.80 by solubility  
-----

Co++ gl KNO3 28°C 0.10M U K1=6.70 B2=10.87 1967LMb (63771)2577  
-----

Co++ gl KCl 25°C 0.10M U K1=7.3 B2=13.6 1963STa (63772)2578  
K3=5.0  
-----

\*\*\*\*\*  
C9H6N2Br2 L CAS 36107-02-5 (4611)  
8-Amino-5,7-dibromoquinoline;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp diox/w 25°C 50% U K1=2.2 1972YTa (63846)2579  
-----

\*\*\*\*\*  
C9H6N2O5S H2L CAS 63347-20-6 (9087)  
5-Nitroso-8-hydroxyquinoline-7-sulfonic acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp KCl 20°C 0.50M C K1=3.7 1977M0b (63870)2580  
-----

\*\*\*\*\*  
C9H6N2O6S H2L CAS 31568-82-8 (9086)  
5-Nitro-8-hydroxyquinoline-7-sulfonic acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp KCl 20°C 0.50M C K1=6.2 1977M0b (63883)2581  
-----

\*\*\*\*\*  
C9H6N2O6S H2L CAS 15851-63-3 (1433)  
7-Nitro-8-hydroxyquinoline-5-sulfonic acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 35°C 0.10M U K1=6.18 B2=11.79 1983ABb (63906)2582  
-----

Co++ sp KCl 20°C 0.50M C K1=6.0 1977M0b (63907)2583  
-----

Co++ gl NaClO4 25°C .005M U K2=5.41 1963FFa (63908)2584  
-----

K3 < 3.8

-----  
Co++ ISE oth/un 25°C 0.0 U K1=6.06 1955NUa (63909)2585  
\*\*\*\*\*  
C9H6N3OClS HL CAS 27004-41-7 (216)  
2-(2'-Thiazolylazo)-4-chlorophenol; C3H2NS.N:N.C6H3(Cl).OH  
-----

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

Co++ sp diox/w 20°C 10% U 1970KIa (63920)2586  
K(Co+HL=CoL+H)=5.7  
\*\*\*\*\*

C9H6N3O2BrS H2L CAS 24598-15-0 (4686)  
4-(5'-Bromo-2'-thiazolylazo)-1,3-dihydroxybenzene;  
-----

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

Co++ sp NaCl04 ? 0.10M U B2=17.52 1969BNb (63933)2587  
\*\*\*\*\*

C9H6O4 HL Ninhydrin CAS 485-47-2 (2536)  
1,2,3-Indantrione monohydrate, Trioxohydrindene monohydrate;  
-----

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

Co++ gl alc/w 30°C 5% U M 1995RRb (63949)2588  
K(CoA+L)=6.54  
B(CoAL)=12.49

Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. H2A is thioglycolic acid.  
\*\*\*\*\*

C9H7N L CAS 119-65-3 (487)  
Isoquinoline;  
-----

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

Co++ sp mixed 27°C ? U T 1976USa (64024)2589  
K(CoCl2+2L)=-1.65

Also data at 36.8 C. Medium: isoquinoline + chlorobenzene  
-----

Co++ sp non-aq 20°C 100% U M 1964KKb (64025)2590  
K(CoCl2+2L)=0.99  
K(CoBr2+2L)=0.862  
K(CoI2+2L)=0.36  
K(Co(NCO)2+2L)=1.03

Medium: CHCl3. K(Co(NCS)2+2L)=4.38  
\*\*\*\*\*

C9H7N L CAS 91-22-5 (1538)  
Quinoline;  
-----

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

Co++ gl NaCl04 25°C 0.20M C M K1=2.60 1993BAb (64050)2591  
 K(Co(gly)+L)=5.13  
 K(Co(ala)+L)=5.00  
 K(Co(val)+L)=4.62  
 K(CoA+L)=4.62

K(Co(gln)+L)=4.25, K(Co(glu)+L)=8.15, K(Co(asp)+L)=8.65. HA is asparagine.

Co++ cal non-aq 25°C 100% C H K1=4.255 B2= 8.57 1989JVa (64051)2592  
 Medium: acetone. DH(K1)=-30.2 kJ mol<sup>-1</sup>, DS(K1)=-19.9 J K<sup>-1</sup> mol<sup>-1</sup>;  
 DH(B2)=-41.5, DS(B2)=24.8. Reaction is CoCl<sub>2</sub>+nL.

Co++ sp oth/un ? 100% U I M 1971AMc (64052)2593  
 K(CoCl<sub>2</sub>+L)=1.18  
 K(CoCl<sub>2</sub>+2L)=3.93

Medium: 3-methylbutanol. Data also in mixed solvents with benzene and CHCl<sub>3</sub>

Co++ sp non-aq ? 100% U I M 1971MAe (64053)2594  
 K(CoCl<sub>2</sub>+L)=0.92  
 K(CoCl<sub>2</sub>+L)=1.00, x=25  
 K(CoCl<sub>2</sub>+L)=1.15, x=50  
 K(CoCl<sub>2</sub>+2L)=1.89, x=50

K(CoCl<sub>2</sub>+L)=1.35, K(CoCl<sub>2</sub>+2L)=3.0 at x=75.

Medium : dimethylformamide with x% benzene.

Co++ sp mixed ? 75% U 1971TMb (64054)2595  
 K(Co(CNS)<sub>3</sub>+2HL)=2.10  
 K(Co(CNS)<sub>4</sub>+2HL)=1.90

Medium: 75% acetone

Co++ sp oth/un ? 100% U I M 1970Lda (64055)2596  
 K(CoCl<sub>2</sub>+L)=2.64  
 K(CoCl<sub>2</sub>+2L)=4.60

Medium: cyclohexanone. In 2-chloroethanol, K(CoCl<sub>2</sub>+L)=0.90, K(CoCl<sub>2</sub>+2L)=2.28  
 In CH<sub>3</sub>CN, K(CoCl<sub>2</sub>+L)=2.38, K(CoCl<sub>2</sub>+2L)=4.1

Co++ sp oth/un ? 100% U 1970Lda (64056)2597  
 K(CoBr<sub>2</sub>+L)=2.72  
 K(CoBr<sub>2</sub>+2L)=4.60

Medium: cyclohexanone. In 2-chloroethanol, K(CoBr<sub>2</sub>+L)=0.90, K(CoBr<sub>2</sub>+2L)=2.33

C9H7NO HL CAS 70254-42-1 (4612)

2-Hydroxyquinoline;

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

Co++ sp oth/un 16°C 0.01M U B2=19.38 1972LUd (64070)2598

C9H7NO HL Oxine CAS 148-24-3 (504)

8-Hydroxyquinoline (8-quinolinol);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	25°C	20%	M	M	K1=8.16	1998ABa (64203)	2599
Medium: 20% w/w EtOH/H2O, 0.1 M KNO3.									
Co++	gl	KNO3	25°C	0.10M	U	M	K1=11.52 B2=22.82	1990NAa (64204)	2600
K(CoL+furoic acid)=4.18									
Co++	kin	alc/w	20°C	100%	U		K1=10.4 B2=21.0	1988BTb (64205)	2601
K(Co+HL=CoL+H)=-3.6									
K(Co+2HL=CoL2+2H)=-7.0									
Medium: MeOH, 0.1 M NaClO4.									
Co++	gl	KCl	25°C	0.1M	U	T	K1=9.15 B2=17.23	1986MLb (64206)	2602
Co++	gl	diox/w	30°C	75%	U		K1=10.9 B2=21.2	1984NYa (64207)	2603
Co++	gl	KNO3	25°C	0.2M	U	I	K1=8.98	1984VZa (64208)	2604
in 0.5 M KNO3 K1=8.97;									
in 1.0 M KNO3 K1=8.63;									
Co++	gl	diox/w	25°C	50%	U		K1=9.68 B2=18.53	1984YAA (64209)	2605
Co++	sp	NaClO4	25°C	0.10M	U			1975BUB (64210)	2606
K1eff=2.87 at pH 3.01									
B2eff=4.83 at pH 3.01									
B(2,2)eff=6.72 at pH 3.01									
Co++	dis	oth/un	20°C	0.10M	U		K1=9.06 B2=17.52	19700Ka (64211)	2607
B3=24.35									
Co++	cal	diox/w	25°C	50%	U	H		1968GFa (64212)	2608
Medium: 50% dioxan, 0.1 M NaClO4. DH(K1)=-30.1 kJ mol <sup>-1</sup> , DS=83.6 J K <sup>-1</sup> mol <sup>-1</sup>									
DH(B2)=-64.4, DS=130									
Co++	gl	diox/w	25°C	50%	U		K1=9.65 B2=18.05	1967SFa (64213)	2609
Co++	gl	diox/w	40°C	50%	U	T H	B2=19.17	1959FFa (64214)	2610
B2=19.8(15 C),19.50(25 C). DH(B2)=-46.4 kJ mol <sup>-1</sup> , DS=217 J K <sup>-1</sup> mol <sup>-1</sup> .									
By calorimetry, 25 C: B2=19.20; DH(B2)=-85.3, DS=88									
Co++	gl	oth/un	20°C	0.01M	U		K1=9.1 B2=17.2	1953ALa (64215)	2611
Co++	gl	oth/un	25°C	0.0	U		K1=8.65	1953NAb (64216)	2612
Co++	gl	diox/w	25°C	50%	U		K1=10.55 B2=19.66	1952JFa (64217)	2613
Co++	gl	diox/w	25°C	70%	U		K1=10.85 B2=20.55	1949MMA (64218)	2614
*****									
C9H7NO2			HL				CAS 10285-97-9	(3257)	



2-Hydroxyquinoline 1-oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	oth/un	20°C	0.10M	U			K1=5.1	1956ARb (64386)	2615
*****										
C9H7N02		HL						CAS 1477-50-5	(4610)	

2-Indolecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	oth/un	25°C	0.0	U			K1=1.25	1972LPa (64392)	2616
*****										
C9H7N02		HL						CAS 1127-45-3	(4614)	

8-Hydroxyquinoline-N-oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U			B2=9.50	1970GMb (64398)	2617
*****										
C9H7N04S		H2L			Sulfoxine			CAS 84-88-8	(448)	

8-Hydroxyquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	35°C	0.10M	U			K1=8.44 B2=15.45	1983ABa (64513)	2618
*****										
Co++	gl	diox/w	25°C	50%	U	H		K1=7.38 B2=17.55	1968GFa (64514)	2619
Medium: 50% dioxan, 0.1 M NaClO4. By calorimetry: DH(K1)=-26.3 kJ mol <sup>-1</sup> (?), DS=92 J K <sup>-1</sup> mol <sup>-1</sup> (?); DH(B2)=-60.6, DS=134										

Co++	gl	NaClO4	25°C	.005M	U			K1=8.54 B2=15.76 K3=5.39	1963FFa (64515)	2620
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Co++	gl	KNO3	25°C	0.10M	U			K1=8.11 B2=15.06 K3=5.36	1959RGa (64516)	2621
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Co++	sp	oth/un	25°C	0.0	U			K1=8.82 B2=15.92	1954NUa (64517)	2622
------	----	--------	------	-----	---	--	--	------------------	-----------------	------

Co++	gl	oth/un	20°C	0.01M	U			K1=9.2 B2=16.8	1953ALa (64518)	2623
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Co++	gl	oth/un	25°C	0.01M	U			K1=9.25 B2=16.70	1949MMa (64519)	2624
*****										
C9H7NS		HL			Quinolinethiol			CAS 491-33-8	(1028)	

8-Mercaptoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	cal	diox/w	25°C	50%	U	H			1968GFa (64644)	2625

Medium: 50% dioxan, 0.1 M NaClO4. DH(K1)=-64.4 kJ mol<sup>-1</sup>, DS=-63 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ gl diox/w 25°C 50% U K1=7.9 1966KFb (64645)2626

Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C9H7N3O2 HL (1328)

4-Oximino-3-phenyl-2-pyrazolin-5-one;

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

-----  
Co++ gl alc/w 20°C 50% U T K1=3.83 B2=6.76 1981SSc (64662)2627

At 30 C: K1=4.08, B2=6.70

\*\*\*\*\*

C9H7N3O2S H2L TAR CAS 2246-46-0 (707)

4-(2'-Thiazolylazo)-resorcinol; C3H2NS.N:N.C6H3(OH)2

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

-----  
Co++ sp NaClO4 ? 0.10M U B2=16.11 1969BId (64692)2628

-----  
Co++ gl diox/w 25°C 50% U 1966SCd (64693)2629

K(Co+HL)=12.05

K(CoHL+HL)=11.23

\*\*\*\*\*

C9H8N04P H2L CAS 7220-39-5 (1930)

8-Quinolyl-phosphoric acid;

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

-----  
Co++ gl NaCl 25°C 0.15M U K1=1.78 1989AKa (64755)2630

\*\*\*\*\*

C9H8N2 L CAS 578-66-5 (503)

8-Aminoquinoline;

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

-----  
Co++ gl KCl 20°C 0.10M U K1=2.66 1957WSa (64780)2631

\*\*\*\*\*

C9H8N2O2S HL (8279)

Dehydroxydemethyl-desferrithiocin;

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

-----  
Co++ gl KNO3 25°C 0.10M C B2=7.6 1990ARa (64802)2632

\*\*\*\*\*

C9H8N2O4S2 HL CAS 219931-32-5 (8394)

3-Phenylsulfonamidorhodanine;

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

Co++ sp alc/w 30°C 20% C T H K1=4.60 B2= 8.95 1998EGa (64828)2633  
Medium: 20% v/v EtOH/H2O, 0.10 M KCl. Also data for 35 and 45 C.  
DH and DS values reported

\*\*\*\*\*  
C9H8N4 L CAS 34938-47-1 (8045)  
(2-Imidazoleazo)benzene;

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

Co++ sp NaClO4 25°C 0.30M C T H K1=2.09 1998DAa (64845)2634  
Data for 25-40 C. DH(K1)=14.4 kJ mol<sup>-1</sup>, DS(K1)=88 J K<sup>-1</sup> mol<sup>-1</sup>.  
K(H+L)=4.00.

\*\*\*\*\*  
C9H8N4O5 L CAS 487-16-1 (8470)  
Isatin 3-thiosemicarbazone; Indole-2,3-dione 3-(thiosemicarbazone);

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

Co++ gl alc/w 30°C 60% M K1=5.95 B2=11.50 1996HTb (64849)2635  
Medium: 60% v/v EtOH/H2O, 0.04 M KCl.

\*\*\*\*\*  
C9H8N4O3S HL ABS CAS 847943-99-1 (9223)  
4-Acrylamidobenzenesulfonylazide;

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

Co++ gl alc/w 25°C 50% C T H K1=8.22 B2=14.61 2004JEa (64858)2636  
Medium: 50% v/v EtOH/H2O, 0.10 M KCl. DH(K1)=-28.7 kJ mol<sup>-1</sup>, DS(K1)=  
-254 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-26.8, DS(K2)=-212. Also data for 35 and 45 C

\*\*\*\*\*  
C9H8O3 H2L o-Coumaric acid CAS 501-98-4 (6327)  
4-Hydroxycinnamic acid; HO.C6H4.CH:CH.COOH

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

Co++ gl NaClO4 25°C 0.10M U K1=7.70 B2=12.10 1975TBb (64883)2637  
\*\*\*\*\*

C9H8O4 H3L Caffeic acid CAS 331-39-5 (6037)  
3-(3,4-Dihydroxyphenyl)propenoic acid; (HO)2C6H3.CH:CH.COOH

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

Co++ gl NaCl 25°C 0.10M U 1992CLa (64916)2638  
B(CoH-1L)=-4.12  
B(Co2H-1L)=-1.75

Ligand defined as H2L

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	NaClO4	?	0.20M	U		K1=6.07	1967GDb (64931)	2639
By glass electrode: K1=6.30, K2=4.82, K3=2.82									
*****									
C9H8O4		H2L					CAS 4316-23-8	(4593)	
4-Methylphthalic acid; CH3.C6H3(COOH)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	oth/un	25°C	0.04M	U		K1=2.88	1971NPc (64969)	2640
*****									
C9H8O5		H2L					CAS 635-53-0	(3246)	
2-(Carboxymethoxy)benzoic acid; HOOC.CH2.O.C6H4.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	35°C	50%	U		K1=5.8	1958YSa (65020)	2641
*****									
C9H9NO2		HL					CAS 25355-34-4	(6206)	
1-Phenyl-prop-1,2-dione monoxime; C6H5.CO.C(:NOH).CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	25°C	75%	U		K1=6.7 B2=10.80	1986BTa (65034)	2642
Medium: 75% MeOH/H2O, 0.1 M NaClO4									
*****									
C9H9NO3		HL					Hippuric acid CAS 495-69-2	(1184)	
Benzoylaminoethanoic acid, N-benzoylglycine; C6H5.CO.NH.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	EMF	diox/w	?	32%	U	I	K1=3.08	1970STg (65054)	2643
In 43% dioxan, K1=3.21; 48% K1=3.30; 60% K1=3.45									
*****									
C9H9NO4		HL					CAS 55805-95-3	(6322)	
2-Hydroxy-5-nitropropiophenone; (HO)(NO2)C6H3.CO.CH2.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	diox/w	40°C	50%	U		K1=3.57	1975PSb (65076)	2644
*****									
C9H9NO4		H2L					Salicylglycine CAS 487-54-7	(3869)	
N-(2-Hydroxybenzoyl)glycine, 2-hydroxyhippuric acid; HO.C6H4.CO.NH.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	25°C	50%	U		K1=3.13 B2= 7.11	1989MSi (65093)	2645
B(CoH-1L)=-4.19									
K(Co+OH+L)=9.81									

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.

\*\*\*\*\*

C9H9N04 H2L CAS 612-42-0 (3263)  
N-(Carboxymethyl)anthranilic acid; HOOC.C6H4.NH.CH2.COOH

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

Co++ gl KNO3 25°C 0.10M U K1=3.20 1973UWb (65106)2646  
-----

Co++ gl diox/w 35°C 50% U K1=5.6 B2=8.6 1958YSa (65107)2647  
-----

\*\*\*\*\*

C9H9N3O2S2 HL Sulfathiazole CAS 72-14-0 (8357)  
4-Amino-N-2-thiazoly-1-benzenesulfonamide;

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

Co++ gl alc/w 30°C 50% C M 1999MBc (65130)2648  
-----

B(Co(gly)L)=9.97  
B(CoAL)=9.24  
B(Co(met)L)=8.63  
B(CoH-1(gly)L)=0.70

In 50% v/v EtOH/H2O, 0.10 M NaNO3. B(CoH-2(gly)L)=-8.47; B(CoH-1AL)=0.94,  
B(CoH-2AL)=-8.46; B(CoH-1(met)L)=1.88, B(CoH-2(met)L)=-7.20. A: Beta-ala

-----  
Co++ gl diox/w 30°C 50% U K1=3.44 B2= 6.51 1993MBc (65131)2649  
-----

\*K(CoL)=-8.26  
\*K(CoL2)=-6.14  
\*K(Co(OH)L2)=-8.14

Medium: 50% v/v dioxane/H2O, 0.10 M NaNO3.

\*\*\*\*\*

C9H10N2 L CAS 7035-68-9 (5669)  
1-Ethylbenzimidazole;

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

Co++ sp non-aq 25°C 100% U B2=2.14 1984DPa (65189)2650  
-----

Medium: DMSO

\*\*\*\*\*

C9H10N2 L CAS 582-60-5 (8433)  
5,6-Dimethylbenzimidazole;

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

Co++ gl KNO3 35°C 0.10M C M K1=2.35 1997PSb (65194)2651  
-----

K(CoL+A)=6.33

H2A is thiamine orthophosphoric acid.

\*\*\*\*\*

C9H10N2O HL (3264)  
2,2'-Hydroxyphenylimidazoline;

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	oth/un	20°C	0.01M	U		K1=7.5 B2=14.0	1956ARb (65201)	2652
*****									
C9H10N2O2			HL				CAS 52829-64-8	(4627)	
2-Acetoacetamidopyridine; C5H4N.NH.CO.CH2.CO.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U		K1=4.52 B2=8.27	1967HAb (65225)	2653
*****									
C9H10N2O3			HL				(3268)		
4-Methoxyphenylglyoxime; CH3O.C6H4.C(:N.OH).CH:N.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U		K1=9.3 B2=17.9	1958PBa (65254)	2654
*****									
C9H10N2O3			HL				CAS 62134-49-0	(9110)	
N-(2-Pyridyl)-3-carboxypropanamide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	U		K1=2.95 B2= 5.12	2002GSa (65260)	2655
*****									
C9H10N2O5			H3L				(4645)		
4,5,6,7-Tetrahydroindazol-3-one-5,5-dicarboxylic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U			1969ZSa (65274)	2656
							K(Co+H2L)=2.59		
							K(Co+HL)=5.41		
*****									
C9H10N2O5			H2L				CAS 130291-86-0	(8051)	
N-(2-Hydroxy-4-nitrobenzyl)glycine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	C		K1=7.46	1983CHa (65286)	2657
							K(Co+HL)=3.86		
							K(CoL+H)=6.0		
							K(Co+OH+L)=11.48		
							*K(CoL)=-9.98		
*****									
Co++	gl	NaClO4	25°C	0.10M	U		K1=7.43 B2=13.08	1983CHb (65287)	2658
*****									
C9H10N2S			L				CAS 14610-11-8	(8494)	
2-Mercaptoethylbenzimidazole;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	30°C	0.10M	M	M			1995RMa (65293)	2659
								K(Co(bpy)+L)=6.83 K(Co(phen)+L)=6.58 K(CoA+L)=6.46		

A is 1,2-diaminobenzene.

Co++	gl	NaClO4	30°C	0.10M	M			K1=8.05	1995RMa (65294)	2660
*****										
C9H10N6			L					CAS 3656-02-8	(8053)	
4-Phenylazo-3,5-diaminopyrazole;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	40%	U			K1=6.62 B(Co2L)=17.5	1994AAb (65302)	2661

Medium: 40% EtOH/H2O, 0.10 M NaClO4. Also data for the 4'-methyl and 4'-carboxy-phenyl derivatives.

*****										
C9H10N6B			HL					CAS 18583-60-3	(7936)	
Hydrotris(pyrazolyl)borate;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	dis	non-aq	25°C	100%	C				2001KSb (65309)	2662
								K(Co+2HL=CoL2(org)+2H)=6.3		

Method: solvent extraction into chloroform.

K: Co+2HL(org)=CoL2(org)+2H.

*****										
C9H10O2			HL					CAS 699-91-2	(4594)	
2-Hydroxy-3-methylacetophenone; HO(CH3).C6H3.CO.CH3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	27°C	75%	U			K1=10.53 B2=18.76	1973KDC (65319)	2663
Medium: 50% v/v dioxan, 0.5 M NaClO4										

*****										
C9H10O2			HL					CAS 6921-64-8	(4595)	
2-Hydroxy-4-methylacetophenone; HO(CH3).C6H3.CO.CH3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	27°C	75%	U			K1=9.63 B2=17.54	1973KDC (65325)	2664
Medium: 50% v/v dioxan, 0.5 M NaClO4										

*****										
C9H10O2			HL					CAS 1450-72-2	(4596)	
2-Hydroxy-5-methylacetophenone; HO(CH3).C6H3.CO.CH3										

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

-----  
Co++ gl diox/w 27°C 75% U K1=8.03 B2=14.94 1973KDc (65332)2665  
Medium: 50% v/v dioxan, 0.5 M NaClO4

\*\*\*\*\*  
C9H1002 HL CAS 610-99-1 (4597)  
2-Hydroxypropioiphenone;

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

Co++ gl diox/w 27°C 75% U K1=8.88 B2=15.31 1973KDc (65342)2666  
K3=4.40

Medium: 75% dioxan, 0.1 M NaClO4

\*\*\*\*\*  
C9H1002S HL CAS 21101-79-1 (3267)  
2-Ethylthiobenzoic acid; CH3.CH2.S.C6H4.COOH

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

Co++ gl diox/w 30°C 50% U K1=3.1 1956IFa (65406)2667

\*\*\*\*\*  
C9H1003 H2L CAS 1643-34-0 (4598)  
2,6-Dihydroxy-4-methylacetophenone; (HO)2(CH3).C6H2.CO.CH3

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

Co++ gl diox/w 27°C 75% U K(Co+HL)=7.85 1973KDc (65428)2668

Medium: 75% dioxan, 0.1 M NaClO4

\*\*\*\*\*  
C9H1003 HL Phenyllactic CAS 828-01-3 (1190)  
2-Hydroxy-3-phenylpropanoic acid, b-Phenyllactic acid; C6H5.CH2.CH(OH).COOH

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

Co++ sp oth/un ? ? U K1=7.0 1976SCb (65448)2669

\*\*\*\*\*  
C9H1003S HL CAS 18619-21-2 (4637)  
(2-Methoxyphenylthio)ethanoic acid; CH3O.C6H4.S.CH2.COOH

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

Co++ ISE KNO3 25°C 0.10M C K1=0.74 1972FGb (65499)2670  
By competition with Ag+ using Ag ISE

\*\*\*\*\*  
C9H1003S HL CAS 3996-32-5 (4638)  
(3-Methoxyphenylthio)ethanoic acid; CH3O.C6H4.S.CH2.COOH

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

Co++ ISE KNO3 25°C 0.10M C K1=0.70 1972FGb (65508)2671



By competition with Ag+ using Ag ISE

\*\*\*\*\*

C9H1003Se HL (4640)  
(2-Methoxyphenylseleno)ethanoic acid; CH3O.C6H4.Se.CH2.COOH

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

Co++ ISE KNO3 25°C 0.10M C K1=0.65 1972FGb (65521)2672

By competition with Ag+ using Ag ISE

\*\*\*\*\*

C9H1008 H4L CAS 3724-52-5 (1264)  
cis-1,2,3,4-Cyclopentanetetracarboxylic acid; C5H6.(COOH)4

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

Co++ gl NaClO4 30°C 0.19M U K1=5.83 B2=9.67 1985MSb (65636)2673

\*\*\*\*\*

C9H11N L CAS 2294-75-9 (301)  
2-(But-3-enyl)pyridine; C5H4N.CH2.CH2.CH:CH2

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

Co++ gl KNO3 25°C 0.10M U K1=1.2 1974ILa (65661)2674

\*\*\*\*\*

C9H11NO2 HL Phenylalanine CAS 63-91-2 (2)  
2-Amino-3-phenylpropanoic acid; H2N.CH(CH2.C6H5)COOH

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

Co++ gl KNO3 35°C 0.10M C M K1=4.20 1999DSb (65909)2675  
B(CoAL)=4.33

A is thiamine hydrochloride.

-----  
Co++ gl KNO3 35°C 0.10M C M K1=4.20 1997PSb (65910)2676  
K(CoL+A)=3.90

H2A is thiamine orthophosphoric acid.

-----  
Co++ gl KNO3 25°C 0.10M M M 1996ABb (65911)2677  
K(CoL+bipy)=4.19  
K(CoL+phen)=4.28  
K(CoL+imidazole)=3.58

-----  
Co++ gl KNO3 35°C 0.10M U K1=4.06 1990RSe (65912)2678

-----  
Co++ gl KNO3 25°C 0.10M U M K1=4.34 1989MAc (65913)2679  
K(CoA+L)=4.20

H4A is adenosine-5'-triphosphoric acid.

-----  
Co++ gl KNO3 25°C 0.10M C M K1=4.34 1989MAd (65914)2680  
K(CoA+L)=4.14

B(CoAL)=11.19

H2A is N-(2-acetamido)imino diethanoic acid.

-----  
Co++ gl KNO3 35°C 0.20M U M K1=3.90 B2=7.55 1989RVa (65915)2681  
K(CoA+L)=3.76

A=bis(imidazol-2-yl)methane

-----  
Co++ gl KNO3 25°C 0.15M U K1=4.05 B2=7.56 1987FZa (65916)2682

-----  
Co++ gl NaCl 25°C 1.0M C H B2=8.18 1984GDa (65917)2683

By calorimetry: DH(K1)=-4.48 kJ mol<sup>-1</sup>, DS(K1)=61.0 J K<sup>-1</sup> mol<sup>-1</sup>;

DH(K2)=-6.83, DS(K2)=57.7.

-----  
Co++ gl KCl 25°C 0.05M U M T K1=4.05 B2=7.56 1972GSc (65918)2684  
K(Co+L+HA)=7.84, H2A=tyrosine

-----  
Co++ gl NaClO4 25°C 3.0M U T K1=4.45 B2=8.44 1972WYa (65919)2685

-----  
Co++ gl oth/un 20°C 0.01M U B2=7.9 1950ALa (65920)2686

\*\*\*\*\*

C9H11NO2 HL B-Phenylalanine CAS 614-19-7 (187)

3-Amino-3-phenyl-propanoic acid; H2N.CH(C6H5).CH2.COOH

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

-----  
Co++ gl KNO3 25°C 0.20M U M K1=3.89 1988BSc (66008)2687  
K(Co(bpy)+L)=3.63

\*\*\*\*\*

C9H11NO2 HL CAS 21911-69-3 (634)

N-(4-Methylphenyl)aminoethanoic acid; CH3.C6H4.NH.CH2.COOH

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

-----  
Co++ gl NaClO4 25°C 0.10M U M 1984Cma (66045)2688  
K(Co(phen)+L)=4.34

\*\*\*\*\*

C9H11NO3 HL (6512)

2-Amino-2-(4'-methoxyphenyl)ethanoic acid; NH2.CH(C6H4OCH3)COOH

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

-----  
Co++ gl KNO3 25°C 0.10M M K1=3.96 B2=7.11 1990Sma (66055)2689

\*\*\*\*\*

C9H11NO3 H2L o-Tyrosine CAS 7432-92-9 (735)

2-Amino-3-(2-hydroxyphenyl)propanoic acid; HO.C6H4.CH2.CH(NH2).COOH

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

-----  
Co++ gl KCl 25°C 0.20M U H B2=10.5 1984KGa (66063)2690  
B(CoHL)=14.73

B(CoH2L2)=29.0

B(CoHL2)=20.4

DH(CoHL)=-26 kJ mol<sup>-1</sup>;DH(CoHL2)=-29;DH(CoL2)=-5

\*\*\*\*\*

C9H11NO3 H2L m-Tyrosine CAS 587-33-7 (736)  
2-Amino-3-(3-hydroxyphenyl)propanoic acid; HO.C6H4.CH2.CH(NH2).COOH

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

Co++ gl KCl 25°C 0.20M U H B2=8.2 1984KGa (66074)2691  
B(CoHL)=13.89  
B(CoH2L2)=27.2  
B(CoHL2)=18.2

DH(CoHL)=-28 kJ mol<sup>-1</sup>; DH(CoH2L2)=-57; DH(CoHL2)=-33; DH(CoL2)=4 kJ mol<sup>-1</sup>

\*\*\*\*\*

C9H11NO3 H2L Tyrosine CAS 60-18-4 (4)  
2-Amino-3-(4-hydroxyphenyl)propanoic acid; HO.C6H4.CH2.CH(NH2).COOH

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

Co++ gl KNO3 35°C 0.10M C M 1997PSb (66201)2692  
K(Co+HL)=4.05  
K(CoHL+A)=3.78

H2A is thiamine orthophosphoric acid.

-----  
Co++ gl KCl 25°C 0.20M U H B2=9.1 1984KGa (66202)2693  
B(CoHL)=14.18  
B(CoH2L2)=28.1  
B(CoHL2)=19.1

DH(CoHL)=-27 kJ mol<sup>-1</sup>;DH(CoH2L2)=-56;DH(CoHL2)=-31;DH(CoL2)=-11

-----  
Co++ gl KCl 25°C 0.10M C TIH R 1984PEa (66203)2694  
K(Co+HL)=4.0  
K(Co+2HL)=7.3

IUPAC evaluation

-----  
Co++ gl KCl 25°C 0.10M U M 1983MDc (66204)2695  
K(Co+HL)=3.87  
K(Co+2HL)=7.45

-----  
Co++ gl KNO3 25°C 0.10M C T K1=4.88 B2=8.31 1982PSa (66205)2696  
B3=11.0, B(CoHL)=14.17  
B(CoHL2)=18.10  
B(CoH2L2)=29.52  
K(Co+3HL)=10.4

-----  
Co++ gl KNO3 25°C 0.10M U T 1973BBE (66206)2697  
K(Co+HL)=4.05  
K(CoHL+HL)=3.78  
-----

Co++ gl KCl 25°C 0.05M U 1972GSc (66207)2698  
K(Co+HL)=3.87  
K(CoHL+HL)=3.65

-----  
Co++ gl oth/un 20°C 0.01M U 1952ALa (66208)2699  
K(Co+2HL)=8.1

\*\*\*\*\*  
C9H11NO3 HL CAS 78547-13-4 (1897)  
2-Aminoxy-3-phenyl-propanoic acid; C6H5.CH2.CH(O.NH2).COOH

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

-----  
Co++ gl KNO3 25°C 0.50M U K1=1.71 1985WTa (66265)2700  
\*\*\*\*\*

C9H11NO3 HL Peonoloxime (6250)  
2-Hydroxy-4-methoxyacetophenoneoxime; CH3O.C6H3(OH).C(:NOH).CH3

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

-----  
Co++ gl diox/w 28°C 50% U K1=6.78 B2=12.87 1979BRb (66270)2701  
\*\*\*\*\*

C9H11NO3 HL CAS 22094-69-5 (633)  
N-(4-Methoxyphenyl)aminoethanoic acid; CH3O.C6H4.NH.CH2.COOH

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

-----  
Co++ gl NaClO4 25°C 0.10M U M 1984CMa (66290)2702  
K(Co(phen)+L)=4.66

\*\*\*\*\*  
C9H11NO4 H3L DOPA CAS 59-92-7 (5)  
2-Amino-3-(3,4-dihydroxyphenyl)propanoic acid; H2NCH(CH2C6H3(OH)2)COOH

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

-----  
Co++ gl KCl 25°C 0.20M C M 1984KDb (66386)2703  
K(Co(His)+L)=5.84  
B(CoH2L(His))=32.68  
K(Co(ATP)+L)=4.27  
B(CoH2L(ATP))=31.11

-----  
Co++ sp KCl 25°C 0.20M C 1983KGa (66387)2704  
K(CoL2+H)=11.0  
K(CoHL2+H)=9.73  
K(CoH2L2+H)=8.96

Microconstants also reported.

-----  
Co++ gl KCl 25°C 0.20M C K1=10.01 B2=15.41 1983KGb (66388)2705  
B(CoHL)=19.10  
B(CoH2L)=26.84  
B(CoHL2)=26.41

B(CoH2L2)=36.14

B(CoH3L2)=45.10.

-----  
Co++ gl KNO3 25°C 0.10M U 1973BKb (66389)2706  
K(Co+H2L)=3.75  
K(CoH2L+H2L)=3.50

\*\*\*\*\*  
C9H11NO4S H2L CAS 1080-44-0 (4682)  
N-(4-Toluenesulfonyl)glycine, N-tosylglycine; CH3.C6H4.SO2.NH.CH2.COOH  
-----

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

Co++ gl diox/w 30°C 45% U K1=12.17 1984MYa (66420)2707  
K(Co+2HL)=6.79  
K(Co+HL+L)=8.91

\*\*\*\*\*  
C9H11NO4S2 H3L CAS 97512-83-9 (1330)  
N-Benzenesulfonyl-L-cysteine;  
-----

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

Co++ gl alc/w 25°C 50% C M 1997MGb (66441)2708  
K(Co+HL)=6.11  
B(Co(en)(HL))=13.25  
B(Co(gly)(HL))=11.10  
\*K(Co(bpy)(HL))=-11.49

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3. \*K(Co(en)HL)=-11.50, \*K(Co(gly)HL)=-11.60, \*K(CoLbpy)=-11.50, \*K(CoLen)=-12.60, \*K(CoLgly)=-12.70  
-----

Co++ gl diox/w 30°C 50% M 1980MDc (66442)2709  
K(Co+HL)=6.03  
K(CoHL+HL)=5.60  
\*K(CoH2L2)=-11.55  
\*K(CoHL2)=-13.30

Medium: 50% v/v dioxane/H2O, 0.50 M NaClO4.  
-----

\*\*\*\*\*  
C9H11NO5S H2L CAS 85828-29-1 (8747)  
N-(Phenylsulfonyl)-L-serine;  
-----

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

Co++ gl alc/w 25°C 50% C T H 1987MDe (66457)2710  
K(Co+HL=CoL+H)=5.40  
K(Co+2HL=CoL2+2H)=11.32  
\*K(CoL2)=-11.46  
\*K(CoH-1L2)=-11.90

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3. Data for 35, 45 C.  
Enthalpy and entropy data.  
-----

\*\*\*\*\*  
C9H11N3 L CAS 29518-68-1 (8048)

2-(2-Aminoethyl)benzimidazole;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp NaCl04 25°C 0.30M C T H      K1=2.65      1998DAa (66468)2711
Data for 25-40 C. DH(K1)=20.6 kJ mol-1, DS(K1)=120 J K-1 mol-1.
K(H+L)=7.49, K(H+HL)=4.60.
```

```
*****
C9H11N3O2      HL      (7179)
2-Hydroxy-acetophenone semicarbazone; HOC6H4C(CH3):NNHCONH2
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp non-aq ? 100% U      K1=7.13 B2=10.84 1991SKc (66486)2712
Medium: EtOH
```

```
-----
Co++      sp alc/w ? 100% U      K1=7.13 B2=10.84 1991SKd (66487)2713
Medium: EtOH
```

```
*****
C9H11N3O2      L      (6246)
3-(2-Acetophenyl)-1-methyltriazene N-oxide; CH3.CO.C6H4.N:NO.NH.CH3
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp alc/w 27°C 50% U      K1=5.12 B2=9.67 1980BRc (66490)2714
*****
```

```
C9H11N3O2S      HL      (1273)
1-Ethoxycarbonyl-3-pyridin-2-ylthiourea; C5H4N.NH.CS.NH.CO.OC2H5
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl alc/w 25°C 75% U      K1=5.52 B2=10.96 1980SMb (66495)2715
*****
```

```
C9H11N3O2S      HL      CAS 51146-75-9 (6170)
N-(2-Hydroxy-3-methoxybenzylidene)thiosemicarbazide; CH3O(OH)C6H3.CH:N.CS.NH.NH2
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl diox/w 35°C 50% U I      K1=7.94 B2=14.22 1993GJa (66503)2716
Medium: 50% v/v dioxane/H2O, 0.10 M NaCl04.
```

```
Also data for 50% dioxane/H2O, 0.0200.2 M NaCl04. At I=0, K1=8.73.
*****
```

```
C9H12N2O2      HL      CAS 19254-08-1 (5893)
2-Amino-N-hydroxy-3-phenylpropanamide, phenylalanine hydroxamic acid;
C6H5.CH2.CH(NH2).CO.NHOH
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl KCl 25°C 0.20M C      K1=5.05 B2=9.75 1991FKa (66579)2717
B(CoHL)=14.41
```

\*\*\*\*\*  
 C9H12N2O2 HL CAS 66315-20-6 (3272)  
 N-2'-Aminoethylanthranilic acid; HOOC.C6H4.NH.CH2.CH2.NH2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl diox/w 35°C 50% U K1=6.0 B2=11.4 1958YSa (66588)2718  
 \*\*\*\*\*

C9H12N2O2 HL CAS 80028-35-9 (2762)  
 beta-(6-Methyl-2-pyridyl)-alpha-alanine; CH3.C5H3N.CH2.CH(NH2).COOH

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KNO3 25°C 0.10M M K1=3.98 B2=7.10 1976RNa (66598)2719  
 B2=7.69 (racemic ligand)  
 \*\*\*\*\*

C9H12N2O3 H3L Tyr hydroxamic CAS 51344-01-5 (864)  
 2-Amino-N-hydroxy-3-(4-hydroxyphenyl)propanamide; HO.C6H4.CH2.CH(NH2)CO.NHOH

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KCl 25°C 0.20M C 1991FKa (66606)2720  
 B(CoHL)=14.41  
 B(CoH2L2)=28.55  
 \*\*\*\*\*

C9H12N2O4 H3L (6664)  
 3,4-Dihydroxyphenylalanine hydroxamic acid, DOPA hydroxamic acid;  
 H2N.CH(CH2.C6H3(OH)2)CO.NHOH

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KCl 25°C 0.20M C 1991FKa (66620)2721  
 B(CoH2L)=20.97  
 B(CoHL)=14.51  
 B(CoH2L2)=28.76  
 \*\*\*\*\*

C9H12N2O6 HL Uridine CAS 58-96-8 (828)  
 Uracil-1-beta-D-ribofuranoside;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KNO3 25°C 0.10M U T HM 1995RSb (66684)2722  
 B(Co(ala)L)=7.73  
 B(Co(phe)L)=7.31  
 B(Co(trp)L)=7.80

Data for 35 and 45 C. DH(Co(ala)L)=-20.0 kJ mol<sup>-1</sup>, DS(Co(ala)L)=81 J K<sup>-1</sup> mol<sup>-1</sup>;  
 DH(Co(phe)L)=-20.0, DS(Co(phe)L)=73; DH(Co(trp)L)=-17.3, DS=91.

-----  
 Co++ gl KNO3 35°C 0.10M U M K1=3.33 1990RSc (66685)2723  
 K(CoA+L)=2.68

K(CoB+L)=2.58

K(CoC+L)=2.04

H2A=Iminodiethanoic acid, H3B=NTA, H4C=EDTA

-----  
Co++ gl KNO3 35°C 0.10M U M K1=2.13 1990RSc (66686)2724  
K(CoL+Ala)=1.87  
K(CoL+Phe)=1.84  
K(CoL+Trp)=1.83  
-----

Co++ gl KNO3 25°C 0.10M C T HM K1=3.79 B2=7.43 1987KRa (66687)2725  
-----

Co++ gl KNO3 35°C 0.10M U M K1=3.43 1986RRa (66688)2726  
Ternary complexes with glycine, oxalate and histidine

\*\*\*\*\*

C9H12N4O L CAS 78105-09-6 (8186)  
9-(1-Ethoxyethyl)purine;

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

Co++ kin oth/un 40°C 0.20M C K1=0.57 1980LOa (66757)2727  
Medium: 0.20 M Mg(ClO4)2.

\*\*\*\*\*

C9H12O6 H3L CAS 16526-68-4 (5948)  
cis, cis-1,3,5-Cyclohexanetricarboxylic acid;

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

Co++ gl KNO3 25°C 0.50M U K1=1.68 1983WKa (66771)2728  
B(CoHL)=6.29  
B(CoH2L)=10.16

\*\*\*\*\*

C9H13N L CAS 3987-81-2 (493)  
4-t-Butylpyridine; C5H4N.(t-C4H9)

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

Co++ gl KNO3 25°C 0.50M U K1=1.20 1983LRa (66782)2729

\*\*\*\*\*

C9H13NO3 H2L (+)Adrenaline CAS 51-43-4 (3879)  
(+)-1-(3',4'-Dihydroxyphenyl)-2-(methylamino)ethanol, (+)Epinephrine;  
(HO)2C6H3.CH(OH).CH2.NHCH3

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

Co++ gl KCl 25°C 0.06M U T H K1=5.76 B2=10.05 1962ALa (66817)2730  
At 0 C:K1=5.68, K2=4.07, B2=9.60(?); DH(B2)=28.8 kJ mol<sup>-1</sup>, DS=288 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C9H13NO3 H2L (-)Adrenaline CAS 51-43-4 (252)  
4-(1-Hydroxy-2-(methylamino)ethyl)-1,2-dihydroxybenzene,  
Epinephrine; CH3NHCH(OH)C6H3(OH)2



```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl    25°C 0.20M C          K1=9.23  B2=15.15  1981GKb (66851)2731
                                     B(CoHL)=18.60
                                     B(CoH2L2)=35.07
                                     B(CoHL2)=25.25

```

```

-----
Co++      gl  KCl    25°C 0.10M U          K1=9.61  B2=16.71  1966JNa (66852)2732
K1 adjusted to give hypothetical microscopic constant

```

```

-----
Co++      gl  KCl    25°C 0.06M U T H    K1=5.42  B2=9.22   1962ALa (66853)2733
At 0 C: K1=6.09, K2=4.19, B2=10.30?; DH(B2)=-84.4 kJ mol-1, DS=-113 J K-1 m-1

```

```

-----
Co++      gl  KCl    25°C .058M U T      B2=10.06      1957LYa (66854)2734
B2=9.60(0 C)

```

```

*****
C9H13N06          H3L                      (3881)
2,6-Dicarboxypiperidyl-N-ethanoic acid;

```

```

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

```

```

Co++      gl  KNO3   25°C 0.10M U          K1=9.64      1968KTd (66878)2735

```

```

*****
C9H13N203P        HL                      (7918)
(Glycylamino)methyl(phenylphosphinic acid);

```

```

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

```

```

Co++      gl  KNO3   25°C 0.10M C          K1=3.28  B2= 5.43  2001LKa (66917)2736

```

```

                                     B(CoHL)=9.94
                                     B(CoH-1L2)=-3.64

```

```

*****
C9H13N209P        H3L    UMP-5          CAS 58-97-9 (2948)
Uridine-5'-monophosphoric acid;

```

```

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

```

```

Co++      gl  R4N.X  25°C 0.1M U    H    K1=1.87      1998HTa (66958)2737

```

```

Medium: 0.10 M Me4NBr. By calorimetry: DH(K1)=10.0 kJ mol-1,
DS=69 J K-1 mol-1.

```

```

-----
Co++      gl  KNO3   35°C 0.10M U    M          1992RAd (66959)2738

```

```

                                     K(Co+HL)=2.06
                                     K(Co+HL+Gly)=11.32
                                     K(Co+HL+His)=11.66
                                     K(Co+HL+histamine)=10.94

```

```

-----
Co++      gl  R4N.X  25°C 0.10M C          T          1991SMa (66960)2739

```

```

                                     K(Co+HL)=2.29

```

IUPAC evaluation

Co++	gl	NaNO3	25°C	0.10M	C					1988MSa (66961)2740
										K(Co+HL)=1.87
*****										
C9H13N3O5			L		Cytidine					CAS 65-46-3 (2152)
Cytidine, Cytosine-1-beta-D-ribofuranoside;										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values		Reference ExptNo
-----										
Co++	gl	KNO3	25°C	0.10M	U	T HM				1995RSb (67041)2741
										K(CoL+ala)=4.51
										K(CoL+phe)=4.75
										K(CoL+trp)=5.35
Data for 35 and 45 C. DH(Co(ala)L)=-16.3 kJ mol <sup>-1</sup> , DS(Co(ala)L)=32 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(Co(phe)L)=18.2, DS(Co(phe)L)=30; DH(Co(trp)L)=-21.7, DS=30.										
-----										
Co++	gl	NaNO3	25°C	0.50M	C			K1=0.03		1992KJa (67042)2742
-----										
Co++	gl	KNO3	35°C	0.10M	U	M		K1=0.88		1990RSc (67043)2743
										B(CoL(Ala))=5.52
										B(CoL(Phe))=5.05
										B(CoL(Trp))=5.62
-----										
Co++	gl	KNO3	35°C	0.10M	C	M		K1=2.74		1985RRc (67044)2744
										B(CoHL(Gly))=13.13
										B(CoL(oxalate))=9.17
										B(CoL(His))=12.69
										B(CoL(histamine))=11.87
-----										
Co++	gl	KNO3	45°C	0.10M	U			K1=2.69		1981TKa (67045)2745
*****										
C9H14N2			L							CAS 14088-79-0 (3252)
N-Benzyloxyethylenediamine; C6H5.CH2.NH.CH2.CH2.NH2										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values		Reference ExptNo
-----										
Co++	gl	diox/w	30°C	50%	U			K1=6.93		1972GPb (67119)2746
*****										
C9H14N2O12P2			H4L		UDP					CAS 58-98-0 (3288)
Uridine-5'-diphosphoric acid;										
-----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values		Reference ExptNo
-----										
Co++	gl	NaNO3	25°C	0.10M	M			K1=3.68		1999SSa (67153)2747
										K(Co+H2L)=2.0
										K(CoHL+H)=4.7
-----										
Co++	gl	KNO3	25°C	0.10M	U			K1=3.68		1995SBa (67154)2748
*****										

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

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

Co++            gl    KNO3    25°C 0.10M C      M    K1=2.85                      2001AAa (67234)2749  
Also data for ternary complexes with MOPSO, TAPSO and ACES.

-----  
Co++            gl    KNO3    20°C 0.10M U                      K1=2.78                      1999GLa (67235)2750  
-----

Co++            gl    R4N.X    25°C 0.1M U      H      K1=1.86                      1998HTa (67236)2751  
Medium: 0.10 M Me4NBr. By calorimetry: DH(K1)=10.3 kJ mol<sup>-1</sup>,  
DS=70 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Co++            gl    R4N.X    25°C 0.10M C                      T    K1=2.28                      1991SMa (67237)2752  
IUPAC evaluation  
-----

Co++            gl    NaNO3    25°C 0.10M C                      K1=1.86                      1988MSa (67238)2753  
-----

Co++            gl    KNO3    35°C 0.10M U      M                                      1986RRe (67239)2754  
K(Co+HL+HA)=6.12  
K(CoLA+2H)=8.49  
K(Co+HL+E)=7.10  
K(CoLE+H)=3.70

B(CoLC)=14.08; B(CoLD)=14.27. HA is glycine; H2E is oxalic acid;  
C is histamine; HD is histidine.

-----  
Co++            gl    NaNO3    35°C 0.10M U      M    K1=3.50                      1985KSc (67240)2755  
K(Co(phen)+L)=3.74  
K(Co(GlyGly)+L)=1.59  
B(Co(salicylate)+L)=0.84  
-----

Co++            gl    KCl      25°C 0.10M U                      K1=2.30                      1984MDb (67241)2756  
\*\*\*\*\*

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  
-----

Co++            gl    KCl      25°C 0.20M C      M    K1=2.85                      1983FSc (67310)2757  
B(CoHL)=11.48  
B(CoH-1L)=-6.10  
B(CoH2L2)=21.91  
B(CoHL(Gly))=16.10

B(CoL(Gly))=7.3; B(CoH-1L(Gly))=-2.0; B(CoHL(GlyGly))=14.50;  
B(CoL(GlyGly))=6.2; B(CoHL(His))=18.23; B(CoL(His))=9.23

-----  
Co++            gl    KNO3    37°C 0.15M U                      K1=3.22                      1975APb (67311)2758  
K(Co+HL)=1.98  
-----

Co++ gl KNO3 25°C 0.10M U 1964LMa (67312)2759  
K(Co+HL)=3.69

-----  
Co++ gl oth/un 25°C 0.16M U K1=2.25 B2=3.85 1960MEa (67313)2760  
\*\*\*\*\*  
C9H14N5O3P H2L CAS 121149-93-7 (2512)  
9-(4-Phosphonobutyl)adenine;

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

Co++ gl NaNO3 25°C 0.10M M K1=2.31 2000GKa (67355)2761  
K(Co+HL)=0.7  
\*K(CoHL)=-6.1

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

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

Co++ gl KNO3 20°C 0.10M U K1=10.33 1974RMF (67401)2762  
\*\*\*\*\*  
C9H15NO6 H3L CAS 817-11-8 (3271)  
3,3',3''-Nitrilotripropanoic acid; (HOOC.CH2.CH2)3N

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

Co++ gl KCl 30°C 0.10M U K1=4.8 1953Cma (67429)2763  
\*\*\*\*\*  
C9H15NO6 H3L CAS 95482-53-4 (3270)  
N-(2-Carboxyethyl)-3,3-iminodipropanoic acid;

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

Co++ gl KCl 30°C 0.10M U K1=7.9 1953Cma (67440)2764  
\*\*\*\*\*  
C9H15NO6P2 H4L (6888)  
N-Benzyl-N-methylaminomethylenedi(phosphonic acid); C6H5.CH2.N(CH3)CH(P03H2)2

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

Co++ gl KCl 25°C 0.10M M K1=7.04 1978GMF (67446)2765  
K(Co+HL)=5.89

\*\*\*\*\*  
C9H15NO6P2 H4L CAS 6056-53-7 (1337)  
N-Benzyliminobis(methylenephosphonic) acid; C6H5CH2N(CH2P03H2)2

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

Co++ gl KCl 25°C 0.20M C K1=8.31 2000Kka (67458)2766  
B(CoHL)=14.90

B(CoH2L)=19.93  
B(CoH-1L)=-2.49

-----  
Co++ gl KNO3 25°C 1.00M M K1=7.75 1982Bgb (67459)2767  
K(Co+HL)=2.97

\*\*\*\*\*  
C9H15NO6S H3L DCMM CAS 72306-91-3 (8239)  
Dicarboxymethyl-N,N-methionine acid;

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

-----  
Co++ gl NaCl 25°C 0.50M C 1980Mfc (67468)2768  
K(Co+HL)=5.39  
K(CoHL+HL)=4.16

Additional methods: conductivity, spectrophotometry

\*\*\*\*\*  
C9H15N2O15P3 H5L UTP CAS 63-39-8 (407)  
Uridine-5'-triphosphoric acid;

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

-----  
Co++ gl R4N.X 25°C 0.10M C R 1991SMa (67514)2769  
K(Co+HL)=4.95  
K(Co+H2L)=2.8

IUPAC evaluation

-----  
Co++ gl NaNO3 25°C 0.10M C 1987STb (67515)2770  
K(Co+HL)=4.73  
K(CoL+H)=4.27  
K(Co+H2L)=2.55

-----  
Co++ gl KNO3 25°C 0.10M U T H K1=6.94 1983RRe (67516)2771  
Also data for 35 and 45 C. At 45 C: K1=6.01.  
DH(K1)=-20.1 kJ mol<sup>-1</sup>, DS(K1)=66 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Co++ gl NaClO4 25°C 0.10M C M 1978FMa (67517)2772  
K(Co+HL)=4.53  
B(Co(HL)(bpy))=10.69

-----  
Co++ gl KNO3 35°C 0.10M U 1976KRa (67518)2773  
K(Co+HL)=6.84

-----  
Co++ ix NaCl 23°C 0.10M U 1958WAa (67519)2774  
K(Co+HL)=4.55

\*\*\*\*\*  
C9H15N3 L CAS 72830-26-3 (3253)  
2-(2-(2-Aminoethyl)aminoethyl)pyridine;

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

Co++ gl oth/un 25°C 0.10M U K1=7.0 1964LMb (67548)2775  
\*\*\*\*\*

C9H15N3O4 HL Gly-Gly-Pro (6982)  
Glycyl-glycyl-proline;

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

Co++ gl KNO3 20°C 0.5M U K1=2.87 1974KHb (67562)2776  
\*\*\*\*\*

C9H15N3O11P2 H3L CDP CAS 63-38-7 (2187)  
Cytidine-5'-diphosphoric acid;

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

Co++ gl NaNO3 25°C 0.10M M K1=3.65 1999SSa (67581)2777  
K(Co+HL)=2.1  
K(CoL+H)=4.84

-----  
Co++ gl KCl 25°C 0.10M U K1=3.87 1984MDb (67582)2778  
B(CoHL)=8.59  
\*\*\*\*\*

C9H15N5O2 L (7098)  
Glycyl-glycyl-histamine;

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

Co++ gl NaClO4 25°C 0.10M C K1=3.15 1996GHa (67595)2779  
B(1,1,1)=9.96  
B(1,-1,1)=-5.97  
B(1,-2,1)=-14.98  
B(1,-3,1)=-27.38

B(p,q,r): pM+qH=rL=MpHqLr

\*\*\*\*\*

C9H16N2O6 H2L CAS 24709-35-8 (3274)  
N-(2-(2-Ethoxycarbonylamino)ethyl)iminodiethanoic acid;

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

Co++ gl KCl 20°C 0.10M U K1=6.71 B2=12.15 1955SAa (67625)2780  
\*\*\*\*\*

C9H16N3O14P3 H4L CTP CAS 65-47-4 (406)  
Cytidine-5'-triphosphoric acid;

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

Co++ gl R4N.X 25°C 0.10M C TI R K1=4.95 1991SMa (67691)2781  
K(Co+HL)=2.8

IUPAC evaluation

-----  
Co++ gl NaNO3 25°C 0.10M C K1=4.78 1987STb (67692)2782

K(Co+HL)=2.95

K(CoL+H)=4.72

-----  
Co++ gl KCl 25°C 0.10M U K1=4.69 1984Mdb (67693)2783  
B(CoHL)=9.04

-----  
Co++ gl KNO3 25°C 0.10M U T H K1=5.07 1983RRe (67694)2784  
K(Co+HL)=4.45

Also data for 35 and 45 C. At 45 C: K1=4.32, K(Co+HL)=4.25.

DH(K1)=-20.1 kJ mol<sup>-1</sup>; DH(Co+HL)=-18.4, DS=30

-----  
Co++ gl KNO3 35°C 0.1M C I K1=4.96 1975TRc (67695)2785  
K(Co+HL)=4.36

-----  
Co++ ix NaCl 23°C 0.10M U K1=4.48 1958WAa (67696)2786

\*\*\*\*\*

C9H16O2 HL CAS 18362-64-6 (1134)

2,6-Dimethyl-3,5-heptanedione; (CH<sub>3</sub>)<sub>2</sub>.CH.CO.CH<sub>2</sub>.CO.CH(CH<sub>3</sub>)<sub>2</sub>

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

-----  
Co++ sp NaClO<sub>4</sub> 25°C 0.5M C K1=6.39 1998BLa (67742)2787

\*\*\*\*\*

C9H16O<sub>4</sub> H<sub>2</sub>L CAS 1636-27-7 (485)

Dipropylpropanedioic acid (Di-n-propylmalonic acid);

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

-----  
Co++ gl NaClO<sub>4</sub> 25°C 0.10M U K1=2.22 19700Va (67767)2788

\*\*\*\*\*

C9H17NO<sub>5</sub> HL Pantothenic acid CAS 63409-48-3 (2629)

N-(2,4-Dihydroxy-3,3-dimethylbutyryl)-3-aminopropanoic acid;

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

-----  
Co++ gl KCl 25°C 0.24M U K1=1.90 B2=3.07 1980FMd (67813)2789

\*\*\*\*\*

C9H17NO<sub>6</sub> H<sub>2</sub>L CAS 58144-32-4 (6077)

N-(1,1-Di(hydroxymethyl)propyl)iminodiethanoic acid;

(HO.CH<sub>2</sub>)<sub>2</sub>C(CH<sub>2</sub>.CH<sub>3</sub>).N(CH<sub>2</sub>.COOH)<sub>2</sub>

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

-----  
Co++ gl NaClO<sub>4</sub> 25°C 1.0M C K1=7.84 B2=10.30 1981ASb (67828)2790

B(CoHL)=11.50

B(CoH-1L)=-0.58

\*\*\*\*\*

C9H17N<sub>3</sub>O<sub>4</sub>S H<sub>2</sub>L Ala-Ala-Cys (6477)

Alanyl-alanyl-cysteine

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	U		B2=8.07 B(CoHL2)=16.83 B(CoH-1L2)=-0.75	1990CRa (67866)	2791

\*\*\*\*\*  
 C9H18N2O3 HL Ala-Leu CAS 1999-42-4 (264)  
 Alanyl-leucine; H2N.CH(CH3).CO.NH.CH(CH2.CH(CH3)2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.12M	U		K1=2.57 B2=4.58	1977PNa (67903)	2792
Co++	gl	NaCl	25°C	0.12M	U		K1=2.57 B2= 4.58	1976PNa (67904)	2793

L=DL-alpha-alanyl-DL-leucine

Co++	gl	NaCl	25°C	0.12M	U		K1=2.57 B2= 4.58	1976PNa (67905)	2794
------	----	------	------	-------	---	--	------------------	-----------------	------

L=DL-alpha-alanyl-DL-leucine

Co++	gl	KNO3	20°C	0.5M	U		K1=2.89	1974KHb (67906)	2795
------	----	------	------	------	---	--	---------	-----------------	------

\*\*\*\*\*  
 C9H18N2O3 HL Sar-Leu CAS 98951-55-4 (3276)  
 Sarcosyl-L-leucine; CH3.NH.CH2.CO.NH.CH(CH2.CH(CH3)2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	oth/un	25°C	0.01M	U		K1=2.61 B2=5.37	1959DLb (67917)	2796

\*\*\*\*\*  
 C9H18N4O2 L CAS 71248-02-7 (540)  
 1,4,7,10-Tetraazacyclotridecane-11,13-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl04	35°C	0.20M	U		B(CoH-2L)=-9.64	1983MKb (67954)	2797

\*\*\*\*\*  
 C9H19N2O4+ H2L (3277)  
 2-Di(carboxymethyl)aminoethyltrimethylammonium cation  
 +

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	20°C	0.10M	U		K1=5.51 B2=10.49	1955SAa (67999)	2798

\*\*\*\*\*  
 C9H20N2O5S HL HEPPSO CAS 68399-78-0 (2011)  
 N-(2-Hydroxyethyl)piperazine-N'-(2-hydroxypropanesulfonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C		K1=3.50	2001A0a (68052)	2799



\*\*\*\*\*  
 C9H20O6Cl2P2 L CAS 19928-93-7 (2633)  
 Dichloromethylenedi(phosphonic acid diethyl ester); Cl2C(PO.(OC2H5)2)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ con non-aq 22°C 100% U M 1981SKd (68120)2800  
 K(CoCl2+L)=1.54  
 K(CoCl2+2L)=2.80

Medium: acetone

\*\*\*\*\*  
 C9H21N3 L (6993)

1,4,7-Trimethyl-1,4,7-triazacyclononane;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl NaCl04 25°C 1.0M C K1=8.10 B2=13.04 1999UGa (68165)2801

\*\*\*\*\*  
 C9H21N3O L (2479)

1-Oxa-4,7,11-triazacyclotridecane; cyclo(-O.(CH2.CH2.NH)2.CH2.CH2.CH2.NH.CH2.CH2-)

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KNO3 25°C 0.10M U K1=9.29 1991ACa (68202)2802  
 B(CoH-1L)=-0.53  
 K(CoL+OH)=4.0

\*\*\*\*\*  
 C9H21N3O3 L CAS 221233-44-9 (7658)

cis,cis,cis-2,4,6-Trimethoxycyclohexane-1,3,5-triamine;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KNO3 25°C 0.10M C K1=11.50 B2=20.59 1999WKa (68212)2803

\*\*\*\*\*  
 C9H22N2 L Nonanediamine CAS 646-24-2 (5800)

1,9-Diaminononane; NH2.(CH2)9.NH2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ cal alc/w 25°C 100% U H K1=2.48 1985BUd (68229)2804  
 Medium: MeOH, 0.05 M Et4N.NO3. DH=-28.2 kJ mol-1

\*\*\*\*\*  
 C9H22N4 L CAS 295-14-7 (9)

1,4,7,10-Tetraazacyclotridecane; cyclo(-(NH.CH2.CH2.)4.CH2-)

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ cal NaCl04 25°C 0.15M U H 1999CCa (68245)2805  
 DH(Co+L=CoL)=-57.2 kJ mol-1.

Co++ gl NaClO4 35°C 0.20M U M K1=14.28 1983MKb (68246)2806  
Ternary complex with dioxygen: B(Co2H-1L2(O2))=29.83

Co++ gl NaClO4 35°C 0.20M U K1=14.28 1980KKa (68247)2807  
B(Co2H-1L4(O2))=29.83

\*\*\*\*\*  
C9H22N4 L CAS 22217-18-1 (4657)  
N,N'-Bis(2-aminoethyl)-1,4-diazacycloheptane;

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

Co++ gl NaClO4 25°C 0.10M U K1=8.37 1977PBb (68258)2808

\*\*\*\*\*  
C9H22O6P2 L CAS 1660-94-2 (2632)  
Methylenedi(phosphonic acid diethyl ester) CH2(PO.(OC2H5)2)2

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

Co++ con non-aq 22°C 100% U M 1981SKd (68259)2809  
K(CoCl2+L)=1.90  
K(CoCl2+2L)=2.99

Medium: acetone

\*\*\*\*\*  
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  
-----

Co++ ISE non-aq 25°C 100% C H K1=4.19 2001CGc (68278)2810  
Method: Cd ion selective electrode. Medium: DMSO, 0.10 M Et4NClO4.  
By calorimetry: DH(K1)=-29.8.

\*\*\*\*\*  
C9H24N3O6P3 H3L (7110)  
1,4,7-Triazacyclononane-1,4,7-triyltrimethylenetris(phosphinic acid);

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

Co++ gl KNO3 25°C 0.10M C K1=12.97 1995BLa (68290)2811

\*\*\*\*\*  
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  
-----

Co++ gl KNO3 25°C 1.00M U K1=19.7 1990BSd (68304)2812  
K(Co+HL)=13.9  
K(Co+H2L)=10.4  
K(Co+H3L)=7.7

-----  
Co++ gl KNO3 25°C 1.00M U M 1988MKb (68305)2813

B(Co2L)=23.1  
K(2Co+HL)=16.1  
K(Co+CoL)=3.40  
K(Co+CoHL)=2.51

B(CoNiL)=23.0; K(Co+Ni+HL)=16.4; K(Ni+CoL)=3.34; K(Ni+CoHL)=2.49

-----  
Co++ gl KCl 25°C 1.0M U K1=19.7 1984KMa (68306)2814  
K(Co+HL)=13.9

\*\*\*\*\*  
C9H24N4 L CAS 129880-56-4 (1533)  
1,4,10,13-Tetraazatridecane; H2N.(CH2)2.NH.(CH2)5.NH.(CH2)2.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 1.00M C H K1=9.01 1982ABc (68334)2815  
B(CoH2L)=22.9

By calorimetry: DH1=-40.6 kJ mol<sup>-1</sup>, DS1=36.8

\*\*\*\*\*  
C9H24N4 L CAS 4605-14-5 (1797)  
1,5,9,13-Tetraazatridecane; H2N.(CH2)3.NH.(CH2)3.NH.(CH2)3.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 20°C 0.10M C M K1=7.36 2002GLc (68359)2816  
K(CoA+H4L)=5.01

H2A is adenosine-5'-monophosphoric acid.

-----  
Co++ gl KNO3 20°C 0.10M C M K1=7.88 2002GLc (68360)2817  
B(CoAH4L)=44.12

H2A is adenosine-5'-monophosphoric acid.

-----  
Co++ gl KNO3 25°C 0.10M C H K1=7.69 1994CCc (68361)2818  
DH(K1)=-40.0 kJ mol<sup>-1</sup>; TdS(K1)=3.4

-----  
Co++ gl oth/un 25°C ? U K1=7.42 B2=10.16 1976NGa (68362)2819

-----  
Co++ gl NaClO4 25°C ? U K1=7.42 B2=10.16 1976NGe (68363)2820

\*\*\*\*\*  
C9H24N4 L CAS 4963-47-7 (546)  
Tris-(3-aminopropyl)amine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M U K1=6.360 1968DPa (68387)2821  
K(CoL+OH)=2.99

-----  
Co++ gl NaNO3 20°C 0.10M U K1=7.81 1962TAb (68388)2822

\*\*\*\*\*  
C9H28N3O15P5 10L DTPPH CAS 15827-60-8 (2921)  
Diethylenetriamine-N,N,N',N'',N''-penta(methylphosphonic acid);

H2O3PCH2.N(CH2CH2.N(CH2PO3H2)2)2 H

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

Co++ gl KCl 25°C 0.10M U K1=15.73 1967KDa (68403)2823  
K(Co+HL)=12.07  
K(Co+H2L)=9.17  
K(Co+H3L)=7.35  
K(Co+H4L)=5.74

K(Co+H5L)=4.30, K(Co+H6L)=3.10

\*\*\*\*\*

C10H6O3 HL CAS 83-72-7 (3294)

2-Hydroxy-1,4-naphthoquinone;

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

Co++ gl diox/w 30°C 75% U K1=5.71 B2=10.78 1960KFc (68458)2824

\*\*\*\*\*

C10H6O3 HL CAS 481-39-0 (3295)

5-Hydroxy-1,4-naphthoquinone;

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

Co++ gl diox/w 30°C 75% U K1=8.66 B2=16.21 1960KFa (68472)2825

\*\*\*\*\*

C10H7NO2 HL CAS 131-91-9 (2668)

1-Nitroso-2-naphthol, alpha-Nitroso-beta-naphthol;

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

Co++ gl alc/w RT 40% M K1=7.88 B2=15.34 1993RAB (68567)2826

Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

-----  
Co++ sol oth/un 20°C var U 1964ASb (68568)2827

B3=46.9

-----  
Co++ gl diox/w 30°C 75% U K1=10.67 B2=22.81 1957CFa (68569)2828

\*\*\*\*\*

C10H7NO2 HL CAS 132-53-6 (2524)

2-Nitroso-1-naphthol;

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

Co++ gl alc/w RT 40% M K1=7.61 B2=14.44 1993RAB (68636)2829

Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

-----  
Co++ sp non-aq 25°C 100% U 1971CBd (68637)2830

K(CoCl2+HL)=3.08

K(CoCl2+2HL)=4.38

Medium: 96% benzene, 4% EtOH

-----  
Co++ oth oth/un 16°C 0.01M U B2=19.05 1971LGb (68638)2831  
Method: chemiluminescence

\*\*\*\*\*  
C10H7NO2 HL Quinaldic acid CAS 93-10-7 (2209)  
Quinoline-2-carboxylic acid;  
-----

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

Co++ sp oth/un 25°C 0.10M U T HM 1981HKa (68694)2832  
K(CoA+L)=1.90  
Phosphate medium, A= Bovine carbonic anhydrase protein  
-----

Co++ gl oth/un 25°C 0.02M U K1=4.3 B2=7.6 1955HCa (68695)2833  
-----

Co++ gl diox/w 25°C 50% U K1=5.3 B2=10.6 1955HCb (68696)2834  
-----

Co++ gl oth/un 25°C 0.0 U K1=4.49 B2=8.23 1955LUa (68697)2835  
\*\*\*\*\*  
C10H7NO2 HL CAS 6480-68-8 (2210)  
Quinoline-3-carboxylic acid;  
-----

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

Co++ sp oth/un 25°C 0.10M U T HM 1981HKa (68727)2836  
K(CoA+L)=1.34  
Phosphate medium, A= Bovine carbonic anhydrase protein  
-----

\*\*\*\*\*  
C10H7NO2 HL CAS 86-59-9 (873)  
Quinoline-8-carboxylic acid;  
-----

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

Co++ sp oth/un 25°C 0.10M U T HM 1981HKa (68749)2837  
K(CoA+L)=2.70  
Phosphate medium, A= Bovine carbonic anhydrase protein  
-----

Co++ gl alc/w 30°C 50% U K1=4.40 B2=7.90 1981RRa (68750)2838  
Medium: 50% v/v EtOH, 0.1 M KNO3  
-----

Co++ gl oth/un 25°C 0.02M U K1=3.5 1955HCa (68751)2839  
-----

Co++ gl diox/w 25°C 50% U K1=5.3 B2=9.6 1955HCb (68752)2840  
-----

Co++ gl oth/un 25°C 0.0 U K1=3.61 B2=6.78 1955LUa (68753)2841  
\*\*\*\*\*  
C10H7NO2S HL CAS 10958-38-5 (3922)  
3-Phenyl-1,2-thiazole-5-carboxylic acid;  
-----

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

-----  
Co++ gl diox/w 25°C 50% U K1=1.73 1968EGb (68779)2842  
Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*  
C10H7NO3 H2L Kynurenic acid CAS 492-77-3 (1540)  
4-Hydroxy-2-quinolinecarboxylic acid;  
-----

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

Co++ gl diox/w 25°C 50% U K1=3.3 B2=6.20 1964BFa (68786)2843  
K(Co(OH)L+H)=7.3  
K(Co(OH)2L+H)=9.0

\*\*\*\*\*  
C10H7NO4 H3L Xanthurenic aci CAS 59-00-7 (1539)  
4,8-Dihydroxy-2-quinolinecarboxylic acid;  
-----

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

Co++ gl diox/w 25°C 50% U K1=6.7 B2=12.30 1964BFa (68793)2844  
K(Co(OH)L+H)=9.9  
K(Co(OH)2L+H)=11.7

\*\*\*\*\*  
C10H7NO5S H2L CAS 3682-32-4 (1812)  
2-Nitroso-1-hydroxynaphthalene-4-sulfonic acid;  
-----

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

Co++ gl oth/un RT 0.10M M K1=4.04 B2= 8.19 1993RAb (68877)2845  
Medium not stated.

-----  
Co++ sp oth/un 25°C 0.10M U TI 1972BTd (68878)2846  
K(Co+HL=CoL+H)=-1.75

14-35 C. I= 0.05-0.1, K(14.75 C,0.05)=-1.61, K(14.75 C,0.1)=-1.76  
K(25.2 C,0.05)=-1.60, K(35.05 C,0.05)=-1.62, K(35.05 C,0.1)=-1.75  
-----

Co++ sp none ? 0.0 U 1958TPa (68879)2847  
B3=34.1

\*\*\*\*\*  
C10H7NO8S2 H3L Nitroso-R acid CAS 525-05-3 (1811)  
1-Nitroso-2-hydroxynaphthalene-3,6-disulfonic acid;  
-----

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

Co++ ISE oth/un 25°C 0.10M C K1=6.87 B2=12.26 1981LCa (68996)2848  
Method: heterogeneous Co ion selective electrode.

-----  
Co++ oth oth/un 30°C 0.0 U K1=6.65 B2=12.43 1973GBa (68997)2849  
-----

Co++ ix NaNO3 30°C 1.0M U K1=6.92 B2=13.36 1973MDa (68998)2850  
-----

Co++ sp oth/un 25°C 0.20M U TI 1972BTd (68999)2851  
 K(Co+HL=CoL+H)=-1.73  
 10-35 C. I=0.025-0.2. K(I=0.025)=-1.19, K(I=0.1)=-1.48,  
 (24.64 C):K(0.05)=-1.3, K(0.1)=-1.47, (35.1 C):K(0.025)=-1.2, K(0.1)=-1.48

-----  
 Co++ sp oth/un 16°C 0.01M U B2=21.0 1972LUd (69000)2852  
 -----

Co++ sp oth/un 25°C ? U 1966MSd (69001)2853  
 K(?)=13.3

\*\*\*\*\*  
 C10H7N2O2F3S HL CAS 23375-18-0 (1680)  
 8-(Trifluoromethanesulfonamido)quinoline;

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

Co++ gl diox/w 30°C 75% U K1=7.7 B2=14.1 1984NYa (69069)2854  
 \*\*\*\*\*  
 C10H7N3O2S L CAS 102036-43-1 (8473)  
 2-(1,3-Dihydro-1,3-dioxo-2H-inden-2-ylidene)hydrazinocarbothioamide;

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

Co++ gl alc/w 30°C 60% M K1=4.93 1996HTb (69073)2855  
 Medium: 60% v/v EtOH/H2O, 0.04 M KCl.  
 \*\*\*\*\*  
 C10H7N3O4 H2L 1-Ph-violuric (957)  
 1-Phenyl-alloxan-5-oxime,(1-Phenyl-5-isonitrosobarbituric acid);

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

Co++ gl alc/w 18°C 50% U T K1=8.25 B2=14.27 1982SGa (69083)2856  
 At 42 C, K1=6.60, K2=5.40. Data also at 31 C  
 \*\*\*\*\*  
 C10H7N5O5 HL CAS 102964-51-2 (6212)  
 5-(2'-Nitrophenylazo)barbituric acid;

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

Co++ gl diox/w 25°C 75% U K1=4.28 B2=8.18 1986MIa (69092)2857  
 \*\*\*\*\*  
 C10H7O2F3 HL CAS 326-06-7 (196)  
 3-Benzoyl-1,1,1-trifluoroacetone; CF3.CO.CH2.CO.C6H5

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

Co++ dis NaNO3 25°C 0.10M C K1=4.1 1994SDc (69128)2858  
 Method: solvent extraction into CHCl3

-----  
 Co++ dis NaCl 25°C 0.10M U K1=4.0 B2=6.5 1984KSb (69129)2859  
 -----

Co++ dis NaClO4 25°C 1.0M C M K1=3.40 B2= 5.24 1977SMe (69130)2860  
 K(CoL2(org)+A(org))=6.15  
 K(CoL2(org)+2A(org))=9.34

Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylphosphine oxide (A). K(Co+2HL(org)=CoL2(org)+2H)=-9.66.

-----  
 Co++ dis NaClO4 25°C 1.0M U K1=3.40 B2=5.24 1971MSe (69131)2861  
 -----

Co++ gl oth/un ? 0.0 U B2=10.50 1951UFa (69132)2862  
 \*\*\*\*\*  
 C10H8NO4BrS H2L CAS 37026-31-6 (3933)  
 7-Bromo-8-hydroxy-2-methylquinoline-5-sulfonic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	.005M	U		K1=6.56 B2=12.04 K3 < 3.5	1963FFa (69190)2863	

Medium: HClO4  
 \*\*\*\*\*  
 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
Co++	gl	NaNO3	37°C	0.10M	U		K1=5.92	1997MGa (69497)2864	
Co++	gl	alc/w	25°C	50%	C		K1=6.50	1997MGb (69498)2865	
Co++	gl	NaNO3	25°C	0.10M	U	M	K(CoL+HA)=7.37 K(CoL2+HA)=12.73 K(CoL+A)=12.28 K(CoL2+A)=17.50	1996BMa (69499)2866	

H2A=N-p-tolyl-sulfonylglycine. Additional methods: spectrophotometry and polarography. Also data for H2A=tosyl-B-alanine and tosyl-N-benzoylglycine

Co++	gl	NaNO3	37°C	0.10M	U		K1=5.92	1994MGc (69500)2867	
Data for ternary complexes with 6-aminopenicillanic acid									
Co++	gl	KNO3	30°C	0.10M	U		K1=5.98	1994RSa (69501)2868	
Co++	gl	KNO3	25°C	0.10M	U		K1=6.06 B2=11.42 K3=4.6	19920Sa (69502)2869	

-----  
 Co++ gl KNO3 25°C 0.10M C M K1=5.80 B2=11.24 1991DAc (69503)2870  
 Data for ternary complexes with acetohydroxamic acid  
 -----

Co++	gl	KNO3	25°C	0.10M	C	M	K1=5.80 K(CoL+A)=4.85 B(CoAL)=10.65	1990DAc (69504)2871	
------	----	------	------	-------	---	---	---	---------------------	--



HL: benzohydroxamic acid

-----  
Co++ sp non-aq 25°C 100% C K1=4.06 B2=7.15 1987AWa (69505)2872  
K3=1.15

Medium: DMSO, 0.06 M NaClO4

-----  
Co++ dis KCl 23°C 0.10M C K1=5.95 B2=11.22 1985SCa (69506)2873  
K3=4.60

Method: spectrophotometry with partition into n-hexane

-----  
Co++ gl diox/w 25°C 50% U M K1=6.79 B2=13.17 1984ABb (69507)2874  
B(CoL(PFHA))=12.56  
B(CoL(PTHA))=12.74

PFHA=N-phenyl-2-furylhydroxamate, PTHA=N-phenyl-2-thenohydroxamate

-----  
Co++ gl NaClO4 35°C 0.10M U M K1=5.70 B2=11.09 1983ABa (69508)2875  
K(CoL+NSA)=5.11

NSA = 5-nitrosalicylic acid

-----  
Co++ sp non-aq 25°C 100% U K1=5.84 B2=9.43 1981AWa (69509)2876  
Medium: hexamethylphosphoric triamide

-----  
Co++ gl KNO3 25°C 0.20M C K2=5.59 1979MBa (69510)2877

-----  
Co++ cal non-aq 30°C 100% U H 1976AGb (69511)2878

K(CoA2+L)=2.19

K(CoB2+L)=2.73

K(CoC2+L)=1.57

K(CoD2+L)=1.56

In Benzene. HA=N-phenyl-2-hydroxybenzaldimine. HB=N-4-fluorophenyl-;  
HC=N-para-methylphenyl-; HD=N-para-methoxyphenyl-; Also DH and DS.

-----  
Co++ gl KNO3 25°C 0.10M C K1=5.72 B2=11.40 1975D0c (69512)2879  
B3=16.15

-----  
Co++ gl NaClO4 25°C 0.10M U M K1=6.06 B2=11.42 1971GSb (69513)2880  
B(CoL(Gly))=10.52  
B(CoL(en))=11.17  
B(CoLA)=15.43

H2A=catechol

-----  
Co++ gl KNO3 30°C 1.0M U HM K1=5.72 B2=11.13 1965DDa (69514)2881  
K3=4.80

By calorimetry:DH(K1)=-30.1 kJ mol<sup>-1</sup>, DS=10.5 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-60.2,  
DS=14.6; DH(B3)=-82.2,DS=34. Ternary complexes with ATP, AMP-5 etc.

-----  
Co++ cal NaNO3 20°C 0.10M U H 1963ANb (69515)2882  
DH(K1)=-34.3 kJ mol<sup>-1</sup>, DS=-1.46 J K<sup>-1</sup> mol<sup>-1</sup>; DH(B2)=-63.5, DS=-1.5;  
DH(B3)=-89.0, DS=5.9

Co++ gl NaNO3 20°C 0.10M U K1=6.06 B2=11.42 1963ANg (69516)2883  
B3=16.02

Co++ dis KCl 25°C 0.10M U K1=5.65 B2=11.25 1962IMa (69517)2884  
K3=4.80

Co++ sp oth/un 25°C 0.00 U K1=5.73 B2=11.57 1955LFb (69518)2885  
B3=17.59

\*\*\*\*\*  
C10H8N2O2 HL CAS 80690-06-8 (874)  
5-Aminoquinoline-8-carboxylic acid;

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

Co++ gl alc/w 30°C 50% U K1=5.29 B2=9.90 1981RRa (69674)2886  
Medium: 50% v/v EtOH, 0.1 M KNO3

\*\*\*\*\*  
C10H8N2O2 HL CAS 5603-22-5 (2753)  
8-Hydroxyquinoline-2-carboxaldehyde oxime

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

Co++ gl diox/w 25°C 50% U K1=7.83 B2=15.54 1967SFa (69681)2887

\*\*\*\*\*  
C10H8N2O2S HL CAS 15112-10-4 (8299)  
N-Phenyl-2-thiobarbituric acid;

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

Co++ gl NaClO4 31°C 0.10M U T H K1=6.65 B2=12.10 1984SJa (69690)2888  
Also data for 18 and 42 C. DH(K1)=-87.7 kJ mol<sup>-1</sup>, DS(K1)=-162 J K<sup>-1</sup> mol<sup>-1</sup>  
DH(K2)=-52.5, DS(K2)=-69.0. Also data for N-tolyl- derivatives.

\*\*\*\*\*  
C10H8N2O4 HL 2-Furil dioxime CAS 522-27-0 (3319)  
1,2-Di(2'-furyl)ethane-1,2-dione dioxime; (C4H3O.C(:N.OH))2

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

Co++ gl diox/w 25°C 50% U K1=9.7 B2=18.2 1958PBa (69701)2889

\*\*\*\*\*  
C10H8N2O5 HL CAS 36874-89-9 (6226)  
4-Nitromaleanilic acid; HOOC.CH:CH.CO.NH.C6H4.NO2

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

Co++ gl alc/w 22°C 80% U T H K1=7.65 B2=13.30 1985SAb (69707)2890  
30 C: K1= 7.55, K2=5.60; 40 C: K1= 7.45, K2=5.58  
DH(K1)=-17.1 kJ mol<sup>-1</sup>, DS=87 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-10.5, DS=73

\*\*\*\*\*  
C10H8N2O6S H2L CAS 37226-33-8 (3923)

2-Methyl-7-nitro-8-hydroxyquinoline-5-sulfonic acid;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaClO4 25°C .005M U          K1=5.50  B2=9.84  1963FFa (69713)2891
                                         K3 < 3.5
-----
```

\*\*\*\*\*  
 C10H8N3O2Cl HL CAS 1947-41-7 (4777)  
 3-Methyl-4-(4'-chlorophenylazo)isoxazol-5-one;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 30°C 75% U          K1=4.20  B2=8.29  1971SYa (69723)2892
-----
```

\*\*\*\*\*  
 C10H8N4O3 HL CAS 43168-60-1 (6209)  
 5-Phenylazobarbituric acid;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 25°C 75% U          K1=4.39  B2=8.25  1986MIa (69726)2893
-----
```

\*\*\*\*\*  
 C10H8O4S HL (1038)  
 1-Hydroxynaphthalene-2-sulfonic acid;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3 25°C 0.10M U          K1=3.27  B2=6.30  1989SSe (69798)2894
-----
```

\*\*\*\*\*  
 C10H8O4S HL (4148)  
 1-Hydroxynaphthalene-5-sulfonic acid;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3 25°C 0.10M U          K1=3.12  B2=6.20  1989SSe (69800)2895
-----
```

\*\*\*\*\*  
 C10H8O5S H3L DHNSA (877)  
 2,3-Dihydroxynaphthalene-6-sulfonic acid;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3 25°C 0.10M U          K1=9.44  B2=15.77 1984NHa (69832)2896
-----
```

\*\*\*\*\*  
 C10H8O7S2 H3L (6341)  
 2-Hydroxynaphthalene-6,8-disulfonic acid;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3 25°C 0.10M U          K1=2.64  B2=5.51  1989SSe (69884)2897
-----
```

\*\*\*\*\*  
 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
Co++	gl	KN03	27°C	0.10M	U			K1=5.52 B2= 9.05	1988AIa (69918)	2898
Co++	sp	oth/un	22°C	?	U			B3=12.97(?)	1966MCb (69919)	2899

\*\*\*\*\*  
 C10H9N L CAS 91-62-3 (8354)  
 6-Methylquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl04	25°C	0.20M	C	M		K1=2.70 K(Co(gly)+L)=5.73 K(Co(ala)+L)=5.73 K(Co(val)+L)=5.15 K(CoA+L)=4.73	1993BAb (69994)	2900

K(Co(gln)+L)=4.68, K(Co(glu)+L)=8.15, K(Co(asp)+L)=9.10. HA is asparagine.  
 \*\*\*\*\*  
 C10H9NO HL 8-OH-Quinaldine CAS 826-81-3 (998)  
 2-Methyl-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U			K1=8.95 B2=17.95	1984YAa (70034)	2901
Co++	cal	diox/w	25°C	50%	U	H			1968GFa (70035)	2902
DH(K1)=-17.5 kJ mol <sup>-1</sup> , DS=104.5 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(B2)=-57.7, DS=138										
Co++	gl	diox/w	25°C	50%	U			K1=8.59 B2=17.38	1967SFa (70036)	2903
Co++	cal	diox/w	25°C	50%	U	H			1959FFa (70037)	2904
DH(K1)=-19.2 kJ mol <sup>-1</sup> ; DH(B2)=-48.5, DS=188 J K <sup>-1</sup> mol <sup>-1</sup>										

Co++ gl diox/w 40°C 50% U T H K1=9.37 B2=18.11 1954JFa (70038)2905  
 K1=9.97(0.7 C),9.63(25 C); K2=9.17(0.7 C),8.87(25 C).  
 DH(B2)=-43.0 kJ mol<sup>-1</sup>, DS=209 J K<sup>-1</sup> mol<sup>-1</sup>  
 \*\*\*\*\*  
 C10H9NO L CAS 5263-87-6 (8353)  
 6-Methoxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl04	25°C	0.20M	C	M		K1=2.65 K(Co(gly)+L)=5.54 K(Co(ala)+L)=5.25 K(Co(val)+L)=5.10 K(CoA+L)=4.70	1993BAb (70071)	2906

K(Co(gln)+L)=4.65, K(Co(glu)+L)=8.10, K(Co(asp)+L)=8.80. HA is asparagine.  
\*\*\*\*\*

C10H9NO HL CAS 3846-73-9 (3320)  
8-Hydroxy-4-methylquinoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U H K1=9.95 B2=18.92 1968GFa (70091)2907  
Medium: 50% dioxan, 0.1 M NaClO4. By calorimetry: DH(K1)=-28.4 kJ mol-1,  
DS=96 J K-1 mol-1. DH(B2)=-74.4, DS=113

-----  
Co++ cal diox/w 25°C 50% U H 1959FFa (70092)2908  
DH(B2)=-104.5 kJ mol-1, DS=33 J K-1 mol-1

-----  
Co++ gl diox/w 25°C 50% U T H K1=10.55 B2=20.00 1954JFa (70093)2909  
K1=11.29(0.7 C),10.22(40 C); K2=10.08(0.7 C). DH(B2)=-84.8 kJ mol-1,  
DS=96 J K-1 mol-1

\*\*\*\*\*

C10H9NOS L CAS 13444-13-8 (4779)  
2-Acetylbenzothiazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp alc/w ? 100% U M 1973SKc (70109)2910  
K(Co(NO3)2+2L)=0.51

Medium: MeOH

\*\*\*\*\*

C10H9NO2 HL CAS 57334-35-7 (3905)  
2-Hydroxymethyl-8-hydroxyquinoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=8.68 B2=17.08 1967SFa (70116)2911  
\*\*\*\*\*

C10H9NO2 HL CAS 87-51-4 (891)  
Indole-3-ethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=3.50 B2=5.77 1981SKc (70134)2912  
Medium: 50% dioxan/H2O, 0.1 M KNO3

\*\*\*\*\*

C10H9NO2Cl2 HL (3333)  
N-2,5-Dichlorophenylacetoacetamide (Acetoacet-2,5-dichloroanilide)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U I K1=3.15 1969HSc (70143)2913  
Medium: 50% dioxan, 0.1 M KClO4. In 75% dioxan: K1=9.16, K2=8.08

\*\*\*\*\*

C10H9NO3 L (5685)  
Isonitrosobenzoylacetone; C6H5.CO.CH2.CO.CH:NOH

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

Co++ gl alc/w 25°C 50% U I B2=4.27 1985CFa (70151)2914  
B3=6.03

\*\*\*\*\*  
C10H9NO3 HL Maleanilic acid CAS 37902-58-2 (6225)  
Maleanilic acid; HOOC.CH:CH.CO.NH.C6H5

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

Co++ gl alc/w 22°C 80% U T H K1=6.80 B2=12.40 1985SAb (70156)2915  
30 C: K1= 6.70, K2=5.55; 40 C: K1= 6.60, K2=5.45  
DH(K1)=-18.6 kJ mol<sup>-1</sup>, DS=66 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-13.2, DS=65

\*\*\*\*\*  
C10H9NO3S H2L CAS 49608-51-7 (8280)  
4,5-Dihydro-2-(2-hydroxyphenyl)-4-thiazolecarboxylic acid,  
Deazademethyl-desferrithiocin;

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

Co++ gl KNO3 25°C 0.10M C K1=8.75 B2=15.55 1990ARa (70166)2916

\*\*\*\*\*  
C10H9NO4S H2L CAS 29021-67-8 (3926)  
2-Methyl-8-hydroxyquinoline-5-sulfonic acid;

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

Co++ gl NaClO4 25°C .005M U K1=7.54 B2=14.06 1963FFa (70195)2917  
K3 < 3.5

Medium: HClO4

\*\*\*\*\*  
C10H9NO7S2 H3L CAS 82-47-3 (6247)  
8-Amino-1-hydroxynaphthalene-3,6-disulfonic acid;

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

Co++ gl oth/un 20°C 0.0 U K1=2.84 B2=4.4 1961PEb (70219)2918

\*\*\*\*\*  
C10H9NO8 H2L CAS 83785-11-9 (685)  
2-Nitro-1,4-di(carboxymethoxy)benzene; O2N.C6H3.(OCH2COOH)2

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

Co++ gl oth/un 30°C ? U K1=3.41 1985TZa (70232)2919

\*\*\*\*\*  
C10H9NS HL CAS 10222-10-3 (1029)  
2-Methyl-8-mercaptoquinoline;

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

Co++ dis NaClO4 25°C 0.10M C 1987YSb (70260)2920  
Method: extraction from 0.10 M NaClO4 solution into CHCl3/HL.  
K(Zn+2HL(org)=ZnL2(org)+2H)=0.41.

-----  
Co++ sp non-aq 25°C 100% C M 1987YSb (70261)2921  
K(CoL2+phen)=<0  
Medium: CHCl3.

-----  
Co++ cal diox/w 25°C 50% U H 1968GFa (70262)2922  
Medium: 50% dioxan, 0.1 M NaClO4. DH(K1)=-23.8 kJ mol-1, DS=105 J K-1 mol-1

-----  
Co++ gl diox/w 25°C 50% U K1=9.6 1966KFb (70263)2923  
Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*  
C10H9N3 L Dipirydyamine CAS 1202-34-2 (2428)  
(2,2'-Dipirydy)amine; C5H4N.NH.C5H4N

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

Co++ gl KNO3 25°C 0.10M C M K1=4.98 B2= 8.90 1991DAc (70334)2924  
Data for ternary complexes with acetohydroxamic acid

-----  
Co++ gl NaClO4 25°C 0.10M C M 1979FSa (70335)2925  
B(CoL(pyrocatecholate))=14.02  
K(CoL+pyrocatecholate)=9.30  
K(Co(pyrocatecholate)+L)=5.41

-----  
Co++ gl KNO3 25°C 0.10M U TIH K1=4.98 B2=8.90 1976BBE (70336)2926

-----  
Co++ EMF KNO3 20°C 0.10M U K1=4.72 B2=8.92 1971ANa (70337)2927  
\*\*\*\*\*  
C10H9N3O5 HL CAS 54723-30-7 (3924)  
3-(2'-Thiazolyazo)-4-methylphenol; CH3.C6H3(OH).N:N.C3H2N2

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

Co++ gl alc/w 25°C 50% U B2=14.5 1967NPb (70373)2928  
Medium: 50% MeOH, 0.1 M NaClO4

\*\*\*\*\*  
C10H9N3O2 HL CAS 1631-97-6 (4718)  
3-Methyl-4-benzeneazo-isoxazol-5-one;

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

Co++ gl diox/w 30°C 75% U K1=4.17 B2=8.70 1971SYa (70384)2929  
\*\*\*\*\*

C10H9N3O2 HL CAS 56634-85-6 (1326)

4-Oximino-3-methyl-1-phenyl-2-pyrazolin-5-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 20°C 50% U T K1=3.20 B2=5.84 1981SSc (70389)2930  
At 30 C: K1=3.18, B2=5.73

\*\*\*\*\*  
C10H9N3O3 HL (1933)  
4-(5'-Methyl-3'-isoxazolylazo)-1,3-dihydroxybenzene; (HO)2C6H3.N:N.C3H2NO

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp alc/w 25°C 4% U K1=7.48 B2=16.41 1987STc (70411)2931  
B(CoHL)=12.77

In 4% ethanol/H2O, 0.1 M NaClO4.

\*\*\*\*\*  
C10H9O2Br HL CAS 4023-81-8 (1182)  
4-Bromo-1-phenyl-1,3-butanedione; Br.C6H4.CO.CH2.CO.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=10.17 B2=17.94 1976GRa (70432)2932

\*\*\*\*\*  
C10H9O2Cl HL CAS 64743-36-8 (308)  
1-(4-Chlorophenyl)butane-1,3-dione; Cl.C6H4.CO.CH2.CO.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U B2=18.67 1976BRd (70446)2933

\*\*\*\*\*  
C10H9O4P H2L CAS 1136-89-6 (1931)  
1-Naphthyl-phosphoric acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaCl 25°C 0.15M U K1=1.68 1989AKa (70461)2934

\*\*\*\*\*  
C10H10NO2Cl HL CAS 6144-11-0 (247)  
Acetoacet-2-chloroacetanilide; CH3.CO.CH2.CO.NH.C6H4.Cl

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=3.51 1969HSc (70488)2935  
Medium: 50% dioxan, 0.1 M KClO4

\*\*\*\*\*  
C10H10N04P HL (1932)  
8-Quinolyl-methyl-phosphoric acid; (C9H7N)CH2P04H

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



Co++ gl NaCl 25°C 0.15M U K1=1.23 1989AKa (70521)2936  
B(CoH-1L)=-5.26

\*\*\*\*\*  
C10H10N2O HL CAS 70125-17-6 (3906)  
2-Aminomethyl-8-hydroxyquinoline;

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

Co++ gl diox/w 25°C 50% U K1=11.7 B2=22.50 1967SFa (70533)2937

\*\*\*\*\*  
C10H10N2O2S L CAS 4939-30-4 (1676)  
8-(Methanesulfonylamino)quinoline;

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

Co++ gl diox/w 30°C 75% U K1=10.0 B2=18.6 1984NYa (70548)2938

\*\*\*\*\*  
C10H10N2O3S H2L CAS 76045-30-2 (7218)  
Desferriferriethiocin,  
2-(3-Hydroxypyridin-2-yl)-4-methyl-4,5-dihydrothiazole-4-carboxylic acid;

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

Co++ gl KNO3 25°C 0.10M C K1=9.13 B2=16.93 1990ARa (70556)2939

\*\*\*\*\*  
C10H10N3OCl L CAS 135471-86-2 (8750)  
2-(Chloroacetylaminomethyl)benzimidazole;

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

Co++ gl diox/w 30°C 50% U 1990MCb (70585)2940  
B(CoH-1L)=-4.60  
K(CoH-1L+L=CoH-2L2+H)=-11.00  
\*K(CoH-1L)=-7.70

Medium: 50% v/v dioxane/H2O, 0.2 M NaNO3.

\*\*\*\*\*  
C10H10N4O2S HL Sulfadiazine CAS 68-35-9 (1885)  
4-Amino-N-(2-pyrimidinyl)benzenesulfonamide; C4H3N2NHSO2C6H4NH2

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

Co++ gl alc/w 30°C 50% C M 1999MBc (70605)2941  
B(Co(gly)L)=9.46  
B(CoAL)=9.91  
B(Co(met)L)=8.42  
B(CoH-1(gly)L)=1.41

In 50% v/v EtOH/H2O, 0.10 M NaNO3. B(CoH-2(gly)L)=-7.64; B(CoH-1AL)=1.76,  
B(CoH-2AL)=-7.34; B(CoH-1(met)L)=-0.08, B(CoH-2(met)L)=-8.08. A: Beta-ala

-----  
Co++ gl diox/w 30°C 50% U K1=2.61 B2= 5.90 1993MBc (70606)2942

\*K(CoL)=-7.95  
 \*K(CoL2)=-6.70  
 \*K(Co(OH)L2)=-9.34

Medium: 50% v/v dioxane/H2O, 0.10 M NaNO3.

-----  
 Co++ gl alc/w 25°C 50% U M K1=2.99 B2=4.37 1986SKe (70607)2943  
 K(CoA+L)=2.23

Medium: 50% v/v EtOH/H2O, 0.1 M NaCl. H3A=nitrolotrientanoic acid

-----  
 Co++ gl mixed 25°C 65% U T K1=2.99 B2=4.37 1982KNc (70608)2944

Medium: 65% DMSO/H2O, 0.1 KNO3

\*\*\*\*\*

C10H1002 HL Benzoylacetone CAS 93-91-4 (197)  
 1-Phenylbutane-1,3-dione; C6H5.CO.CH2.CO.CH3

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

Co++ dis NaCl04 25°C 1.0M C M K1=4.55 B2= 8.14 1977SMe (70698)2945  
 K(CoL2(org)+A(org))=3.40

Method: distribution from 1.0 M NaCl04 into CCl4/HL/tri-octylposphine  
 oxide (A). K(Co+2HL(org)=CoL2(org)+2H)=-13.05.

-----  
 Co++ gl diox/w 25°C 50% U K1=6.09 B2=11.65 1974DHa (70699)2946

-----  
 Co++ dis NaCl04 25°C 1.0M U K1=4.55 B2=8.14 1971MSe (70700)2947  
 B3=11.0

-----  
 Co++ gl diox/w 30°C 75% U K1=9.74 B2=18.02 1955H0a (70701)2948

-----  
 Co++ gl diox/w 30°C 75% U K1=9.42 B2=17.83 1953UFa (70702)2949

\*\*\*\*\*

C10H1003 HL CAS 16636-62-7 (3298)  
 2-Hydroxybenzoylacetone; HO.C6H4.CO.CH2.CO.CH3

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

Co++ gl diox/w 30°C 75% U K1=8.84 B2=16.50 1955H0a (70797)2950

\*\*\*\*\*

C10H1004 H2L CAS 616-75-1 (4700)  
 Benzylmalonic acid; HOOC.CH(CH2.C6H5).COOH

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

Co++ gl none 25°C 0.0 U K1=3.35 1970NPb (70819)2951

\*\*\*\*\*

C10H1006 H2L CAS 5411-14-3 (2394)  
 1,2-Phenylenedioxodiethanoic acid; C6H4(O.CH2.COOH)2

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

Co++ gl NaClO4 25°C 0.10M U K1=1.1 1968SMb (70843)2952  
 \*\*\*\*\*  
 C10H11NOS L (2831)  
 Acetothioacetanilide; CH3.CO.CH2.CS.NH.C6H5

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ sp diox/w 25°C 50% U K1=4.93 1985NBa (70877)2953  
 \*\*\*\*\*  
 C10H11NO2 L CAS 102-01-2 (250)  
 Acetoacetanilide; CH3.CO.CH2.CO.NH.C6H5

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl diox/w 25°C 50% U K1=4.49 1969HSc (70903)2954  
 Medium: 50% dioxan, 0.1 M KClO4  
 \*\*\*\*\*  
 C10H11NO2S HL CAS 42607-21-6 (8331)  
 2-Phenylthiazolidine-4-carboxylic acid;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KNO3 30°C 0.10M U TIH K1=7.30 B2=13.59 1983Rkb (70926)2955  
 At I=0.0, K1=7.45, K2=6.44. Data for 25-50 C. DH(K1)=-42.6 kJ mol<sup>-1</sup>,  
 DS(K1)=26.9 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-36.7, DS(K2)=20.0.  
 \*\*\*\*\*  
 C10H11NO4 H2L CAS 1137-73-1 (2567)  
 N-Phenyliminodiethanoic acid; C6H5.N(CH2.COOH)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ cal KNO3 25°C 0.1M C H 1991ANa (70993)2956  
 DH(K1)=20.9 kJ mol<sup>-1</sup>

-----  
 Co++ cal KNO3 25°C 0.10M U K1=2.96 1991Aa (70994)2957  
 DH(K1)=20.92 kJ mol<sup>-1</sup>, DS(K1)=125.52 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
 Co++ gl KCl 30°C 0.10M U K1=3.3 B2=5.9 1957TBc (70995)2958

-----  
 Co++ gl KCl 20°C 0.10M U K1=2.90 1955SAa (70996)2959  
 \*\*\*\*\*  
 C10H11NO4 H2L Salicylalanine CAS 5853-90-7 (6174)  
 N-Salicylyl-2-aminopropanoic acid; HO.C6H4.CO.NH.CH(CH3)COOH

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl alc/w 25°C 50% U K1=3.07 B2= 5.99 1989MSi (71015)2960  
 B(CoH-1L)=-4.23  
 K(Co+OH+L)=9.77  
 Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.

\*\*\*\*\*  
 C10H11N05 H3L CAS 100844-86-8 (2108)  
 N-(2-Hydroxyphenyl)iminodiethanoic acid; HO.C6H4.N(CH2.COOH)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ EMF oth/un ? ? U K1=11.0 1968TRc (71035)2961  
 K(Co+HL)=4.60

\*\*\*\*\*  
 C10H11N05 H3L CAS 6386-78-3 (2834)  
 N-(4-Hydroxyphenyl)-iminodiethanoic acid; HO.C6H4.N(CH2.COOH)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KNO3 25°C 0.10M U K1=7.66 1980TAa (71053)2962  
 K(Co+HL)=6.63

\*\*\*\*\*  
 C10H11N05S H2L (3929)  
 N-(2-Thenoylmethyl)iminodiethanoic acid; C4H3S.CO.CH2.N(CH2.COOH)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KNO3 25°C 0.10M U K1=6.93 B2=11.90 1965AUa (71060)2963

\*\*\*\*\*  
 C10H11N3 L CAS 49612-00-2 (3301)  
 2-Hydrazino-4-methylquinoline;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl oth/un 22°C 0.10M U K1=5.3 B2=9.6 1957FEa (71078)2964  
 B3=13.0

\*\*\*\*\*  
 C10H11N3O3S HL CAS 723-46-6 (8374)  
 4-Amino-N-(5-methyl-3-isoxazolyl)-benzenesulfonamide;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl NaNO3 25°C 0.10M M M K1=2.13 1995SKa (71084)2965  
 B(Co(phen)L)=2.31

\*\*\*\*\*  
 C10H11O2Cl HL CAS 77103-89-0 (6319)  
 5-Chloro-2-hydroxybutyrophenone; (HO)(Cl)C6H3.CO.CH2.CH2.CH3

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl diox/w 40°C 75% U K1=7.02 B2=13.46 1974PSc (71103)2966  
 Medium: 75% dioxan/H2O, 0.1 M NaClO4

\*\*\*\*\*  
 C10H11O4P H2L CAS 58942-13-5 (7014)  
 Phenylphosphino-P,P-diethanoic acid, Diphenylphosphinediethanoic acid;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaClO4 25°C 0.10M U I      K1=2.71      1979POa (71137)2967
In 50% v/v dioxan/H2O: K1=4.52; B2=8.01
*****
C10H12N2          L      Tolazoline          CAS 59-97-2 (1036)
2-Benzyl-2-imidazoline; C6H5.CH2.C3H5N2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.50M U          K1=2.11      B2=4.04      1983LWa (71155)2968
                                     B3=5.88
                                     B4=7.65
*****
C10H12N2O          HL          CAS 155055-22-4 (8339)
3-(Phenylimino)-2-butanone oxime;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  alc/w  30°C 50% U T      K1=8.38      B2=15.67      1993HMd (71163)2969
Medium: 50% v/v MeOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.
For 2-OH deriv., K1=7.20, for 3-OH, K1=7.08, for 4-OH, K1=7.40.
*****
C10H12N2O2         HL          CAS 70263-59-1 (8479)
2-(Phenylhydrazono)butanoic acid;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  alc/w  30°C 40% C TI      K1=3.12      B2= 5.67      1997RRd (71174)2970
Medium: 40% v/v EtOH/H2O, 0.10 M KNO3. Also data for 50-70% v/v EtOH/H2O,
0.1 M KNO3, and for 20-50 C.
*****
C10H12N2O3S        HL          CAS 93100-65-3 (6199)
2-(2-Pyrrolideneamino)benzene sulfonic acid; C4H7N:N.C6H4.HSO3
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaClO4 25°C 0.10M U T H      K1=12.52      1987RDb (71210)2971
35 C:K=12.94, 45 C:13.30. DH=70.77 kJ mol-1, DS=480 J K-1 mol-1
*****
C10H12N2O4          H2L          CAS 16598-05-3 (967)
2-Pyridylmethyliminodiethanoic acid; C5H4N.CH2.N(CH2.COOH)2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3  20°C 0.10M C  H      K1=10.60      B2=13.50      1981ANb (71243)2972
DH1=-14.6 kJ mol-1 DS1=152.7 J K-1 mol-1
additional method: exchange equilibria and ion selective electrode
-----

```

Co++ gl KNO3 25°C 0.10M C K1=8.86 B2=15.42 1975IPa (71244)2973

Co++ gl KCl 25°C 0.10M U K1=10.39 B2=13.59 1966SIb (71245)2974

Co++ gl KNO3 20°C 0.10M U K1=10.16 B2=13.34 1963IFc (71246)2975

\*\*\*\*\*

C10H12N2O4 H2L CAS 91856-13-2 (8436)

DL-N-(4-Aminophenyl)aspartic acid;

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

Co++ gl NaCl 25°C 0.50M C K1=2.21 1984RFb (71290)2976

\*\*\*\*\*

C10H12N2O4 HL (6004)

N-Benzyloxycarbonylglycyl hydroxamic acid; C6H5.CH2.O.CO.NH.CH2.CO.NHOH

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

Co++ gl KNO3 25°C 0.10M U K1=4.2 1987CSb (71300)2977

\*\*\*\*\*

C10H12N2O5S HL (6278)

2-Benzenesulfonamidossuccinamic acid; C6H5.SO2.NH.CH(CO.NH2).CH2.COOH

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

Co++ gl alc/w 25°C 50% U K1=5.46 1978GMc (71313)2978

\*\*\*\*\*

C10H12N4O L CAS 16347-32-3 (2483)

9-(Tetrahydro-2-pyranlyl)purine;

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

Co++ gl NaClO4 25°C 1.00M U K1=0.84 1983ALa (71322)2979

\*\*\*\*\*

C10H12N4O4 L Nebularine CAS 550-33-4 (2172)

Purine-9-beta-D-ribofuranoside;

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

Co++ gl NaClO4 25°C 1.00M U K1=1.00 1981LAc (71329)2980

\*\*\*\*\*

C10H12N4O5 HL Inosine CAS 58-63-9 (2344)

Hypoxanthine-9-beta-D-ribofuranoside;

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

Co++ gl KNO3 35°C 0.10M U M K1=2.01 1991RRa (71380)2981

B(CoL(Ala))=6.39

B(CoLA)=6.25

B(CoL(norVal))=6.38

B(CoL(norLeu))=6.48

HA=2-aminobutanoic acid

-----  
Co++ gl KNO3 35°C 0.10M U M K1=2.01 1990RRb (71381)2982  
B(Co(Ala)L)=6.39  
K(Co(Phe)L)=6.63  
K(Co(Trp)L)=6.96  
-----

Co++ gl KNO3 25°C 0.10M C T H K1=2.88 1983RRd (71382)2983  
Data for 25-45 C. DH(K1)=-0.59 kJ mol<sup>-1</sup>, DS(K1)=53.1 J K<sup>-1</sup> mol<sup>-1</sup>.  
-----

Co++ gl NaClO4 25°C 1.0M U K1=2.1 1981LVa (71383)2984  
K(Co+HL)=0.8  
K(Co+HL=CoL+H)=-6.6  
-----

Co++ gl oth/un 20°C 0.01M U K1=2.6 1953ALa (71384)2985  
\*\*\*\*\*  
C10H12N4O6 H2L Xanthosine CAS 5968-90-1 (1176)  
3,9-Dihydro-9-ribofuranosyl-1H-purine-2,6-dione;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 35°C 0.10M U M K1=1.62 1991RRa (71466)2986  
K(Co(Ala)+L)=4.24  
K(CoA+L)=4.72  
K(Co(norVal)+L)=4.36  
K(Co(norLeu)+L)=4.46  
-----

HA=2-aminobutanoic acid

-----  
Co++ gl KNO3 25°C 0.10M U M 1990RRa (71467)2987  
B(CoHL(His))=10.23  
B(CoHL(histamine))=8.88  
B(CoH2L(catechol))=9.24  
K(Co(Gly)+H+L)=3.15  
-----

Co++ gl KNO3 35°C 0.10M U M K1=1.62 1990RRb (71468)2988  
K(Co(Ala)L)=4.24  
K(Co(Phe)L)=4.56  
K(Co(Trp)L)=4.96  
-----

Co++ gl NaNO3 25°C 0.10M C K1=0.5 1989KTa (71469)2989  
K(Co+H-1L)=1.65  
-----

Co++ gl KNO3 35°C 0.10M C M 1985RRh (71470)2990  
K(Co+HL)=2.51  
K(Co(gly)+HL)=3.0  
K(Co+HL+his)=10.11  
K(Co+HL+HA)=9.08  
-----

K(Co+HL+B)=9.33. H2A is catechol, H2B is oxalic acid.  
-----

Co++ gl KNO3 35°C 0.10M U M 1983RRb (71471)2991  
 K(Co+HL)=2.51  
 K(Co+2HL)=5.38  
 K(CoGly+H2L=CoHLGly+H)=3.0

Co++ gl KNO3 25°C 0.10M U T H 1983RRc (71472)2992  
 K(Co+2HL)=5.32  
 DH=-9.2 kJ mol<sup>-1</sup>. At 5 C: K=6.03; 35 C: 5.38; 45 C: 5.53

Co++ gl KNO3 45°C 0.10M U M 1979RRb (71473)2993  
 K(Co+HL+TetraMeen)=5.23  
 K(Co+HL+Sulphosalicylate)=2.45

Co++ gl KNO3 45°C 0.10M U M 1979RRb (71474)2994  
 K(Co+HL+bpy)=6.82  
 K(Co+HL+phen)=7.02

Co++ gl KNO3 25°C 0.10M U T 1978RRa (71475)2995  
 K(Co+HL)=2.23

Co++ gl oth/un 20°C 0.01M U K1=2.8 1953ALa (71476)2996  
 \*\*\*\*\*  
 C10H12N4O6 HL CAS 40281-74-1 (3910)  
 Purin-6-one 9-riboside N(1)-oxide (Inosine N(1)-oxide)

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

Co++ sp NaClO4 25°C 0.10M U K1=3.46 1965SIa (71507)2997  
 \*\*\*\*\*  
 C10H12O2 HL CAS 7624-24-2 (4702)  
 2-Hydroxy-4-methylpropiophenone; HO.C6H3(CH3).CO.CH2.CH3

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

Co++ gl diox/w 27°C 75% U K1=8.78 B2=15.12 1973KDC (71525)2998  
 Medium: 75% dioxan, 0.1 M NaClO4  
 \*\*\*\*\*  
 C10H12O2 HL CAS 1946-74-3 (202)  
 3-Isopropyltropolone;

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

Co++ gl diox/w 30°C 50% U M K1=11.91 B2=18.62 1980KSa (71565)2999  
 B(Co(bpy)+L)=6.58

Co++ dis NaClO4 25°C 0.10M U K1=5.8 B2=10.80 1962DYa (71566)3000

Co++ gl diox/w 30°C 50% U K1=8.1 B2=14.8 1954BFb (71567)3001

Co++ gl diox/w 30°C 50% U K1=7.9 B2=14.2 1954BFb (71568)3002



B3=18.0

\*\*\*\*\*

C10H1202 HL CAS 499-44-5 (3303)  
4-Isopropyltropolone;

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

Co++ dis non-aq 25°C 100% C M K1=5.7 1997SNa (71629)3003  
K(2Co+4L=Co2L4(org))=29.5

Method: solvent extraction from 0.10 M NaNO3 into CHCl3.  
K is for: 2Co(aq)+4L(aq)=Co2L4(org). K1 refers to 0.10 M NaNO3.

\*\*\*\*\*

C10H1204 HL CAS 90-24-4 (4704)  
2-Hydroxy-4,6-dimethoxyacetophenone; (HO)(CH3)2.C6H2.CO.CH3

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

Co++ gl diox/w 27°C 75% U K1=10.76 B2=21.23 1973KDC (71662)3004  
Medium: 75% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C10H13N L CAS 100190-73-6 (302)  
2-(Pent-4-enyl)pyridine; C5H4N.CH2.CH2.CH2.CH:CH2

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

Co++ gl KNO3 25°C 0.10M U K1=1.2 1974ILa (71692)3005

\*\*\*\*\*

C10H13NO3 H2L Salicyl-alanine CAS 57471-91-7 (6944)  
2-(N-(2-Hydroxybenzyl))aminopropanoic acid; HO.C6H4.CH2.NH.CH(CH3)COOH

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

Co++ gl KCl 25°C 0.10M U K1=8.15 B2=13.53 1975RIa (71735)3006  
B(CoHL2)=21.55

Data are for L-ligand. For rac-ligand, K1=8.15, B2=13.34,  
B(CoHL2)=21.49.

\*\*\*\*\*

C10H13NO3 HL CAS 676256-93-2 (9134)  
N-(2-Furanylmethylene)valine;

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

Co++ gl KCl 25°C 1.0M U K1=4.55 2003SGa (71747)3007

\*\*\*\*\*

C10H13NO5S H2L CAS 93474-55-6 (8748)  
N-(Phenylsulfonyl)-L-threonine;

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

Co++ gl alc/w 25°C 50% C T H 1987MDe (71778)3008

$$K(\text{Co+HL}=\text{CoL+H})=6.07$$

$$K(\text{Co+2HL}=\text{CoL2+2H})=12.37$$

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3. Data for 35, 45 C.  
 Enthalpy and entropy data.

\*\*\*\*\*  
 C10H13N2O11P H3L Orotidylic acid CAS 68244-58-6 (6665)  
 Orotidine-5'-monophosphoric acid, uridine-5-carboxylic acid-5-monophosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	M			K1=2.37 K(CoH-1L+H)=8.40	1991BSc (71789)	3009

\*\*\*\*\*  
 C10H13N4O8P H3L IMP CAS 131-99-7 (843)  
 Inosine-5'-monophosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C	M		K1=2.65	2001AAa (71849)	3010

Also data for ternary complexes with MOPSO, TAPSO and ACES.  
 -----  
 Co++ gl KNO3 25°C 0.10M C TIHM 2000RNb (71850) 3011  
 K(Co+HL)=2.85  
 K(CoL+H)=3.92  
 K(CoHL+HA=CoLA+2H)=7.38  
 K(CoHL+HC=CoLC+2H)=7.45

Data for 35 and 45 C. HA is DL-ala-ala, HC is DL-ala-phe. DH(CoLA)=-19.9 kJ mol-1, DS(CoLA)=75 J K-1 mol-1; DH(CoLB)=-18.1, DS(CoLC)=82.

Co++	gl	R4N.X	25°C	0.1M	U	H		K1=2.55 K(Co+HL)=1.08	1998HTa (71851)	3012
------	----	-------	------	------	---	---	--	--------------------------	-----------------	------

Medium: 0.10 M Me4NBr. By calorimetry: DH(K1)=-12.2 kJ mol-1, DS=1.9 J K-1 mol-1. DH(K2)=-18.2, DS=44.

Co++	gl	KNO3	35°C	0.10M	U	M		K(Co+H2L=CoHL+H)=2.51 K(CoHL+HA=CoLA+2H)=8.36 K(CoHL+HC=CoLC+2H)=8.73 K(CoHL+HD=CoLD+2H)=9.00	1998RVb (71852)	3013
------	----	------	------	-------	---	---	--	--	-----------------	------

HA is alanine, HC is phenylalanine, HD is tryptophan.

Co++	gl	NaNO3	25°C	0.10M	M			K(Co+HL)=2.59 *K(CoHL)=-7.69	1994SMb (71853)	3014
------	----	-------	------	-------	---	--	--	---------------------------------	-----------------	------

\*\*\*\*\*  
 C10H13N4O9P H3L (3930)  
 Inosine-5'-monophosphoric acid N(1)-oxide;

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

Co++ sp NaClO4 25°C 0.10M U 1965SIa (71882)3015  
K(Co+HL)=3.73

\*\*\*\*\*  
C10H13N5O4 L Adenosine CAS 58-61-7 (2154)  
Adenosine, Adenine-9-beta-D-ribofuranoside;

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

Co++ gl NaClO4 25°C 1.00M U K1=0.2 1981LAc (71938)3016  
-----

Co++ sp oth/un 20°C var U K1=-0.30 1964SBb (71939)3017  
Medium: 1-3 M Co(ClO4)2

\*\*\*\*\*  
C10H13N5O5 HL Guanosine CAS 118-00-3 (1402)  
2-Aminopurin-6-one-9-riboside;

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

Co++ gl KNO3 25°C 0.10M C T HM 1988KRa (72002)3018  
K(Co+HL)=3.47  
K(CoHL+HL)=4.27

Also data at 15, 35 and 45 C. DH(CoHL)=-12; DS=25. DH(CoH2L2)=-15.6; DS=29.  
Also ternary complexes with bpy, phen and 5-sulfosalicylic acid

-----  
Co++ gl NaClO4 25°C 1.0M U 1981LVa (72003)3019  
K(Co+HL=CoHL)=1.0

-----  
Co++ gl oth/un 20°C 0.01M U K1=3.2 1953ALa (72004)3020  
\*\*\*\*\*

C10H13N5O5 L CAS 116-92-9 (2174)  
Adenosine-N'-oxide;

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

Co++ gl none 25°C 0.0 U K1=7.01 1960PEb (72030)3021  
\*\*\*\*\*

C10H14N2O L CAS 59-26-7 (1358)  
N,N-Diethylnicotinamide; (C2H5)2N.CO.C5H4N

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

Co++ gl KNO3 25°C 0.50M U K1=0.85 B2=1.15 1974WAa (72065)3022  
\*\*\*\*\*

C10H14N2O6 L alpha-Thymidine CAS 4449-43-8 (695)  
Thymine-2-desoxyribofuranosyl-5-methyluracil;

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

Co++ gl NaNO3 20°C 1.0M M K1=7.85 B2=15.04 1997WYa (72102)3023  
K3=3.62

K4=3.28

\*\*\*\*\*

C10H14N2O7 H3L CAS 95175-15-8 (5705)  
2,5-Diazacyclohexanon-1-2(butane-1,4-dioic)-6-ethanoic acid;

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

Co++ cal KNO3 25°C 0.25M U T 1991LKb (72119)3024  
DH(K1)=-3.1 kJ mol-1

-----  
Co++ EMF KNO3 25°C 0.10M U K1=3.00 1991VZa (72120)3025  
-----

C10H14N4B- L (7239)  
Bis(3,5-dimethylpyrazol-1-yl)borate; ((CH3)2C3H)2BH2-

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

Co++ dis non-aq 25°C 100% U 1996KSa (72127)3026  
K(Co+2HL=CoL2(org)+2H)=0.59

By solvent extraction into CHCl3

\*\*\*\*\*

C10H14N5O6PS H2L AMPS CAS 19341-57-2 (8152)  
Adenosine-5'-monothiophosphoric acid, 5-Thioadenylic acid;

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

Co++ gl NaNO3 25°C 0.10M M K1=2.03 1997SSg (72149)3027  
K(Co+HL)=1.0  
K(CoL+H)=3.8

\*\*\*\*\*

C10H14N5O7P H2L AMP-2 CAS 81012-86-4 (2437)  
Adenosine-2'-monophosphoric acid, 2-Adenylic acid;

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

Co++ gl R4N.X 25°C 0.10M C TIH R K1=2.32 1991SMa (72177)3028  
IUPAC evaluation. DH(K1)=-2.5 kJ mol-1 (tentative)

-----  
Co++ gl NaNO3 25°C 0.10M U K1=1.93 1989MSf (72178)3029  
-----

Co++ gl KNO3 40°C 0.10M U T H K1=2.28 1967TMf (72179)3030  
K1=2.15(0.4 C), 2.19(12 C), 2.24(25 C). At 25 C: DH(K1)=-2.9? kJ mol-1, DS=36?  
-----

C10H14N5O7P H2L AMP-3 CAS 84-21-9 (2438)  
Adenosine-3'-monophosphoric acid, 3-Adenylic acid;

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

Co++ gl R4N.X 25°C 0.10M C TIH R K1=2.22 1991SMa (72225)3031  
IUPAC evaluation. DH(K1)=-2.5 kJ mol-1 (tentative)

-----  
Co++ gl NaNO3 25°C 0.10M U K1=1.80 1989MSf (72226)3032  
-----

Co++ gl KNO3 40°C 0.10M U T H K1=2.24 1967TMf (72227)3033  
K1=2.11(0.4 C),2.15(12 C),2.20(25 C). At 25 C: DH(K1)=-2.5? kJ mol<sup>-1</sup>,DS=35 ?  
-----

Co++ ix NaClO4 25°C 0.10M U K1=2.08 1966DTa (72228)3034  
-----

Co++ gl KNO3 25°C 0.10M U I K1=2.10 1966DTa (72229)3035  
In 0.1 M Me4NBr: K1=2.19  
-----

Co++ gl KNO3 25°C 0.10M U K1=2.24 1962TMa (72230)3036  
\*\*\*\*\*  
C10H14N5O7P H2L AMP-5 CAS 18422-05-4 (842)  
Adenosine-5'-monophosphoric acid, 5-Adenylic acid;  
-----

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

Co++ gl NaNO3 25°C 0.10M M K1=2.30 2003BSa (72388)3037  
K(CoL+H)=4.79  
K(Co+HL)=0.88  
-----

Co++ gl KNO3 20°C 0.10M C B(CoHL)=11.87 2002GLc (72389)3038  
B(CoH2L)=17.14  
-----

Co++ gl KNO3 25°C 0.10M C M K1=2.53 2001A0a (72390)3039  
K(CoL+A)=2.61  
B(CoLA)=5.14  
K(CoL+B)=3.84  
B(CoLB)=6.37  
-----

HA=POPSO, HB=HEPPSO.  
-----

Co++ gl KNO3 25°C 0.10M C M K1=2.53 2000ADa (72391)3040  
K(CoL+A)=6.11  
B(CoLA)=8.64  
K(CoL+B)=3.93  
B(CoLB)=6.46  
-----

HA=ACES, HB=MOPSO. Also data for CHES, TAPSO and DIPSO.  
-----

Co++ gl NaNO3 25°C 0.10M C M K1=2.57 2000KHa (72392)3041  
K(CoL+A)=2.64  
B(CoLA)=5.21  
-----

H2A=salicylhydroxamic acid.  
-----

Co++ gl NaNO3 25°C 0.10M C M K1=2.57 2000KHb (72393)3042  
K(CoA+L)=2.82  
B(CoAL)=9.72  
-----

H2A=N-(2-acetamido)iminodiacetic acid.  
-----

Co++	gl	KNO3	20°C	0.10M	U		K1=2.72		1999GLa (72394)3043
-----									
Co++	gl	R4N.X	25°C	0.1M	U	H	K1=2.24		1998HTa (72395)3044
							K(Co+HL)=0.78		
Medium: 0.10 M Me4NBr. By calorimetry: DH(K1)=-3.6 kJ mol <sup>-1</sup> , DS=31 J K <sup>-1</sup> mol <sup>-1</sup> . DH(K2)=-18.2, DS=-20.									
-----									
Co++	gl	NaNO3	25°C	0.10M	M		K1=2.30		1996SSd (72396)3045
-----									
Co++	gl	KNO3	25°C	0.10M	C	M	K1=2.61		1995AEb (72397)3046
							K(CuL+BES)=3.19		
							K(Co+L+BES)=5.80		
							K(CoL+Bicine)=3.86		
							K(Co+L+Bicine)=6.47		
BES: N,N-bis(2-hydroxyethyl)-2-aminoethanesulfonic acid. K(Co+L+TAPS)=6.76 K(CoL+TAPS)=4.2. TAPS:N-[Tris(hydroxymethyl)methyl]-3-aminopropanesulfonic									
-----									
Co++	gl	R4N.X	25°C	0.10M	C	TIH R	K1=2.62		1991SMa (72398)3047
IUPAC evaluation. DH(K1)=-0.4 kJ mol <sup>-1</sup> (tentative). 37 C, I=0.15 M: K1=2.48									
-----									
Co++	gl	NaNO3	25°C	0.10M	U		K1=2.23		1989MSf (72399)3048
-----									
Co++	cal	R4N.X	25°C	0.10M	C	H			19890Ca (72400)3049
Medium: 0.10 M triethanolamine/HCl buffer, pH 7.5. DH(K1)=-4.39 kJ m <sup>-1</sup> , DS(K1)=34.3 J K <sup>-1</sup> mol <sup>-1</sup> .									
-----									
Co++	gl	NaNO3	25°C	0.10M	C		K1=2.23		1988SMb (72401)3050
-----									
Co++	gl	KNO3	25°C	0.10M	C	M	K1=5.44	B2=10.08	1986BMa (72402)3051
							B(CuL(Dien))=12.40		
K(2CoL(Dien)+O2=Co2L2(Dien)2O2)=10.59									
-----									
Co++	gl	KCl	25°C	0.10M	U	M	K1=2.77		1984DMc (72403)3052
-----									
Co++	gl	KCl	25°C	0.10M	U	M			1983MDd (72404)3053
							B(CoL(Gly))=6.24		
-----									
Co++	gl	KCl	25°C	0.10M	U		K1=2.30		1980DMa (72405)3054
-----									
Co++	gl	KCl	25°C	0.10M	U	M	K1=2.30		1980DMc (72406)3055
K(Co+L+his)=9.30, Hhis=histidine									
-----									
Co++	gl	R4N.X	25°C	0.20M	U	T H	K1=2.33		1980MGb (72407)3056
Medium: Me4NBr. By calorimetry DH(K1)=-0.4 kJ mol <sup>-1</sup> at 25 C. At 5 C: K1=2.45 15 C: 2.37; 37 C: 2.35									
-----									
Co++	gl	NaClO4	8°C	0.20M	U		K1=2.352		1977PDa (72408)3057
							K(Co+HL)=1.322		
-----									
Co++	ix	NaClO4	20°C	0.05M	U		K1=3.86	B2=6.60	1975KOb (72409)3058

-----  
Co++ gl diox/w 25°C 10% U M K1=2.34 1967SBc (72410)3059  
K(Co(bpy)+L)=2.37

Medium: 10% dioxan, 0.1 M NaClO4

-----  
Co++ gl KNO3 40°C 0.10M U T H K1=2.57 1967TMF (72411)3060  
K1=2.44(0.4 C),2.49(12 C),2.53(25 C). At 25 C: DH(K1)=-4.6 kJ mol<sup>-1</sup>, DS=35 ?

-----  
Co++ gl KNO3 25°C 0.10M U K1=2.57 1966DTa (72412)3061

-----  
Co++ gl NaClO4 25°C 0.10M U K1=2.19 1964SBa (72413)3062

-----  
Co++ gl KNO3 25°C 0.10M U K1=2.64 1962TMa (72414)3063

-----  
Co++ ix NaCl 23°C 0.10M U K1=2.58 1958WAa (72415)3064

\*\*\*\*\*

C10H14N5O8P H2L CAS 4061-78-3 (3931)

Adenosine-5'-monophosphoric acid N(1)-oxide;

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

-----  
Co++ gl NaClO4 25°C 0.10M U 1964SBa (72520)3065

K(Co+HL)=2.11

K(CoL+H)=7.77

By spectrophotometry: K1=6.8

\*\*\*\*\*

C10H14N5O8P H3L GMP-5 CAS 85-32-5 (2947)

Guanosine-5'-monophosphoric acid;

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

-----  
Co++ gl KNO3 25°C 0.10M C M K1=2.75 2001AAa (72574)3066

Also data for ternary complexes with MOPSO, TAPSO and ACES.

-----  
Co++ gl KNO3 25°C 0.10M C T HM 2000RNb (72575)3067

K(Co+HL)=3.04

K(CoL+H)=4.08

K(CoHL+HA=CoLA+2H)=7.50

K(CoHL+HC=CoLC+2H)=7.68

Data for 35 and 45 C. HA is DL-ala-ala, HC is DL-ala-phe. DH(CoLA)=-17.5

kJ mol<sup>-1</sup>, DS(CoLA)=85 J K<sup>-1</sup> mol<sup>-1</sup>; DH(CoLB)=-17.2, DS(CoLC)=89.

-----  
Co++ gl R4N.X 25°C 0.1M U H K1=2.68 1998HTa (72576)3068

K(Co+HL)=1.26

Medium: 0.10 M Me4NBr. By calorimetry: DH(K1)=-14 kJ mol<sup>-1</sup>,

DS=4 J K<sup>-1</sup> mol<sup>-1</sup>. DH(K2)=-6.1, DS=20.

-----  
Co++ gl KNO3 35°C 0.10M U M 1998RVb (72577)3069

K(Co+H2L=CoHL+H)=2.65

K(CoHL+HA=CoLA+2H)=8.50

K(CoHL+HC=CoLC+2H)=8.87

K(CoHL+HD=CoLD+2H)=9.15

HA is alanine, HC is phenylalanine, HD is tryptophan.

-----  
Co++ gl NaNO3 25°C 0.10M M 1994SMb (72578)3070

K(Co+HL)=2.72

\*K(CoHL)=-8.16

-----  
Co++ gl KNO3 35°C 0.10M U M 1990RAc (72579)3071

B(CoHL)=1.94

K(Co+H2L+Gly)=8.88

K(Co+HL+His)=11.13

K(Co+HL+histamine)=10.70

\*\*\*\*\*  
C10H14O8S4 H4L CAS 10003-69-7 (3914)

1,1,2,2-Tetrathioethane-S,S',S'',S'''-tetraethanoic acid;

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

-----  
Co++ gl NaClO4 25°C 0.10M U K1=2.86 1973PPc (72624)3072

B(CoHL)=6.77

B(CoH2L)=10.23

B(Co2L)=4.12

-----  
Co++ gl oth/un 25°C 0.10M U K1=2.2 1972PPb (72625)3073

\*\*\*\*\*  
C10H15N L CAS 91-66-7 (3897)

N,N-Diethylaniline; C6H5.N(CH2.CH3)2

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

-----  
Co++ sp non-aq ? 100% U 1972ZDa (72631)3074

K(CoCl2+L)=2.70

K(CoCl2+2L)=5.37

Medium: t-butanol

\*\*\*\*\*  
C10H15NOS2 L (5423)

2-(2-Pyridyl)-1,3-dithiomethyl-2-propanol; CH3S.CH2.C(OH)(C5H4N).CH2.SCH3

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

-----  
Co++ gl diox/w 25°C 50% U K1=1.21 1981CBa (72653)3075

\*\*\*\*\*  
C10H15N2O4P H2L (7120)

Phenylalanylaminomethylphosphonic acid;

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

-----  
Co++ gl KNO3 25°C 0.10M C K1=2.651 B2=4.33 1995HLA (72674)3076

B(CoHL)=9.09



B(CoH-1L)=-5.874

\*\*\*\*\*

C10H15N2O8P H2L TMP-5 CAS 365-07-1 (2949)  
Thymidine-5'-monophosphoric acid, Thymidylic acid;

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

Co++ gl R4N.X 25°C 0.10M C T K1=2.31 1991SMa (72694)3077  
K(Co+HL)=2.31

IUPAC evaluation

-----  
Co++ gl NaNO3 25°C 0.10M C 1988MSa (72695)3078  
K(Co+HL)=1.89

\*\*\*\*\*

C10H15N3O8 H3L CAS 43068-75-3 (2463)  
Triglycine-N,N-diethanoic acid; (HOOC.CH2)2N.CH2.CO-Gly-Gly-OH

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

Co++ gl KNO3 25°C 0.10M C K1=6.84 1974MMb (72716)3079  
K(CoL+H)=3.33  
K(CoH-1L+H)=10.10

\*\*\*\*\*

C10H15N4O14P3 H5L ITP CAS 35908-31-7 (2148)  
Inosine 5'-triphosphoric acid;

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

Co++ gl NaNO3 25°C 0.10M C 2001SBc (72750)3080  
K(Co+HL)=5.08  
K(CoHL+H)=4.4  
K(Co+H2L)=3.0

-----  
Co++ gl R4N.X 25°C 0.10M C R 1991SMa (72751)3081  
K(Co+HL)=5.13

IUPAC evaluation

-----  
Co++ gl NaClO4 25°C 0.10M U M 1977CSa (72752)3082  
K(Co+HL)=4.81  
K(Co(bpy)+HL)=4.73  
B(Co(bpy)(HL))=10.79

-----  
Co++ sp NaClO4 25°C 0.10M U M 1977CSa (72753)3083  
Kefff(Co(bpy)+HL)=2.78, pH 2.5  
K(CoL(bpy)+H)=4.50

-----  
Co++ gl KNO3 25°C 0.10M U T 1973TRb (72754)3084  
K(Co+HL)=4.97

K(35 C)=5.02, K(45 C)=4.92

-----

Co++ ix NaCl 23°C 0.10M U 1958WAa (72755)3085  
K(Co+HL)=4.74

\*\*\*\*\*  
C10H15N5O4 HL Gly-His-Gly CAS 7758-33-0 (716)  
Glycyl-histidyl-glycine; NH2.CH2.CO.NH.CH(CH2.C3N2H3)CO.NH.CH2.COOH

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

Co++ gl KNO3 37°C 0.15M U K1=3.17 1975APb (72816)3086  
K(CoH-1L+H)=6.09  
K(CoH-1L+L)=2.54

\*\*\*\*\*  
C10H15N5O4 HL His-Gly-Gly CAS 32999-80-7 (6269)  
Histidyl-glycyl-glycine;

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

Co++ gl none 21°C 0.0 M K1=5.09 B2=9.20 1974YAa (72824)3087

\*\*\*\*\*  
C10H15N5O10P2 H3L ADP CAS 20398-34-9 (2181)  
Adenosine-5'-diphosphoric acid;

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

Co++ gl NaNO3 25°C 0.10M M K1=3.92 2003BSa (72928)3088  
K(CoL+H)=4.55  
K(Co+HL)=2.07

-----  
Co++ gl KNO3 25°C 0.10M C M K1=4.20 2001A0a (72929)3089  
K(CoL+A)=1.57  
B(CoLA)=5.77  
K(CoL+B)=2.83  
B(CoLB)=7.03

K(CoL+C)=3.91, B(CoLC)=8.11, K(CoL+D)=3.02, B(CoLD)=7.22.  
HA=MOPS, HB=POPSO, HC=HEPPSO and HD=AMPSO.

-----  
Co++ gl KNO3 25°C 0.10M C M K1=4.20 2000ADa (72930)3090  
K(CoL+A)=4.32  
B(CoLA)=8.52  
K(CoL+B)=3.84  
B(CoLB)=8.05

HA=ACES, HB=MOPSO. Also data for CHES, TAPSO and DIPSO.

-----  
Co++ gl NaNO3 25°C 0.10M C M K1=4.10 2000KHa (72931)3091  
K(CoL+A)=4.22  
B(CoLA)=8.32

H2A=salicylhydroxamic acid.

-----  
Co++ gl NaNO3 25°C 0.10M C M K1=4.10 2000KHb (72932)3092  
K(CoA+L)=4.42

B(CoAL)=11.32

H2A=N-(2-acetamido)iminodiacetic acid.

-----

Co++	gl	KNO3	25°C	0.10M	C	M	K1=4.41	1995AEb (72933)	3093
							K(CuL+BES)=3.80		
							K(Co+L+BES)=8.21		
							K(CoL+Bicine)=4.29		
							K(Co+L+Bicine)=8.70		

BES: N,N-bis(2-hydroxyethyl)-2-aminoethanesulfonic acid. K(Co+L+TAPS)=8.88  
 K(CoL+TAPS)=4.5. TAPS:N-[Tris(hydroxymethyl)methyl]-3-aminopropanesulfonic

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Co++	gl	KNO3	25°C	0.10M	U		K1=3.94	1995SBa (72934)	3094
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Co++	gl	R4N.X	25°C	0.10M	C	T	K1=4.40	1991SMa (72935)	3095
							K(Co+HL)=2.01		

IUPAC evaluation

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Co++	gl	KCl	25°C	0.10M	U	M		1983MDd (72936)	3096
							B(CoL(Gly))=7.28		

-----

Co++	gl	KCl	25°C	0.10M	U		K1=3.51	1980DMa (72937)	3097
							B(CoHL)=8.38		

-----

Co++	gl	KCl	25°C	0.10M	U	M	K1=3.51	1980DMc (72938)	3098
							K(Co+H+L)=8.38		

K(Co+L+his)=10.31, Hhis=histidine

-----

Co++	gl	R4N.X	25°C	0.20M	U	T H	K1=3.90	1980MGb (72939)	3099
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Medium: Me4NBr. At 5 C: K1=3.84; 15 C: 3.84; 37 C: 4.00

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Co++	ix	NaCl04	20°C	0.05M	U		B2=4.52	1975K0b (72940)	3100
							B3=6.79		

-----

Co++	gl	KNO3	40°C	0.10M	U	T H	K1=4.12	1967TMf (72941)	3101
							K(Co+HL)=1.93		

K1=4.63?(0.4 C),4.27(12 C),4.20(25 C); K=2.12(0.4 C),2.07(12 C),2.01(25 C).  
 At 25 C:DH(K1)=-8.4 kJ mol<sup>-1</sup>,DS=54 J K<sup>-1</sup> mol<sup>-1</sup>; DH(Co+HL)=-7.9,DS=13

-----

Co++	gl	KNO3	25°C	0.10M	U		K1=4.20	1962TMa (72942)	3102
							K(Co+HL)=2.01		

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Co++	ix	NaCl	23°C	0.10M	U		K1=3.68	1958WAa (72943)	3103
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\*\*\*\*\*  
 C10H16N2O6                      H2L                      CAS 23873-27-0 (9120)  
 N,N'-Bis-(3-carboxy-1-oxopropanyl)-1,2-diaminoethane;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	NaCl04	25°C	0.10M	M		K1=5.24	B2= 9.10	2003GSa (73067)	3104
------	----	--------	------	-------	---	--	---------	----------	-----------------	------

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Co++ gl NaClO4 25°C 0.10M U K1=5.43 B2= 9.34 2003GSc (73068)3105  
\*\*\*\*\*

C10H16N2O8 H4L EDDS CAS 52759-67-8 (1100)  
1,2-Diaminoethane-N,N'-di-1,4-butanedioic acid; (CH2.NH.CH(COOH)CH2.COOH)2

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

Co++ gl KNO3 25°C 0.50M U T H K1=13.54 1993VKa (73101)3106  
-----

Co++ EMF KNO3 25°C 0.10M U K1=13.70 1991VZa (73102)3107  
K(Co+HL)=7.30  
-----

Co++ ISE KNO3 25°C 0.10M U K1=13.55 1973SGa (73103)3108  
Method: Cu/Hg. Reference gives 2 values: K1=13.55 and 14.55  
-----

Co++ gl KNO3 30°C 1.0M U K1=10.05 1972TSf (73104)3109  
-----

Co++ gl KNO3 20°C 0.10M U K1=14.11 1968MJa (73105)3110  
By paper electrophoresis: K1=13.8  
-----

Co++ sp KNO3 20°C 0.10M U K1=14.02 1966MSg (73106)3111  
\*\*\*\*\*

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

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

Co++ cal NaNO3 25°C 0.50M U HM 1998KKb (73518)3112

K(CoL+OH)=0.95  
K(CoL+NH3)=0.87  
K(CoL+en)=1.49

DH(CoL+OH)=-23.9 kJ mol<sup>-1</sup>, DH(CoL+NH3)=-25.6, DH(CoL+en)=-43.6  
-----

Co++ cal NaNO3 25°C 0.5M C 1998KNa (73519)3113

K(CoL+OH)=0.95  
K(CoL+en)=1.44  
K(CoL+NH3)=0.87

DH(CoL+OH)=-23.92 kJ/mol; DH(CoL+NH3)=-25.63

DH(CoL+en)=-43.58  
-----

Co++ cal KNO3 25°C 0.50M U H 1984PTb (73520)3114

DH(K1)=-20.1 kJ mol<sup>-1</sup>, DH(CoL+OH)=-12.1  
-----

Co++ sp none 25°C 0.0 U M K1=16.3 1983KPa (73521)3115

K(CoL+CN)=3.30  
-----

Co++ EMF KCl 20°C 0.10M C K1=16.1 1981SFa (73522)3116

Method: Pt/H2 electrode.  
-----

Co++ sol KNO3 25°C 1.00M U 1979JPb (73523)3117

K(CoL+H)=3.30  
K(CoHL+H)=1.85  
K(CoH2L+H)=1.83

---

Co++ gl KCl 20°C 0.10M C R K1=16.49 1978ANa (73524)3118  
K(CoL+H)=3.0

IUPAC evaluation. K(CoL+H) Tentative

---

Co++ vlt KNO3 20°C 0.10M U K1=16.47 1978NLb (73525)3119

---

Co++ oth none 25°C 0.0 U K1=16.31 1977DFa (73526)3120  
Calculated from a model. Constants also for other related Co++ complexes

---

Co++ vlt KNO3 25°C 1.00M U K1eff=13.20 1977HDa (73527)3121

Keff at pH 7

---

Co++ cal KNO3 25°C 0.5M U IH K1=15.55 1976VBb (73528)3122  
DH1=-21.0 kJ/mol

For 15 C: K1=15.69, DH1=-21.72; 35 C: K1=15.45, DH1=-20.04  
for 25 C and I=0.3 M K1=15.77; for 25 C and I=1.0 M K1=15.36

---

Co++ oth NaClO4 25°C 1.0M U K(CoLCl+Co)=0.94 1973HHb (73529)3123

---

Co++ sp NaClO4 25°C 1.0M U M K(CoL+H)=2.79 1970HSc (73530)3124  
K(CoL+N3)=-0.39  
K(CoL+SCN)=0.13  
K(CoL+py)=0.29

K(CoL+NH3)=0.85, K(CoL+A)=-0.16 A=hydroxylamine, K(CoHL+SCN)=0.49

---

Co++ cal KNO3 25°C 0.10M U K1=16.31 1969BNa (73531)3125  
K(CoL+H)=3.0  
K(Co+HL)=9.15

---

Co++ sp oth/un 25°C 0.20M U K(CoL+CN)=3.30 1969JMb (73532)3126

---

Co++ sp NaClO4 25°C 0.20M U K1=16.14 1967BDb (73533)3127

---

Co++ sp NaClO4 25°C 1.0M U M K(CoL+A)=1.40 1965BRe (73534)3128  
K(CoL+B)=1.56  
K(CoL+en)=1.68  
K(CoL+py)=1.64

K(CoL+diaminopropane)=1.68. A=hydroxylamine, B=hydrazine

---

Co++ oth KNO3 20°C 0.10M U K1=16.5 1965JMb (73535)3129  
Method: electrophoresis

-----  
Co++ vlt KNO3 25°C 0.20M U K1=15.71 19650Ga (73536)3130  
-----

Co++ gl KNO3 20°C 0.10M U K1=16.31 1964ANa (73537)3131  
K(Co+HL)=9.15  
-----

Co++ cal KNO3 20°C 0.10M U H 1963ANF (73538)3132  
DH(K1)=-17.6 kJ mol<sup>-1</sup>, DS=251 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ sp NaClO4 ? 1.0M U 1963BKb (73539)3133  
K(Co+HL)=8.66  
K(CoL+OH)=0.83  
-----

Co++ dis NaClO4 20°C 0.10M U K1=16.55 1963STc (73540)3134  
Medium: KClO4  
-----

Co++ EMF oth/un 25°C 0.0 U H 1956MAa (73541)3135  
Method: H electrode. DS(K1)=245 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ cal oth/un 25°C 0.05M U H 1954CHa (73542)3136  
Medium: Co(NO3)2. DH(K1)=-17.1 kJ mol<sup>-1</sup>, DS=242 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ gl KCl 20°C 0.10M U I T K1=16.21 1954SGa (73543)3137  
K(CoL+H)=3.09  
By polarography K1=16.31. In 0.1 M KNO3 K(Co+HL)=9.15  
-----

Co++ sp KNO3 30°C 0.10M U K1=15.4 1953HMa (73544)3138  
-----

Co++ sp oth/un ? 0.10M U K1=16.1 1952MPa (73545)3139  
-----

\*\*\*\*\*  
C10H16N2O9 H4L CAS 616-90-0 (2615)  
Bis-(2-aminoethylether)-N,N'di(1,3-propanedioic acid); ((HOO)2CH.NH.CH2.CH2)2O  
-----

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

Co++ EMF KNO3 25°C 0.10M U K1=10.18 1979KBe (74373)3140  
\*\*\*\*\*

C10H16N2O11P2 H4L CAS 491-97-4 (7674)  
Thymidine-5'-diphosphoric acid;  
-----

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

Co++ gl NaNO3 25°C 0.10M M 1999SSa (74386)3141  
K(Co+HL)=3.77  
\*\*\*\*\*

C10H16N5O13P3 H4L ATP CAS 56-65-5 (403)  
Adenosine-5'-triphosphoric acid;  
-----

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

Co++ gl KNO3 25°C 0.10M C M K1=4.66 2001A0a (74615)3142  
K(CoL+A)=1.60  
B(CoLA)=6.26  
K(CoL+B)=1.88  
B(CoLB)=6.54  
K(CoL+C)=3.07, B(CoLC)=7.73, K(CoL+D)=4.72, B(CoLD)=9.38, K(CoL+E)=3.50,  
B(CoLE)=8.16. HA=PIPES, HB=MOPS, HC=POPSO, HD=HEPPSO and HE=AMPSO.

Co++ gl KNO3 25°C 0.10M C T HM K1=4.40 2001BTa (74616)3143  
K(CoL+A)=4.09  
Data for 15-45 C. DH(K1)=-10.39 kJ mol<sup>-1</sup>, DS(K1)=-49.4 J K<sup>-1</sup> mol<sup>-1</sup>.  
HA=asparagine.

Co++ gl KNO3 25°C 0.10M C M K1=4.66 2000ADa (74617)3144  
K(CoL+A)=3.69  
B(CoLA)=8.35  
K(CoL+B)=4.09  
B(CoLB)=8.75  
HA=ACES, HB=MOPSO. Also data for CHES, TAPSO and DIPSO.

Co++ gl NaNO3 25°C 0.10M C M K1=4.65 2000KHa (74618)3145  
K(CoL+A)=6.89  
B(CoLA)=11.54  
H2A=salicylhydroxamic acid.

Co++ gl NaNO3 25°C 0.10M C M K1=5.00 2000KHb (74619)3146  
K(CoA+L)=5.08  
B(CoAL)=11.98  
H2A=N-(2-acetamido)iminodiacetic acid.

Co++ gl KNO3 25°C 0.10M C M K1=4.40 1999BIa (74620)3147  
K(CoL+His)=6.90  
K(CoL+Lys)=4.47  
K(CoL+Asn)=4.09  
K(CoL+Gln)=3.96  
K(CoL+Asp)=8.68, K(CoL+Glu)=7.62.

Co++ gl KNO3 25°C 0.10M C M K1=5.11 1995AEb (74621)3148  
K(CuL+BES)=4.17  
K(CoL+BES)=9.28  
K(CoL+Bicine)=4.52  
K(CoL+Bicine)=9.63  
BES: N,N-bis(2-hydroxyethyl)-2-aminoethanesulfonic acid. K(CoL+TAPS)=9.89  
K(CoL+TAPS)=4.8. TAPS:N-[Tris(hydroxymethyl)methyl]-3-aminopropanesulfonic

Co++ gl R4N.X 25°C 0.10M C TIH R K1=5.1 B2=7.76 1991SMa (74622)3149  
IUPAC evaluation. DH(K1)=18.8 kJ mol<sup>-1</sup>. 37 C, I=0.15 M: K1=4.8

Co++ gl KNO3 25°C 0.10M U K1=4.26 1989MAc (74623)3150

Co++	gl	NaNO3	25°C	0.10M	C	K1=4.97 K(Co+HL)=2.82 K(CoL+H)=4.32	1987STb (74624)3151
Co++	gl	NaClO4	25°C	0.10M	U	M K1=5.056 B(CoHL)=9.23 B(CoH2L2)=18.53	1986CCc (74625)3152
Ternary complexes with 2,2'-dipyridylamine							
Co++	ix	oth/un	25°C	0.06M	C	K1eff=3.04	1985JEa (74626)3153
Medium: 0.06 M N-tris(hydroxymethyl)methyl-2-aminoethane sulfonic acid buffer, pH 7.45. In 0.06 M imidazole/HCl buffer, pH 7.45, K1eff=3.46.							
Co++	gl	KCl	25°C	0.10M	U	M K1=4.01	1984DMc (74627)3154
Co++	gl	KCl	25°C	0.20M	C	M B(CoL(DOPA))=12.90	1984KDb (74628)3155
H3DOPA=3,4-dihydroxyphenylalanine							
Co++	gl	KCl	25°C	0.10M	U	M B(CoL(Gly))=8.05	1983MDd (74629)3156
Co++	gl	KCl	25°C	0.10M	U	K1=4.36 B(CoHL)=9.45	1980DMa (74630)3157
Co++	gl	KCl	25°C	0.10M	U	M K1=4.36 K(Co+H+L)=9.45	1980DMc (74631)3158
K(Co+L+his)=10.65, Hhis=histidine							
Co++	gl	R4N.X	5°C	0.20M	U	T H K1=5.59 15 C: K1=5.74; 26 C: 5.92; 30 C: 6.104, 36 C: 6.248. DH(K1)=5.9 kJ mol <sup>-1</sup>	1978GFb (74632)3159
Co++	gl	NaCl	25°C	0.12M	U	K1=4.54	1978RMc (74633)3160
Co++	sp	NaClO4	25°C	0.10M	U	M K(Co(bpy)+L)=4.93	1977CSa (74634)3161
Co++	gl	NaClO4	25°C	0.10M	U	M K1=4.86 K(Co(bpy)+L)=4.79	1977CSa (74635)3162
Co++	ix	NaClO4	20°C	0.05M	U	B2=2.17 B3=4.60 B4=6.53	1975KOb (74636)3163
Co++	gl	NaClO4	25°C	0.10M	U	M K1=4.86 K(Co(bpy)+L)=4.79	1967SBc (74637)3164
Co++	gl	R4N.X	30°C	0.10M	U	K1=5.21 K(Co+HL)=2.65	1966PSa (74638)3165



Medium: Me4NBr

-----  
Co++ gl KNO3 40°C 0.10M U T H K1=4.55 1966TMb (74639)3166  
K(Co+HL)=2.24  
K1=4.80(0.4 C),4.69(12 C),4.66(25 C); K=2.45(0.4 C),2.39(12 C),2.32(25 C).  
At 25 C:DH(K1)=-9.2 kJ mol<sup>-1</sup>, DS=59 J K<sup>-1</sup> mol<sup>-1</sup>; DH(Co+HL)=8.8, DS=17  
-----

Co++ gl KNO3 25°C 0.10M U K1=4.66 1962TMb (74640)3167  
K(Co+HL)=2.32  
-----

Co++ gl KCl 22°C 0.10M U K1=4.71 1961BRb (74641)3168  
K(Co(OH)L+H)=9.4  
-----

Co++ ix NaCl 23°C 0.10M U K1=4.62 1958WAa (74642)3169  
\*\*\*\*\*  
C10H16N5O14P3 H5L GTP CAS 86-01-1 (404)  
Guanosine-5'-triphosphoric acid;  
-----

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

Co++ gl NaNO3 25°C 0.10M C 2001SBc (74871)3170  
K(Co+HL)=5.34  
K(CoHL+H)=4.66  
K(Co+H2L)=3.50  
-----

Co++ gl R4N.X 25°C 0.10M C T 1991SMa (74872)3171  
K(Co+HL)=5.11  
-----

IUPAC evaluation

Co++ gl KNO3 25°C 0.10M U T 1973TRb (74873)3172  
K(Co+HL)=5.57  
K(35 C)=5.65, K(45 C)=5.50  
-----

Co++ ix NaCl 23°C 0.10M U 1958WAa (74874)3173  
K(Co+HL)=4.63  
\*\*\*\*\*  
C10H16N6 L CAS 53596-58-0 (3898)  
N,N'-Bis(4'-(5')-imidazolylmethyl)-1,2-diaminoethane;  
-----

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

Co++ gl none 0.0 U K1=10.98 1971ZKa (74895)3174  
K(CoLOH=CoL+OH)=-2.2  
K(Co2L2O2OH=2CoL+O2+OH)=-17.9  
By O2-sensor: K(Co2L2O2OH=2CoL+O2+OH)=-18.3  
-----

Co++ gl KCl 25°C 0.10M U K1=11.43 1968GRa (74896)3175  
\*\*\*\*\*  
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  
-----  
Co++ gl NaClO4 25°C 0.10M C B2=22.54 1992PPb (74943)3176  
B(CoH2L2)=32.71  
B(CoH4L2)=40.15  
B(CoH6L2)=45.72  
-----

Co++ gl NaClO4 25°C 0.10M C B(CoH2L2)=32.71 1982PPc (74944)3177  
-----

\*\*\*\*\*  
C10H17N04 H2L CAS 2848-06-8 (3916)  
N-(Cyclohexyl)iminodiethanoic acid; C6H11.N(CH2.COOH)2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.50M U K1=7.19 B2=12.87 1967FMb (74972)3178  
-----  
\*\*\*\*\*

C10H17N05 H2L (3917)  
N-(Tetrahydropyran-2-ylmethyl)iminodiethanoic acid;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 20°C 0.10M U K1=8.51 B2=13.01 1963IFa (74998)3179  
K(Co+HL)=2.60  
-----  
\*\*\*\*\*

C10H17N08S HL (1735)  
2-(5-Carboxy-1,2,3,4-tetrahydroxypropyl)4-carboxythiazolidine,  
Galactocarboxythiazolidine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.10M C K1=4.10 B2=6.65 1992GNa (75012)3180  
B(CoHL)=7.12  
-----  
\*\*\*\*\*

C10H17N2O14P3 H3L TTP CAS 365-08-2 (402)  
Thymidine-5'-triphosphoric acid;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaCl 25°C 0.10M C T K1=4.91 1991SMa (75048)3181  
K(Co+HL)=4.91  
-----

IUPAC evaluation  
-----

Co++ gl NaNO3 25°C 0.10M C K(Co+HL)=4.78 1987STb (75049)3182  
-----  
\*\*\*\*\*

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

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

Co++ gl NaClO4 25°C 0.10M U TIH K1=6.910 2001SGd (75107)3183  
Data for 0.05-0.2 M NaClO4 and 15-45 C. DH(K1)=-29.4 kJ mol<sup>-1</sup>, DS(K1)=-38  
J K<sup>-1</sup> mol<sup>-1</sup>. At I=0, K1=7.150. Also data for MeOH/H<sub>2</sub>O, EtOH/H<sub>2</sub>O, DMF/H<sub>2</sub>O.

Co++ gl KNO3 30°C 0.10M U T M 1995SSc (75108)3184  
K(CoA+L)=6.05  
K(CoB+L)=6.48  
K(CoC+L)=5.98  
K(CoD+L)=7.60

Also data for 40 and 50 C. HA is anthranilic acid, H2B is ascorbic acid,  
HC is nicotinic acid, HD is sulfanilic acid.

Co++ gl KCl 25°C 0.20M C B2=9.55 1983HSa (75109)3185  
B(CoHL)=13.20  
B(CoHL2)=18.52  
B(Co2L3)=18.93  
B(Co2HL3)=26.97

B(Co2L2)=14.05. Alternative method: Spectrophotometry

Co++ gl KNO3 37°C 0.15M C K1=6.3 1981AEa (75110)3186  
B(CoHL)=13.4  
B(CoH2L2)=25.85  
B(Co2L)=9.3

Co++ gl KNO3 25°C 0.16M U K1=4.2 1959MEa (75111)3187  
\*\*\*\*\*  
C10H17N6O12P3 H4L CAS 4209-30-7 (4795)  
Adenyl-5'-yl-imidodiphosphoric acid; adenosine-0.PO(OH).0.PO(OH).NH.PO(OH)2

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

Co++ gl R4N.X 20°C 0.10M M K1=5.63 1976PSe (75168)3188  
K(Co+HL)=3.15

\*\*\*\*\*  
C10H18N2O4 H2L CAS 17423-86-4 (8122)  
1,4-Piperazine-N,N'-dipropanoic acid;

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

Co++ gl KNO3 30°C 0.10M U TIH K1=4.27 B2= 6.55 1991KEa (75188)3189  
DH(K1)=-22.1 kJ mol<sup>-1</sup>, DS(K1)=9.8 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-20.2,  
DS(K2)=20.6. Data for 0.02-0.10 M KNO3 and 30-60 C.

\*\*\*\*\*  
C10H18N2O4 H2L CAS 124125-60-6 (914)  
1,5-Diazacyclooctane-N,N'-diethanoic acid;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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-----
Co++      gl  NaClO4  25°C  0.10M  U          K1=8.55          1975BIb (75200)3190
-----
Co++      gl  KNO3    25°C  0.50M  U          K1=10.9          1975CKa (75201)3191
                    K(CoL(OH)+H)=10.55
*****
C10H18N2O4S          H2L                      (6638)
1-Thia-4,7-diazacyclononane-N,N'-diethanoic acid;
-----
Metal     Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
Co++      gl  KNO3    25°C  0.10M  C          K1=13.0          1993WLa (75214)3192
*****
C10H18N2O5          H2L                      (5608)
1-Oxa-4,7-diazacyclononane-N,N'-diethanoic acid;
-----
Metal     Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
Co++      gl  KNO3    25°C  0.10M  U          K1=11.48         1990CCa (75229)3193
*****
C10H18N2O7          H3L  HEDTA          CAS 150-39-0 (392)
N-(Hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid;
-----
Metal     Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
-----
Co++      gl  NaCl    25°C  0.10M  U          K(CoL+H)=2.2
                    K(CoH-1L+H)=2.14
-----
Co++      gl  KCl     25°C  0.10M  U          K1=14.4          1975AZa (75317)3195
                    K1=16.2 by spectrophotometry
-----
Co++      oth oth/un  ?    ?    U          K1=14.4          1970DTc (75318)3196
-----
Co++      sp  NaClO4  25°C  1.0M  U    M          1970HSc (75319)3197
                    K(CoL+N3)=0.33
                    K(CoL+SCN)=0.54
                    K(CoL+py)=0.94
                    K(CoL+NH3)=1.38
K(CoL+A)=0.80, K(CoL+B)=0.38.  A=hydrazine, B=hydroxylamine
-----
Co++      gl  KNO3    25°C  0.10M  U          K1=14.42         1969BNa (75320)3198
2nd method: calorimetry
-----
Co++      sp  NaClO4  25°C  0.20M  U          K1=14.12         1967BDb (75321)3199
-----
Co++      cal KNO3    25°C  0.10M  U    H          1965WHa (75322)3200
DH(K1)=-27.2 kJ mol-1, DS=184 J K-1 mol-1
-----
Co++      gl  KCl     30°C  0.10M  U          K1=14.4          1955CMa (75323)3201

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\*\*\*\*\*  
 C10H18N4O6 H2L (4504)  
 Hexanoic acid bis(3-hydroxycarbamoyl-methyl)amide; HONHCOCH2NHC0(CH2)4CONHCH2CONHOH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	C			K1=6.87 B(Co2L3)=19.0 B(CoHL)=13.61	1999FEa (75566)	3202

\*\*\*\*\*  
 C10H18N4O6S2 H2L CAS 7729-20-6 (6021)  
 Cysteinylglycine disulfide; (-S.CH2.CH(NH2)CO.NH.CH2.COOH)2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	C			K1=2.93 B(CoHL)=9.47	1988VSb (75576)	3203

\*\*\*\*\*  
 C10H18N4O8 H4L CAS 35048-92-5 (4751)  
 Ethylenedinitrilo-N,N'-diacetohydroxamic-N,N'-diethanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U			K(Co+H2L)=9.69 K(CoL+H)=7.31 K(CoHL+H)=5.77	1971MMe (75581)	3204

\*\*\*\*\*  
 C10H18O2 HL CAS 73910-38-6 (4707)  
 Isobutyryl pivaloyl methane; (CH3)2.CH.CO.CH2.CO.C(CH3)3  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=9.73 B2=18.97	1972UDa (75596)	3205

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*  
 C10H18O8 H2L CAS 32775-08-9 (240)  
 1,12-Dicarboxy-2,5,8,11-tetraoxadodecane; (HOOC.CH2.O.CH2.CH2.O.CH2)2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U			K1=1.92	1975MTc (75616)	3206

\*\*\*\*\*  
 C10H19N04 H2L (3328)  
 N-(3,3-Dimethylbutyl)iminodiethanoic acid; (CH3)3C.CH2.CH2.N(CH2.COOH)2  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	20°C	0.10M	U			K1=7.78 B2=14.07	1955SAa (75636)	3207

\*\*\*\*\*

C10H19NO8 L Pangamic acid (2194)  
2,3,4,5,6-Pentahydroxyhexanoic acid-6-O-dimethylglycine ester

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

Co++ gl KCl 25°C 0.20M U K1=2.39 1981FDb (75650)3208  
\*\*\*\*\*

C10H19N3O4 HL Leu-Gly-Gly CAS 1187-50-4 (1230)  
Leucyl-glycyl-glycine; H2N.CH(CH2.CH(CH3)2).CO.NH.CH2.CO.NH.CH2.COOH

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

Co++ gl oth/un 25°C 0.01M U K1=2.16 B2=4.34 1959DLb (75685)3209  
\*\*\*\*\*

C10H20N2O3 HL Val-Val CAS 3918-94-3 (724)  
L-Valyl-L-valine; H2N.CH(CH(CH3)2).CO.NH.CH(CH(CH3)2).COOH

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

Co++ gl NaCl 25°C 0.12M U K1=2.21 1977PNa (75739)3210  
-----

Co++ gl NaCl 25°C 0.12M U K1=2.21 1976PNa (75740)3211  
\*\*\*\*\*

C10H20N2O3 HL NIBL (6057)  
N-(Isobutyryl)-lysine; (CH3)2CH.CO.NH.(CH2)4.CH(NH2)COOH

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

Co++ gl NaClO4 25°C 0.10M C K1=4.26 B2=7.38 1987LMa (75749)3212  
-----

Co++ cal NaClO4 25°C 0.10M C H 1987LMc (75750)3213  
DH(K1)=-13.54 kJ mol<sup>-1</sup>, DS(K1)=36.6 J K<sup>-1</sup> mol<sup>-1</sup>.  
DH(K2)=-11.70, DS(K2)=20.8.  
\*\*\*\*\*

C10H20N2O3 HL (8624)  
N-Hydroxy-4-amino-4-carboxy-2,2,6,6-tetramethylpiperidine;

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

Co++ gl NaNO3 25°C U K1=3.08 B2= 5.00 1976TCb (75752)3214  
Ionic strength not stated.  
\*\*\*\*\*

C10H20N2O4 H2L CAS 58534-57-9 (2113)  
Hexamethylenediamine-N,N-diethanoic acid; H2N(CH2)6.N(CH2.COOH)2

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

Co++ gl KNO3 25°C 0.10M U 1977TIa (75774)3215  
K(Co+HL)=7.43  
\*\*\*\*\*

C10H20N2O4 H2L CAS 5578-84-7 (5914)  
N,N-Dihydroxydecanediamide; HN(OH).CO.(CH2)8.CO.NH(OH)

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

Co++ gl NaNO3 25°C 0.10M C K1=7.40 1989EHa (75796)3216  
\*\*\*\*\*

C10H20N2O4S2 H2L CAS 20902-45-8 (5411)  
Penicillamine disulfide, 3,3'-Dithiobis(2-amino-3-methylbutanoic acid);

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

Co++ gl KCl 25°C 0.20M C  
B(CoHL)=11.85  
B(Co2L2)=12.29  
\*\*\*\*\*

C10H20N2O6 H2L (7208)  
1,2-Diaminoethane-N,N'-bis(3-hydroxy-2-butanoic acid)); (CH2NHCH(COOH)CH(OH)CH3)2

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

Co++ gl KNO3 20°C 0.10M U K1=9.62 1970DKa (75832)3218  
\*\*\*\*\*

C10H20N2O6 H2L CAS 96817-35-5 (4755)  
1,2-Diaminoethane-N,N'-bis(4-hydroxy-2-butanoic acid);

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

Co++ sp oth/un 20°C 0.10M U K1=9.62 1972DKa (75843)3219  
\*\*\*\*\*

C10H20N2S2 L CAS 13749-59-2 (2825)  
Tetraethyldithiooxamide; (C2H5)2N.CS.CS.N(C2H5)2

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

Co++ sp none 25°C 0.0 U K1=4.62 1976AMc (75863)3220  
\*\*\*\*\*

C10H20N4O2 L CAS 63972-19-0 (137)  
1,4,8,11-Tetraazacyclotetradecane-5,7-dione;

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

Co++ gl NaClO4 35°C 0.20M U M 1983MKb (75887)3221  
B(CoH-2L)=-11.11  
Ternary complex with dioxygen: B(Co2H-4L2(O2))=-8.62  
\*\*\*\*\*

C10H20O5 L 15-Crown-5 CAS 33100-27-5 (576)  
1,4,7,10,13-Pentaoxacyclopentadecane; cyclo(-(O.CH2.CH2)5-)

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

-----  
Co++ con mixed 25°C 90% C K1=1.98 2003ISa (75960)3222  
Medium: 90% v/v DMSO/H2O.  
-----

Co++ con alc/w 25°C 40% C K1=1.66 2002ISa (75961)3223  
Medium: 40% EtOH/H2O.  
-----

Co++ con alc/w 25°C 40% C K1=1.90 2001ISa (75962)3224  
Medium: 40% v/v EtOH/H2O.  
-----

Co++ nmr non-aq 27°C 100% C K1=3.56 2000SMg (75963)3225  
Medium: acetonitrile. Method: competitive 7Li nmr technique.  
-----

Co++ cal non-aq 25°C 100% C H K1=4.24 1999SBe (75964)3226  
Medium: acetonitrile. DH(K1)=-12.9 kJ mol<sup>-1</sup>.  
-----

Co++ vlt alc/w 25°C 100% C K1=3.62 1987CBd (75965)3227  
Medium: methanol, 0.10 M Et4NI or Bu4NClO4. Method: polarography.  
-----

\*\*\*\*\*  
C10H21N11 L (7006)  
1,7-Di(2-(5-tetraazoly)ethyl)-1,4,7-triazaheptane;  
-----

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

Co++ gl NaNO3 20°C 0.10M U K1=21.35 1981ESa (76210)3228  
\*\*\*\*\*

C10H22N2OS2 L CAS 40236-04-2 (2343)  
1-Oxa-4,13-diaza-7,10-dithiacyclopentadecane;  
-----

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

Co++ gl NaClO4 25°C 0.10M U H K1=5.42 1979ASb (76237)3229  
Also DH values  
-----

Co++ gl NaClO4 25°C 0.10M U K1=5.22 1977LAa (76238)3230  
-----

Co++ gl NaClO4 25°C 0.10M U K1=5.42 1975ASc (76239)3231  
\*\*\*\*\*

C10H22N2OS2 L CAS 40236-30-4 (5395)  
1-Oxa-4,13-dithia-7,10-diazacyclopentadecane;  
-----

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

Co++ gl NaClO4 25°C 0.10M U H K1=5.22 1979ASb (76251)3232  
Also DH values  
\*\*\*\*\*

C10H22N2O3 L CAS 60350-17-6 (2471)  
1,4,7-Trioxa-10,13-diazacyclopentadecane;  
-----

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



-----  
 Co++ gl R4N.X 25°C 0.10M C K1=4.90 1983LCa (76260)3233  
 \*\*\*\*\*  
 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  
 -----

Co++ sp non-aq 25°C 100% U H K1=3.7 2004DMb (76300)3234  
 Medium: dmsO, 0.1 M Et4NC1O4. DH(K1)=-14.8 kJ mol-1, DS(K1)=20 J K-1 mol-1  
 -----

Co++ cal non-aq 25°C 100% C H K1=4.81 1999SBe (76301)3235  
 Medium: acetonitrile. DH(K1)=-63.9 kJ mol-1.  
 -----

Co++ gl R4N.X 25°C 0.05M C K1=3.8 1997BCc (76302)3236  
 Medium: 0.05 M Me4NC1O4  
 -----

Co++ cal alc/w 25°C 100% U H K1=6.9 1985BUd (76303)3237  
 Medium: MeOH, 0.05 M Et4N.NO3. DH=+5.5 kJ mol-1  
 -----

Co++ gl R4N.X 25°C 0.10M C K1=5.22 1983LCa (76304)3238  
 -----

Co++ gl R4N.X 25°C 0.10M C K1=5.05 1977ASc (76305)3239  
 \*\*\*\*\*  
 C10H22N2S2 CAS 65113-46-4 (5985)  
 N,N'-Dimethyl-1,7-diaza-4,10-dithiacyclododecane;  
 -----

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

Co++ gl NaClO4 25°C 0.10M U K1=4.24 1985SLa (76372)3240  
 B(CoLOH)=-3.16  
 \*\*\*\*\*  
 C10H22N4O L CAS 85828-26-8 (5498)  
 1,4,8,11-Tetraazacyclotetradecane-5-one;  
 -----

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

Co++ gl NaClO4 35°C 0.20M U M B(CoH-1L)=1.49 1983MKb (76403)3241  
 Ternary complex with dioxygen: B(Co2H-2L2(O2))=16.52  
 \*\*\*\*\*  
 C10H23N3O L (6453)  
 1-Oxa-4,8,12-triazacyclotetradecane;  
 -----

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

Co++ gl KCl 25°C 0.10M C K1=9.63 1996JLb (76507)3242  
 -----

Co++ gl KNO3 25°C 0.10M U K1=8.87 1991ACa (76508)3243  
 B(CoHL)=14.6

B(CoH-2L)=-6.43  
K(CoL+20H)=12.34

\*\*\*\*\*

C10H23N3O2 L CAS 60350-18-7 (5875)

1,4-Dioxa-7,10,13-triazacyclopentadecane;

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

Co++ gl KNO3 25°C 0.10M C K1=8.49 1994CDa (76522)3244

\*\*\*\*\*

C10H24N2OS2 L CAS 68704-79-0 (1787)

8-Oxa-2,14-diaza-5,11-dithiapentadecane;

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

Co++ gl NaClO4 25°C 0.10M U H K1=<1.5 1979ASb (76558)3245

B(CoHL)=8.22

Also DH values

-----  
Co++ gl NaClO4 25°C 0.10M U K1=1.50 B2=8.70 1975ASb (76559)3246

\*\*\*\*\*

C10H24N2O2 L Ethambutol CAS 36697-71-9 (1403)

R-2,2'-(1,2-Ethandiyldiimino)-bis-1-butanol;

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

Co++ gl NaClO4 25°C 0.10M U T H K1=5.72 1990BPb (76572)3247

\*\*\*\*\*

C10H24N2O4 L CAS 140-07-8 (2669)

N,N,N',N'-Tetra(2-hydroxyethyl)diaminoethane; ((HO.CH2.CH2)2N.CH2-)2

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

Co++ gl NaClO4 25°C 0.10M U K1=5.13 1970RMa (76585)3248

By Kinetics : K1=4.9

-----  
Co++ gl NaNO3 ? 0.50M U K1=5.30 1965ISa (76586)3249

-----  
Co++ gl oth/un 25°C 0.50M U K1=5.04 1960HDa (76587)3250

\*\*\*\*\*

C10H24N4 L CAS 70072-63-8 (286)

1,4,7,10-Tetraazacyclotetradecane;

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

Co++ gl NaClO4 35°C 0.20M U M K1=11.67 1983MKb (76605)3251

Ternary complex with dioxygen: B(Co2H-1L2(O2))=27.63

\*\*\*\*\*

C10H24N4 L iso-Cyclam CAS 52877-36-8 (142)

1,4,7,11-Tetraazacyclotetradecane; cyclo(-(HNCH2.CH2)3.CH2.NH.CH2.CH2.CH2-)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 35°C 0.20M U K1=10.91 1980KKa (76616)3252  
\*\*\*\*\*  
C10H24N4 L Cyclam CAS 295-37-4 (8)  
1,4,8,11-Tetraazacyclotetradecane; cyclo(-(HN.CH2.CH2.NH.(CH2)3)2-)  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 25°C 0.10M U K1=14.30 1984CCb (76658)3253  
K(Co+OH+L)=17.08  
Medium not stated.  
-----

-----  
Co++ gl NaClO4 35°C 0.20M U K1=12.71 1980KKa (76659)3254  
B(Co2L4(O2))=27.08  
\*\*\*\*\*  
C10H24N4O L (7051)  
1-Oxa-4,7,10,13-tetraazacyclopentadecane;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=12.72 1994CDa (76708)3255  
\*\*\*\*\*  
C10H25N5 L 15-Ane-N5 CAS 295-64-7 (99)  
1,4,7,10,13-Pentaazacyclopentadecane; cyclo(-(HN.CH2.CH2)5-)  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 35°C 0.2M C K1=16.76 1980KKe (76730)3256  
\*\*\*\*\*  
C10H26N2O12P4 H8L CAS 28698-30-8 (3342)  
N,N,N',N'-Tetra(phosphomethyl)cyclohexane-1,2-diamine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp oth/un 25°C 0.10M U K1=3.31 1959BYa (76755)3257  
\*\*\*\*\*  
C10H26N4 L Spermine CAS 71-44-3 (291)  
4,9-Diazadodecane-1,12-diamine; (H2N.CH2.CH2.CH2.NH.CH2.CH2.)2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 20°C 0.10M C M K1=7.36 2002GLc (76792)3258  
K(Co+H4L)=4.65  
H2A is adenosine-5'-monophosphoric acid.  
-----

-----  
Co++ gl KNO3 20°C 0.10M C M K1=7.36 2002GLc (76793)3259  
B(CoH2L)=25.39  
B(CoH-1L)=-2.38  
-----

B(CoAH4L)=46.04

H2A is adenosine-5'-monophosphoric acid.

\*\*\*\*\*

C10H26N4S4 L CAS 55677-43-5 (1178)

1,1,2,2-Tetramercaptoethylamine-ethane; (CH(S.CH2.CH2.NH2)2)2

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

Co++ gl NaClO4 25°C 0.10M U 1976CJa (76816)3260

K(Co+H2L)=3.90

\*\*\*\*\*

C10H27N5 L CAS 58214-71-4 (5539)

4,7,10-Triazatridecane-1,13-diamine;

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

Co++ gl NaClO4 25°C 0.15M C K1=16.26 2002AGa (76828)3261

\*\*\*\*\*

C10H28N2O12P4 H8L CAS 23605-74-5 (435)

(Hexamethylenedinitrilo)tetra(methylenephosphonic acid);

(CH2.CH2.CH2.N(CH2.PO3H2)2)2

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

Co++ gl KNO3 25°C 0.10M U K1=5.90 1980ZRb (76837)3262

K(CoL+H)=10.18

K(CoHL+H)=7.26

K(CoH2L+H)=6.28

K(CoH3L+H)=5.59

\*\*\*\*\*

C10H28N6 L PENTEN CAS 4097-90-9 (3315)

N,N,N',N'-Tetra-(2-aminoethyl)diaminoethane;

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

Co++ gl NaNO3 25°C 1.0M C K1=15.79 2001GLb (76867)3263

B(CoHL)=23.22

B(CoH2L)=29.07

-----  
Co++ cal KNO3 25°C 0.10M U H K1=15.55 1971PWa (76868)3264

DH(K1)=-61.7 kJ mol<sup>-1</sup>, DS=89.9 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ cal KCl 25°C 0.10M U H K1=11.55? 1964SPb (76869)3265

B(CoHL)=12.40

K calculated. By calorimetry:DH(K1)=-61.6 kJ mol<sup>-1</sup>, DS=89.9 J K<sup>-1</sup> mol<sup>-1</sup>;

DH(CoHL)=-58.5, DS=41.8

-----  
Co++ gl KCl 20°C 0.10M U K1=15.75 1953SMa (76870)3266

K(Co+HL)=12.50

K(CoL+H)=6.95

\*\*\*\*\*

C11H5N3O2Br4 H2L (4862)  
4-(3',5'-Dibromo-2'-pyridylazo)-2,6-dibromo-1,3-dihydroxybenzene;

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

Co++ sp NaClO4 ? 0.10M U B2=27.53 1969BNb (76883)3267

\*\*\*\*\*

C11H7NO4 H2L CAS 122844-38-6 (8293)  
1-Hydroxy-4-nitroso-2-naphthalenecarboxylic acid;

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

Co++ gl alc/w RT 40% M K1=5.06 B2= 9.03 1993Rab (76891)3268

Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

\*\*\*\*\*

C11H7NO4 H2L CAS 32446-26-7 (8294)  
3-Hydroxy-4-nitroso-2-naphthalenecarboxylic acid;

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

Co++ gl alc/w RT 40% M K1=3.61 B2= 7.71 1993Rab (76899)3269

Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

\*\*\*\*\*

C11H7N3O2Br2 H2L (4863)  
2,6-Dibromo-1,3-dihydroxy-4-(2'-pyridylazo)benzene;

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

Co++ sp NaClO4 ? 0.10M U B2=26.84 1969BNb (76905)3270

\*\*\*\*\*

C11H7N3O2Br2 H2L (4864)  
4-(3',5'-Dibromo-2'-pyridylazo)-1,3-dihydroxybenzene;

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

Co++ sp NaClO4 ? 0.10M U B2=26.64 1969BNb (76907)3271

\*\*\*\*\*

C11H8N2O L Dipyridylketone CAS 19437-26-4 (1151)  
2,2'-Carbonyldipyridine; C5H4N.CO.C5H4N

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

Co++ gl NaClO4 25°C 0.10M U K1=2.56 1975FSb (76917)3272

K(CoH-1L+H)=5.7

\*\*\*\*\*

C11H8N3O2Br H2L CAS 17091-08-6 (4865)  
4-(5'-Bromo-2'-pyridylazo)-1,3-dihydroxybenzene;

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

-----  
 Co++ sp NaClO4 ? 0.10M U B2=22.54 1969BNb (76920)3273  
 \*\*\*\*\*  
 C11H8O2S2 HL CAS 1138-14-3 (3352)  
 Di-2-thenoylmethane; C4H3S.CO.CH2.CO.C4H3S  
 -----

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

Co++ sp mixed 25°C 30% U B2=11.1 1965CAa (76984)3274  
 Medium: 30% THF, 1 M NaClO4  
 \*\*\*\*\*  
 C11H8O3 H2L CAS 86-48-6 (1129)  
 1-Hydroxy-2-naphthoic acid;  
 -----

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

Co++ gl alc/w RT 40% M K1=4.03 B2= 8.00 1993Rab (77004)3275  
 Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.  
 -----

Co++ gl alc/w 25°C 50% U M K1=6.86 B2=12.24 1980DCa (77005)3276  
 K(Co(phen)+L)=6.48  
 \*\*\*\*\*  
 C11H8O3 H2L CAS 2083-08-1 (1131)  
 2-Hydroxy-1-naphthoic acid;  
 -----

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

Co++ gl alc/w 25°C 50% U M K1=6.77 1980DCa (77058)3277  
 K(Co(phen)+L)=5.99  
 \*\*\*\*\*  
 C11H8O3 H2L CAS 92-70-6 (1130)  
 2-Hydroxy-3-naphthoic acid (3-Hydroxy-2-naphthoic acid);  
 -----

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

Co++ gl alc/w RT 40% M K1=4.89 B2=11.86 1993Rab (77108)3278  
 Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.  
 -----

Co++ gl diox/w 25°C 50% C K1=7.9 1987CFb (77109)3279  
 In 50% dioxan/H2O; 0.2 M KNO3.  
 -----

Co++ gl diox/w 20°C 50% M TIH K1=7.70 B2=14.92 1978SKk (77110)3280  
 Medium: 50% v/v dioxane/H2O, 0.1 M KNO3. Data for 20-40 C and for 0.05-  
 0.20 M KNO3. DH and DS values reported. At I=0 and 30 C, K1=7.49, K2=8.14.  
 \*\*\*\*\*

C11H8O3 HL Plumbagin CAS 81402-06-4 (882)  
 6-Hydroxy-2-methyl-1,4-naphthoquinone;  
 -----

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

Co++ gl alc/w 30°C 50% U K1=5.76 B2=10.46 1981RRc (77146)3281  
\*\*\*\*\*

C11H8O3S HL CAS 32267-05-3 (3353)  
2-Furoyl-2-thenoymethane; C4H3O.CO.CH2.CO.C4H3S

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

Co++ gl diox/w 30°C 75% U K1=9.79 B2=18.72 1953UFe (77154)3282  
\*\*\*\*\*

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

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

Co++ gl diox/w 35°C 50% U K1=2.46 B2=4.49 1971MAa (77168)3283  
Medium: 50% dioxan, 0.01 M NaClO4  
\*\*\*\*\*

C11H8O4 HL CAS 6724-42-1 (6183)  
8-Formyl-7-hydroxy-4-methyl-2H-1-benzopyran-2-one; CH0.C9H30(:O)(CH3)(OH)

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

Co++ gl alc/w 35°C 70% U M K1=4.66 B2=7.80 1984CEa (77195)3284  
K(Co(bpy)+L)=4.50  
K(Co(phen)+L)=4.32  
\*\*\*\*\*

C11H9NO HL 2-Vinyl-oxine CAS 35385-32-1 (1707)  
2-Vinyl-8-hydroxyquinoline;

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

Co++ gl diox/w 25°C 50% U K1=7.38 B2=16.63 1984YAa (77313)3285  
\*\*\*\*\*

C11H9NO2S HL CAS 29556-13-6 (1450)  
N-Phenyl-2-thenoylhydroxamic acid; C4H3SCON(C6H5)OH

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

Co++ gl diox/w 25°C 50% U M K1=4.73 B2=10.54 1984ABb (77345)3286  
B(CoL(bpy))=12.74  
B(CoL(phen))=14.40  
-----

Co++ gl NaClO4 25°C 0.10M U K1=5.63 B2=10.27 1975BLa (77346)3287  
\*\*\*\*\*

C11H9NO3 H2L CAS 80690-05-7 (872)  
3-Hydroxy-2-methyl-1,4-naphthoquinone monoxime;

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

Co++ gl diox/w 30°C 0.10M U B2=12.08 1981KSa (77361)3288

K3=6.34

\*\*\*\*\*

C11H9NO3 H2L CAS 35975-56-5 (16)  
Methyl-8-hydroxyquinoline-2-carboxylic acid;

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

Co++ kin NaClO4 25°C 0.10M U K1=5.53 1977HCa (77370)3289

\*\*\*\*\*

C11H9NO3 HL CAS 1137-48-0 (1449)  
N-Phenyl-2-furylhydroxamic acid; C4H3O.CO.N(C6H5).OH

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

Co++ gl diox/w 25°C 50% U M K1=5.82 B2=10.40 1984ABb (77387)3290  
B(CoL(bpy))=12.56  
B(CoL(phen))=14.23

-----  
Co++ gl NaClO4 25°C 0.10M U K1=5.48 B2=9.59 1975BLa (77388)3291

\*\*\*\*\*

C11H9NO3S2 HL (939)  
2-(Thiophene-2'-aldimino)benzene sulfonic acid; C4H3S.CH:N.C6H4.SO3H

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

Co++ gl NaClO4 25°C 0.10M U K1=4.32 B2=7.42 1982MSa (77398)3292

\*\*\*\*\*

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

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

Co++ gl diox/w 35°C 50% U 1971MAa (77410)3293  
K(Co+HL)=7.62  
K(Co+2HL)=14.33

Medium: 50% dioxan, 0.01 M NaClO4

\*\*\*\*\*

C11H9NO4 HL CAS 65490-35-9 (6230)  
8-Formyl-7-hydroxy-4-methyl-2H-[1]benzopyran-2-one-oxime; (CH3)(OH)C9H3O(:O)CH:NOH

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

Co++ gl alc/w 35°C 70% U K1=6.77 B2=11.86 1984CEa (77436)3294

\*\*\*\*\*

C11H9N2O2F3S HL CAS 33354-16-4 (1681)  
2-Methyl-8-(Trifluoromethanesulfonamido)quinoline;

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

Co++ gl diox/w 30°C 75% U K1=6.3 B2=13.1 1984NYa (77443)3295



\*\*\*\*\*

C11H9N3O HL CAS 10335-29-2 (3937)  
2-(2'-Pyridylazo)phenol; C5H4N.N:N.C6H4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	25°C	50%	U		K1=8.9 B2=18.20	1967ANa (77455)	3296

Medium: 50% MeOH, 0.1 M NaClO4

\*\*\*\*\*

C11H9N3O HL CAS 7687-72-1 (3938)  
4-(2'-Pyridylazo)phenol; C5H4N.N:N.C6H4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	alc/w	24°C	5%	U		B2=7.88 K(CoL2+OH)=5.17	1973BJb (77470)	3297

Medium: 5% EtOH, 0.1 M NaClO4

Co++	gl	alc/w	25°C	50%	U		K1=3.5 B2=7.30	1967ANa (77471)	3298
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Medium: 50% MeOH, 0.1 M NaClO4

\*\*\*\*\*

C11H9N3O2 H2L PAR CAS 1141-59-9 (636)  
4-(2'-Pyridylazo)-1,3-dihydroxybenzene; C5H4N.N:N.C6H3(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	oth/un	25°C	0.10M	U		K(Co+HL+L)=17.3 K(CoHL+HL)=7.0 K(Co+2HL=CoHL2+H)=0.7 K(CoHL+H2L=Co(HL)2+H)=0.18	1970ENa (77522)	3299

Co++	sp	NaClO4	?	0.10M	U		B2=21.08	1968BIc (77523)	3300
------	----	--------	---	-------	---	--	----------	-----------------	------

Co++	gl	diox/w	25°C	50%	U		K(Co+HL) > 12 K(CoL+H)=4.7 K(CoOHL+H)=6.0	1962CYa (77524)	3301
------	----	--------	------	-----	---	--	---	-----------------	------

Co++	gl	diox/w	25°C	50%	U	I	K1=14.8 B2=23.00	1962GNa (77525)	3302
------	----	--------	------	-----	---	---	------------------	-----------------	------

Medium: 50% dioxan, 0.1 M. In 0% dioxan: K1=10.0, K2=7.1

\*\*\*\*\*

C11H9N3O4 H2L CAS 82628-26-0 (1379)  
1-(2-Tolyl)violuric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	18°C	50%	U	T	K1=8.02 B2=13.97	1982SGa (77620)	3303

Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4

\*\*\*\*\*

C11H9N3O4 H2L CAS 82628-27-1 (1378)  
1-(3-Tolyl)violuric acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 18°C 50% U T K1=8.18 B2=14.15 1982SGa (77627)3304  
Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4

\*\*\*\*\*  
C11H9N3O4 H2L CAS 82628-25-9 (1377)  
1-(4-Tolyl)violuric acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 18°C 50% U T K1=8.38 B2=14.56 1982SGa (77634)3305  
Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4

\*\*\*\*\*  
C11H9N3O5S HL (6249)  
1,2-Naphthoquinone-4-sulfonic acid 2-semicarbazone; C10H5(:O)(HSO3):N.NH.CO.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 28°C 0.10M U T H K1=4.62 B2=9.09 1980MGd (77640)3306  
\*\*\*\*\*

C11H10N2 L CAS 1132-37-2 (2427)  
(2,2'-Dipyridyl)methane; C5H4N.CH2.C5H4N

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.10M C M 1979FSa (77657)3307  
B(CoL(pyrocatecholate))=13.20  
K(Co(pyrocatecholate)+L)=9.74  
K(CoL+pyrocatecholate)=4.59

-----  
Co++ gl KNO3 20°C 0.10M U K1=3.46 B2=6.28 1970BAa (77658)3308  
K(Co+HL)=1.9  
K(Co+CoL)=1.9

\*\*\*\*\*  
C11H10N2O L (7591)  
4'-(Imidazol-1-yl)acetophenone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 25°C 0.50M M K1=2.02 1998KSa (77666)3309  
\*\*\*\*\*

C11H10N2O2 HL CAS 75793-37-6 (1669)  
N-(8-Quinolyl)aminoethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp alc/w 25°C 12% U H K1=4.82 B2=9.51 1984HOa (77678)3310

Medium: 12% v/v EtOH/H2O, 0.1 M NaCl

-----  
Co++ gl NaCl04 25°C 0.10M U K1=3.7 B2=7.50 1969TKa (77679)3311  
\*\*\*\*\*  
C11H10N3OClS HL (1294)  
2-(4',5'-Dimethyl-2'-thiazolylazo)-4-chlorophenol;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 60% U K1=7.48 B2=15.78 1981Kta (77689)3312  
\*\*\*\*\*  
C11H10N4O HL (3939)  
3-(2'-Hydroxyphenyl)-1-(pyrimidin-2''-yl)-1,2-diazaprop-2-ene;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 50% U K1=10.4 B2=19.00 1967AND (77715)3313  
Medium: 50% MeOH, 0.1 M NaCl04  
\*\*\*\*\*  
C11H10N4O2S L (6353)  
1-Cyanoacetyl-4-benzoylthiosemicarbazide; C6H5.CS.NH.NH.CO.NH.CO.CH2.CN  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 70% C K1=10.73 B2=16.00 1982SDa (77721)3314  
In 70% ethanol/H2O; Electrolyte: 0.1 M KCl  
\*\*\*\*\*  
C11H10N4O3 HL CAS 92265-24-2 (6211)  
5-(2'-Methylphenylazo)barbituric acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 75% U K1=4.36 B2=8.34 1986MIa (77725)3315  
\*\*\*\*\*  
C11H10N4O4 HL CAS 92265-26-4 (6210)  
5-(2'-Methoxyphenylazo)barbituric acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 75% U K1=5.60 B2=10.56 1986MIa (77739)3316  
\*\*\*\*\*  
C11H11NO2 HL CAS 830-96-6 (892)  
Indole-3-propanoic acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=3.55 B2=5.88 1981SKc (77779)3317  
Medium: 50% dioxan/H2O, 0.1 M KNO3  
\*\*\*\*\*  
C11H11NO4 HL CAS 32345-47-4 (6227)

4-Methoxymaleamic acid; HOOC.CH:CH.CO.NH.C6H4.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	22°C	80%	U T H			K1=7.40 B2=13.65	1985SAb	(77786)3318
30 C: K1= 7.30, K2=6.20; 40 C: K1= 7.15, K2=6.15										
DH(K1)=-23.0 kJ mol <sup>-1</sup> , DS=62 J K <sup>-1</sup> mol <sup>-1</sup> ; DH(K2)= -9.9, DS=88										
*****										
C11H11NO6 H3L CAS 1147-65-5 (425)										
N-(2'-Carboxyphenyl)iminodiethanoic acid; HOOC.C6H4.N(CH2.COOH)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C	M		K1=8.42	1990DAb	(77815)3319
K(CoL+A)=4.13										
B(CoLA)=12.55										

H2A: salicylaldoxime

Co++	gl	KNO3	25°C	0.10M	C	M		K1=8.42	1990DAc	(77816)3320
K(CoL+A)=3.30										
B(CoAL)=11.72										

HL: benzohydroxamic acid

Co++	gl	KNO3	25°C	0.10M	U			K1=8.42	1967UKa	(77817)3321
Co++	sp	NaNO3	20°C	0.10M	U			K(?)=5.45	1961DSa	(77818)3322

Co++	gl	KCl	22°C	0.10M	U			K1=8.17	1961UHa	(77819)3323
*****										
C11H11N2O2Br HL (9228)										
3-[4-Bromophenylazo]penta-2,4-dione;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	0.1M	U			K1=7.75	2004GMc	(77873)3324
Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture										
*****										
C11H11N2O2Cl HL (9229)										
3-[4-Chlorophenylazo]penta-2,4-dione;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	0.1M	U			K1=7.83	2004GMc	(77886)3325
Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture										
*****										
C11H11N2O2I HL (9227)										
3-[4-Iodophenylazo]penta-2,4-dione;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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-----  
Co++ gl alc/w 25°C 0.1M U K1=7.70 2004GMc (77897)3326  
Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture

\*\*\*\*\*  
C11H11N3O2 HL CAS 16428-80-1 (4832)  
3-Methyl-4-(4'-methylphenylazo)isoxazol-5-one;

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

Co++ gl diox/w 30°C 75% U K1=4.20 B2=8.44 1971SYa (77911)3327

\*\*\*\*\*  
C11H11N3O2S HL (4866)  
3-Methyl-4-(4'-methylthiophenylazo)isoxazol-5-one;

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

Co++ gl diox/w 30°C 75% U K1=4.5 B2=8.74 1971SYa (77915)3328

\*\*\*\*\*  
C11H11N3O2S HL Sulfapyridine CAS 144-83-2 (8356)  
4-Amino-N-2-pyridinyl-benzenesulfonamide;

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

Co++ gl alc/w 30°C 50% C M 1999MBc (77928)3329

B(Co(gly)L)=10.18  
B(CoAL)=9.04  
B(Co(met)L)=9.37  
B(CoH-1(gly)L)=2.99

In 50% v/v EtOH/H2O, 0.10 M NaNO3. B(CoH-2(gly)L)=-6.38; B(CoH-1AL)=0.93,  
B(CoH-2AL)=-7.47; B(CoH-1(met)L)=1.59, B(CoH-2(met)L)=-6.51. A: Beta-ala

-----  
Co++ gl diox/w 30°C 50% U K1=3.83 B2= 7.53 1993MBc (77929)3330

\*K(CoL)=-7.76  
\*K(CoL2)=-6.00  
\*K(Co(OH)L2)=-11.29

Medium: 50% v/v dioxane/H2O, 0.10 M NaNO3.

\*\*\*\*\*  
C11H11N3O3 HL CAS 51451-03-7 (4834)  
3-Methyl-4-(2'-methoxyphenylazo)isoxazol-5-one;

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

Co++ gl diox/w 30°C 75% U K1=5.39 B2=10.17 1971SYa (77940)3331

\*\*\*\*\*  
C11H11N3O3 HL CAS 51451-04-8 (4835)  
3-Methyl-4-(4'-methoxyphenylazo)isoxazol-5-one;

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

Co++ gl diox/w 30°C 75% U K1=4.16 B2=8.44 1971SYa (77944)3332

\*\*\*\*\*

C11H11N3O4 HL (9230)  
3-[4-Nitrophenylazo]penta-2,4-dione;

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

Co++ gl alc/w 25°C 0.1M U K1=6.72 2004GMc (77957)3333  
Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture

\*\*\*\*\*

C11H12NOCl L CAS 50519-24-9 (3367)  
4-(4-Chlorophenylimino)pentan-2-one; CH3.CO.CH2.C(:N.C6H4.Cl).CH3

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

Co++ gl alc/w 25°C 70% U K1=6.27 1992CGd (77979)3334  
Medium: 70% EtOH/H2O. For 4-fluoro K1=4.88; 4-bromo 6.38; 4-iodo 6.80

\*\*\*\*\*

C11H12N2O L Antipyrine CAS 60-80-0 (2026)  
2,3-Dimethyl-1-phenyl-3-pyrazolin-5-one, Phenazone;

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

Co++ gl KNO3 25°C 0.50M U K1=0.48 B2=0.78 1980LWa (78002)3335  
B3=0.88

-----  
Co++ sp mixed ? 75% U M 1969KSb (78003)3336  
K(Co(CNS)3+2HL)=2.1  
K(Co(CNS)4+2HL)=1.9

Medium: 75% acetone

\*\*\*\*\*

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

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

Co++ gl NaClO4 25°C 0.10M U TIH B2=19.25 1988GRb (78014)3337  
35 C:B2=19.32, 45 C:19.45. DH(B2)=20.0 kJ mol-1, DS=434.7 J K-1 mol-1

\*\*\*\*\*

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

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

Co++ gl KNO3 35°C 0.10M C M K1=4.39 1999DSb (78174)3338  
B(CoAL)=4.46

A is thiamine hydrochloride.

-----  
Co++ gl KNO3 35°C 0.10M C M K1=4.35 1997PSb (78175)3339  
K(CoL+A)=4.31

H2A is thiamine orthophosphoric acid.

```

-----
Co++      gl  KNO3   35°C 0.10M U      K1=4.55      1990RSe (78176)3340
-----
Co++      gl  KNO3   35°C 0.10M U      M  K1=4.52      1989RSb (78177)3341
                    K(Co(thiodipropanoate)+L)=4.34
-----
Co++      gl  KNO3   35°C 0.20M U      M  K1=4.10      B2=8.01      1989RVa (78178)3342
                    K(CoA+L)=4.22

```

A=bis(imidazol-2-yl)methane

```

-----
Co++      gl  KNO3   25°C 0.20M U      M  K1=4.10      1988BSc (78179)3343
                    K(Co(bpy)+L)=4.63
-----
Co++      gl  KNO3   25°C 0.10M U      M  K1=4.62      B2=8.62      1988MBa (78180)3344
-----
Co++      gl  KNO3   35°C 0.10M C      M  K1=4.39      1983KSc (78181)3345
                    K(CoHA+L)=4.40
                    K(CoHB+L)=4.24

```

A is adenine; HB is cytosine.

```

-----
Co++      vlt NaClO4 25°C 0.10M C      K1=4.72      1981KVa (78182)3346
Method: polarography. Medium pH 7.0
-----

```

```

Co++      vlt KNO3   25°C 1.00M U      K1eff=2.25      1977HDa (78183)3347
-----

```

Keff at pH 7

```

-----
Co++      gl  NaClO4 25°C 3.0M U      T  K1=4.58      B2=8.90      1970WIa (78184)3348
                    B3=12.25
-----

```

```

Co++      gl  oth/un 20°C 0.01M U      K2=8.5      1950ALa (78185)3349
*****
C11H12N2O2      HL      (9226)
3-[Diphenylazo]penta-2,4-dione;
-----

```

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

```

Co++      gl  alc/w  25°C 0.1M U      K1=8.18      2004GMc (78248)3350
Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture
-----

```

```

C11H12N2O2S      HL      CAS 51925-00-9 (1677)
2-Methyl-8-(methanesulfonamido)quinoline;
-----

```

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

```

Co++      gl  diox/w 30°C 75% U      K1=8.6      B2=19.3      1984NYa (78257)3351
*****

```

```

C11H12N2O3      HL      (6598)
2,3-Dehydro-N-glycyl-phenylalanine; NH2.CH2.CO.NH.C(COOH):CH.C6H5
-----

```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C		K1=3.00 B2=5.04 B(CoH-1L)=-5.59 B(CoH-2L)=-15.08 B(CoH-1L2)=-3.07 B(CoH-2L2)=-12.36	1994JBa (78266)	3352

\*\*\*\*\*  
 C11H12N2O3 H2L CAS 121565-72-8 (8344)  
 2-[[2-(Hydroxyimino)-1-methylpropylidene]amino]benzoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	30°C	50%	C T H		K1=10.28	1993HCb (78271)	3353

Medium: 50% v/v EtOH/H2O, 0.10 M NaClO4. For meta-COOH, K1=10.82; for para-COOH, K1=10.28. Data for 40 and 50 C and DH and DS values.

\*\*\*\*\*  
 C11H12N2O3 HL CAS 20771-72-6 (3359)  
 4-(4-Nitrophenylimino)pentan-2-one; CH3.CO.CH2.C(:N.C6H4.NO2).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	50%	U		K1=9.64 B2=17.23	1961MJa (78276)	3354

\*\*\*\*\*  
 C11H12N2O5 H2L CAS 5853-99-6 (8739)  
 N-[N-(2-Hydroxybenzoyl)glycyl]glycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	30°C	50%	C		K(Co+HL=CoH-2L+3H)=-19.93	1991MCb (78304)	3355

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.

\*\*\*\*\*  
 C11H12N2O5S HL CAS 56475-09-3 (8410)  
 3-(4'-Sulfophenylhydrazo)-pentane-2,4-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	U T		K1=7.74	2005ACa (78314)	3356

For 35 C K1=7.57; for 45 C K1=7.41

\*\*\*\*\*  
 C11H12N4O2 HL (4837)  
 2-(5-Methyl-4-imidazolylazo)-4-methoxyphenol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U		K1=11.2 B2=21.40	1968YTa (78354)	3357

Medium: 50% dioxan, 0.1 M KNO3

\*\*\*\*\*  
 C11H12O9 H3L CAS 69065-58-3 (2714)



1,2,4-Trihydroxy-3,4,5-trimethoxycarbonylcyclopentadiene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	C	T			1978MSh (78426)	3358
									DH(Co+HL)=-6.27 kJ/mol	
Data obtained from three lgK values at 15, 25 and 35 C.										

Co++	gl	NaClO4	25°C	0.10M	U				1975MSb (78427)	3359
									K(Co+HL)=5.42	
									K(CoHL+HL)=4.27	

\*\*\*\*\*

C11H13NO HL CAS 880-12-6 (3361)  
 4-(Phenylimino)pentan-2-one; CH3.CO.CH2.C(:N.C6H5).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	70%	U			K1=8.39	1992CGd (78437)	3360
Medium: 70% EtOH/H2O										

Co++	gl	diox/w	30°C	50%	U			K1=9.08 B2=15.76	1961MJa (78438)	3361
------	----	--------	------	-----	---	--	--	------------------	-----------------	------

\*\*\*\*\*

C11H13NO2 HL CAS 3026-99-1 (249)  
 Acetoacet-2-toluidide; CH3.CO.CH2.CO.NH.C6H4.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U			K1=4.20	1969HSc (78461)	3362
Medium: 50% dioxan, 0.1 M KClO4										

\*\*\*\*\*

C11H13NO3 HL CAS 91099-10-4 (246)  
 Acetoacet-2-anisidide; CH3.CO.CH2.CO.NH.C6H4.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U			K1=4.30	1969HSc (78517)	3363
Medium: 50% dioxan, 0.1 M KClO4										

\*\*\*\*\*

C11H13NO4 H2L (3364)  
 N-2-Tolyliminodiethanoic acid; CH3.C6H4.N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	30°C	0.10M	U			K1=2.0	1957TBb (78546)	3364

\*\*\*\*\*

C11H13NO4 H2L CAS 300042-63-8 (7950)  
 N-4-Tolyliminodiethanoic acid;

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

Co++ cal NaClO4 25°C 0.10M C H 1997ZLa (78550)3365  
DH(K1)=17.3, DH(K2)=5.00 kJ mol<sup>-1</sup>. DH(B(CoL(nta)))=15.1

\*\*\*\*\*

C11H13N04 H2L CAS 3987-53-9 (966)

N-Benzyliminodiethanoic acid; C6H5.CH2.N(CH2.COOH)2

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

Co++ gl oth/un ? ? U K1=7.0 1975DTa (78580)3366  
-----

Co++ gl KNO3 25°C 0.10M C K1=6.78 B2=12.10 1975IPa (78581)3367  
-----

Co++ gl KCl 40°C 0.10M U T K1=6.65 B2=11.92 1968EAb (78582)3368  
K1=7.01(10 C),6.87(25 C); K2=5.75(10 C),5.46(25 C)  
-----

Co++ gl KCl 25°C 0.10M U K1=6.78 B2=12.13 1966SIb (78583)3369  
-----

\*\*\*\*\*

C11H13N05 H3L HBIDA CAS 7372-13-6 (1603)

N-(2-Hydroxybenzyl)iminodiethanoic acid; HO.C6H4.CH2.N(CH2.COOH)2

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

Co++ gl KNO3 25°C 0.10M C K1=12.87 1975HMb (78613)3370  
K(CoL+H)=5.81  
K(Co+HL)=6.97  
-----

\*\*\*\*\*

C11H13N05 H2L CAS 65489-73-8 (3946)

N-(Carboxymethyl)-N-(2'-hydroxyethyl)-2-aminobenzoic acid;

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

Co++ gl KCl 22°C 0.10M U K1=6.40 1963UHa (78651)3371  
-----

\*\*\*\*\*

C11H13N06 H4L CAS 1911-59-2 (4852)

2,3-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2

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

Co++ EMF oth/un ? ? U K(Co+HL)=12.7 1975DTa (78658)3372  
K(Co+H2L)=7.7  
-----

\*\*\*\*\*

C11H13N06 H4L CAS 59036-09-8 (2111)

2,5-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2

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

Co++ gl oth/un 25°C 0.0 U K(Co+HL)=13.0 1970TTb (78673)3373  
K(Co+H2L)=7.6

\*\*\*\*\*

C11H13N06 H4L CAS 31477-66-7 (4853)  
2,6-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2

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

Co++ EMF oth/un ? ? U 1975DTa (78689)3374  
K(Co+HL)=10.3  
K(Co+H2L)=7.8

\*\*\*\*\*

C11H13N30 L Ampyrone CAS 83-07-8 (2027)  
4-Amino-2,3-dimethyl-1-phenyl-3-pyrazolin-5-one, 4-Aminoantipyrine;

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

Co++ gl KNO3 25°C 0.50M U K1=1.17 B2=2.06 1980LWa (78706)3375

\*\*\*\*\*

C11H13N30S L CAS 7420-45-3 (4869)  
1-Benzoyl-4-allylthiosemicarbazide;

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

Co++ sp mixed 25°C 50% U B2=2.11 1969CFb (78712)3376  
Medium: acetone/H2O

\*\*\*\*\*

C11H13O4AsS H2L CAS 36198-36-4 (4870)  
Bis(carboxymethyl)-2-(methylthiophenyl)arsine; (HOOC.CH2)2.As.C6H4.S.CH3

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

Co++ gl oth/un 25°C 0.10M U K1=2.93 1971FPa (78743)3377  
K(Co+HL)=2.37

\*\*\*\*\*

C11H14N2 L CAS 4886-30-0 (5670)  
1-Butylbenzimidazole;

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

Co++ sp non-aq 25°C 100% U B2=2.15 1984DPa (78764)3378  
Medium: DMSO

\*\*\*\*\*

C11H14N2O3 HL Gly-Phe CAS 3321-03-7 (829)  
Glycyl-phenylalanine; H2N.CH2.CO.NH.CH(CH2.C6H5).COOH

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

Co++ gl KNO3 0°C 0.10M C K1=3.52 B2= 6.27 1992KUa (78809)3379  
B(CoH-1L)=-5.34  
B(CoH-1L2)=-1.84  
B(CoH-2L2)=-11.72

-----  
Co++ gl KCl 25°C 0.10M U K1=2.96 B2=5.27 1959BRb (78810)3380  
For Gly-D-Phe: K1=2.91, B2=5.35

\*\*\*\*\*  
C11H14N2O3 HL Phe-Gly CAS 721-90-4 (830)  
Phenylalanyl-glycine; H2N.CH(CH2.C6H5).CO.NH.CH2.COOH  
-----

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

Co++ gl KNO3 0°C 0.10M C K1=2.48 B2= 4.72 1992KUa (78826)3381  
B(CoH-1L)=-7  
B(CoH-1L2)=-3.33  
B(CoH-2L2)=-15  
-----

Co++ gl KCl 25°C 0.10M U K1=2.12 B2=6.26 1959BRb (78827)3382

\*\*\*\*\*  
C11H14N2O4 H2L Gly-Tyr CAS 658-79-5 (533)  
Glycyl-tyrosine; H2N.CH2.CO.NH.CH(CH2.C6H4.OH).COOH  
-----

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

Co++ gl KNO3 25°C 0.16M M B2=6.94 1979AKa (78856)3383  
B(CoH2L2)=25.48  
B(CoHL2)=16.44  
B(CoHL)=13.07  
B(CoH-1L2)=-3.04  
-----

\*\*\*\*\*  
C11H14N2O4 H2L (1880)  
N-(6-Methyl-2-pyridylmethyl)iminodiethanoic acid; CH3C5H3NCH2N(CH2COOH)2  
-----

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

Co++ ISE NaNO3 20°C 0.10M C H K1=9.80 1981ANb (78875)3384  
DH(K1)=-9.2 kJ mol<sup>-1</sup>, DS=156.1 J K<sup>-1</sup> mol<sup>-1</sup>  
additional method: exchange equilibria  
-----

\*\*\*\*\*  
C11H14N4O5 HL CAS 56566-64-4 (2816)  
Biacetylmonoxime-4-phenyl-3-thiosemicarbazone;  
-----

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

Co++ gl alc/w 30°C 50% U T H K1=8.45 1992HRa (78936)3385  
Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.  
DH(K1)=-39.7 kJ mol<sup>-1</sup>, DS(K1)=-29.8 J K<sup>-1</sup> mol<sup>-1</sup>.  
-----

Co++ sp none 25°C 0.0 U K1=11.76 1975CJb (78937)3386

\*\*\*\*\*  
C11H14N4O4 L Tubercidin CAS 69-33-0 (6412)  
7-Deazaadenosine, Tubercidin;  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.50M	C		K1=0.13	2002KSb (78954)	3387

Co++	gl	NaNO3	25°C	0.50M	M		K1=0.22	1991JCa (78955)	3388
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Also by spectrophotometry in 0.5 M NaClO4: K1=0.24

\*\*\*\*\*

C11H14N4O5 HL 1-Methylinosine CAS 2140-73-0 (8133)  
 1-Methylhypoxanthine-9-beta-D-ribofuranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	1.0M	U		K(Co+HL=CoHL)=0.4	1981LVa (78972)	3389

\*\*\*\*\*

C11H14O2S HL (4857)  
 2-Thenoylpivaloylmethane; C4H3S.CO.CH2.CO.C(CH3)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=9.61 B2=18.75	1972UDa (79004)	3390

Medium: 75% v/v dioxan, 0.01 M Me4NC1O4

\*\*\*\*\*

C11H14O3 HL (4819)  
 2-Furoyl pivaloyl methane; C4H3O.CO.CH2.CO.C(CH3)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=9.38 B2=17.73	1972UDa (79010)	3391

Medium: 75% v/v dioxan, 0.01 M Me4NC1O4

\*\*\*\*\*

C11H15NO3 L (6281)  
 Benzaldehyde:tris-buffer Schiff's base; C6H5.CH:N.C(CH2.OH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	26°C	60%	U		K1=1.44 B2=3.92	1978TPb (79031)	3392

\*\*\*\*\*

C11H15NO4 HL CAS 18212-81-2 (6280)  
 Salicylaldehyde:tris-buffer Schiffs base;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	26°C	60%	U		K1=4.63	1978TPb (79043)	3393

\*\*\*\*\*

C11H15NO4S2 H2L CAS 51786-15-3 (8749)  
 N-(Phenylsulfonyl)-L-methionine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++ gl alc/w 25°C 50% C T H 1987MDe (79049)3394  
 K(Co+HL=CoL+H)=4.08  
 K(Co+2HL=CoL2+2H)=12.37

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3. Data for 35, 45 C.

Enthalpy and entropy data.

\*\*\*\*\*

C11H15N4O7P H2L CAS 16719-46-3 (6026)  
 Tubercidin-5'-monophosphoric acid, 7-Deazaadenosine-5-monophosphoric acid;

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

Co++ gl NaNO3 25°C 0.10M C K1=1.94 1988SMb (79067)3395  
 K(Co+HL)=0.96

\*\*\*\*\*

C11H16N2O2 L Pilocarpine CAS 54-71-7 (1431)  
 (3S;4R)-3-Ethylidihydro-4-((1-methyl-1H-imidazol-5-yl)methyl)-2-furanone;

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

Co++ gl KNO3 25°C 0.50M U K1=2.15 B2=4.00 1983LWa (79090)3396  
 B3=5.61  
 B4=6.95  
 B5=8.05

\*\*\*\*\*

C11H16N2O10 H5L CEDTA CAS 62394-58-5 (1080)  
 1-Carboxy-1,2-diaminoethane-N,N,N',N'-tetraethanoic acid;  
 (HOOCCH2)2NCH(COOH)CH2N(CH2COOH)2

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

Co++ gl KNO3 20°C 0.10M U K(Co+HL)=12.40 1982GSg (79107)3397

-----  
 Co++ gl KNO3 20°C 0.10M U K1=12.40 1982GSh (79108)3398

\*\*\*\*\*

C11H16N4O5 HL 7-Methylinosine CAS 20245-33-4 (8134)  
 7-Methylhypoxanthine-9-beta-D-ribofuranoside;

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

Co++ gl NaClO4 25°C 1.0M U K(Co+HL=CoL+H)=-5.7 1981LVa (79135)3399

\*\*\*\*\*

C11H17N08S H3L CAS 91649-51-3 (8438)  
 N,N,S-Tris(carboxymethyl)methionine;

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

Co++ gl KCl 25°C 0.10M C K1=8.70 1984RFd (79173)3400  
 K(Co+HL)=8.36

\*K(CoHL)=-10.65

\*\*\*\*\*

C11H17N2O4P H2L (7123)  
(S,S)-Phenylalanyl-1-aminoethylphosphonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M U K1=2.843 B2=4.92 1995HLA (79181)3401  
B(CoH-1L)=-5.832  
B(CoHL)=9.26

For the (S,R) isomer, K1=2.525, B(CoHL)=9.23, B(CoH-1L)=-6.084

\*\*\*\*\*

C11H18N2O8 H4L PDTA CAS 4408-81-5 (1655)  
1,2-Diaminopropane-N,N,N',N'-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ vlt KNO3 20°C 0.10M U K1=15.70 1981NSc (79251)3402  
-----  
Co++ vlt KNO3 20°C 0.10M U K1=17.59 1978NLb (79252)3403  
-----  
Co++ vlt KNO3 25°C 1.00M U 1977HDa (79253)3404  
K1eff=13.31  
Keff at pH 7

-----  
Co++ cal KNO3 25°C 0.20M C H 1975CGf (79254)3405  
DH(K1)=-20.4 kJ mol-1.

-----  
Co++ sp NaClO4 25°C 1.0M U M 1970HSc (79255)3406  
K(CoL+H)=2.46  
K(CoL+SCN)=-0.42; K(CoHL+SCN)=0.51

-----  
Co++ vlt KNO3 25°C 0.20M U K1=17.07 19650Ga (79256)3407  
\*\*\*\*\*

C11H18N2O8 H4L CAS 4408-81-5 (923)  
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.)2.CH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ vlt KNO3 25°C 0.20M U K1=14.48 19650Ga (79414)3408  
-----  
Co++ gl KNO3 20°C 0.10M U H 1964ANa (79415)3409  
K(Co+HL)=7.4  
By calorimetry: DH(K1)=-10.9 kJ mol-1, DS=260 J K-1 mol-1

-----  
Co++ gl KNO3 20°C 0.10M U K1=15.54 1964LAa (79416)3410  
K(CoL+H)=2.4

By polarography: K1=15.56

\*\*\*\*\*

C11H18N2O9 H4L HDPTA CAS 3148-72-9 (431)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.1M	C	I		K1=14.48 K(CoL+H)=3.03	2002GKb (79528)	3411
For 0.5 M KNO3 K1=14.07; K(CoL+H)=3.01, by spectr. K1=14.15										
For 1.0 M KNO3 K1=14.14; K(CoL+H)=3.02										

Co++	vlt	KNO3	25°C	1.00M	U			K1eff=11.15	1977HDa (79529)	3412
Keff at pH 7										

Co++	sp	KNO3	20°C	0.10M	U			K1=14.23	1967SMF (79530)	3413
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Co++	EMF	KCl	20°C	0.10M	U			K1=12.95	1966PIa (79531)	3414
Method: H electrode										

Co++	gl	KNO3	25°C	0.10M	U			K1=13.92 K(CoL+H)=3.33	1966TKa (79532)	3415
------	----	------	------	-------	---	--	--	---------------------------	-----------------	------

Co++	oth	KNO3	20°C	0.10M	U			K1=14.5	1965JMb (79533)	3416
Method: electrophoresis										

\*\*\*\*\*  
 C11H18N6O3 HL Gly-Gly-His-NMe CAS 59681-15-1 (2222)  
 Glycyl-glycyl-L-histidyl-N-methylamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.16M	U			K1=5.01 B(CoHL)=11.22 B(CoH-1L)=-1.38 B(CoH-2L)=-9.52	1979LSa (79648)	3417

\*\*\*\*\*  
 C11H19NO9 HL CAS 131-48-6 (8730)  
 5-Amino-3,5-dideoxy-D-glycero-D-galactononulosic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	C	M		K1=3.84 B2= 6.70 B(CoH-1L2)=-1.3 B(Co(bpy)L)=10.3 B(Co(bpy)L2)=13.1 B(CoH-1(bpy)L2)=4.1	2002SMc (79682)	3418
K(Co(bpy)+L)=4.24, K(Co(bpy)+2L)=7.04.										

\*\*\*\*\*  
 C11H19N3 L CAS 23539-10-8 (5556)  
 4-Benzyl-diethylenetriamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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 Co++ gl diox/w 25°C 70% U K1=7.14 1984MMe (79685)3419  
 \*\*\*\*\*  
 C11H20N2O4S H2L (6639)  
 1-Thia-4,8-diazacyclodecane-N,N'-diethanoic acid;  
 -----

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

Co++ gl KNO3 25°C 0.10M C K1=12.0 1993WLa (79715)3420  
 \*\*\*\*\*  
 C11H20O2 HL Dipivaloylmeth. CAS 1118-71-4 (363)  
 2,2,6,6-Tetramethyl-3,5-heptanedione; (CH3)3C.CO.CH2.CO.C(CH3)3  
 -----

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

Co++ gl diox/w 30°C 75% U I K1=9.97 1972UDa (79742)3421  
 Medium: 75% v/v dioxan, 0.01 M Me4NC1O4  
 \*\*\*\*\*  
 C11H20O4 H2L CAS 2283-16-1 (2854)  
 2,2-Dibutylpropanedioic acid; HOOC.C(C4H9)2.COOH  
 -----

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

Co++ gl NaClO4 25°C 0.10M U K1=2.26 19700Va (79764)3422  
 \*\*\*\*\*  
 C11H21N3O6 H3L CAS 65439-22-7 (1857)  
 1,1,1-Tris(aminomethyl)ethane-N,N',N''-triethanoic acid;  
 -----

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

Co++ gl KNO3 25°C 0.10M U K1=12.56 1977HZa (79813)3423  
 K(Co+HL)=7.64  
 \*\*\*\*\*  
 C11H22N2O3 HL Val-Leu CAS 3989-97-7 (2119)  
 DL-Valyl-DL-leucine; H2N.CH(CH(CH3)2).CO.NH.CH(CH2.CH(CH3)2).COOH  
 -----

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

Co++ gl NaCl 25°C 0.12M U K1=2.33 1977PNa (79825)3424  
 -----  
 Co++ gl NaCl 25°C 0.12M U K1=2.33 1976PNa (79826)3425  
 \*\*\*\*\*  
 C11H22N4O2 L CAS 85828-22-4 (5493)  
 6-Methyl-1,4,8,11-tetraazacyclotetradecane-5,7-dione;  
 -----

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

Co++ gl NaClO4 35°C 0.20M U M 1983MKb (79836)3426  
 B(CoH-2L)=-11.89  
 Ternary complex with dioxygen: B(Co2H-4L2(O2))=-8.72

\*\*\*\*\*

C11H23N5O2 L CAS 76201-28-0 (1606)  
1,4,8,11,14-Pentaazacyclohexadecane-5,7-dione;

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

Co++ gl KCl 25°C 0.10M C T HM K1=4.62 1991Cma (79895)3427  
K(CoL+H)=7.89  
K(CoH-1L+H)=7.57  
K(CoH-2L+H)=8.33  
Keff(2CoH-2L+O2)=0.56

Keff(2CoH-2L+O2) at 5 C in 0.05M KCl/0.05M borate, pH 9.0;DH=-62.7 kJ mol<sup>-1</sup>,  
DS=-209 J K<sup>-1</sup> mol<sup>-1</sup>. Keff(2CoH-2L+O2) at 10C = 0.33, at 15 C = 0.14

\*\*\*\*\*

C11H25N3O L (6392)  
4,7,10-Trimethyl-1-oxa-4,7,10-triazacyclododecane;

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

Co++ gl KNO3 25°C 0.10M U K1=10.30 1991ACa (79931)3428  
B(CoH-1L)=2.69  
K(CoL+OH)=6.21

\*\*\*\*\*

C11H25N3O2 L (7052)  
1,4-Dioxa-7,11,14-triazacyclohexadecane;

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

Co++ gl KNO3 25°C 0.10M C K1=7.85 1994CDa (79938)3429

\*\*\*\*\*

C11H26N4 L CAS 83616-30-2 (868)  
1,4,7,10-Tetraazacyclopentadecane; cyclo(-(NH.CH2.CH2)4.CH2.CH2.CH2-)

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

Co++ gl NaClO4 35°C 0.20M U M K1=9.85 1983MKb (79974)3430  
Ternary complex with dioxygen: B(Co2L2(O2))=26.34

\*\*\*\*\*

C11H26N4 L CAS 83118-60-1 (5483)  
1,4,8,11-Tetraazacyclopentadecane;

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

Co++ gl NaClO4 35°C 0.20M U M K1=12.41 1983MKb (79978)3431

\*\*\*\*\*

C11H26N4 L CAS 85828-18-8 (5488)  
6-Methyl-1,4,8,11-tetraazacyclotetradecane;

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

Co++ gl NaClO4 35°C 0.20M U M K1=12.04 1983MKb (79998)3432  
Ternary complex with dioxygen: B(Co2L2(O2))=29.26

\*\*\*\*\*  
C11H26N4O L CAS 252191-58-5 (7607)  
1-(3-Hydroxypropyl)-1,4,7,10-tetraazacyclododecane;

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

Co++ gl R4N.X 25°C 0.10M C K1=10.5 1999DWa (80009)3433  
K(CoL=CoH-1L+H)=-8.1

Medium: 0.1 M NEt4ClO4

\*\*\*\*\*  
C11H26N4O L CAS 73396-34-6 (7856)  
1-Oxa-4,7,11,14-tetraazacyclohexadecane;

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

Co++ gl NaClO4 35°C 0.2M C K1=11.42 1980KKe (80016)3434  
K(2Co+2L+O2=(CoL)2O2)=27.48

\*\*\*\*\*  
C11H26N4S L CAS 80846-36-2 (720)  
1-Thia-4,7,11,14-tetraazacyclohexadecane;

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

Co++ gl NaClO4 35°C 0.20M C M K1=13.39 1984KKa (80021)3435  
K(2CoL+O2=(CoL)2O2) = 7.3

\*\*\*\*\*  
C11H27N5 L CAS 29783-72-0 (98)  
1,4,7,10,13-Pentaazacyclohexadecane; cyclo(-(NH.CH2.CH2)5.CH2-)

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

Co++ gl NaClO4 35°C 0.20M U M K1=15.95 1983MKb (80029)3436

-----  
Co++ gl NaClO4 35°C 0.2M C K1=15.95 1980KKe (80030)3437  
K(2Co+2L+O2=(CoL)2O2)=39.77

\*\*\*\*\*  
C11H30N6 L CAS 65845-29-6 (4822)  
2,2',2'',2'''-(Trimethylenedinitrilo)tetrakis(ethylamine);

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

Co++ EMF KNO3 25°C 0.10M U H K1=13.29 1971PWa (80051)3438  
By calorimetry. DH(K1)=-51.9 kJ mol<sup>-1</sup>, DS=79.8 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ EMF KNO3 20°C 0.10M U K1=13.45 1971PWa (80052)3439  
K(CoL+Co)=2.5  
K(Co+HL)=10.33  
K(CoL+H)=7.26

\*\*\*\*\*

C11H30N6 L (6595)  
5-(4'-Amino-2'-azabutane)-5-methyl-3,7-diazanonane-1,9-diamine;  
CH3.C(CH2.NH.CH2.CH2.NH2)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.50M	M			K1=18.0 K(CoL+H)=5.9 K(CoHL+H)=5.6	1991HLA	(80058)3440

\*\*\*\*\*

C12H602Cl4S H2L CAS 97-18-7 (4944)  
Bithionol; Cl2.C6H2(OH).S.C6H2(OH).Cl2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	75%	U			K1=7.80 B2=14.36	1970FGa	(80097)3441
Medium: 75% EtOH, 1.0 M NaClO4										

\*\*\*\*\*

C12H7N3O2 L CAS 4199-88-6 (449)  
5-Nitro-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C	M		K1=6.30 B2=11.80	1991DAc	(80168)3442
Data for ternary complexes with acetohydroxamic acid										
Co++	gl	oth/un	25°C	0.10M	U			K1=6.44 B2=12.04 K3=4.82	1959BBa	(80169)3443

By distribution K1=6.25, K2=5.41, K3=4.63

\*\*\*\*\*

C12H8N2 L Phenanthroline CAS 66-71-7 (144)  
1,10-Phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C	M		K1=7.08 B2=13.72	1991DAc	(80397)3444
Data for ternary complexes with acetohydroxamic acid										
Co++	gl	KNO3	25°C	0.10M	C	M		K1=7.08 K(CoL+A)=4.92 B(CoAL)=12.00	1990DAc	(80398)3445

HL: benzohydroxamic acid

Co++	gl	NaNO3	35°C	0.10M	U	M		K1=6.75 K(CoL+CMP)=3.74	1985KSc	(80399)3446
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H2CMP=cytidine-5'-monophosphoric acid

Co++	gl	diox/w	25°C	50%	U	M		K1=8.31 B2=16.03 B(CoL(PFHA))=14.23	1984ABb	(80400)3447
------	----	--------	------	-----	---	---	--	--	---------	-------------

B(CoL(PTHA))=14.40

PFHA=N-phenyl-2-furylhydroxamate, PTHA=N-phenyl-2-thenohydroxamate

-----  
Co++ gl NaClO4 35°C 0.10M U M K1=7.25 B2=13.93 1983ABa (80401)3448  
K(CoL+NSA)=5.25

NSA = 5-nitrosalicylic acid

-----  
Co++ gl KNO3 25°C 0.20M C K2=7.64 1979MBa (80402)3449

-----  
Co++ cal NaNO3 20°C 0.10M U H 1963ANb (80403)3450  
DH(K1)=-38.0 kJ mol<sup>-1</sup>, DS=8.8 J K<sup>-1</sup> mol<sup>-1</sup>, DH(B2)=-66.0, DS=41.4;  
DH(B3)=-99.5, DS=41.4

-----  
Co++ gl NaNO3 20°C 0.10M U K1=7.25 B2=13.95 1963ANG (80404)3451  
K3=5.95

-----  
Co++ dis KCl 25°C 0.10M U K1=7.02 B2=13.72 1962IMa (80405)3452  
K3=6.38

-----  
Co++ EMF NaNO3 20°C 0.10M U K1=7.31 1959ANc (80406)3453

\*\*\*\*\*

C12H8N2 L (8126)

1,5-Phenanthroline;

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

-----  
Co++ gl KNO3 25°C 0.50M U K1=6.10 1987ZSa (80538)3454

\*\*\*\*\*

C12H8N2 L (8127)

4,6-Phenanthroline;

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

-----  
Co++ gl KNO3 25°C 0.50M U K1=4.95 1987ZSa (80542)3455

\*\*\*\*\*

C12H8O2Cl2S H2L CAS 97-24-5 (4946)

Fentichlor; Cl.C6H3(OH).S.C6H3(OH).Cl

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

-----  
Co++ gl alc/w 25°C 75% U K1=8.86 B2=15.15 1970FGa (80562)3456

Medium: 75% EtOH, 1.0 M NaClO4

\*\*\*\*\*

C12H9NO3 HL CAS 63098-85-1 (6279)

2-(N-2'-Furfuralideneimino)benzoic acid; C4H3O.CH:N.C6H4.COOH

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

-----  
Co++ gl NaClO4 25°C 0.10M U TI K1=3.68 B2=6.71 1978SKg (80581)3457

\*\*\*\*\*

C12H9N3 L CAS 65591-51-7 (2673)  
1-(2-Imidazolin-2-yl)isoquinoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 1.00M M K1=5.40 B2=10.17 1978KOb (80618)3458  
\*\*\*\*\*

C12H9N3O5 HL Nifuroxazide CAS 965-52-6 (8729)  
5-Nitro-4-furfurylidene benzydrazide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 25°C 100% C I K1=1.23 2002KAc (80640)3459  
Medium: MeOH, 0.10 M NaClO4. In PrOH, 0.10 M NaClO4, K1=1.38.  
\*\*\*\*\*

C12H10N2O HL CAS 1823-47-8 (3969)  
2-Salicylideneaminopyridine; (2-OH).C6H4.CH:N.C5H4N

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 30°C 50% U M K1=4.53 B2= 8.01 1988SGb (80670)3460  
K(Co(dpy)+L)=4.11  
K(Co(phen)+L)=4.11  
Medium: 50% v/v EtOH/H2O, 0.10 M KNO3.

-----  
Co++ gl diox/w 25°C 50% U K1=5.3 B2=10.3 1962GNb (80671)3461  
\*\*\*\*\*

C12H10N6O4S H2L CAS 77327-19-6 (8343)  
2-[4-Amino-3-(1,2,4-triazolylazo)]naphthol-4-sulphonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 30°C 0.10M U T K1=5.99 B2=10.00 1981GMi (80779)3462  
Also data for 40-50 C.  
\*\*\*\*\*

C12H10O3 H2L CAS 60548-85-8 (5983)  
2-Aceto-1,8-dihydroxy-naphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 70% U 1987HWa (80800)3463  
B(CoHL)=15.77  
B(Co2L2)=16.13  
\*\*\*\*\*

C12H11NOS HL Thionalide CAS 93-42-5 (4002)  
2-Mercapto-N-(2'-naphthyl)acetamide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 20°C 75% U K1=7.3 B2=14.1 1968BKb (80816)3464

B3=20.1

Medium: 75% dioxan, 0.1 M NaClO4

\*\*\*\*\*

C12H11N09 H5L (3975)  
N-(2',5'-Dicarboxy-4'-hydroxyphenyl)iminodiethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U 1967UKa (80850)3465  
K(Co+HL)=9.18  
K(Co+H2L)=3.24

-----  
Co++ gl KCl 22°C 0.10M U 1961UHa (80851)3466  
K(Co+HL)=9.0  
K(Co+H2L)=3.2

\*\*\*\*\*

C12H11N30 HL CAS 2824-60-4 (3972)  
1-Pyridyl-3-(2'-hydroxyphenyl)-1,2-diazaprop-2-ene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 50% U K1=12.1 1967AND (80868)3467  
Medium: 50% MeOH, 0.1 M NaClO4

\*\*\*\*\*

C12H11N30S HL (6787)  
2-Hydroxy-1-naphthaldehyde thiosemicarbazone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 20°C 75% U K1=9.00 B2=16.08 1992SSc (80884)3468  
Medium: 75% v/v dioxan/H2O and other mixtures, 0.1 M NaClO4

\*\*\*\*\*

C12H11N302 HL CAS 50536-09-5 (6323)  
2-Hydroxy-1-naphthaldehyde-semicarbazone; HO.C10H6.CH:N.NH.CO.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 20°C 75% U K1=8.60 B2=16.18 1992SSc (80911)3469  
Medium: 75% v/v dioxan/H2O and other mixtures, 0.1 M NaClO4

-----  
Co++ gl diox/w 30°C 75% U K1=9.27 B2=16.01 1975MKa (80912)3470

\*\*\*\*\*

C12H11N304S H2L (4003)  
3-Hydroxy-3-phenyl-1-(4'-sulfonyl)triazene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp oth/un 25°C ? U 1963DPa (80938)3471  
K(?)=12.59

\*\*\*\*\*

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

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

Co++ sp NaClO4 25°C 0.50M C K1=0.977 1984MTa (80960)3472

\*\*\*\*\*

C12H12N2 L CAS 4916-40-9 (4895)

1,2-Bis(2-pyridyl)-ethane; C5H4N.CH2.CH2.C5H4N

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

Co++ gl KNO3 20°C 0.10M U K1=1.3 1970BAa (80991)3473

K(Co+HL)=1.0

\*\*\*\*\*

C12H12N2 HL CAS 4329-81-1 (1939)

2-(Phenyliminomethyl)pyridine; C5H4N.CH2.NH.C6H5

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

Co++ EMF KNO3 20°C 0.10M U K1=6.24 1978CSa (80998)3474

\*\*\*\*\*

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  
-----

Co++ dis KCl 23°C 0.10M C K1=6.38 B2=12.30 1985SCa (81007)3475

K3=5.25

Method: spectrophotometry with partition into n-hexane

\*\*\*\*\*

C12H12N2O HL CAS 70301-52-9 (1940)

2-(Hydroxyphenyliminomethyl)pyridine; C5H4N.CH2.NH.C6H4.OH

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

Co++ EMF KNO3 20°C 0.10M U K1=7.81 1978CSa (81025)3476

Co++ gl diox/w 25°C 50% U K1=12.2 B2=19.0 1962GNb (81026)3477

\*\*\*\*\*

C12H12N2O3 HL Nalidixic acid CAS 389-08-2 (1401)

1-Ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridine-3-carboxylic acid;

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

Co++ gl mixed 25°C 75% U K1=4.65 1998Sjb (81063)3478

Medium: 75% DMSO/H2O, 0.10 M NaClO4.

-----  
Co++ sp KCl 25°C 0.10M U K1=4.4 1978TSb (81064)3479

\*\*\*\*\*



C12H12N2O4 H2L CAS 63409-56-3 (8441)  
3-(2-Carboxyphenylazo)pentane-2,4-dione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 25% M K1=8.76 B2=15.86 1985EEa (81093)3480  
\*\*\*\*\*

C12H12N2O4Cl2 L CAS 53-85-0 (8151)  
5,6-Dichloro-1-(beta-D-ribofuranosyl)benzimidazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 25°C 0.50M M K1=1.14 1998KSd (81100)3481  
\*\*\*\*\*

C12H12N2O8 H4L CAS 10362-08-0 (4916)  
2,5-Bis(carboxymethylamino)-1,4-dibenzoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=5.80 1973UWb (81109)3482  
K(Co+HL)=3.0  
K(Co+H2L)=2.05  
B(Co2L)=8.30  
\*\*\*\*\*

C12H12N4O2 HL AHMP CAS 62201-49-4 (7697)  
4-(4-Acetophenyl)hydrazono-3-methyl-2-pyrazolin-5-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 50% U T H K1=6.15 B2=11.40 1999EEa (81125)3483  
Medium: 50%(v/v) EtOH/H2O, 0.10 M KCl. DH(K1)=15.3 kJ mol<sup>-1</sup>,  
DS(K1)=169 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=47.9 kJ mol<sup>-1</sup>, DS(K2)=261 J K<sup>-1</sup>mol<sup>-1</sup>.  
\*\*\*\*\*

C12H12N5Cl L (708)  
5-(5-Chloro-2-pyridylazo)-2,4-diaminotoluene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp none 25°C 0.0 U B2=7.98 1985ZWa (81137)3484  
\*\*\*\*\*

C12H12N8B HL CAS 40250-95-1 (7937)  
Tetrakis(pyrazolyl)borate;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ dis non-aq 25°C 100% C 2001KSb (81143)3485  
K(Co+2HL=CoL2(org)+2H)=6.0

Method: solvent extraction into chloroform.

K: Co+2HL(org)=CoL2(org)+2H.

\*\*\*\*\*

C12H12O3 H2L CAS 39113-56-9 (794)  
1-Phenylhexane-1,3,5-trione; C6H5.CO.CH2.CO.CH2.CO.CH3

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

Co++ gl alc/w 25°C 70% C B(CoHL)=16.35  
B(Co2L2)=18.14  
1985HWa (81154)3486

Medium: 70% v/v MeOH/H2O

-----  
Co++ gl diox/w 30°C 75% U K1=9.37 B2=17.25 1960KFc (81155)3487  
-----

C12H12O3 HL (6844)  
3-Benzoylpenta-2,4-dione; CH3.CO.CH(CO.C6H5)CO.CH3

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

Co++ gl KCl 25°C 0.20M U K1=4.56 1992CMd (81163)3488  
-----

C12H13NO2 HL CAS 4346-15-0 (893)  
Indole-3-butanoic acid;

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

Co++ gl diox/w 25°C 50% U K1=3.60 B2=5.90 1981SKc (81181)3489

Medium: 50% dioxan/H2O, 0.1 M KNO3

-----  
C12H13NO2S L (6236)  
Diacetophenylthioamide; (CH3.CO)2CH.CS.NH.C6H5

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

Co++ sp alc/w 25°C 60% U B3=12.46  
1984FNa (81183)3490

Data also for 4-Cl-, 4-Br- and 3-Me- analogues

-----  
C12H13NO3 HL (1054)  
4-Dimethylamino-benzylidenepyruvic acid; (CH3)2N.C6H4.CH:CH.CO.COOH

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

Co++ sp NaClO4 25°C 0.50M C K1=1.082 1984MTa (81190)3491  
-----

C12H13NO3 H2L (5384)  
Acetylacetone-anthranilic acid Schiff base

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

Co++ gl diox/w 30°C 50% U K1=5.92 B2=9.87 1971MGa (81217)3492  
-----

C12H13N03 HL (6219)  
Diacetylacetanilide; C6H5.NH.CO.CH(CO.CH3)2

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

Co++ sp alc/w 30°C 50% U B2=10.74 1986BNa (81222)3493  
\*\*\*\*\*

C12H13N05 H2L CAS 90274-75-2 (3979)  
N-(2'-Acetylphenyl)iminodiethanoic acid; CH3.CO.C6H4.N(CH2.COOH)2

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

Co++ gl KNO3 25°C 0.10M U K1=6.99 B2=11.84 1965AUa (81232)3494  
\*\*\*\*\*

C12H13N08 H5L (7001)  
3-Bis-(carboxymethyl)iminomethyl-2,4-dihydroxybenzoic acid;  
HOOC.C6H2(OH)2CH2.N(CH2COOH)2

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

Co++ gl KCl 25°C 0.10M U K(Co+H2L)=7.7  
\*\*\*\*\*

C12H13N3 L CAS 1539-42-0 (932)  
bis-((2-Pyridyl)methyl)-amine (Di-2-picolylamine); C5H4N.CH2NHCH2.C5H4N

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

Co++ gl KNO3 20°C 0.10M C H K1=8.05 B2=13.85 1977AHc (81281)3496  
Calorimetry: DH1=-36.2 kJ mol-1, DS1=33.6; DH(B2)=-68.2, DS(B2)=35.6

-----  
Co++ gl KCl 25°C 0.10M U K1=5.2 1968GRa (81282)3497  
-----

Co++ gl KNO3 25°C 0.10M U K1=7.74 B2=13.05 1968RBA (81283)3498  
\*\*\*\*\*

C12H13N3O5 HL CAS 76877-48-0 (1289)  
2-(4',5'-Dimethyl-2-thiazolylazo)-4-methylphenol;

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

Co++ gl diox/w 25°C 60% U K1=8.67 B2=17.98 1981KTA (81300)3499  
\*\*\*\*\*

C12H13N3O2S H2L (1911)  
4-(4',5'-Dimethyl-2'-thiazolylazo)-2-methyl-1,3-dihydroxybenzene;

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

Co++ sp mixed 25°C 20% U K1=12.30 B2=14.83 1988SSb (81306)3500  
B(CoHL)=9.90

in 20% (v/v) acetone/water, 0.25 NaCl04

\*\*\*\*\*  
 C12H13N5O4 L Ethenoadenosine CAS 39007-51-7 (6331)  
 N6-Ethenoadenosine;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ sp none 22°C 0.0 C 1979VWa (81317)3501  
 K1eff=2.18

Method: fluorescence spectroscopy. Medium pH ca. 6.

\*\*\*\*\*  
 C12H13O10S H5L (8082)  
 3-Bis(N,N-carboxymethyl)aminomethyl-2-hydroxy-5-sulphobenzoic acid;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KCl 25°C 0.1M U K1=13.4 1978TZa (81324)3502  
 K(Co+HL)=7.8

\*\*\*\*\*  
 C12H14N2O3 HL (6602)  
 2,3-Dehydro-N-phenylalanyl-alanine; NH2.CH(CH2.C6H5)CO.NH.C(COOH):CH2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KCl 25°C 0.10M C K1=2.37 1994JBa (81341)3503  
 B(CoH-1L)=-5.27  
 B(CoH-1L2)=-2.76  
 B(CoH-2L2)=-11.29

\*\*\*\*\*  
 C12H14N4 L (7104)  
 6,6'-Bis(aminomethyl)-2,2'-bipyridyl;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KCl 25°C 0.10M C K1=10.16 B2=15.82 1995WRa (81350)3504  
 K(CoL+H)=4.85  
 \*K(CoL)=-8.68

\*\*\*\*\*  
 C12H14N4O2S L Sulfadimidine CAS 57-68-1 (6167)  
 2-(4-Aminobenzolsulfamido)-4,6-dimethylpyrimidine;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl NaNO3 25°C 0.10M U M 1988SSg (81365)3505  
 K(Co(NTA)+L)=1.41

\*\*\*\*\*  
 C12H14N5O7P H2L e-AMP CAS 361-99-9 (6334)  
 1,N6-Ethenoadenosine-5'-monophosphoric acid;

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

Co++ sp none 22°C 0.0 C 1979VWa (81382)3506

K1eff=3.76

Method: fluorescence spectroscopy. Medium pH ca. 6.

\*\*\*\*\*

C12H14O3 HL CAS 543-05-8 (4900)  
Ethyl 2-phenylacetoacetate; CH3.CO.CH(C6H5).CO.O.CH2.CH3

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

Co++ gl diox/w 30°C 75% U K1=9.72 1973AAa (81400)3507

\*\*\*\*\*

C12H15NO HL CAS 13074-74-3 (3383)  
4-(4-Methylphenylimino)pentan-2-one; CH3.CO.CH2.C(:N.C6H4.CH3).CH3

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

Co++ gl diox/w 30°C 50% U K1=8.71 B2=15.99 1961MJa (81422)3508

\*\*\*\*\*

C12H15NO2 HL (4924)  
2-Pyridoyl pivaloyl methane; C5H4N.CO.CH2.CO.C(CH3)3

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

Co++ gl diox/w 30°C 75% U K1=10.22 B2=19.31 1972UDa (81427)3509

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*

C12H15NO2 HL (4925)  
3-Pyridoyl pivaloyl methane; C5H4N.CO.CH2.CO.C(CH3)3

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

Co++ gl diox/w 30°C 75% U K1=9.75 1972UDa (81432)3510

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*

C12H15NO2 HL (4926)  
4-Pyridoyl pivaloyl methane; C5H4N.CO.CH2.CO.C(CH3)3

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

Co++ gl diox/w 30°C 75% U K1=9.53 1972UDa (81438)3511

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*

C12H15NO4S H2L Salicyl-Met CAS 65055-24-5 (6176)  
N-Salicyl-methionine; HO.C6H4.CO.NH.CH(CH2.CH2.S.CH3)COOH

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

Co++ gl alc/w 25°C 50% U K1=2.92 B2= 5.61 1989MSi (81484)3512

B(CoH-1L)=-4.37

K(Co+OH+L)=9.63

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.

\*\*\*\*\*

C12H15N05 H3L (4930)  
1-Hydroxy-4-methylphenyl-2-methyleneiminodiethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M U K1=12.6 1977RTb (81493)3513  
K(Co+HL)=7.7  
-----

Co++ gl oth/un 25°C 0.0 U K1=12.65 1970TTb (81494)3514

\*\*\*\*\*

C12H15N06 H2L (4931)  
2-(Bis(2-hydroxyethyl)amino)-1,4-dibenzoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 25°C 0.10M U K1=2.35 1973WUa (81515)3515  
-----

C12H15N5 L (4902)  
4-(5-Methyl-4-imidazolylazo)dimethylaminobenzene; Me.C3H2N2.NN.C6H4N(Me)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=4.2 B2=8.50 1968YTa (81529)3516  
K3=4.2  
-----

Medium: 50% dioxan, 0.1 M KNO3

\*\*\*\*\*

C12H15N5O HL (4920)  
2-(5-Methyl-4-imidazolylazo)-4-dimethylaminophenol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=12.8 B2=24.30 1968YTa (81535)3517  
-----

Medium: 50% dioxan, 0.1 M KNO3

\*\*\*\*\*

C12H15N5O10P2 H3L EthenoADP CAS 38806-39-2 (8857)  
1,N6-Ethenoadenosine-5'-diphosphoric acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp none 22°C 0.0 C 1979VWa (81537)3518  
K1eff=4.46  
-----

Method: fluorescence spectroscopy. Medium pH ca. 6.

\*\*\*\*\*

C12H16N2O2 HL (7068)  
2-Hydroxyacetophenone isobutroylhydrazone; HO.C6H4.C(CH3):N.NH.CO.CH(CH3)2

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

Co++ sp alc/w 25°C 20% U T H B2=9.10 1994BIa (81558)3519  
Medium: 20% v/v EtOH/H2O, pH 8.5. DH(B2)=-12 kJ mol<sup>-1</sup>, DS=220 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C12H16N2O3 HL Ala-Phe CAS 3061-90-3 (6981)

Alanyl-phenylalanine; H2N.CH(CH3)CO.NH.CH(CH2.C6H5)COOH

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

Co++ gl KNO3 25°C 0.10M C T K1=2.67 2000RNb (81573)3520  
Data for 35 and 45 C.

-----  
Co++ gl KNO3 0°C 0.10M C K1=2.44 B2= 4.56 1992KUa (81574)3521  
B(CoH-1L)=-9  
B(CoH-1L2)=-4.40  
B(CoH-2L2)=-14.8

-----  
Co++ gl KNO3 20°C 0.5M U K1=2.51 1974KHb (81575)3522

\*\*\*\*\*

C12H16N2O3 HL Phe-Ala CAS 3918-87-4 (8232)

Phenylalanylalanine;

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

Co++ gl KNO3 0°C 0.10M C K1=2.64 B2= 4.45 1992KUa (81579)3523  
B(CoH-1L)=-9  
B(CoH-1L2)=-2.83  
B(CoH-2L2)=-13.4

\*\*\*\*\*

C12H16N2O4 HL Phe-Ser CAS 16053-39-7 (8233)

Phenylalanyl-serine;

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

Co++ gl KNO3 0°C 0.10M C K1=2.77 B2= 5.41 1992KUa (81585)3524  
B(CoH-1L)=-10  
B(CoH-1L2)=-3.60  
B(CoH-2L2)=-14

\*\*\*\*\*

C12H16N2O8 H4L CAS 51067-47-1 (4933)

Bis-(glyoxalimine)-N,N'-diglutamic acid;

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

Co++ gl NaClO4 30°C 0.10M U K1=6.08 1973MMb (81609)3525

\*\*\*\*\*

C12H16N2O8S4 H6L (7852)

N,N'-Bis(dithiocarboxy)-N,N'-bis-1,1'-(1,2-dicarboxyethyl)ethylenediamine;

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

Co++ gl KNO3 20°C 0.1M U K1=15.8 1999SAa (81615)3526  
\*\*\*\*\*

C12H16N5O13P3 H4L e-ATP CAS 37482-17-0 (5714)  
1,N6-Ethenoadenosine 5'-triphosphoric acid;

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

Co++ sp none 22°C 0.0 C K1eff=4.61 1979VWa (81628)3527

Method: fluorescence spectroscopy. Medium pH ca. 6.

\*\*\*\*\*

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  
-----

Co++ gl KNO3 25°C 0.10M C K1=5.49 1977HMd (81655)3528  
K[Co(H-1L)+H]=7.8

Oxygenation constant:  $K\{2CoL+O2=[Co2(H-1L)2(O2)(OH)]+3H\} = -8.2$

-----  
Co++ gl KCl 25°C .135M U T B2=12.00 1957LYa (81656)3529  
At 0 C: B2=8.96 ?

\*\*\*\*\*

C12H16O4S6 L CAS 66785-63-5 (7805)  
1,4,7,10,13,16-Hexathiacyclooctadecane-2,3,11,12-tetraone;

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

Co++ con none 25°C 0.0 C T H K1=4.86 1998GRa (81689)3530  
DH(K1)=-41.9 kJ mol<sup>-1</sup>, DS(K1)=-47.6 J K<sup>-1</sup> mol<sup>-1</sup>.

Also data for 15-45 C.

\*\*\*\*\*

C12H17N4OClS HL Vitamin B1 CAS 59-43-8 (2777)  
Thiamine, Aneurine;

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

Co++ gl KNO3 35°C 0.10M C K1=2.36 1999DSb (81745)3531

-----  
Co++ gl KNO3 35°C 0.10M U M K1=2.36 B2=4.19 1989SRc (81746)3532  
K(CoL+thymine)=3.68  
K(CoL+uracil)=3.17

-----  
Co++ gl KNO3 25°C 1.0M U K1=2.71 1961GKa (81747)3533  
\*\*\*\*\*

C12H17N4O4PS H2L CAS 495-23-8 (895)  
Thiamine orthophosphoric acid, Aneurine monophosphoric acid;

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



Co++ gl KNO3 35°C 0.10M C K1=3.06 1997PSb (81766)3534

-----  
Co++ gl NaCl 23°C 0.15M U K1=2.05 1989DBb (81767)3535

-----  
Co++ gl KNO3 45°C 0.10M U T K1=3.09 1981TTa (81768)3536  
K(CoL+H)=2.29

5 C: K1 = 3.20

-----  
Co++ gl KNO3 35°C 0.10M U K1=3.07 1978KBa (81769)3537  
K(Co+HL)=2.54

\*\*\*\*\*

C12H18N2O5S H2L CAS 80459-15-0 (1595)

2-Nitroso-5-(N-propyl-3-sulfopropylamino)phenol;

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

-----  
Co++ gl KNO3 25°C 0.10M C K1=9.08 B2=18.97 1988YSc (81803)3538  
B3=26.56

\*\*\*\*\*

C12H18N2O10 H5L CAS 105147-09-9 (1081)

1-Carboxy-1,3-diaminopropane-N,N,N',N'-tetraethanoic acid;  
(HOOCCH2)2NCH(COOH)(CH2)2N(CH2COOH)2

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

-----  
Co++ gl KNO3 25°C 0.10M U K1=18.47 1988MGa (81908)3539  
K(Co+H2L)=4.27  
K(Co+HL)=10.24  
B(Co2L)=19.56  
K(CoL+H)=4.19

K(CoHL+H)=2.93

\*\*\*\*\*

C12H18N4O7P2S H3L Cocarboxylase T CAS 136-09-4 (894)

Thiamine pyrophosphoric acid, Aneurine pyrophosphoric acid;

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

-----  
Co++ gl KNO3 35°C 0.10M C M K1=3.20 1999PSb (81935)3540  
Ternary complexes with many aminoacids.

-----  
Co++ gl NaCl 23°C 0.15M U K1=3.86 1989DBb (81936)3541

-----  
Co++ gl KNO3 45°C 0.10M U T K1=3.83 1981TTa (81937)3542  
K(CoL+H)=2.67

5 C: K1 = 3.39

-----  
Co++ gl KNO3 35°C 0.10M U K1=4.52 1978KBa (81938)3543  
K(Co+HL)=3.10

\*\*\*\*\*

C12H18N4O9 H3L CAS 43101-37-7 (2935)

Tetraglycine-N,N-diethanoic acid; (HOOC.CH2)2N.CH2.CO.Gly-Gly-Gly-OH

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.10M C          K1=6.45      1974MMb (81950)3544
                                     K(CoL+H)=3.47
                                     K(CoH-1L+H)=9.14
                                     K(CoH-2L+H)=9.79
-----
```

\*\*\*\*\*  
 C12H19NOS2 L (5424)  
 2-(2-Pyridyl)-1,3-dithioethyl-2-propanol; C2H5.S.CH2.C(OH)(C5H4N).CH2.S.C2H5  
 -----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 25°C 50% U          K1=1.17      1981CBa (81974)3545
-----
```

\*\*\*\*\*  
 C12H20N2O2 H2L CAS 6310-76-5 (3387)  
 4,4'-Ethylenedi-iminodi(pentan-2-one);  
 -----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  alc/w  25°C 0.2M U          K1=7.79      1999MTc (82005)3546
-----
```

Medium: 0.2 M KCl in 3:7 v/v H2O/EtOH  
 \*\*\*\*\*  
 C12H20N2O8 H4L CAS 1798-13-6 (4935)  
 1,2-Diaminobutane-N,N,N',N'-tetraethanoic acid;  
 (HOOC.CH2)2N.CH2.CH(C2H5).N(CH2.COOH)2  
 -----

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      vlt KNO3  20°C 0.10M U          K1=18.05     1968NLa (82018)3547
-----
```

\*\*\*\*\*  
 C12H20N2O8 H4L CAS 40623-42-5 (1101)  
 1,2-Diaminoethane-N,N'-di(2-pentane-1,5-dioic acid); (CH2NHCH(COOH)CH2CH2COOH)2  
 -----

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      ISE KNO3  25°C 0.10M U          K1=10.59     1973SGa (82053)3548
-----
```

By glass electrode: K1=10.22 , By ion-selective electrode (Cu/Hg): K1=10.43  
 By polarography: K1=10.64  
 -----

```
-----
Co++      gl  KNO3   30°C 1.0M U          K1=9.10      1972TSf (82054)3549
-----
```

\*\*\*\*\*  
 C12H20N2O8 H4L CAS 61368-60-3 (3389)  
 1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-propanoic acid;  
 -----

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      vlt KNO3  20°C 0.10M U          K1=16.16     1976NKa (82123)3550
-----
```

\*\*\*\*\*

C12H20N2O8 H4L CAS 40623-42-5 (3388)  
1,2-Diaminoethane-N,N'-diethanoic-N,N'-dipropanoic acid;

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

Co++ gl KCl 30°C 0.10M U K1=14.9 1952CMc (82156)3551  
\*\*\*\*\*

C12H20N2O8 H4L CAS 2458-58-4 (922)  
1,4-Diaminobutane-N,N,N',N'-tetraethanoic acid; (HOOC.CH2)2N.(CH2)4.N(CH2.COOH)2

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

Co++ cal KNO3 20°C 0.10M U H 1964ANa (82207)3552  
DH(K1)=-6.7 kJ mol<sup>-1</sup>, DS=177 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ gl KNO3 20°C 0.10M U K1=15.69 1964LAa (82208)3553  
\*\*\*\*\*

C12H20N2O8 H4L BDTA CAS 868-43-9 (1742)  
DL-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;  
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2

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

Co++ sp KNO3 20°C 0.10M U K1=18.81 1968SKb (82276)3554

-----  
Co++ oth KNO3 20°C 0.10M U K1=19 1965JMb (82277)3555  
Method: electrophoresis

-----  
Co++ vlt KNO3 20°C 0.10M U K1=18.89 1964MNa (82278)3556  
\*\*\*\*\*

C12H20N2O8 H4L CAS 22968-57-6 (3992)  
meso-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;  
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2

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

Co++ sp KNO3 20°C 0.10M U K1=17.2 1968SKb (82377)3557

-----  
Co++ oth KNO3 20°C 0.10M U K1=17.5 1965JMb (82378)3558  
Method: electrophoresis

-----  
Co++ vlt KNO3 20°C 0.10M U K1=17.09 1964MNa (82379)3559  
\*\*\*\*\*

C12H20N2O8S H4L TEDTA CAS 923-74-0 (3394)  
2,2'-Thiobis(ethyliminodiethanoic acid); S(CH2.CH2.N(CH2.COOH)2)2

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

Co++ gl KNO3 20°C 0.10M U H K1=13.99 1964ANa (82445)3560  
K(Co+HL)=8.37

By calorimetry:  $DH(K1)=-19.4 \text{ kJ mol}^{-1}$ ,  $DS=202 \text{ J K}^{-1} \text{ mol}^{-1}$

\*\*\*\*\*

C12H20N2O9                    H4L        EEDTA                    CAS 923-73-9 (2112)  
Oxa-bis(ethyleneimino)diethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	cal	KNO3	25°C	0.10M	U	H			1965WHa	(82517)3561

$DH(K1)=-27.5 \text{ kJ mol}^{-1}$ ,  $DS=188 \text{ J K}^{-1} \text{ mol}^{-1}$

Co++	gl	KNO3	20°C	0.10M	U	H		$K1=15.27$ $K(\text{Co+HL})=8.55$	1964ANa	(82518)3562
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By calorimetry:  $DH(K1)=-26.5 \text{ kJ mol}^{-1}$ ,  $DS=201.5 \text{ J K}^{-1} \text{ mol}^{-1}$

Co++	EMF	KNO3	25°C	0.10M	U			$K1=14.7$	1960HRa	(82519)3563
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\*\*\*\*\*

C12H20N2O10                    H4L                    CAS 10258-50-1 (3993)  
(2,3-Dihydroxytetramethylenedinitrilo)tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	oth	oth/un	?	?	U			$B(\text{Co2L})=21.15$	1967Lda	(82582)3564

Method: high-frequency titration

\*\*\*\*\*

C12H20N4O6                    H2L                    (7078)  
1,4,7,10-Tetraazacyclododeca-2,9-dione-4,7-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C			$K1=8.79$ $K(\text{CoL+H})=2.15$ $K(\text{CoL=CoH-1L+H})=-9.52$ $K(\text{CoH-1L=CoH-2L+H})=-12.23$	1995IOb	(82623)3565

\*\*\*\*\*

C12H20N6O                    L                    (5462)  
1,9-Bis(4-imidazolyl)-2,8-diaza-5-oxanonane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C			$K1=9.64$	1982BTb	(82634)3566

\*\*\*\*\*

C12H20O8N2                    H4L                    (6908)  
2-Methyl-1,2-diaminopropane-N,N,N'N'-tetraethanoic acid;  
(HOOC.CH2)2N.CH2.C(CH3)2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	vlt	KNO3	20°C	0.10M	C			$K1=17.20$	1978NLa	(82667)3567

\*\*\*\*\*

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

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

Co++ gl KNO3 25°C 0.10M U K1=17.5 1975HTa (82726)3568  
By competition with Cd ion.

\*\*\*\*\*

C12H21N3O6 H3L CAS 111769-28-9 (8145)  
Azetidine-2-carboxy-1-(4-azaheptane-1-amino-1,5-dicarboxylic acid);

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

Co++ gl oth/un 25°C 0.10M M K1=14.8 1983BSd (82748)3569  
Medium: 0.10 M KClO4.

\*\*\*\*\*

C12H21N3O6 H3L CAS 31824-09-6 (4936)  
cis,cis-1,3,5-Tris(carboxymethylamino)cyclohexane;

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

Co++ gl KCl 25°C 0.10M U K1=13.81 1971ZOa (82757)3570  
K(Co+HL)=8.34

\*\*\*\*\*

C12H21N7 L (1870)  
1,9-Bis(4-imidazolyl)-2,5,8-triazanonane;

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

Co++ cal KNO3 25°C 0.1M C H K1=13.84 1982TMc (82776)3571  
DH(K1)=-55.1 kJ mol<sup>-1</sup>

Co++ cal KNO3 25°C 0.10M C 1982TMd (82777)3572  
DH1=-55.2 kJ/mol

Co++ gl KNO3 25°C 1.00M U M K1=13.84 1979HTa (82778)3573  
K(2CoL+O2=CoL.O2.CoL)=12.6

Co++ gl KNO3 25°C 0.10M C K1=13.84 1978THb (82779)3574  
K(CoL+H)=3.3  
K(2CoL+O2=CoL.O2.CoL)=12.6

\*\*\*\*\*

C12H22N2O6 H2L (6394)  
1,7-Dioxa-4,10-diazacyclododecan-4,10-diethanoic acid;

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

Co++ gl R4N.X 25°C 0.10M C K1=13.12 1992ADa (82789)3575  
Medium: 0.1 M Me4NNO3

\*\*\*\*\*

C12H22N2O6 H2L (6641)  
7,10-Diaza-1,4-Dioxacyclododecane-7,10-diethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl R4N.X 25°C 0.10M C K1=12.89 1992ADa (82803)3576  
Medium: 0.1 M Me4NNO3

\*\*\*\*\*  
C12H22O12 HL Lactobionic acid CAS 96-82-2 (2487)  
4-O-Beta-D-Galactopyranosyl-D-gluconic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 20°C 0.10M C 1997FEb (82926)3577  
B(CoH-2L)=-15.64

\*\*\*\*\*  
C12H23N3O5 H2L (6393)  
1-Oxa-4,7,10-triazacyclododecan-4,10-diethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl R4N.X 25°C 0.10M C K1=16.80 1992ADa (82970)3578  
Medium: 0.1 M Me4NNO3

\*\*\*\*\*  
C12H24N2 L CAS 67483-65-2 (3962)  
1,1'-Diaminobicyclohexyl;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 20°C 0.10M U K1=5.3 B2=10.1 1965TSc (83015)3579  
K3=5.3

\*\*\*\*\*  
C12H24N2O3 HL Leu-Leu CAS 36077-41-5 (974)  
Leucyl-leucine; H2N.CH(CH2.CH(CH3)2).CO.NH.CH(CH2.CH(CH3)2).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 20°C 0.5M U K1=2.64 1974KHb (83040)3580

\*\*\*\*\*  
C12H24N2O12P4 H8L (1351)  
1,3-Diaminomethylbenzene-N,N,N'N'-tetra(methylenephosphonic) acid;  
C6H4(CH2.N(CH2.PO3H2)2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M M K1=10.31 1982PBa (83058)3581  
K(Co+HL)=9.01  
K(Co+H2L)=5.11  
K(Co+H3L)=4.21  
K(Co+H4L)=3.26

\*\*\*\*\*  
 C12H24N4O2 L CAS 85828-23-5 (5494)  
 6-Ethyl-1,4,8,11-tetraazacyclotetradecane-5,7-dione;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl NaClO4 35°C 0.20M U M 1983MKb (83067)3582  
 B(CoH-2L)=-12.19  
 Ternary complex with dioxygen: B(Co2H-4L2(O2))=-9.10

\*\*\*\*\*  
 C12H24O6 L 18-Crown-6 CAS 17455-13-9 (577)  
 1,4,7,10,13,16-Hexaoxacyclooctadecane;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ con mixed 25°C 90% C K1=1.83 2003ISa (83246)3583  
 Medium: 90% v/v DMSO/H2O.  
 -----  
 Co++ con alc/w 25°C 40% C K1=1.42 2002ISa (83247)3584  
 Medium: 40% EtOH/H2O.  
 -----  
 Co++ con alc/w 25°C 40% C K1=1.80 2001ISa (83248)3585  
 Medium: 40% v/v EtOH/H2O.  
 -----

Co++ nmr non-aq 27°C 100% U I K1=2.15 2000SMd (83249)3586  
 Competitive method by 7Li nmr. Medium: acetonitrile (AN). Also data for  
 50% w/w AN/nitrobenzene (K1=2.38) and 50% w/w AN/nitromethane (K1=2.59).

-----  
 Co++ vlt alc/w 25°C 100% C K1=3.41 1987CBd (83250)3587  
 Medium: methanol, 0.10 M Et4NI or Bu4NClO4. Method: polarography.

\*\*\*\*\*  
 C12H26N2O4 L CAS 41775-36-4 (2470)  
 1,4,7,13-Tetraoxa-10,16-diazacyclooctadecane;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl R4N.X 25°C 0.10M C K1=3.26 1983Lca (83729)3588

\*\*\*\*\*  
 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  
 -----  
 Co++ cal non-aq 25°C 100% C H K1=>5 1999SBe (83803)3589  
 Medium: acetonitrile. DH(K1)=-26.5 kJ mol-1.

-----  
 Co++ gl R4N.X 25°C 0.05M C K1=3.7 1997BCc (83804)3590  
 Medium: 0.05 M Me4NClO4

-----  
 Co++ cal alc/w 25°C 100% U H K1=3.56 1985BUd (83805)3591

Medium: MeOH, 0.05 M Et4N.NO3. DH=+11.4 kJ mol-1

-----  
Co++ gl R4N.X 25°C 0.10M C K1=4.42 1985CSb (83806)3592  
Medium: 0.10 M Et4NClO4.  
-----

Co++ gl R4N.X 25°C 0.10M C K1=3.25 1983LCa (83807)3593  
-----

Co++ gl alc/w 25°C 95% C K1=3.5 1981ANa (83808)3594  
Medium: 95% MeOH, 0.1 M Me4NCl  
-----

Co++ gl R4N.X 25°C 0.10M C K1=<2.5 1977ASc (83809)3595  
\*\*\*\*\*  
C12H26N2O10P2 H6L CAS 58534-59-1 (2115)  
Hexamethylenediamine-N,N-dimethylphosphonic-N'N'-diethanoic acid;  
-----

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

Co++ gl KNO3 25°C 0.10M U K(Co+H4L)=3.69 1977TIa (83924)3596  
-----

\*\*\*\*\*  
C12H26N12 L (7007)  
1,10-Di(2-(5-tetraazolyl)ethyl)-1,4,7,10-tetraazadecane;  
-----

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

Co++ gl NaNO3 20°C 0.10M U K1=20.90 1981ESa (83969)3597  
\*\*\*\*\*

C12H27N3O2 L (7053)  
1,4-Dioxa-7,11,15-triazacycloheptadecane;  
-----

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

Co++ gl KNO3 25°C 0.10M C K1=5.40 1994CDa (84058)3598  
K(CoLOH+H)=9.30  
-----

\*\*\*\*\*  
C12H27P L CAS 998-40-3 (170)  
Tri-n-butylphosphine; (CH3.(CH2)3)3P  
-----

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

Co++ sp non-aq 25°C 100% U M K(CoA+L)=3.48 1980ELa (84132)3599  
-----

Medium: toluene. A="capped" porphyrin  
\*\*\*\*\*  
C12H28N2 L CAS 2783-17-7 (357)  
1,12-Diaminododecane; H2N.(CH2)12.NH2  
-----

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

Co++ cal alc/w 25°C 100% U H K1=2.49 1985BUd (84142)3600  
-----



Medium: MeOH, 0.05 M Et4N.NO3. DH=-26.6 kJ mol-1

\*\*\*\*\*

C12H28N4 L CAS 76025-63-3 (5481)  
1,4,7,10-Tetraazacyclohexadecane;

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

Co++ gl NaClO4 35°C 0.20M U M K1=9.04 1983MKb (84171)3601

\*\*\*\*\*

C12H28N4 L CAS 85828-16-6 (5484)  
1,4,8,11-Tetraazacyclohexadecane;

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

Co++ gl NaClO4 35°C 0.20M U M K1=11.70 1983MKb (84180)3602

\*\*\*\*\*

C12H28N4 L CAS 85828-19-9 (5489)  
6-Ethyl-1,4,8,11-tetraazacyclotetradecane;

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

Co++ gl NaClO4 35°C 0.20M U M K1=11.00 1983MKb (84202)3603

Ternary complex with dioxygen: B(Co2L2(O2))=28.59

\*\*\*\*\*

C12H28N4O L (7305)  
1-(2-Hydroxyethyl)-1,4,8,11-tetraazacyclotetradecane;

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

Co++ gl R4N.X 25°C 0.10M C K1=7.6 1997RWa (84207)3604

B(CoH-1L)=0.4

Medium: Et4NClO4

\*\*\*\*\*

C12H28N4O2 L CAS 296-36-6 (2472)  
1,10-Dioxa-4,7,13,16-tetraazacyclooctadecane;

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

Co++ dis non-aq 25°C 100% C I 2004CCa (84229)3605

K(Co+A+L(org))=CoAL(org))=11.37

Distribution of CoA2 from H2O into CH2Cl2. A is nitrate. For the N-tetra-  
benzyl- derivative, K'=12.56. Distribution into CHCl3, K=12.58; K'=13.71.

-----  
Co++ gl R4N.X 25°C 0.10M C K1=9.68 1983LCA (84230)3606

\*\*\*\*\*

C12H29N5 L CAS 79569-23-6 (5485)  
1,4,7,10,13-Pentaazacycloheptadecane;

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

Co++ gl NaClO4 35°C 0.20M U M K1=15.38 1983MKb (84253)3607  
Ternary complex with dioxygen: B(Co2L2(O2))=39.87

\*\*\*\*\*

C12H30N3O9P3 H6L DOPHET CAS 123325-12-2 (227)

1,4,7-Tris(beta-dioxyphosphorylethyl)-1,4,7-triazacyclononane;

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

Co++ gl KNO3 25°C 1.0M U K1=13.38 1988MKa (84276)3608  
K(Co+HL)=9.38  
K(Co+H2L)=7.60  
K(Co+H3L)=6.50

\*\*\*\*\*

C12H30N4 L (6740)

Tris(2-(dimethylamino)ethyl)amine; N(CH2CH2.N(CH3)2)3

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

Co++ gl KNO3 25°C 1.00M C K1=8.53 1994AGa (84302)3609  
K(Co+HL)=4.28

\*\*\*\*\*

C12H30N6 L CAS 296-35-5 (143)

1,4,7,10,13,16-Hexaazacyclooctadecane; cyclo(-(NH.CH2.CH2)6-)

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

Co++ gl NaClO4 35°C 0.20M U T K1=18.9 1980KKb (84322)3610  
K(Co+HL)=11.8

\*\*\*\*\*

C12H32N4O8P4 H4L (7111)

1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetrayltetramethylenetetakis(phosphinic acid);

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

Co++ gl KNO3 25°C 0.10M C K1=15.55 1995BLa (84387)3611  
B(CoHL)=16.9  
B(CoH-1L)=3.16

\*\*\*\*\*

C12H32N4O12P4 H8L DOTPH CAS 91987-74-5 (229)

1,4,7,10-Tetraazacyclododecane-N,N',N'',N'''-tetramethylenephosphonic acid;

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

Co++ gl KNO3 25°C 1.00M U M 1988MKb (84401)3612  
B(Co2L)=27.2  
K(2Co+HL)=22.3  
K(Co+CoL)=6.39  
K(Co+CoHL)=5.79

B(CoCuL)=30.0; K(Co+Cu+HL)=24.9; K(Co+CuL)=4.61;

K(Co+CuHL)=4.20; B(CoNiL)=26.9; K(Co+NiL)=6.10

-----  
Co++ gl KNO3 25°C 1.0M U K1=20.8 1984KMb (84402)3613  
K(Co+HL)=16.5  
K(Co+H2L)=11.8  
K(Co+H3L)=9.2  
K(Co+H4L)=6.8  
\*\*\*\*\*

C12H32N6 L (6455)  
2,5,8,11,14,17-Hexaazaoctadecane;  
CH3.NH.(CH2)2.NH.(CH2)2.NH.(CH2)2.NH.(CH2)2.NH.C(CH2)2.NH.CH3  
-----

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

Co++ gl NaClO4 25°C 0.15M C K1=14.756 1993BBe (84428)3614  
B(CoHL)=20.63  
B(CoH2L)=26.21  
\*\*\*\*\*

C12H32N6 L CAS 62497-72-7 (8838)  
4,7,10,13-Tetraazahexadecane-1,16-diamine;  
-----

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

Co++ gl NaClO4 25°C 0.15M C K1=14.10 2002AGa (84440)3615  
K(CoL+H)=9.99  
K(CoHL+H)=5.47  
B(CoH-2L)=0.41  
\*\*\*\*\*

C12H32N6 L (3377)  
5-Ethyl-5-(4-amino-2-azabutyl)-1,9-diamino-3,7-diazanonane;  
-----

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

Co++ gl NaClO4 25°C 0.10M U K1=17.3 1963Gcb (84446)3616  
K(Co+HL)=12.3  
\*\*\*\*\*

C13H8N3O2BrS H2L CAS 102390-19-2 (5025)  
4-(6-Bromo-2-benzothiazolylazo)-1,3-dihydroxybenzene;  
-----

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

Co++ sp NaClO4 ? 0.10M U K(Co+2HL)=21.57 1969IBb (84479)3617  
\*\*\*\*\*

C13H8O3 HL CAS 719-41-5 (3397)  
1-Hydroxyxanthone (1-Hydroxy-9-xanthenone)  
-----

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

Co++ gl KCl 25°C 0.10M U K1=5.26 B2=8.81 1986DDa (84491)3618

-----  
Co++ sp alc/w 25°C 50% U K1=5.88 1968GDb (84492)3619  
Medium: 50% EtOH, 0.1 M NaClO4

\*\*\*\*\*  
C13H9N L Acridine CAS 260-94-6 (3398)  
Acridine;

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

Co++ sp non-aq ? 100% U 1970LDa (84526)3620  
K(CoCl2+L)=1.50  
K(CoBr2+L)=1.68

Medium: cyclohexanone. In CH3CN: K(CoCl2+L)=1.39  
In 2-chloroethanol: K(CoCl2+L)=0.3, K(CoBr2+L)=0.88

\*\*\*\*\*  
C13H9NOBrCl HL (6173)  
N-(2-Hydroxy-5-bromobenzylidene)-4-chloroaniline; Cl.C6H4.N:CH.C6H3(OH)Br

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

Co++ gl mixed 28°C 75% U K1=5.15 1988MNb (84532)3621

\*\*\*\*\*  
C13H9NOS HL (4945)  
2-(2'-Thienyl)-8-hydroxyquinoline; HO.C9H5N.C4H3S

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

Co++ gl diox/w 25°C 50% U K1=5.83 B2=12.91 1969CBa (84539)3622  
Medium: 50% dioxan, 0.1 M NaClO4

\*\*\*\*\*  
C13H9NOS HL CAS 3411-95-8 (1683)  
2-(2-Hydroxyphenyl)benzothiazole;

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

Co++ gl diox/w 25°C 50% U K1=9.76 B2=18.15 1954CFa (84548)3623

\*\*\*\*\*  
C13H9NO2BrCl HL CAS 104614-71-3 (9109)  
4-Bromo-N-(3-chlorophenyl)-N-hydroxybenzamide;

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

Co++ gl diox/w 25°C 50% C M K1=7.71 2001AMc (84575)3624  
B(Co(gly)L)=13.68

Medium: 50% v/v dioxane/H2O

\*\*\*\*\*  
C13H9NO2ClF HL CAS 104614-72-4 (9107)  
N-(3-Chlorophenyl)-4-fluoro-N-hydroxybenzamide;

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

-----  
Co++ gl diox/w 25°C 50% C M K1=7.95 2001AMc (84583)3625  
B(Co(gly)L)=14.12

Medium: 50% v/v dioxane/H2O

\*\*\*\*\*

C13H9N02Cl2 HL CAS 67201-86-9 (9108)

4-Chloro-N-(3-chlorophenyl)-N-hydroxybenzamide;

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

Co++ gl diox/w 25°C 50% C M K1=7.73 2001AMc (84591)3626  
B(Co(gly)L)=13.68

Medium: 50% v/v dioxane/H2O

\*\*\*\*\*

C13H9N3OS HL TAN CAS 1147-56-4 (4030)

1-(1',3'-Thiazol-2'-ylazo)-2-hydroxynaphthalene;

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

Co++ sp oth/un 20°C 0.05M U K1=9.50 B2=19.00 1967NAa (84613)3627

\*\*\*\*\*

C13H9N3O2S H2L CAS 3706-50-1 (5006)

4-(2-Benzothiazolylazo)-1,3-dihydroxybenzene;

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

Co++ sp NaClO4 ? 0.10M U 1969IBb (84631)3628  
K(Co+2HL)=19.62

\*\*\*\*\*

C13H9N3O4 HL (6260)

3-Formyl-4-hydroxy-3'-nitroazobenzene; HO.(CHO)C6H3.N:N.C6H4.NO2

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

Co++ gl KNO3 28°C 0.20M U K1=5.65 B2=9.83 1977WJa (84636)3629

Data also for 2' and 4'-nitro analogues

\*\*\*\*\*

C13H9N3O4S2 H2L CAS 2536-61-0 (4031)

1-(1',3'-Thiazol-2'-ylazo)-2-hydroxynaphthalene-6-sulfonic acid;

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

Co++ gl NaClO4 25°C 0.10M U I K1=7.7 B2=14.3 1967NPb (84641)3630

In 50% MeOH, 0.1 M NaClO4: B2=15.4

\*\*\*\*\*

C13H9N3O8S H2L CAS 81771-91-7 (1392)

5-(3'-Nitro 4'-sulfophenylazo)salicylic acid;

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

Co++ sp KCl 25°C 0.10M U K1=6.03 1982GSb (84658)3631  
 \*\*\*\*\*  
 C13H10NOBr HL (6171)  
 N-(2-Hydroxy-5-bromobenzylidene)aniline; C6H5.N:CH.C6H3(OH)Br

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

Co++ gl diox/w 28°C 75% U K1=5.73 1988Mnb (84673)3632  
 \*\*\*\*\*  
 C13H10NO2Br H2L (1385)  
 2'-Hydroxy-5'-bromobenzophenone oxime; Br(HO)C6H3.C(:NOH)C6H5

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

Co++ gl diox/w 30°C 50% U K1=6.64 1982UVa (84690)3633  
 \*\*\*\*\*  
 C13H10NO2Cl HL CAS 78154-49-1 (5649)  
 N-3-Chlorophenylbenzohydroxamic acid;

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

Co++ gl diox/w 25°C 50% C M K1=8.09 2001AMc (84734)3634  
 B(Co(gly)L)=14.39

Medium: 50% v/v dioxane/H2O

-----  
 Co++ gl diox/w 25°C 50% U K1=7.21 B2=12.66 1989Pmb (84735)3635  
 \*\*\*\*\*  
 C13H10N2 L CAS 3002-77-5 (3400)  
 2-Methyl-1,10-phenanthroline;

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

Co++ dis KCl 25°C 0.10M U K1=5.1 B2=10.0 1962IMa (84778)3636  
 K3=3.9

-----  
 C13H10N2 L CAS 3003-78-6 (2752)  
 5-Methyl-1,10-phenanthroline;

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

Co++ gl KNO3 25°C 0.10M C M K1=7.14 B2=14.00 1991DAc (84806)3637  
 Data for ternary complexes with acetohydroxamic acid

-----  
 Co++ dis KCl 25°C 0.10M U K1=7.14 B2=14.00 1962MBa (84807)3638  
 K3=6.60

-----  
 C13H10N2O HL CAS 5496-07-1 (3404)  
 2-(2'-Hydroxyphenyl)benzimidazole;

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

-----  
 Co++ gl alc/w 35°C 60% U K1=5.70 B2=10.60 1984MLa (84824)3639  
 \*\*\*\*\*  
 C13H10N2O HL CAS 65782-79-8 (4978)  
 4-Amino-5-hydroxyacridine;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl diox/w 25°C 50% U K1=6.97 B2=13.52 1970CBc (84833)3640  
 Medium: 50% dioxan, 0.1 M NaClO4  
 \*\*\*\*\*  
 C13H10N2O2 HL CAS 27147-03-1 (6307)  
 2-Hydroxy-5-(phenylazo)benzaldehyde; C6H5.N:N.C6H3(CHO)(OH)  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl diox/w 28°C 50% U K1=4.90 B2=8.90 1975JTb (84847)3641  
 \*\*\*\*\*  
 C13H10N2O3 HL CAS 788-25-0 (8488)  
 N-(2-Hydroxybenzylidene)-4-nitroaniline;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl alc/w 25°C 50% U K1=3.77 1988BDa (84854)3642  
 Medium: 50% v/v EtOH/H2O, 0.10 M NaNO3.  
 \*\*\*\*\*  
 C13H10N2O3 HL CAS 19357-10-9 (9111)  
 N-(2-Pyridyl)-2-carboxybenzamide;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl mixed 25°C 40% U K1=5.77 B2=10.46 2002GSa (84860)3643  
 Medium: 40% v/v DMF/H2O, 0.1 M NaClO4.  
 \*\*\*\*\*  
 C13H10N2O4 H2L CAS 15766-65-6 (1384)  
 2-Hydroxy-5-nitrobenzophenone oxime; HO(NO2)C6H3.C(:NOH)C6H5  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl diox/w 30°C 50% U K1=5.58 1982UVa (84871)3644  
 \*\*\*\*\*  
 C13H10N2O5 H3L (1389)  
 2,4-Dihydroxy-5-nitrobenzophenone oxime; (HO)2(NO2)C6H2.C(:NOH)C6H5  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl diox/w 30°C 50% U K1=8.86 B2=16.44 1982UVa (84917)3645  
 \*\*\*\*\*  
 C13H10N2O6S H2L MordentYellow10 CAS 21542-82-5 (1390)  
 5-(4'-Sulfophenylazo)salicylic acid; HO3S.C6H4.N:N.C6H3(OH).COOH  
 -----

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp  KCl    25°C 0.10M U          K1=6.01      1982GSb (84934)3646
-----
Co++      gl  KNO3   25°C 0.10M U          K1=5.84  B2=9.77  1964MTc (84935)3647
*****
C13H10N4Br2S          HL          CAS 104654-49-1 (5015)
Di-4-bromophenylthiocarbazon; Br.C6H4.N:N.CS.NH.NH.C6H4.Br
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 25°C 50% U          K1=5.39      1970AFb (84947)3648
Medium: 50% dioxan, 0.1 M
*****
C13H10N4Cl2S          HL          CAS 19403-31-7 (5014)
Di-4-chlorophenylthiocarbazon; Cl.C6H4.N:N.CS.NH.NH.C6H4.Cl
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 25°C 50% U          K1=5.63      1970AFb (84951)3649
Medium: 50% dioxan, 0.1 M
*****
C13H10N4F2S          HL          CAS 2805-80-3 (5017)
Di-4-fluorophenylthiocarbazon; F.C6H4.N:N.CS.NH.NH.C6H4.F
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp  diox/w 25°C 50% U          K1=5.94      1970AFb (84955)3650
Medium: 50% dioxan, 0.1 M
*****
C13H10N4I2S          HL          CAS 2059-77-0 (5016)
Di-4-iodophenylthiocarbazon; I.C6H4.N:N.CS.NH.NH.C6H4.I
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 25°C 50% U          K1=4.84      1970AFb (84959)3651
Medium: 50% dioxan, 0.1 M
*****
C13H10O3          H2L          CAS 835-11-0 (796)
2,2'-Dihydroxybenzophenone; HO.C6H4.CO.C6H4.OH
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  alc/w  25°C 70% C          B(CoHL)=14.41
                                     B(Co2L2)=15.88
Medium: 70% v/v MeOH/H2O
*****
C13H10O3          HL          CAS 5910-23-6 (3399)
-----

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Benzoyl-2-furoylmethane; C6H5.CO.CH2.CO.C4H3O

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  diox/w 30°C  75%  U           K1=10.03  B2=19.21  1953UFe (84998)3653
*****
C13H11NO           HL                       CAS 779-84-0  (3406)
N-Salicylideneaniline; HO.C6H4.CH:N.C6H5
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  alc/w  25°C  50%  U           K1=4.01                    1988BDa (85031)3654
Medium: 50% v/v EtOH/H2O, 0.10 M NaNO3.
-----
```

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-----
Co++       gl  diox/w 27°C  50%  U           K1=4.70   B2=8.51   1972SDb (85032)3655
Medium: 50% dioxan, 0.1 M NaClO4
-----
```

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-----
Co++       sp  alc/w  30°C  10%  U                               1969DNa (85033)3656
                               K(Co+HL=CoL+H)=-3.96
Medium: 10% EtOH, 0.2 M NaClO4
-----
```

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-----
C13H11NO2           H2L                       (1383)
2-Hydroxybenzophenone oxime; HO.C6H4.C(:NOH)C6H5
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  diox/w 30°C  50%  U           K1=7.07                    1982UVa (85075)3657
*****
C13H11NO2           H2L                       CAS 78-75-2  (6258)
3-(Salicylideneamino)phenol; HO.C6H4.CH:N.C6H4.OH
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  alc/w  25°C  50%  U           K1=6.15  B2=10.95  1977DWa (85081)3658
*****
C13H11NO2           HL                       CAS 304-88-1  (181)
N-Phenylbenzohydroxamic acid; C6H5.CO.N(C6H5).OH
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  diox/w 25°C  50%  U           K1=5.68  B2=10.56  1976BLa (85135)3659
*****
C13H11NO3           H3L                       CAS 3147-44-2  (1388)
2,4-Dihydroxy-benzophenone oxime; (HO)2C6H3.C(:NOH)C6H5
-----
```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  diox/w 30°C  50%  U           K1=7.89                    1982UVa (85193)3660
*****
C13H11N3OS           L                           (1274)
-----
```

1-Benzoyl-3-pyridin-2-ylthiourea; C5H4N.NH.CS.NH.CO.C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 75% U K1=4.83 B2=9.04 1980SMb (85265)3661  
\*\*\*\*\*  
C13H11N3O2 H2L CAS 62031-25-8 (1119)  
4-Hydroxy-3-oximinomethylazobenzene; (HO)(HO.N:CH)C6H3.N:N.C6H5  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 28°C 60% U K1=7.40 B2=13.75 1978WPa (85279)3662  
-----  
Co++ gl alc/w 25°C 42% U K1=5.45 B2=10.58 1974MSb (85280)3663  
\*\*\*\*\*  
C13H11N3O5S H3L (5019)  
4-Hydroxy-3-oximinomethylazobenzene-4'-sulfonic acid;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 42% U K1=3.41 B2=6.46 1973DSa (85296)3664  
Medium: 42% EtOH, 0.2 M NaClO4  
\*\*\*\*\*  
C13H11N5O HL CAS 70805-39-9 (3407)  
6-Anilinomethyl-4-hydroxypteridine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 20°C =.01 U K1=3.5 1953ALa (85307)3665  
\*\*\*\*\*  
C13H11N5O2 L CAS 4453-80-9 (8115)  
3-Nitro-1,5-diphenylformazan;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 50% C T H K1=6.80 B2=12.41 2001SKb (85312)3666  
Medium: 50% v/v dioxane/water, 0.1 M KCl. Data for 20-40 C.  
DH(K1)=-31.6 kJ mol<sup>-1</sup>, DH(K2)=-25.5.  
\*\*\*\*\*  
C13H11N5O4S H2L (3417)  
4-Hydroxy-6-p-sulfoanilinomethylpteridine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 20°C 0.01M U K1=3.7 B2=6.50 1953ALa (85318)3667  
\*\*\*\*\*  
C13H12N2O HL CAS 952-47-6 (1110)  
2-Hydroxy-5-methylazobenzene; C6H5.N:N.C6H3(CH3).OH  
-----

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

-----  
Co++ gl diox/w 30°C 75% U K1=6.23 B2=11.93 1952SNa (85331)3668

\*\*\*\*\*

C13H12N2O4S H2L CAS 19980-54-2 (1394)

2-Hydroxy-5-methyl-4'-sulfonato-azobenzene;  
-----

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

Co++ sp alc/w 25°C 0.10M U K1=11.1 B2=14.35 1981MOB (85374)3669

\*\*\*\*\*

C13H12N2O6S2 H2L (1333)

4-Sulfono-salicylidene sulfanilamide; H03S.C6H3(OH).CH:N.S02.C6H4.NH2  
-----

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

Co++ gl KNO3 32°C 0.10M U T K1=7.10 1981SBb (85384)3670

\*\*\*\*\*

C13H12N4S L Dithizone CAS 60-10-6 (1801)

Diphenylthiocarbazone; C6H5.NH.NH.CS.N:N.C6H5  
-----

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

Co++ sp non-aq 25°C 100% U I K1=6.68 B2=12.32 1976CCb (85448)3671

Medium: acetone and EtOH-acetone mixtures  
-----

Co++ sp NaClO4 25°C 0.10M U K1=7.52 B2=13.97 1973BSe (85449)3672

Co++ sp diox/w 25°C 50% U K1=6.43 1970AFb (85450)3673

Medium: 50% dioxan, 0.1 M  
-----

Co++ dis oth/un 25°C ? U 1960DTa (85451)3674

K(Co+2HL)=13

Distribution into CCl4  
-----

\*\*\*\*\*

C13H12O5 HL CAS 17426-76-5 (3401)

O,O-Dimethylpurpurogallin  
-----

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

Co++ gl diox/w 30°C 50% U K1=6.6 B2=11.8 1954BFc (85484)3675

K3=3.1  
-----

\*\*\*\*\*

C13H13NO L CAS 35854-45-6 (297)

2-(2-Phenyl-2-hydroxy)ethylpyridine; (C6H5)(OH)CHCH2C5H4N  
-----

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

Co++ gl KNO3 25°C 0.10M U K1=1.40 1974ILa (85498)3676

\*\*\*\*\*

C13H13N3 L CAS 102-06-7 (994)

sym-N,N'-Diphenylguanidine; C6H5.NH.C(NH).NH(C6H5)

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

Co++ sp mixed ? 75% U 1971Tmb (85501)3678  
K(Co(CNS)3+2HL)=8.13  
K(Co(CNS)4+2HL)=1.35

Medium: 75% acetone

\*\*\*\*\*

C13H13N5OS HL CAS 220035-45-0 (8639)  
alpha-Pyridoin thiosemicarbazone;

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

Co++ gl diox/w 30°C 50% U TIH K1=9.16 B2=17.45 19980Fa (85528)3678  
Medium: 50% H2O/dioxane, 0.10 M KNO3. Data for 50% v/v H2O/dioxane, I =  
0.05-0.20 M, and for 40 and 50 C at I=0.10. DH and DS values.

\*\*\*\*\*

C13H13O2Br HL (6846)  
3-Benzoyl-5-bromohexa-5-ene-2-one; CH2=CBr.CH2.CH(CO.CH3)CO.C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 25°C 0.20M U K1=4.52 1992CMd (85535)3679

\*\*\*\*\*

C13H13O2Cl HL (6842)  
3-Benzoyl-5-chlorohex-5-ene-2-one; CH2=CCl.CH2.CH(CO.CH3)CO.C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 25°C 0.20M U K1=4.55 1992CMd (85543)3680

\*\*\*\*\*

C13H14NO3P H2L CAS 19316-85-7 (1466)  
2-Hydroxyphenyl-N-phenylaminomethylphosphinic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 20°C 0.10M U K1=6.00 1985SIb (85560)3681

\*\*\*\*\*

C13H14N2 L CAS 104986-55-2 (4972)  
1,3-Bis(2'-pyridyl)-propane; C5H4N.CH2.CH2.CH2.C5H4N

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 20°C 0.10M U K1=1.3 1970BAa (85573)3682  
K(Co+HL)=1.0

\*\*\*\*\*

C13H14N2O2S HL CAS 4384-37-1 (4032)  
2-(4'-Methylphenylsulfonamido)aniline; CH3.C6H4.SO2.NH.C6H4.NH2

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	?	50%	U		K1=9.57 B2=18.73	1968BRa	(85592)3683

Medium: 50% dioxan, 0.01 M

\*\*\*\*\*  
 C13H14N2O3 HL (4940)  
 3-(2-Acetylphenylhydrazone)pentane-2,4-dione; (CH3.CO)2C:N.NH.C6H4(CO.CH3)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	25°C	75%	U		K1=9.82 B2=19.02	1990ASb	(85603)3684

\*\*\*\*\*  
 C13H14N2O3 HL Antineoplaston CAS 91531-30-5 (8098)  
 3-(N-Phenylacetyl-amino)-2,6-piperidinedione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	45°C	50%	C		K1=5.87	1996MMc	(85626)3685

Medium: 50% v/v MeOH/H2O, 0.10 M KNO3.

\*\*\*\*\*  
 C13H14N3O5P H2L CAS 80767-75-5 (1467)  
 2-Hydroxy-4-nitrophenyl-N-(2-pyridylmethyl)aminomethylphosphinic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	20°C	0.10M	U		K1=6.50 K(Co+HL)=3.00	1985SIb	(85637)3686

\*\*\*\*\*  
 C13H14N3O5P H2L CAS 80767-76-6 (1468)  
 2-Hydroxy-4-nitrophenyl-N-(3-pyridylmethyl)aminomethylphosphinic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	20°C	0.10M	U		K1=6.55 K(Co+HL)=3.10	1985SIb	(85650)3687

\*\*\*\*\*  
 C13H14N4 L CAS 13103-75-8 (473)  
 4-(2-Pyridylazo)-N,N-dimethylaniline; C5H4N.N:N.C6H4.N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	kin	NaNO3	25°C	0.30M	U	M		1994CHc	(85677)3688

K(Co(MIDA)+L=Co(MIDA)L)=3.34  
 K(Co(N,N'-EDDA)+L)=2.18  
 K(Co(N,N-EDDA)+L)=1.91  
 K(Co(dien)+L)=2.84

K(Co(tren)+L=Co(tren)L)=1.75.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	kin	NaNO3	25°C	0.30M	U	M	K1=3.32 K(CoA+L)=3.61	1971CHd	(85678)3689

K(CoB+L)=2.86

K(CoC+L)=3.03

H2A=iminodiethanoic acid; H3B=nitriлотriethanoic acid;  
H5C=tripolyphosphoric acid.

-----  
Co++ sp NaNO3 25°C 0.30M U M K1=3.36 1971CHd (85679)3690

K(CoA+L)=3.26

K(CoB+L)=2.73

K(CoC+L)=3.10

H2A=iminodiethanoic acid; H3B=nitriлотriethanoic acid;  
H5A=tripolyphosphoric acid.

-----  
Co++ kin KNO3 16°C 0.10M U K1=3.8 1964WIa (85680)3691

-----  
Co++ sp NaNO3 25°C 0.15M U K1=3.33 1953KMa (85681)3692

\*\*\*\*\*  
C13H15N04 HL CAS 35104-87-2 (4997)

2-Nitrobenzoyl pivaloyl methane; O2N.C6H4.CO.CH2.CO.C(CH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl diox/w 30°C 75% U K1=8.90 B2=17.44 1972UDa (85713)3693

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*  
C13H15N04 HL CAS 18362-53-3 (4998)

4-Nitrobenzoyl pivaloyl methane; O2N.C6H4.CO.CH2.CO.C(CH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl diox/w 30°C 75% U K1=9.20 B2=17.82 1972UDa (85720)3694

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*  
C13H15N06 H3L (4999)

2-Benzylnitriлотriethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ oth oth/un 25°C 0.10M U K1=10.27 1962HKa (85732)3695

\*\*\*\*\*  
C13H15N203P H2L CAS 80767-72-2 (1460)

2-Hydroxyphenyl-(N-2-pyridylmethylamino)methylphosphinic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl NaClO4 20°C 0.10M U K1=6.70 1985SIa (85777)3696

\*\*\*\*\*  
C13H15N203P H2L CAS 80767-73-3 (1461)

2-Hydroxyphenyl-(N-3-pyridylmethylamino)methylphosphinic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
 Co++        gl   NaClO4 20°C 0.10M U        K1=6.80        1985SIa (85790)3697  
 \*\*\*\*\*  
 C13H15N2O3P                    H2L                    CAS 80767-74-4 (1462)  
 2-Hydroxyphenyl-(N-4-pyridylmethylamino)methylphosphinic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	20°C	0.10M	U			K1=6.90	1985SIa (85803)	3698
*****										
C13H15N2O4P								CAS 80767-78-8	(1463)	
2-Hydroxyphenyl-(N-2-pyridylmethylamino)methylphosphonic acid; C6H4(OH)CH(PO3H2).NH.CH2.C5H4N										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	20°C	0.10M	U			K1=9.60	1985SIa (85816)	3699
*****										
C13H15N2O4P								CAS 85946-85-6	(1464)	
2-Hydroxyphenyl-(N-3-pyridylmethylamino)methylphosphonic acid; C6H4(OH)CH(PO3H2).NH.CH2.C5H4N										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	20°C	0.10M	U			K1=9.80	1985SIa (85829)	3700
*****										
C13H15N2O4P								CAS 85946-86-7	(1465)	
2-Hydroxyphenyl-(N-4-pyridylmethylamino)methylphosphonic acid; C6H4(OH)CH(PO3H2).NH.CH2.C5H4N										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	20°C	0.10M	U			K1=10.00	1985SIa (85842)	3701
*****										
C13H15N3								(5860)		
N,N-Bis(2-aminophenyl)methylamine;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	25°C	70%	C	M		K1=2.84 B(CoA2L)=14.12 K(2CoA2L+O2=(CoA2L)2O2)=8.30	1988MMd (85851)	3702
Medium: 70% v/v dioxan/H2O, 0.1 M KCl. A=Salicylaldehyde *****										
C13H15N3O5								CAS 76877-50-4	(1291)	
2-(4',5'-Dimethyl-2-thiazolylazo)-4,6-dimethylphenol;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	25°C	60%	U			K1=9.11    B2=18.99	1981KTa (85858)	3703

\*\*\*\*\*

C13H15N3O5 HL CAS 76877-45-7 (1295)  
2-(4',5'-Dimethyl-2-thiazolylazo)-4-ethylphenol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 60% U K1=8.61 B2=17.87 1981KTa (85867)3704  
\*\*\*\*\*

C13H15N3O2 HL CAS 16832-24-9 (6)  
N3-Benzyl-L-histidine; H2N.CH(CH2.C3H2N2(CH2.C6H5))COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 25°C 0.10M C K1=6.242 B2=11.885 1976RIa (85883)3705  
K(Co(DL-Benzyl-His))=6.236  
B(Co(DL-Benzyl-His)2)=11.993  
-----

Co++ gl none 21°C 0.0 M K1=6.87 B2=13.04 1974YAA (85884)3706  
\*\*\*\*\*

C13H15N3O2S HL CAS 76877-49-1 (1293)  
2-(4',5'-Dimethyl-2-thiazolylazo)-4-methyl-6-methoxyphenol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 60% U K1=8.67 B2=18.00 1981KTa (85891)3707  
\*\*\*\*\*

C13H15O2Br HL CAS 41070-38-6 (4994)  
2-Bromobenzoyl pivaloyl methane; Br.C6H4.CO.CH2.CO.C(CH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=9.22 B2=18.10 1972UDa (85917)3708  
Medium: 75% v/v dioxan, 0.01 M Me4NClO4  
\*\*\*\*\*

C13H15O2Br HL CAS 41070-33-1 (4995)  
4-Bromobenzoyl pivaloyl methane; Br.C6H4.CO.CH2.CO.C(CH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=9.47 B2=18.44 1972UDa (85922)3709  
Medium: 75% v/v dioxan, 0.01 M Me4NClO4  
\*\*\*\*\*

C13H15O2Cl HL CAS 41070-37-5 (4992)  
2-Chlorobenzoyl pivaloyl methane; Cl.C6H4.CO.CH2.CO.C(CH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=9.19 B2=18.04 1972UDa (85927)3710  
Medium: 75% v/v dioxan, 0.01 M Me4NClO4  
\*\*\*\*\*



C13H15O2Cl HL CAS 41070-30-8 (4993)  
4-Chlorobenzoyl pivaloyl methane; Cl.C6H4.CO.CH2.CO.C(CH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=9.60 B2=18.80 1972UDa (85932)3711  
Medium: 75% v/v dioxan, 0.01 M Me4NC1O4

\*\*\*\*\*  
C13H16N4OS HL CAS 76877-51-5 (1290)  
2-(4',5'-Dimethyl-2-thiazolylazo)-5-dimethylaminophenol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 60% U K1=11.20 B2=21.65 1981KTa (85943)3712  
\*\*\*\*\*

C13H16O2 HL CAS 13988-67-5 (4973)  
Benzoyl pivaloyl methane; C6H5.CO.CH2.CO.C(CH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=9.70 B2=19.02 1972UDa (85963)3713  
Medium: 75% v/v dioxan, 0.01 M Me4NC1O4

\*\*\*\*\*  
C13H17NO HL (5000)  
Salicylidene-N-cyclohexylamine; HO.C6H4.CH:N.C6H11

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp diox/w 25°C 80% U K1=14.95 1972RGd (85972)3714  
Medium: 80% v/v dioxan, 0.1 M NaClO4

\*\*\*\*\*  
C13H17NO6 H2L CAS 77553-78-7 (6078)  
N-(2-Hydroxy-1-(hydroxybenzyl)-iminodiethanoic acid;  
HO.CH2.CH(CH(OH)(C6H5)).N(CH2.COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 1.0M C K1=6.76 B2= 9.51 1981ASb (85990)3715  
B(CoH-1L)=-1.50

\*\*\*\*\*  
C13H17N3O L Aminopyrine (2030)  
1-Phenyl-2,3-dimethyl-4-dimethylamino-5-pyrazolone, Dimethylaminoantipyrine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.50M U K1=0.78 B2=0.82 1978LWa (85997)3716

-----  
Co++ sp mixed ? 75% U 1971TMb (85998)3717  
K(Co(CNS)3+2HL)=2.33  
K(Co(CNS)4+2HL)=2.15

Medium: 75% acetone

\*\*\*\*\*

C13H18N2O4 L (6005)  
N-Benzyloxycarbonyl-valyl hydroxamic acid; C6H5.CH2.O.CO.NH.CH(CH(CH3)2).CO.NHOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=4.6 B2=6.8 1987CSb (86032)3718  
\*\*\*\*\*

C13H19N3 L (6739)  
2,6-Bis(pyrrolidin-2-yl)pyridine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.12M U H K1=9.10 1993BGb (86068)3719  
B(rac-CoL2)=13.45  
B(meso-CoL2)=14.31  
B(Co(OH)L)=18.87

\*\*\*\*\*

C13H19N3O4 H2L (6689)  
N,N'-((Pyridine-2,6-diyl)bis-methylene)bis-sarcosine; C5H3N(CH2.N(CH3)CH2.COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 25°C 0.10M U K1=12.27 1992BSb (86070)3720  
\*\*\*\*\*

C13H20N04P H3L (1471)  
2-Hydroxyphenyl-N-(cyclohexylamino)methylphosphonic acid;  
C6H4(OH)CH(PO3H2).NH.C6H11

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 20°C 0.10M U K1=8.90 1985SIb (86087)3721  
K(Co+HL)=4.40

\*\*\*\*\*

C13H20N2O2 L Procaine CAS 59-46-1 (4029)  
2-(Diethylamino)ethyl 4-aminobenzoate; H2N.C6H4.CO2.CH2.CH2.N(C2H5)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 1.0M U K1=7.21 B2=13.39 1961GKa (86096)3722  
K3=5.90  
K4=5.80

\*\*\*\*\*

C13H20N2O8 H4L CAS 22991-70-4 (3413)  
trans-1,2-Cyclopentane-iminodiethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ EMF NaNO3 20°C 0.10M U K1=12.0 1971PSc (86108)3723

K1=12.14 (D or L isomer)  
B(CoHL)=15.41 (DL isomer)  
B(CoHL)=15.47 (D or L isomer)

\*\*\*\*\*

C13H21N3O L CAS 473793-88-3 (8976)  
7-Oxa-3,11,17-triazabicyclo[11.3.1]heptadeca-1(17),13,15-triene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=7.15 2001CDb (86165)3724  
\*K(CoL)=-10.02

\*\*\*\*\*

C13H22N2O8 H4L CAS 1798-14-7 (921)  
(Pentamethylenedinitrilo)tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2CH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 20°C 0.10M U H K1=13.38 1964ANa (86186)3725  
K(Co+HL)=7.94

By calorimetry: DH(K1)=-12.9 kJ mol<sup>-1</sup>, DS=212 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C13H22N2O8 H4L CAS 1198-14-7 (5004)  
1,2-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)2NCH2CH(C3H7)N(CH2COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ vlt KNO3 20°C 0.10M U K1=17.99 1974NLa (86220)3726

\*\*\*\*\*

C13H22N2O8 H4L (7164)  
2,4-Diaminopentane-N,N,N',N'-tetraethanoic acid;  
(HOOCCH2)2NCH(CH3)CH2CH(CH3)N(CH2COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 20°C 0.10M U K1=17.40 1981NSc (86247)3727

\*\*\*\*\*

C13H22N2O8 H4L (5003)  
3-Methyl-1,2-diaminobutane-N,N,N',N'-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ vlt KNO3 20°C 0.10M U K1=18.28 1968NLb (86275)3728

\*\*\*\*\*

C13H22N4O6 H2L CAS 93031-56-2 (7079)  
1,4,7,10-Tetraazacyclotrideca-2,9-dione-4,7-diethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M C K1=8.79 1995IOb (86347)3729

K(CoL+H)=2.52

K(CoL=CoH-1L+H)=-10.62  
K(CoH-1L=CoH-2L+H)=-10.26

\*\*\*\*\*  
C13H22O2 HL CAS 41070-22-8 (4974)  
Hexahydrobenzoyl pivaloyl methane; C6H11.CO.CH2.CO.C(CH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=9.92 1972UDa (86373)3730  
Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*  
C13H23N3 L CAS 1555-71-1 (5557)  
5-Benzylidipropylenetriamine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 70% U K1=9.03 1984MMe (86386)3731  
K(CoL+H)=5.65

\*\*\*\*\*  
C13H24N2O6 H2L (5610)  
1,11-Dioxa-4,8-diazacyclotridecane-N,N'-diethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M C K1=9.94 1998CCd (86407)3732  
\*K(CoL)=ca.-9.7

Medium: 0.10 M Me4NNO3.

\*\*\*\*\*  
C13H25N5 L (2943)  
2,6-Bis-(5-(1,4-diazahexyl)pyridine; (H2N.C2H4.NH.CH(CH3))2.C5H3N

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ cal KNO3 25°C 0.1M C H K1=13.99 1982TMc (86446)3733  
DH(K1)=-50.2 kJ mol<sup>-1</sup>

-----  
Co++ cal KNO3 25°C 0.10M C 1982TMd (86447)3734  
DH1=-50.6 kJ/mol

-----  
Co++ gl KNO3 25°C 0.10M C K1=13.99 1978HMa (86448)3735  
K(CoL+H)=4.35

\*\*\*\*\*  
C13H26N4O2 L CAS 85828-24-6 (5495)  
6-Propyl-1,4,8,11-tetraazacyclotetradecane-5,7-dione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 35°C 0.20M U M 1983MKb (86455)3736  
B(CoH-2L)=-12.22

Ternary complex with dioxygen: B(Co2H-4L2(O2))=-8.85

\*\*\*\*\*

C13H27N5O2 L (6541)  
15-Ethyl-1,4,7,10,13-pentaazacyclohexadecane-14,16-dione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 25°C 0.10M C T HM K1=4.66 1991Cma (86513)3737  
K(CoL+H)=7.12  
K(CoH-1L+H)=8.36  
K(CoH-2L+H)=8.28  
Keff(2CoH-2L+O2)=0.98

Keff(2CoH-2L+O2) at 5 C in 0.05M KCl/0.05M borate, pH 9.0;DH=-70.7 kJ mol<sup>-1</sup>,  
DS=-234.2 J K<sup>-1</sup> mol<sup>-1</sup>; Keff at 10 C=0.70, at 15 C=0.48

\*\*\*\*\*

C13H29N3O L (6454)  
4,8,12-Trimethyl-1-oxa-4,8,12-triazacyclotetradecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M U K1=5.8 1991ACa (86548)3738  
B(CoH-2L)=-9.67  
K(CoL+2OH)=12.17

\*\*\*\*\*

C13H30N2O4 L CAS 139-90-2 (3415)  
N-(2-Hydroxyethyl)-N,N',N'-tri(2-hydroxypropyl)ethylenediamine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.50M U K1=5.96 1960Hda (86558)3739

\*\*\*\*\*

C13H30N4 L CAS 95929-20-2 (5490)  
6-Propyl-1,4,8,11-tetraazacyclotetradecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 35°C 0.20M U M K1=10.64 1983MKb (86562)3740  
Ternary complex with dioxygen: B(Co2L2(O2))=28.54

\*\*\*\*\*

C13H30N4O L CAS 252191-62-1 (7610)  
1-(3-Hydroxypropyl)-1,4,8,11-tetraazacyclotetradecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M C K1=10.0 1999Dwa (86567)3741  
K(CoL=CoH-1L+H)=-9.7

Medium: 0.1 M NEt4ClO4

\*\*\*\*\*

C13H31N5 L CAS 85828-17-7 (5486)  
1,4,7,10,13-Pentaazacyclooctadecane;

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl04	35°C	0.20M	U	M	K1=11.54	1983MKb (86572)	3742
Ternary complex with dioxygen: B(Co2L2(O2))=30.43									
*****									
C14H8N3OCl		HL					CAS 25732-23-4	(5079)	
7-Chloro-10-hydroxyindolo(2,3-b)quinoxaline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	alc/w	?	50%	U		K1=5.98	1970KMc (86601)	3743
*****									
C14H8N3O8S2F3		HL					(9231)		
1-(2-Thenoyl),4-trifluoro,2-[2-hydroxy-2-sulpho-5-nitrophenylazo]butadi-1,3-one;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.1M	U		K1=7.55 B2=14.11	2004ACa (86608)	3744
*****									
C14H8O4		H2L					CAS 117-10-8	(3425)	
1,8-Dihydroxyanthraquinone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=8.52 B2=16.38	1960KFc (86674)	3745
*****									
C14H8O7S		H3L	DASA				CAS 83-61-4	(950)	
1,2-Dihydroxyanthraquinone-3-sulfonic acid, Alizarin Red S;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	oth/un	25°C	0.50M	U			1973VCa (86708)	3746
							K1eff=5.85		
							K2eff=4.45		

Medium: Borax buffers, pH 9 to 11.5

\*\*\*\*\*

C14H9NO2		HL					CAS 641-63-4	(4038)	
2-(2'-Pyridyl)indan-1,3-dione;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=9.8 B2=19.4	1964CMB (86786)	3747
*****									
C14H9NO4		H2L	Alizarin Maroon				CAS 3963-78-8	(1052)	
3-Amino-1,2-dihydroxyanthraquinone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl04	25°C	0.10M	U	M	K1=5.95	1982ISc (86811)	3748
							K(Co+H3L=CoH2L+H)=5.95		

$$K(\text{Co}+2\text{H}3\text{L}=\text{Co}(\text{H}2\text{L})2+2\text{H})=6.80$$

Ternary complexes with eosin and rosebengal.

\*\*\*\*\*

C14H9N3O HL CAS 25732-18-7 (5042)

1-Hydroxyindolo(2,3-b)quinoxaline;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl diox/w ? 50% U K1=6.42 B2=14.21 1970KMc (86829)3749  
 -----

Co++ gl diox/w 25°C 50% U K1=7.36 B2=14.36 1970MKg (86830)3750  
 Medium: 50% v/v dioxan, 0.01 M (H,K)NO3

\*\*\*\*\*

C14H9N3O HL CAS 25732-19-8 (5043)

4-Hydroxyindolo(2,3-b)quinoxaline;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl diox/w ? 50% U K1=5.99 B2=15.04 1970KMc (86841)3751  
 -----

Co++ gl diox/w 25°C 50% U K1=7.74 B2=15.63 1970MKg (86842)3752  
 Medium: 50% v/v dioxan, 0.01 M (H,K)NO3

\*\*\*\*\*

C14H10N2O5 H3L CAS 85545-78-4 (6309)

3,2'-Dicarboxy-4-hydroxyazobenzene; (HO)(COOH)C6H3.N:N.C6H4.CO0H

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl alc/w 25°C 75% U K1=9.22 B2=16.11 1976RKa (86905)3753  
 -----

C14H10N4O2S HL (6854)  
 3-Phenyl-5-mercapto-4-(2-nitrophenyl)-1,2,4-triazole; C6H5.C2N3(SH)(C6H4.NO2)

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl mixed 30°C 70% U K1=4.18 B2=7.50 1991SMc (86919)3754  
 Medium: 70% DMF. Data also for 4-chlorophenyl, 2-nitrophenyl, 4-nitrophenyl,  
 3,5-dinitrophenyl analogues

\*\*\*\*\*

C14H10N6O2 H2L CAS 481635-45-4 (8531)

1,10-Phenanthrolino-(5,6-b)-2,3-dihydroxyimino-1,4-diazine;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl alc/w 25°C 60% M K1=9.99 2002DEa (86923)3755  
 -----

B(CoHL)=16.32  
 B(CoH-2L)=-5.00

Medium: 60% v/v EtOH/H2O, 0.20 M KNO3.

\*\*\*\*\*

C14H10O4 H2L CAS 482-05-3 (8247)

Diphenyl-2,2'-dicarboxylic acid; diphenic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 50% U T H K1=5.88 B2= 8.27 1978Sjc (86931)3756  
Medium: 50% dioxane/H2O, 0.10 M NaClO4. At 40 C, K1=5.65, K2=2.17.  
DH and DS values reported.

\*\*\*\*\*  
C14H11NO3 H2L CAS 67707-86-2 (8476)  
Salicylideneaniline-3-carboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 30% U K1=5.15 1978CPb (86956)3757  
Medium: 30% v/v dioxane/H2O, 0.20 M NaClO4.

\*\*\*\*\*  
C14H11NO4 H2L CAS 279-92-0 (3430)  
2,2'-Iminodibenzoic acid; HOOC.C6H4.NH.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 50% U K1=3.98 B2=7.22 1973DSb (86970)3758  
Medium: 50% EtOH, 0.2 M NaClO4

-----  
Co++ gl diox/w 35°C 50% U K1=5.1 1958YSa (86971)3759  
\*\*\*\*\*  
C14H11N3O HL CAS 24854-76-0 (1380)  
2-(1H-Benzimidazol-2-yl-methylene-amino) phenol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 60% U K1=8.38 1984ORa (86992)3760  
Data also for 4-Cl- and 4-NO2- analogues

\*\*\*\*\*  
C14H12NOBr HL CAS 20772-74-1 (6172)  
N-(2-Hydroxy-5-bromobenzylidene)-4-methylaniline; HO(Br)C6H3.CH:N.C6H4.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 28°C 75% U K1=6.02 1988Mnb (87040)3761  
\*\*\*\*\*  
C14H12NO2Cl HL CAS 67055-92-9 (6301)  
N-(3-Chlorophenyl)-4-methylbenzohydroxamic acid; CH3.C6H4.CO.N(C6H4Cl)OH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% C M K1=8.26 2001AMc (87060)3762  
B(Co(gly)L)=14.66  
Medium: 50% v/v dioxane/H2O  
-----



Co++ gl diox/w 25°C 50% U K1=7.38 B2=13.03 1989Pmb (87061)3763  
Data also for 4-fluoro, 4-chloro, 4-bromo, 4-nitro and 4-methoxy analogues

\*\*\*\*\*

C14H12NO3Cl HL CAS 67135-47-1 (9106)

N-(3-Chlorophenyl)-N-hydroxy-4-methoxybenzamide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 50% C M K1=8.30 2001AMc (87094)3764  
B(Co(gly)L)=14.87

Medium: 50% v/v dioxane/H2O

\*\*\*\*\*

C14H12N2 L CAS 484-11-7 (450)

2,9-Dimethyl-1,10-phenanthroline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl alc/w 25°C 50% M I M 1990BDb (87125)3765  
K(CoL+thr)=4.76

Medium: 50% v/v EtOH/H2O, 0.10 M NaNO3. Also data for 0.05 and 0.20 M  
NaNO3 in EtOH/H2O. At I=0, K(CoL+thr)=5.15.

-----  
Co++ dis KCl 25°C 0.10M U K1=4.2 B2=7.0 1962IMa (87126)3766

\*\*\*\*\*

C14H12N2 L CAS 2963-64-6 (5027)

2-Benzylbenzimidazole; C6H5.CH2.C7H5N2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp alc/w ? 100% U M 1972ASc (87134)3767

K(Co(NO3)2+2L)=2.40

K(CoCl2+2L)=3.16

K(CoBr2+2L)=2.77

K(Co(SCN)2+2L)=2.69

Medium: MeOH

\*\*\*\*\*

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  
-----

Co++ dis oth/un 25°C 0.10M U K1=8.08 B2=16.08 1963Bmb (87144)3768  
K3=8.43

\*\*\*\*\*

C14H12N2 L CAS 3002-81-1 (451)

5,6-Dimethyl-1,10-phenanthroline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ dis oth/un 25°C 0.10M U K1=7.47 B2=15.47 1963Bmb (87157)3769

K3=8.14

\*\*\*\*\*

C14H12N2O2 HL (6311)  
4-Hydroxy-3-formyl-2'-methylazobenzene; (HO)(CHO)C6H3.N:N.C6H4.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 28°C 50% U K1=4.92 B2=9.16 1975JTb (87174)3770

\*\*\*\*\*

C14H12N2O2 HL (6328)  
4-Hydroxy-3-formyl-4'-methylazobenzene; (HO)(CHO)C6H3.N:N.C6H4.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 28°C 50% U K1=4.92 B2=9.06 1975JTb (87184)3771

\*\*\*\*\*

C14H12N2O2 HL Benzil dioxime CAS 23873-81-6 (3431)  
Diphenylglyoxime; (C6H5.C:NOH.)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 50% U K1=11.2 B2=19.5 1958PBa (87187)3772

\*\*\*\*\*

C14H12N2O3 H2L CAS 4870-46-6 (3432)  
2-Hydroxy-5-methyl-2'-carboxy-azobenzene; HO.C6H3(CH3).N:N.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp none 25°C 0.0 U K1=9.02 1984MSc (87207)3773

Co++ gl diox/w 30°C 75% U 1957SFb (87208)3774

K((Co+H2L=CoL+2H))=-7.3

\*\*\*\*\*

C14H12N2O3 H2L CAS 28547-20-8 (1395)  
2-Hydroxy-5-methyl-4'-carboxy-azobenzene; (HO)(CH3)C6H3.N:N.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp alc/w 25°C 0.10M U K1=10.60 B2=14.11 1981MOb (87230)3775

\*\*\*\*\*

C14H12N2O4 H2L (3433)  
2,2'-Hydrazodibenzoic acid; HOOC.C6H4.NH.NH.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 35°C 50% U K1=3.8 1958YSa (87239)3776

\*\*\*\*\*

C14H12N2O6S H2L MordentYellow 7 (1391)  
5-(4'-Sulfophenylazo)-4-methylsalicylic acid;

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	KCl	25°C	0.10M	U		K1=5.54	1982GSb (87297)	3777
*****									
C14H12N3OBrS		L					CAS 39643-68-0	(5097)	
1-Benzoyl-4-bromophenylthiosemicarbazide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	mixed	25°C	50%	U		B2=5.25	1969CFb (87301)	3778
Medium: 50% acetone									
*****									
C14H12N4O		HL					CAS 66751-18-6	(5048)	
1-(5-Methyl-4-imidazolylazo)-2-naphthol;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U		K1=13.0	1968YTa (87308)	3779
Medium: 50% dioxan, 0.1 M KNO3									
*****									
C14H12N4O		L					CAS 74126-83-3	(5438)	
Di(2-pyridyl)-imidazol-2-yl-methanol;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.20M	U		K1=8.67 B2=16.77	1980BH a (87312)	3780
*****									
C14H12O2		HL					CAS 119-53-9	(2739)	
2-Hydroxydeoxybenzoin, 2-hydroxyphenylacetophenone; HO.C6H5.CH2.CO.C6H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	30°C	50%	U		K1=5.15	1986SBa (87329)	3781
*****									
C14H12O3		H2L					CAS 3669-41-8	(2740)	
2,4-Dihydroxydeoxybenzoin, 2,4-dihydroxyphenylacetophenone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	30°C	50%	U		K1=3.20	1986SBa (87340)	3782
*****									
C14H12O3		HL					Benzilic acid CAS 76-93-7	(710)	
Diphenylglycolic acid, (benzilic acid); (C6H5)2C(OH).COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	oth/un	?	?	U		K1=6.03	1976SCb (87348)	3783
*****									
C14H12O4		H3L					(2741)		
2,4,6-Trihydroxydeoxybenzoin, 2,4,6-trihydroxyphenylacetophenone;									

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 50% U K1=4.15 1986SBa (87356)3784  
\*\*\*\*\*  
C14H13NO HL CAS 3246-73-9 (5056)  
N-(Salicylidene)-2-methylaniline; CH3.C6H4.N:CH.C6H4.OH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 27°C 50% U K1=4.26 1972SDb (87367)3785  
Medium: 50% dioxan, 0.1 M NaClO4  
\*\*\*\*\*  
C14H13NO HL CAS 952-81-8 (5057)  
N-(Salicylidene)-3-methylaniline; CH3.C6H4.N:CH.C6H4.OH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 27°C 50% U K1=4.81 B2=8.42 1972SDb (87374)3786  
Medium: 50% dioxan, 0.1 M NaClO4  
\*\*\*\*\*  
C14H13NO HL CAS 982-76-3 (5058)  
N-(Salicylidene)-4-methylaniline; CH3.C6H4.N:CH.C6H4.OH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 27°C 50% U K1=4.95 B2=9.00 1972SDb (87384)3787  
Medium: 50% dioxan, 0.1 M NaClO4  
\*\*\*\*\*  
C14H13NO2 HL DPAHA CAS 4463-22-3 (880)  
2,2'-Diphenylacetohydroxamic acid; (C6H5)2.CH.CO.NH.OH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 30°C 50% C M K1=5.58 1982RSa (87401)3788  
K(Co(bpy)+L)=5.50  
K(Co(hist)+L)=4.60  
Medium: 50% v/v EtOH/H2O, 0.10 M KNO3.  
-----

-----  
Co++ gl alc/w 20°C 50% U TIH K1=5.68 B2=10.17 1979RSb (87402)3789  
DH(K1)=-12.5 kJ mol<sup>-1</sup>, DS=59.7 J K<sup>-1</sup> mol<sup>-1</sup>, DH(K2)=-14.3, DS2=37  
\*\*\*\*\*  
C14H13NO2 HL N,2'-DPAHA CAS 13663-57-5 (879)  
N,2'-Diphenylacetohydroxamic acid; C6H5.CH2.CO.N(C6H5).OH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 30°C 50% U M K1=5.24 B2=9.06 1992RAa (87424)3790  
B(CoL(phen))=5.04  
-----

Co++ gl alc/w 20°C 50% U T H K1=5.39 B2=9.35 1985RSd (87425)3791  
30 C:K1=5.24, K2=3.82; 40 C, K1=5.10, K2=3.69; 50 C, K1=4.96, K2=3.52  
DH(K1)=-23.5 kJ mol<sup>-1</sup>, DS=15 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-23.8, DS=3.2

-----  
Co++ gl alc/w 30°C 50% C M K1=5.24 1982RSa (87426)3792  
K(Co(bpy)+L)=4.90  
K(Co(his)+L)=4.21

Medium: 50% v/v EtOH/H<sub>2</sub>O, 0.10 M KNO<sub>3</sub>.

-----  
Co++ gl alc/w 30°C 50% U T K1=5.24 B2=9.06 1981RSa (87427)3793  
Medium: 50% v/v EtOH, 0.1 M KNO<sub>3</sub>

\*\*\*\*\*  
C14H13NO2 HL CAS 19064-76-7 (5061)  
N-2'-Hydroxybenzylidene-4-methoxyaniline; HO.C6H4.CH:N.C6H4.OCH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl alc/w 25°C 50% U K1=4.68 1988BDa (87460)3794  
Medium: 50% v/v EtOH/H<sub>2</sub>O, 0.10 M NaNO<sub>3</sub>.

\*\*\*\*\*  
C14H13NO2 HL CAS 889-29-2 (6259)  
N-Salicylidene-3-methoxyaniline; HO.C6H4.CH:N.C6H4.OCH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl alc/w 25°C 50% U K1=3.90 B2=7.15 1977DWa (87524)3795

\*\*\*\*\*  
C14H13NO3 H2L (1386)  
2-Hydroxy-5-methoxybenzophenone oxime; HO(CH3O)C6H3.C(:NOH)C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl diox/w 30°C 50% U K1=6.97 1982UVa (87537)3796

\*\*\*\*\*  
C14H13NO3 HL CAS 676256-94-3 (9135)  
N-(2-Furanylmethylene)phenylalanine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl KCl 25°C 1.0M U K1=3.70 2003SGa (87546)3797

\*\*\*\*\*  
C14H13NO3 H2L CAS 51931-02-1 (5063)  
N-(2-Hydroxy-1-naphthalidene)-beta-alanine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ oth NaClO4 30°C 0.10M U K1=5.60 1972MSe (87551)3798

\*\*\*\*\*  
C14H13NO4S H2L (3660)  
2-Aminobenzenesulfonic acid 2-hydroxyacetophenone Schiff base;

HSO3.C6H4.N:C(CH3).C6H4.OH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.10M U T H K1=4.121 B2=7.74 1977SMd (87572)3799  
\*\*\*\*\*  
C14H13N08S H4L CAS 22531-44-8 (5091)  
2-Hydroxy-4-sulfonaphthalene-1-iminodiethanoic acid;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ EMF oth/un ? ? U K1=12.4 1971TTb (87585)3800  
K(Co+HL)=9.3  
\*\*\*\*\*  
C14H13N30S L CAS 14938-70-6 (5090)  
1-Benzoyl-4-phenylthiosemicarbazide;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp mixed 25°C 50% U B2=5.50 1969CFb (87586)3801  
Medium: 50% acetone  
-----

-----  
Co++ sp alc/w 25°C 100% U B2=7.31 1968CFb (87587)3802  
\*\*\*\*\*  
C14H13N302S HL CAS 40788-59-8 (6178)  
2-Benzenesufonamidomethylbenzimidazole; C6H5S02NHCH2C7H5N2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 20°C 50% M K1=6.57 B2=12.12 1988NRA (87605)3803  
Medium: 0.25 M NaClO4 in 50% acetone  
-----  
Co++ gl diox/w 30°C 50% C M K1=5.01 B2= 9.94 1987MSd (87606)3804  
K(Co(gly)+L)=4.83  
B(Co(gly)L)=10.53  
Medium: 50% v/v dioxane/H2O, 0.2 M NaNO3.  
\*\*\*\*\*

-----  
C14H13N50S HL (5394)  
1-(2-Pyridylmethylideneamino)-3-(salicylideneamino)thiourea;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp mixed 25°C 40% U K1eff=5.23 1985RGa (87612)3805  
Medium: 40% DMF, pH 4.5  
\*\*\*\*\*  
C14H13N502 HL (5393)  
1-(2-Pyridylmethylideneamino)-3-(salicylideneamino)urea;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

-----  
Co++ sp mixed 25°C 32% U 1985RGa (87622)3806  
K1eff=4.22  
B2eff=11.27

Medium: 32% DMF, pH 4.5

\*\*\*\*\*

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  
-----

Co++ gl NaClO4 25°C 0.10M U I K1=1.7 1979POa (87632)3807  
In 50% v/v dioxan/H2O: K1=2.35

\*\*\*\*\*

C14H14N2O10 H5L CAS 41379-95-7 (5070)  
2-Carboxymethylamino-5-(bis(carboxymethyl)amino)-1,4-dibenzoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M U K1=9.80 1973UWb (87669)3808  
K(Co+HL)=4.85  
K(Co+H2L)=3.50  
B(Co2L)=12.40

\*\*\*\*\*

C14H14N4 L CAS 98240-13-2 (4033)  
N,N'-Bis(2'-picolinylidene)-1,2-diaminoethane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ dis non-aq 25°C 100% C M 20010Hb (87679)3809  
Method: distribution from buffered 0.10 M NaCl into nitrobenzene.  
K(Co+3L(org)+2A=CoL3A2(org))=15.2. HA is picric acid.

\*\*\*\*\*

C14H14N4OBr2 HL CAS 35601-32-2 (5092)  
5-(3,5-Dibromo-2-pyridylazo)-2-ethylamino-4-hydroxy-1-methylbenzene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp oth/un ? ? U 1968GKc (87684)3810  
K(?)=7.12

\*\*\*\*\*

C14H15N2O8Cl H4L (1903)  
4-Chloro-1,2-diaminobenzene-N,N,N',N'-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 25°C 0.10M C 1999RNa (87742)3811  
K(Co2A+L)=11.72  
\*K(Co2AL)=-7.45  
\*K(Co2(OH)AL)=-9.00

A: 1,4,7,13,16,19-Hexaaza-10,22-dioxacyclotetracosane

-----  
Co++ gl KCl 25°C 0.10M C K1=12.75 1988BMe (87743)3812  
K(Co+HL)=9.57  
K(CoL+H)=2.72  
-----

\*\*\*\*\*  
C14H15N4OBr HL CAS 14337-50-9 (5095)  
5-(5-Bromo-2-pyridylazo)-2-ethylamino-4-hydroxy-1-methylbenzene;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp oth/un rt ? U 1968GKc (87763)3813  
B2eff=7.22  
-----

\*\*\*\*\*  
C14H15N5O L CAS 74126-82-2 (5436)  
2-Pyridyl-di(N-methylimidazol-2-yl)-methanol;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.20M U K1=5.2 B2=9.70 1980BHa (87777)3814  
-----

\*\*\*\*\*  
C14H15N5OS HL CAS 220035-48-3 (8653)  
alpha-Pyridoin 2-methylthiosemicarbazone;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 50% U TIH K1=9.02 B2=17.16 19980Fa (87782)3815  
Medium: 50% H2O/dioxane, 0.10 M KNO3. Data for 50% v/v H2O/dioxane, I =  
0.05-0.20 M, and for 40 and 50 C at I=0.10. DH and DS values.  
-----

\*\*\*\*\*  
C14H15N5OS HL CAS 220035-52-9 (8654)  
alpha-Pyridoin 4-methylthiosemicarbazone;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 50% U TIH K1=9.15 B2=17.44 19980Fa (87788)3816  
Medium: 50% H2O/dioxane, 0.10 M KNO3. Data for 50% v/v H2O/dioxane, I =  
0.05-0.20 M, and for 40 and 50 C at I=0.10. DH and DS values.  
-----

\*\*\*\*\*  
C14H16N03P H2L CAS 25881-35-0 (1469)  
Phenyl-N-(benzylamino)methylphosphonic acid; C6H5.CH(PO3H2).NH.CH2.C6H5  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 20°C 0.10M U K1=7.10 1985SIb (87806)3817  
K(Co+HL)=3.20  
-----

\*\*\*\*\*  
C14H16N04P H3L CAS 61146-25-6 (1470)  
2-Hydroxyphenyl-N-(benzylamino)methylphosphonic acid; C6H4(OH)CH(PO3H2).NH.CH2.C6H5  
-----



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	20°C	0.10M	U			K1=8.00 K(Co+HL)=4.10	1985SIb (87819)	3818
*****										
C14H16N2			L					CAS 1620-43-7	(5033)	
1,4-Bis(2'-pyridyl)butane; C5H4N.CH2.CH2.CH2.CH2.C5H4N										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	20°C	0.10M	U			K1=1.2 K(Co+HL) < 1	1970BAa (87836)	3819
*****										
C14H16N2O2			L					CAS 52411-34-4	(2475)	
2,2'(1,2-Ethanediy)bis(oxy))bisaminobenzene; H2N.C6H4.OCH2CH2O.C6H4.NH2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	25°C	85%	C	T		K1 < 1 30	1983HBa (87858)	3820
*****										
C14H16N2O6			H2L					CAS 307340-23-4	(9121)	
N,N'-Bis-(3-carboxy-1-oxopropanyl)-1,2-phenylenediamine;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	M			K1=3.72 B2= 7.01	2003GSa (87911)	3821
*****										
Co++	gl	NaClO4	25°C	0.10M	U			K1=3.27 B2= 6.35	2003GSc (87912)	3822
*****										
C14H16N2O8			H4L					CAS 40774-59-2	(1901)	
1,2-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	cal	NaClO4	25°C	1.00M	U	H		K1=13.18 DH(K1)=-3.9 kJ mol-1; DS(K1)=265 J K-1 mol-1	1987MNa (87937)	3823
*****										
Co++	gl	NaClO4	25°C	1.00M	C			K1=13.18 K(CoL+H)=2.52 K(CoHL+H)=1.2 K(CoH-1L+H)=12	1985NKa (87938)	3824
*****										
C14H16N2O8			H4L					CAS 103012-22-2	(1904)	
1,3-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	U			K1=5.03 B(CoH2L)=12.81	1988BMa (87981)	3825

B(CoHL)=9.09  
B(Co2L2)=12.95

---

Co++ gl KCl 25°C 0.10M U K1=5.18 1968UHa (87982)3826  
K(Co+H2L)=1.5  
K(Co+HL)=3.26  
B(Co2L)=6.29

\*\*\*\*\*  
C14H16N2O8 H4L (6108)  
1,3-Phenylenediamine-N,N'-disuccinic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ gl NaCl 25°C 0.50M C M K1=4.543 1989FRa (87989)3827  
B(CoH2L)=12.197  
B(CoHL)=8.847  
B(Co2L)=6.187  
B(CoLA)=7.59

B(CoHLA)=12.50, B(CoHLB)=12.15, B(CoH2LB)=16.53, B(CoH3LB)=20.24, B(CoHLC)=12.52  
B(CoH2LC)=16.86, B(CoH3LC)=21.34. H2A=Oxalic, H2B=Malonic, H2C=Succinic acid  
\*\*\*\*\*

C14H16N2O8 H4L CAS 3020-07-3 (1905)  
1,4-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ gl KCl 25°C 0.10M C K1=5.66 B2=10.97 1997GHc (88003)3828  
B(CoH2L)=13.30  
B(CoHL)=9.29  
B(Co2L2)=15.72  
B(Co2HL2)=19.58

B(Co4L3)=28.99, B(CoH3L2)=23.78, B(CoH2L2)=20.66, B(Co3L3)=26.09,  
B(Co6L6)=54.68, B(CoHL2)=16.31, B(Co2L)=9.06, B(Co3L2)=18.83.

---

Co++ gl KCl 25°C 0.10M U K1=6.70 1968UHa (88004)3829  
K(Co+H2L)=2.27  
K(Co+HL)=4.27  
K(Co2L)=8.84

\*\*\*\*\*  
C14H16N2O8 H4L CAS 91856-15-4 (8449)  
1,4-Phenylenediamine-N,N'-disuccinic acid;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ gl NaCl 25°C 0.50M C K1=5.85 B2= 9.57 1984RFe (88010)3830  
B(CoH2L)=12.80  
B(CoHL)=9.86  
K(Co+H2L)=1.55  
K(Co+HL)=3.23

\*\*\*\*\*

C14H16N4O HL PAAC CAS 13059-69-3 (5067)  
5-Ethylamino-4-methyl-2-(2'-pyridylazo)phenol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sol oth/un ? ? U 1968GKc (88016)3831  
K(?)=7.48 pH 6

\*\*\*\*\*  
C14H17N2O4P H3L (1472)  
2-Hydroxyphenyl-N-(2-(2'-pyridyl)ethylamino)methylphosphonic  
acid;C6H4(OH)CH(PO3H2)NHCH2CH2C5H4N

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 20°C 0.10M U K1=8.95 1985SIb (88039)3832  
K(Co+HL)=4.40

\*\*\*\*\*  
C14H18N2O2 HL (7898)  
1-(2-Hydroxyphenyl)-2,5-diaza-8-oxonona-1,5-diene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl alc/w 25°C 0.2M U K1=5.32 1999MTc (88063)3833  
Medium: 0.2 M KCl in 3:7 v/v H2O/EtOH

\*\*\*\*\*  
C14H18N4 L DPEN CAS 4608-34-3 (1850)  
N,N'-Bis-(2-pyridylmethyl)-1,2-diaminoethane; (C5H4N.CH2.NH.CH2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M C M K1=12.51 1988BMf (88107)3834  
K(Co(H-1)L+H)=10.61  
K(2(CoL)+O2=Co2H-1L2(O2)+H)=1.37

-----  
Co++ gl KCl 25°C 0.10M U M K1=12.48 1985BMD (88108)3835  
K(2CoL+O2=CoL(OH)(O2)CoL+H)=3.8. Method: amperometric O2 electrode.

-----  
Co++ gl KNO3 25°C 0.10M U H K1=11.96 1975APc (88109)3836  
DH(K1)=-59.4 kJ mol<sup>-1</sup>, DS=29.3 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ gl KCl 25°C 0.10M U K1=12.0 1968GRa (88110)3837

-----  
Co++ gl oth/un 25°C 0.10M U K1=12.8 1964PCa (88111)3838

\*\*\*\*\*  
C14H18O2 HL CAS 41070-28-4 (5035)  
2-Toluoyl pivaloyl methane; CH3.C6H4.CO.CH2.CO.C(CH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=9.73 B2=19.06 1972UDa (88124)3839

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*

C14H1802 HL CAS 41070-24-0 (5036)

4-Toluoyl pivaloyl methane; CH3.C6H4.CO.CH2.CO.C(CH3)3

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=10.0 B2=19.36 1972UDa (88129)3840

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*

C14H1803 HL CAS 41070-25-1 (5037)

2-Anisoyl pivaloyl methane; CH3O.C6H4.CO.CH2.CO.C(CH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=9.90 B2=18.87 1972UDa (88134)3841

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*

C14H1803 HL CAS 41070-23-9 (5038)

4-Anisoyl pivaloyl methane; CH3O.C6H4.CO.CH2.CO.C(CH3)3

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=9.89 B2=19.21 1972UDa (88139)3842

Medium: 75% v/v dioxan, 0.01 M Me4NC104

\*\*\*\*\*

C14H20N203 HL Val-Phe CAS 3918-92-1 (8058)

Valyl-phenylalanine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 0°C 0.10M C K1=2.53 B2= 3.60 1992KUa (88163)3843

B(CoH-1L)=-11

B(CoH-1L2)=-4.09

B(CoH-2L2)=-15.0

\*\*\*\*\*

C14H20N203S HL Met-Phe CAS 14492-14-9 (6368)

Methionyl-phenylalanine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.20M U K1=1.91 B2=3.57 1990XJa (88166)3844

\*\*\*\*\*

C14H20N203S HL Phe-Met CAS 15080-84-9 (6367)

Phenylalanyl-methionine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co++ gl KNO3 25°C 0.20M U K1=2.43 B2=3.82 1990XJa (88169)3845

\*\*\*\*\*

C14H20N2O6 HL (4048)  
 Ethyl hydrogen-2,5-bis-(N-(2'-hydroxyethyl)amino)benz-1,4-dicarboxylate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	22°C	0.10M	U			K1=2.3 B2=5.35	1960UHb (88176)	3846

\*\*\*\*\*  
 C14H20O5 L Benzo15-crown-5 CAS 14098-44-3 (608)  
 2,3-Benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	con	mixed	25°C	90%	C			K1=2.17	2003ISa (88231)	3847

Medium: 90% v/v DMSO/H2O.

Co++	con	alc/w	25°C	40%	C			K1=1.86	2002ISa (88232)	3848
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Medium: 40% EtOH/H2O.

Co++	con	alc/w	25°C	40%	C			K1=2.01	2001ISa (88233)	3849
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Medium: 40% v/v EtOH/H2O.

Co++	nmr	non-aq	27°C	100%	C			K1=3.09	2000SMg (88234)	3850
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Medium: acetonitrile. Method: competitive 7Li nmr technique.

\*\*\*\*\*  
 C14H21NO7 HL CAS 85906-10-1 (6635)  
 2-(Benzylamino)-2-deoxy-D-glycero-D-gulo-heptonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl04	25°C	0.10M	U			K1=3.73 B2=6.70 B(CoH-1L)=-4.57 B(CoH2L2)=20.8	1992VDA (88408)	3851

\*\*\*\*\*  
 C14H22N2O8 H4L CDTA CAS 482-54-2 (200)  
 trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	none	25°C	0.0	U	M		K1=19.6 K(CoL+CN)=1.59	1983KPa (88554)	3852

at pH 11.5

Co++	sp	NaCl04	25°C	1.0M	U	M		K(CoL+H)=1.68 K(CoL+SCN) < -1 K(CoHL+SCN)=0.30	1970HSc (88555)	3853
------	----	--------	------	------	---	---	--	--	-----------------	------

Co++	sp	oth/un	25°C	0.10M	U			K(CoL+CN)=1.59	1969JMb (88556)	3854
------	----	--------	------	-------	---	--	--	----------------	-----------------	------

Co++	sp	NaCl04	25°C	0.20M	U			K1=18.78	1967BDb (88557)	3855
------	----	--------	------	-------	---	--	--	----------	-----------------	------

-----  
Co++ vlt KNO3 25°C 1.0M U I K1=18.3 1967JGb (88558)3856  
K1=18.6(I=0.1)  
-----

Co++ cal KNO3 25°C 0.10M U H 1965WHa (88559)3857  
DH(K1)=-22.6 kJ mol<sup>-1</sup>, DS=284 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ cal KNO3 20°C 0.10M U T H 1963ANb (88560)3858  
DH(K1)=-11.7 kJ mol<sup>-1</sup>, DS=334 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ gl KNO3 20°C 0.10M U H K1=19.57 1963ANf (88561)3859  
By calorimetry, DH(K1)=-11.7 kJ mol<sup>-1</sup>, DS=335 J K<sup>-1</sup> mol<sup>-1</sup>  
-----

Co++ dis NaClO4 20°C 0.10M U K1=18.92 1963STc (88562)3860  
-----

Co++ sp oth/un 20°C 0.08M U K1=21.9 1961JSa (88563)3861  
-----

Co++ vlt KNO3 20°C 0.10M U K1=18.92 1954SGa (88564)3862  
K(CoL+H)=4.32  
-----

\*\*\*\*\*  
C14H22N2O10 H5L (1083)  
1-Carboxy-1,5-diaminopentane-N,N,N',N'-tetraethanoic acid;  
(HOOCCH2)2NCH(COOH)(CH2)4N(CH2COOH)2  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M U K1=14.39 1988TGe (88897)3863  
K(Co+H2L)=3.87  
K(Co+HL)=10.44  
B(Co2L)=19.04  
B(Co2L2)=31.60  
-----

\*K(CoH2L)=-3.20, \*K(CoHL)=-5.30.  
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\*\*\*\*\*  
C14H22N4Br2 L CAS 221635-46-7 (8396)  
3,4-(3',4'-Dibromobenzo)-1,6,9,12-tetraazacyclotetradecane-3,4-ene;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 25°C 0.30M C K1=15.76 1999ABb (88905)3864  
B(CoHL)=25.39  
B(CoH2L)=34.01  
B(CoH3L)=40.46  
B(CoH-1L)=5.49  
-----

B(CoH-2L)=-4.86. Also data for related tetra(macrocylic)-substituted  
phthalocyanine.  
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\*\*\*\*\*  
C14H22N4O10 H3L CAS 29725-87-9 (5074)  
Ethylenedinitrilo-N,N'-bis(methylenecarbonyliminoethanoic)-N,N'-diethanoic acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

-----  
Co++ gl KNO3 25°C 0.10M U K1=10.47 1970MMc (88932)3865  
K(CoL+H)=3.83  
K(CoHL+H)=2.97

\*\*\*\*\*  
C14H22N4O10 H4L BAOTA CAS 95156-15-3 (5584)  
N,N'-Bis(2-aminoethyl)oxalamide-N'',N''N''',N'''-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M C K1=10.05 1985SMc (88939)3866  
K(CoL+H)=4.90  
K(CoL+Co)=2.84  
K(Co2H-2L+2H)=14.92

\*\*\*\*\*  
C14H22N4O10 H4L DGENTA CAS 29725-86-8 (2371)  
N,N-Diglycyldiaminoethane-tetraethanoic acid;(-CH2.HNCOCH2N(CH2COOH)2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M C K1=8.85 1985SMc (88947)3867  
K(CoL+H)=5.23  
K(CoL+Co)=5.26

-----  
Co++ gl KNO3 25°C 0.10M U K1=8.5 1972NMa (88948)3868  
K(Co+HL)=6.9  
K(2CoL+O2=CoH-2L(O2)CoH-2L+4H)=-38.5, where (O2) is in atmospheres

-----  
Co++ gl KNO3 25°C 0.10M U K1=8.54 1970MMc (88949)3869  
K(CoL+H)=5.69  
K(Co+CoL)=5.77  
K(Co2H-1L+H)=9.36  
K(Co2H-2L+H)=9.60

K(Co2H-2L(OH)+H)=10.10  
\*\*\*\*\*  
C14H22N4O10 H4L GGENTA CAS 95216-33-4 (5586)  
N-(Glycylglycyl)-1,2-diaminoethane-N'',N'',N''',N'''-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M C K1=11.0 1985SMc (88957)3870  
K(CoL+H)=4.6  
K(CoL+Co)=2.9

\*\*\*\*\*  
C14H22N6O5 HL Asp-Ala-His-Me CAS 66277-14-3 (2223)  
Aspartyl-alanyl-histidine-N-methylamide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.16M M 1979LSa (88977)3871

B(CoH-1L)=-5.27  
B(CoH-1L2)=-1.52  
B(CoH-2L2)=-10.55

\*\*\*\*\*

C14H22O5 H2L CAS 85785-29-1 (2250)  
Di(hepta-4,6-dione)ether, (CH3.CO.CH2.CO.(CH2)3)2O

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 24°C 50% U K1=9.2 1979ACa (88990)3872

\*\*\*\*\*

C14H23N3O10 H5L DTPA CAS 67-43-6 (238)  
Diethylenetriamine-pentaethanoic acid; HOOC.CH2.N(CH2.CH2.N(CH2.COOH)2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp oth/un 25°C 0.10M U 1974MBa (89130)3873

B(CoH4L)=30.18

-----  
Co++ sp oth/un 20°C 0.0 U K1=19.72 1968KAb (89131)3874

K(Co+HL)=11.89

-----  
Co++ cal KNO3 20°C 0.10M U T H 1965ANa (89132)3875  
DH(K1)=-39.3 kJ mol-1, DS=235 J K-1 mol-1

-----  
Co++ cal KNO3 25°C 0.10M U H 1965WHa (89133)3876  
DH(K1)=-39.7 kJ mol-1, DS=234 J K-1 mol-1

-----  
Co++ EMF oth/un 20°C 0.10M U K1=19.27 1959AND (89134)3877

K(CoL+Co)=3.51

K(Co+HL)=13.43

-----  
Co++ gl KNO3 25°C 0.10M U K1=18.4 B2=22.14 1959CFc (89135)3878

-----  
Co++ gl oth/un 20°C 0.10M U K1=19.00 1958DRa (89136)3879

\*\*\*\*\*

C14H24N2O8 H4L (5075)  
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-butyric acid;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ vlt KNO3 20°C 0.10M U K1=15.93 1969NDc (89502)3880

\*\*\*\*\*

C14H24N2O8 H4L (7165)  
1,2-Diaminohexane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)NCH2CH(C4H9)N(CH2COOH)2

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ vlt KNO3 20°C 0.10M U K1=18.03 1974NLa (89525)3881

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C14H24N2O8 H4L HMDTA CAS 1633-00-7 (920)  
 1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2.CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	NaClO4	20°C	0.01M	U			K(Co+HL)=6.24	1980KVb (89560)	3882

Co++	gl	KNO3	20°C	0.10M	U	H		K1=13.05 K(Co+HL)=7.92 K(CoL+Co)=2.9	1964ANa (89561)	3883
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By calorimetry: DH(K1)=-19.1 kJ mol<sup>-1</sup>, DS=184 J K<sup>-1</sup> mol<sup>-1</sup>

Co++	gl	NaNO3	20°C	0.10M	U			K1=12.85 K(Co+HL)=7.88	1957SSa (89562)	3884
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C14H24N2O8 H4L CAS 1633-00-7 (5076)  
 4-Methyl-1,2-diaminopentane-N,N,N',N'-tetraethanoic acid;  
 (HOOCCH2)2NCH2CH(N(CH2COOH)2CH2CH(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	20°C	0.10M	U			K1=17.88	1968NLb (89626)	3885

\*\*\*\*\*

C14H24N2O8 H4L EDTP (2936)  
 Diaminoethane-N,N,N',N'-tetrapropanoic acid; (HOOC.CH2CH2)2N.CH2CH2.N(CH2CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	C	I		K1=8.68 B(CoHL)=13.61	1989LKa (89674)	3886

Co++	gl	KCl	30°C	0.10M	U			K1=7.6	1953CCb (89675)	3887
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C14H24N2O10 EGTA CAS 67-42-5 (349)  
 Ethyleneglycol-0,0'-bis(2-aminoethyl ether)-N,N,N',N'-tetraethanoic acid; H4L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	vlt	NaClO4	25°C	0.30M	U			K2=3.86	1973K0a (89819)	3888

Co++	gl	alc/w	25°C	99%	U			K1=13.5	1972Rba (89820)	3889
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Medium: 99% MeOH, 0.1 M NaClO4

Co++	gl	NaClO4	25°C	0.10M	U			K1=12.3 K(CoL+H)=4.9 K(CoHL+H)=3.3	1970FTa (89821)	3890
------	----	--------	------	-------	---	--	--	--	-----------------	------

Co++	sp	NaClO4	25°C	0.20M	U			K1=15.6 K(Co+HL)=8.64	1967BDb (89822)	3891
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Co++ cal KNO3 25°C 0.10M U H 1965WHa (89823)3892  
DH(K1)=-14.2 kJ mol-1, DS=188 J K-1 mol-1  
-----

Co++ gl KNO3 20°C 0.10M U H K1=12.28 1964ANa (89824)3893  
K(Co+HL)=7.98  
K(Co+CoL)=3.3  
By calorimetry: DH(K1)=-11.8 kJ mol-1, DS=194 J K-1 mol-1  
-----

Co++ gl KNO3 20°C 0.10M U K1=12.50 1963FCa (89825)3894  
K(Co+HL)=7.99  
-----

Co++ EMF KNO3 25°C 0.10M U K1=12.3 1960HRa (89826)3895  
\*\*\*\*\*  
C14H25N3O7 H3L (5397)  
1-Oxa-4,7,10-triazacyclododecane-4,7,10-triethanoic acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M U K1=19.54 1988ADa (90077)3896  
K(Co+HL)=10.57  
-----

\*\*\*\*\*  
C14H25N5 L CAS 80251-43-0 (5459)  
3,6,10,13,19-Pentaazabicyclo[13.3.1]nonadecane-1(19),15,17-triene;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 35°C 0.20M U M K1=13.96 1982KKb (90128)3897  
Ternary complex with O2  
-----

\*\*\*\*\*  
C14H25N7 L (1872)  
1,11-Bis(2-imidazolyl)-2,6,10-triazaundecane;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 1.00M U M K1=11.55 1979HTa (90135)3898  
K(2CoL+O2=CoL.O2.CoL)=8.6  
-----

Co++ gl KNO3 25°C 0.10M C K1=11.55 1978THb (90136)3899  
K(2CoL+O2=CoL.O2.CoL)=8.63  
-----

By polarography: K(CoL+O2)=8.3  
-----

\*\*\*\*\*  
C14H25N7 L (1871)  
1,11-Bis(4-imidazolyl)-2,6,10-triazaundecane;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ cal KNO3 25°C 0.1M C H K1=11.36 1982TMc (90148)3900  
DH(K1)=-38.5 kJ mol-1  
-----

Co++ cal KNO3 25°C 0.10M C 1982Tmd (90149)3901  
DH1=-38.6 kJ/mol

Co++ gl KNO3 25°C 1.00M U M K1=11.36 1979HTa (90150)3902  
K(2CoL+O2=CoL.O2.CoL)=9.5

Co++ gl KNO3 25°C 0.10M C K1=11.36 1978THb (90151)3903  
K(CoL+H)=3.99  
K(2CoL+O2=CoL.O2.CoL)=9.49

By polarography: K(CoL+O2)=9.4

\*\*\*\*\*

C14H26N2O7 H2L (1567)  
1,4,10-Trioxa-7,13-diazacyclopentadecane-N,N'-diethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

Co++ cal R4N.X 25°C 0.10M U H 1989DSa (90169)3904  
DH(CoL)=-15.1 kJ mol<sup>-1</sup>; DS=213.

Co++ gl R4N.X 25°C 0.10M C K1=13.72 1987DDb (90170)3905  
B(Co2L)=16.37

\*\*\*\*\*

C14H26N4O6 H2L (4690)  
Hexanoic acid bis(3-hydroxycarbamoyl-propyl)amide;  
HONHCO(CH2)3NHCO(CH2)4CONH(CH2)3COHNOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

Co++ gl KCl 25°C 0.20M C K1=7.89 1999FEa (90262)3906  
B(CoHL)=14.43  
B(Co2L3)=21.91

\*\*\*\*\*

C14H27N3O5 H2L (6473)  
1-Oxa-4,8,12-triazacyclotetradecane-4,12-diethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

Co++ gl R4N.X 25°C 0.10M U K1=11.81 1992CDa (90286)3907  
B(CoHL)=15.7

Medium: 0.10 M (NMe4)NO3.

\*\*\*\*\*

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

Co++ gl R4N.X 25°C 0.05M C K1=4.5 1997BCc (90342)3908  
Medium: 0.05 M Me4NClO4

Co++ gl alc/w 25°C 100% U K1=6.38 1985BUd (90343)3909

Medium: MeOH, water content approx. 0.1 M. Without supporting electrolyte.  
 \*\*\*\*\*

C14H28N4O2 L CAS 63972-22-5 (5496)  
 6-Butyl-1,4,8,11-tetraazacyclotetradecane-5,7-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	35°C	0.20M	U	M		B(CoH-2L)=-12.32	1983MKb (90500)	3910

Ternary complex with dioxygen: B(Co2H-4L2(O2))=-9.03

\*\*\*\*\*  
 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
Co++	cal	alc/w	25°C	100%	U	H		K1=3.59	1985BUd (90608)	3911

Medium: MeOH, 0.05 M Et4N.NO3. DH=+8.4 kJ mol-1

\*\*\*\*\*  
 C14H30N2O5 L (6722)  
 7,13-Bis(2-hydroxyethyl)-1,4,10-trioxa-7,13-diazacyclopentadecane

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C			K1=6.62	1995LLa (90624)	3912

Medium: Et4NClO4

\*\*\*\*\*  
 C14H30N4O2 H2L (316)  
 4,4,9,9-Tetramethyl-5,8-diazadodecane-2,11-dione dioxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.10M	C			K(Co+H2L=CoHL+H)=-0.58	1976KPa (90671)	3913

K(Co+HL)=11.7  
 K(CoHL+OH)=3.32

\*\*\*\*\*  
 C14H32N2O4 L CAS 102-60-3 (2678)  
 Tetra(2-hydroxypropyl)-N,N,N',N'-diaminoethane; (-CH2.N(CH2.CH(OH).CH3)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.50M	C			K1=6.22	1979OSb (90738)	3914

B(CoH-1L)=-2.94  
 B(CoH-2L)=-13.05

Co++	sp	NaClO4	25°C	0.10M	U			K1=6.1	1970RMa (90739)	3915
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Co++	gl	oth/un	25°C	0.50M	U			K1=6.33	1960HDa (90740)	3916
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Co++ gl oth/un 27°C 0.05M U K1=5.7 1959KEc (90741)3917  
\*\*\*\*\*

C14H32N4 L 4-Mecyclam-14 CAS 41203-22-9 (935)  
1,4,8,11-Tetramethyl-1,4,8,11-tetraazacyclotetradecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaNO3 25°C 0.10M U M K1=7.58 1983Nwa (90799)3918  
K(CoL+OH)=6.75

-----  
Co++ sp oth/un 25°C 0.50M U HM 1982MPb (90800)3919  
K(CoL+A)=2.57

A=N3, DH=-5.6, DS=30.1. When: A=OCN, K=3.82, DH=-10.0, DS=39.9;  
A=SCN, K=3.07, DH=-13.7, DS=13.0; A=OH, K=5.28, DH=-23.8 kJ mol<sup>-1</sup>, DS=20.9

-----  
Co++ kin KNO3 25°C 0.50M U K1=10.9 1974HKb (90801)3920  
\*\*\*\*\*

C14H32N4 L CAS 63972-27-0 (5491)  
6-Butyl-1,4,8,11-tetraazacyclotetradecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 35°C 0.20M U M K1=10.15 1983MKb (90812)3921  
Ternary complex with dioxygen: B(Co2L2(O2))=27.86

-----  
C14H32N4O2 L CAS 252191-60-9 (7608)  
1,4-Bis(3-hydroxypropyl)-1,4,7,10-tetraazacyclododecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M C K1=9.7 1999Dwa (90817)3922  
K(CoL=CoH-1L+H)=-8.7

Medium: 0.1 M NEt4ClO4

-----  
C14H33N5 L CAS 34391-14-5 (5487)  
1,4,7,10,13-Pentaazacyclononadecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 35°C 0.20M U M 1983MKb (90826)3923  
K(Co+HL)=7.36

-----  
C14H36N4O12P4 H8L CAS 107446-90-2 (2015)  
1,4,7,11-Tetraazacyclotetradecane-N,N',N'',N'''-tetramethylphosphonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 1.00M U 1988MKb (90867)3924  
B(2Co+L)=22.4  
K(2Co+HL)=19.5

K(Co+CoL)=7.10  
K(Co+CoHL)=5.91

-----  
Co++ gl KNO3 25°C 1.00M U K1=15.3 1987PBa (90868)3925  
K(Co+HL)=13.6  
K(Co+H2L)=10.9  
K(Co+H3L)=7.1

\*\*\*\*\*  
C14H36N6 L TAPEN CAS 4879-98-5 (5715)  
N,N,N',N'-Tetrakis(3-aminopropyl)diaminoethane; (-CH2.N(CH2.CH2.CH2.NH2)2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl NaClO4 25°C 0.15M C K1=10.30 1994ABd (90896)3926  
K(CoL+H)=9.58  
K(CoHL+H)=8.00  
B(Co2H-2L)=-3.43

-----  
Co++ gl KNO3 25°C 0.50M M K1=10.96 1986GMA (90897)3927  
B(CoHL)=20.29  
B(CoH2L)=27.95  
B(CoH3L)=35.61

\*\*\*\*\*  
C14H37N7 L CAS 298-85-5 (5606)  
1,4,7,10,13,16,19-Heptaazacycloheicosane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl NaClO4 25°C 0.15M C K1=14.69 1989BBd (90910)3928  
B(CoHL)=19.96  
K(CoL+H)=5.27

\*\*\*\*\*  
C14H37N7 L (6456)  
2,5,8,11,14,17,20-Heptaazaheneicosane; CH3.(NH.(CH2)2)6.NH.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl NaClO4 25°C 0.15M C K1=13.99 1993BBE (90924)3929  
B(CoHL)=22.39  
B(CoH2L)=27.60

\*\*\*\*\*  
C15H10N4F6S HL CAS 50722-52-6 (5129)  
Di-3-trifluoromethylphenylthiocarbazonate; F3CC6H4.N:N.CS.NH.NH.C6H4CF3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl diox/w 25°C 50% U K1=3.48 1970AFb (90960)3930  
Medium: 50% dioxan, 0.1 M.

\*\*\*\*\*  
C15H10N6O3S3 L SPT CAS 748815-23-8 (9213)

5-(4'-Sulfonylazidophenylazo)-3-phenyl-2-thioxothiazolidin-4-one;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  alc/w  35°C  40%  C T H      K1=7.29  B2=12.75  2004MUa (90967)3931
Medium: 40% v/v EtOH/H2O, 0.1 M KCl. Data for 25 and 45 C. DH(K1)=32.55
kJ mol-1, DS(K1)=245 J K-1 mol-1; DH(K2)=30.63, DS(K2)=204.
*****
C15H10O3      HL      CAS 577-85-5 (3443)
3-Hydroxyflavone;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 20°C  75%  U      K1=9.91  B2=19.70  1960KFc (90976)3932
*****
C15H10O7      H5L      Morin      CAS 104363-16-8 (5100)
2',3,4',5,7-Pentahydroxyflavone;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  alc/w  25°C  50%  U      1983NGa (91005)3933
K(Co+H3L)=3.83
Medium 0.1 M NaClO4 in 50% v/v EtOH/w
*****
C15H10O7      H5L      Quercetin  CAS 117-39-5 (5101)
3,5,7-Trihydroxy-2-(3',4'-dihydroxyphenyl)-1-benzopyran-4-one;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3  20°C  0.10M C      K1=8.37      1991ESa (91018)3934
K(CoL+H)=9.22
K(CoHL+H)=7.93
-----
Co++      gl  alc/w  25°C  50%  U      1983NGa (91019)3935
K(Co+H4L)=4.36
Medium 0.1 M NaClO4 in 50% v/v EtOH/w
*****
C15H11NO      HL      CAS 6961-25-7 (4059)
8-Hydroxy-2-phenylquinoline;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 25°C  50%  U      K1=7.75      1954JFa (91046)3936
*****
C15H11NO2      H2L      (430)
2-(2'-Hydroxyphenyl)-8-hydroxyquinoline; HO.C6H4.C9H5N.OH
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 25°C  50%  U      K1=15.42     1974CCb (91055)3937
-----
```

\*\*\*\*\*

C15H11NO2 HL (5109)  
2-Benzofuran phenyl ketoxime; C8H5O.C(:N.OH).C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	oth	alc/w	30°C	80%	U			K1=5.08 B2=9.92	1972Smb	(91067)3938

\*\*\*\*\*

C15H11NO4 HL CAS 1776-18-7 (955)  
3-Phenyl-1-(2'-hydroxy-5'-nitrophenyl)-2-propen-1-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	35°C	70%	U			K1=5.46 B2=9.64	1982SLb	(91074)3939

\*\*\*\*\*

C15H11N2OCl HL CAS 38371-80-1 (8337)  
3(5)-(2-Hydroxyphenyl)-5(3)-(4-chlorophenyl)pyrazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	35°C	60%	U	H		K1=5.20 B2= 9.94	1993ALb	(91102)3940

Medium: 60% v/v MeOH/H2O, 0.1 M KNO3. DH(K1)=-134 kJ mol-1, DS(K1)=-335 J K-1 mol-1; DH(K2)=-86, DS(K2)=-189.

\*\*\*\*\*

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
Co++	gl	alc/w	20°C	50%	M			K1=4.38	1995AMb	(91145)3941

Medium: 50% v/v EtOH/H2O, 0.20 M NaClO4.

\*\*\*\*\*

Co++	sp	non-aq	25°C	100%	U			K1=4.87 B2=8.22	1981AWa	(91146)3942
------	----	--------	------	------	---	--	--	-----------------	---------	-------------

Medium: hexamethylphosphoric triamide

\*\*\*\*\*

Co++	cal	KNO3	25°C	0.10M	C	H			1977KNa	(91147)3943
------	-----	------	------	-------	---	---	--	--	---------	-------------

DH(K1)=-44.6 kJ mol-1, DS(K1)=32 J K-1 mol-1; DH(K2)=-49.0, DS(K2)=10.

\*\*\*\*\*

Co++	sp	NaCl	25°C	0.24M	U	H			1969PPc	(91148)3944
------	----	------	------	-------	---	---	--	--	---------	-------------

K(Co+H2L=CoL+2H)=1.49  
K(CoL+H2L=CoL2+2H)=1.09  
DH(CoL)=-60.6 kJ mol-1, DS=-176 J K-1 mol-1; DH(CoL2)=-19.7, DS=-46

\*\*\*\*\*

Co++	kin	oth/un	25°C	var	U			K1=8.4 B2=18.3	1966HHa	(91149)3945
------	-----	--------	------	-----	---	--	--	----------------	---------	-------------

\*\*\*\*\*

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
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\*\*\*\*\*



Co++ sol oth/un 20°C ? U B2=>5 1986YAa (91201)3946  
 -----  
 Co++ sp oth/un 20°C ? U B2=>5.0 1982YAa (91202)3947  
 -----  
 Co++ sp NaCl04 19°C 0.10M U B2=25.77 1972BEb (91203)3948  
 -----  
 Co++ sp oth/un 20°C 0.05M U K1=12.15 B2=24.16 1967NAa (91204)3949  
 -----

Co++ gl diox/w 25°C 50% U K1=>12 1962CYa (91205)3950  
 \*\*\*\*\*  
 C15H11N30 HL CAS 4312-09-8 (989)  
 5-Phenylazo-8-hydroxyquinoline; C6H5.N:N.C9H5N.OH  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U		K1=8.8 B2=16.74	1965TFa (91265)	3951
Medium: 50% dioxan, 0.1 M NaCl04									
*****									
C15H11N302		H2L					(5110)		
1,3-Dihydroxy-4-(8'-quinolinylazo)benzene;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	NaCl04	?	0.10M	U			1969IBb (91274)	3952
K(Co+2H2L=Co(HL)2+2H)(?)=-2.10									
*****									
C15H11N302		H2L					(4062)		
8-Hydroxy-5-(2'-hydroxyphenylazo)quinoline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U		K1=8.3 B2=16.12	1965TFa (91279)	3953
Medium: 50% dioxan, 0.1 M NaCl04									
*****									
C15H11N302		H2L					CAS 4563-87-5 (4063)		
8-Hydroxy-5-(3'-hydroxyphenylazo)quinoline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U		K1=8.8 B2=16.98	1965TFa (91286)	3954
Medium: 50% dioxan, 0.1 M NaCl04									
*****									
C15H11N302		H2L					CAS 5087-35-4 (4064)		
8-Hydroxy-5-(4'-hydroxyphenylazo)quinoline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U		K1=9.1 B2=17.19	1965TFa (91293)	3955
Medium: 50% dioxan, 0.1 M NaCl04									
*****									

C15H11N3O2 L CAS 74378-23-7 (2745)  
Phenanthrenequinone monosemicarbazone; C14H8(:O)(:N.NH.CO.NH2)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaCl04 25°C 0.10M C TIH K1=6.48 B2=12.36 1985SMa (91302)3956  
\*\*\*\*\*

C15H11N3O2S2 HL (5083)  
3-Phenyl-5-(2-hydroxyphenylazo)-2-thioxo-4-thiazolidinone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp alc/w 25°C 50% U B2=11.37 1972TBa (91313)3957  
Medium: 50% MeOH, 0.04 M KCl  
\*\*\*\*\*

C15H11O2Cl HL CAS 1218-24-2 (953)  
3-Phenyl-1-(2'-hydroxy-5'-chlorophenyl)-2-propen-1-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 35°C 70% U K1=4.7 B2=9.10 1978SLb (91384)3958  
\*\*\*\*\*

C15H12N2O HL CAS 19726-12-6 (8336)  
3-(2'-Hydroxyphenyl)-5-phenylpyrazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 35°C 60% U H K1=5.68 B2=11.12 1993ALb (91432)3959  
Medium: 60% v/v MeOH/H2O, 0.1 M KNO3. DH(K1)=-153 kJ mol-1, DS(K1)=  
-389 J K-1 mol-1; DH(K2)=-102, DS(K2)=-227.  
\*\*\*\*\*

C15H12OS HL (1261)  
mono-Thiodibenzoylmethane; C6H5.CO.CH2.CS.C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 75% U B2=16.0 1968MSa (91485)3960  
Medium: 75% dioxan, 0.05 M NaCl04  
\*\*\*\*\*

C15H12O2 HL Diphenylacac CAS 120-46-7 (362)  
1,3-Diphenylpropane-1,3-dione, Dibenzoylmethane; C6H5.CO.CH2.CO.C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=10.35 B2=20.05 1953UFe (91534)3961  
\*\*\*\*\*

C15H12O2 HL CAS 1214-47-7 (951)  
3-Phenyl-1-(2'-hydroxyphenyl)-2-propen-1-one, 2'-hydroxychalkone;  
C6H5.CH:CH.CO.C6H4.OH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl diox/w 30°C 60% U K1=7.72 B2=14.20 1975KKc (91575)3962  
\*\*\*\*\*  
C15H12O3 H2L CAS 1469-94-9 (3445)  
2-Hydroxydibenzoylmethane; HO.C6H4.CO.CH2.CO.C6H5  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl diox/w 30°C 70% U 1996SNa (91602)3963  
K(Co+HL)=8.65  
K(CoHL+HL)=7.75

Medium: 70% v/v dioxane/H2O, 1.0 M NaClO4.

-----  
Co++ gl diox/w 30°C 75% U K1=9.65 B2=18.74 1955HOa (91603)3964  
\*\*\*\*\*  
C15H13NOS L CAS 13196-40-2 (2832)  
Benzoylthioacetanilide; C6H5.CO.CH2.CS.NH.C6H5  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ vlt KCl 25°C 1.0M U B2=9.04 1982LUa (91619)3965  
\*\*\*\*\*  
C15H13NO2S H2L (6851)  
Benzoylacet-2-thioanilide; C6H5.CO.CH2.CO.NH.C6H4.SH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl oth/un 25°C 0.10M U K1=7.70 1990AIa (91649)3966  
Data also for analogues with OH and COOH in place of SH  
\*\*\*\*\*  
C15H13N3O HL CAS 104992-04-3 (6852)  
2-((1H-Benzimidazo-2-yl-methyl)-iminomethyl)phenol;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl alc/w 30°C 60% U M K1=8.55 B2=15.60 1990DOc (91661)3967  
K(Co(bpy)+L)=8.19  
K(Co(phen)+L)=8.14  
K(CoA+L)=7.97

A=2-phenylenediamine

-----  
Co++ gl NaClO4 30°C 0.10M U M 1990DPa (91662)3968  
K(CoL+catechol)=6.72  
K(CoL+Salicylate)=6.14  
K(CoL+Gly)=4.09  
K(CoL+Ala)=4.11

K(CoL+en)=4.83, K(CoL+diminopropane)=4.62

\*\*\*\*\*  
C15H13N5O2 HL BIAAP CAS 385824-97-5 (8021)

2-(2-Benzimidazolylazo)-4-acetamidophenol;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       sp none 25°C 0.0 C          K1=6.45      2001MEa (91677)3969
*****
C15H14NOCl      HL          CAS 268214-29-5 (8398)
4-Chloro-3,5-dimethyl-2-[(phenylimino)methyl]phenol;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl diox/w 30°C 75% M          K1=5.34      2000ANa (91686)3970
Medium: 75% v/v dioxan/H2O, 0.10 M NaClO4. Data for an extensive series of
4'-substituted phenylimino derivatives.
*****
C15H14NO3Cl     HL          CAS 113581-14-9 (9105)
N-(3-Chlorophenyl)-4-ethoxy-N-hydroxybenzamide;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl diox/w 25°C 50% C      M      K1=8.45      2001AMc (91703)3971
B(Co(gly)L)=15.10
Medium: 50% v/v dioxane/H2O
*****
C15H14N2O2      HL          (1393)
2-Hydroxy-5-methyl-4'-acetyl-azo-benzene; (HO)(CH3).C6H3.N:N.C6H4.CO.CH3
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       sp alc/w 25°C 0.10M U          K1=10.3 B2=14.01 1981MOB (91712)3972
*****
C15H14N2O4      H2L        CAS 61908-02-0 (3450)
N,N'-Methylenedi(anthranilic acid); HOOC.C6H4.NH.CH2.NH.C6H4.COOH
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl diox/w 35°C 50% U          K1=3.5      1958YSa (91722)3973
*****
C15H14N2O5S     HL          (9232)
3-(5-Sulphonylnaphthylazo)penta-2,4-dione;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl KCl 25°C 0.1M U      H      K1=7.39      2004ACb (91733)3974
for 35 C K1=7.24; for 45 C K1=7.06
*****
C15H14N4O       L          CAS 74126-81-1 (5435)
Di-(2-pyridyl)-N-methylimidazol-2-yl-methanol;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
```

-----  
Co++ gl KNO3 25°C 0.20M U K1=6.6 B2=12.80 1980BHa (91746)3975  
\*\*\*\*\*

C15H14O3 HL CAS 84-79-7 (3446)

2-Hydroxy-3-(3-methylbut-2-enyl)-1,4-naphthoquinone;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.57 B2=12.11 1960KFc (91772)3976  
\*\*\*\*\*

C15H14O3 HL (5102)

2-Hydroxy-4-benzyloxy acetophenone; C6H5.CH2.O.C6H3(OH).CO.CH3  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 27°C 75% U K1=8.07 B2=14.04 1973KDC (91778)3977  
Medium: 75% dioxan, 0.1 M NaClO4  
\*\*\*\*\*

C15H15NO5 H3L (5121)

(2-Hydroxy-1-naphthyl)methyl iminodiethanoic acid;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ EMF oth/un ? ? U K1=7.3 1971TTb (91879)3978  
\*\*\*\*\*

C15H15N3O5 L (5134)

1-Benzoyl-4-methylphenylthiosemicarbazide; C6H5.CO.NH.NH.CS.NH.C6H4.CH3  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp mixed 25°C 50% U B2=5.84 1969CFb (91880)3979  
Medium: 50% acetone  
\*\*\*\*\*

C15H15N3O2S L (5135)

1-Benzoyl-4-methoxyphenylthiosemicarbazide; C6H5.CO.NH.NH.CS.NH.C6H4.OCH3  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp mixed 25°C 50% U B2=6.13 1969CFb (91888)3980  
Medium: 50% acetone  
\*\*\*\*\*

C15H15N3O2S HL CAS 54270-74-5 (6179)

2-(2-Benzenesufonamido)ethylbenzimidazole; C6H5SO2NHCH(CH3)C7H5N2  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl mixed 20°C 50% M K1=6.05 B2=10.80 1988NRa (91894)3981  
Medium: 0.25 M NaClO4 in 50% acetone  
\*\*\*\*\*

C15H15N3O2S HL CAS 54220-74-5 (6180)

2-(3-Benzenesufonamido)ethylbenzimidazole; C<sub>6</sub>H<sub>5</sub>SO<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>C<sub>7</sub>H<sub>5</sub>N<sub>2</sub>

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	mixed	20°C	50%	M			K1=7.72 B2=13.47	1988NRa	(91903)3982

Medium: 0.25 M NaClO<sub>4</sub> in 50% acetone

Co++	gl	diox/w	30°C	50%	C	M		K1=6.31 B2=11.79 K(Co(gly)+L)=6.15 B(Co(gly)L)=11.85	1987MSd	(91904)3983
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Medium: 50% v/v dioxane/H<sub>2</sub>O, 0.2 M NaNO<sub>3</sub>.

\*\*\*\*\*  
 C15H16N2O2 HL CAS 7397-15-1 (6853)  
 Peonolphenylhydrazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	20°C	75%	U T			K1=12.78 B2=23.96	1991NNa	(91924)3984

30 C: K1=12.54, K2=10.97; 40 C: K1=12.32, K2=10.69

\*\*\*\*\*  
 C15H16N4O2 L CAS 219673-66-2 (7757)  
 N,N'-Bis[(2-pyridylmethyl)]-1,3-diamidopropane ;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	C			K1=1.75	1998CGa	(91949)3985

\*\*\*\*\*  
 C15H18N2 L CAS 25382-73-6 (5106)  
 1,5-Bis(2-pyridyl)-pentane; C<sub>5</sub>H<sub>4</sub>N.(CH<sub>2</sub>)<sub>5</sub>.C<sub>5</sub>H<sub>4</sub>N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO <sub>3</sub>	20°C	0.10M	U			K1=1 K(Co+HL) < 1	1970BAa	(92002)3986

\*\*\*\*\*  
 C15H18N2O3 HL CAS 116822-13-0 (6743)  
 5,5-Dimethylcyclohexane-2-(2-hydroxy-4'-methylphenyl)-hydrazono-1,3-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	20°C	75%	U T H			K1=14.22	1993RAa	(92015)3987

Medium: 75% v/v MeOH/H<sub>2</sub>O; 0.10 M KNO<sub>3</sub>. Data also for 4-Cl and 4-Me analogues  
 \*\*\*\*\*  
 C15H18N2O8 H4L CAS 1099-02-2 (1906)  
 1-Methyl-2,4-diaminobenzene-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C			K1=4.71 K(Co+HL)=2.65	1997DMa	(92051)3988

K(2Co+HL)=4.55  
 K(2Co+HL+L)=10.07  
 B(Co2L2)=12.16

\*\*\*\*\*

C15H18N2O8                      H4L                                      (1934)  
 1-Methyl-2,5-diaminobenzene-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	oth	oth/un	25°C	0.10M	U			K1=4.5 K(CoL+H)=5.8 K(CoHL+H)=3.9	1969RMa (92060)	3989

\*\*\*\*\*

C15H18N2O8                      H4L                                      CAS 95478-42-5 (1907)  
 1-Methyl-2,6-diaminobenzene-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	U			K1=2.27 B(CoHL)=8.24 B(Co2H2L)=14.82 B(Co2HL)=11.22 B(Co2HL2)=14.61	1992DRb (92069)	3990

B(Co2L2)=8.92

\*\*\*\*\*

C15H18N2O8                      H4L                                      (6114)  
 2,5-Toluenediamine-N,N'-disuccinic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.50M	C			K1=5.231 B(CoHL)=9.195 B(CoH2L)=12.687 B(Co2L)=6.395	1989FRa (92092)	3991

\*\*\*\*\*

C15H18N4O3                      HL                      His-Phe                      CAS 16874-81-0 (8702)  
 Histidyl-phenylalanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	C			K1=5.25    B2= 9.47	1987RKa (92103)	3992

\*\*\*\*\*

C15H18N4O4                      H2L                      His-Tyr                      CAS 35979-00-1 (8703)  
 Histidyl-tyrosine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	C			B2=8.54 B(CoHL)=14.72 B(CoH2L2)=28.32	1987RKa (92108)	3993

B(CoHL2)=18.64

\*\*\*\*\*

C15H20N2O7 H4L HBET (6954)  
N-(Hydroxobenzyl)diaminoethane-N,N',N'-triethanoic acid;  
HO.C6H4.CH2.N(CH2COOH)CH2CH2.N(CH2COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M C K1=16.97 1995MMa (92166)3994  
B(CoHL)=24.28  
B(CoH2L)=26.56

\*\*\*\*\*

C15H20N4 L DPTN CAS 63671-70-5 (1851)  
N,N'-Bis-(2-pyridylmethyl)-1,3-diaminopropane; (C5H4N.CH2.NH.CH2)2CH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U H K1=11.96 1975APc (92181)3995  
DH(K1)=-55.2 kJ mol<sup>-1</sup>, DS=29.3 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C15H22N2O3 HL Leu-Phe CAS 3063-05-6 (6366)  
Leucyl-phenylalanine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.20M U K1=2.10 B2=3.93 1990XJa (92212)3996

\*\*\*\*\*

C15H22N2O3 HL Phe-Leu CAS 3303-55-7 (6365)  
Phenylalanyl-leucine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.20M U K1=2.37 B2=3.28 1990XJa (92217)3997

\*\*\*\*\*

C15H22N2O4 H2L D-Leu-Tyr CAS 3303-29-5 (2166)  
D-Leucyl-L-tyrosine; H2N.CH(CH2.CH(CH3)2).CO.NH.CH(CH2.C6H4.OH).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 25°C 0.15M U 1960LMa (92226)3998  
K(Co+HL)=2.81  
K(Co+2HL)=5.07

\*\*\*\*\*

C15H22N2O4 H2L Leu-Tyr CAS 968-21-8 (530)  
Leucyl-tyrosine; H2N.CH(CH2.CH(CH3)2).CO.NH.CH(CH2.C6H4.OH).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 25°C 0.15M U 1960LMa (92240)3999  
K(Co+HL)=2.42



K(Co+2HL)=4.48

\*\*\*\*\*

C15H23N3O4 HL (5972)  
2,6-Bis(3-carboxy-1,2-dimethyl-2-azapropyl)pyridine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ oth oth/un 25°C 0.10M U K1=13.72 1988BPa (92295)4000  
Data also for 3-carboxy-azabutyl and 3-carboxy-4-methyl-2-azapentyl ligands.

\*\*\*\*\*

C15H23N3O4 H2L (6690)  
N,N'-((Pyridine-2,6-diyl)bis-methylene)bis-N-methylalanine;  
C5H3N(CH2.N(CH3)CH(CH3)COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaNO3 25°C 0.10M U K1=12.34 1992BSb (92300)4001

\*\*\*\*\*

C15H23N3O12 H6L CAS 21979-64-6 (4069)  
1,2,3-Tris(N,N-bis(carboxymethyl)amino)propane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M U M K1=13.8 1968MMb (92317)4002

K(Co+HL)=10.5

K(CoL+Ca)=2.05

\*\*\*\*\*

C15H24N4O10 H4L BAMTA CAS 95193-06-9 (5585)  
N,N'-Bis(2-aminoethyl)malonamide-N'',N''N''',N'''-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M C K1=10.05 1985SMc (92338)4003

K(CoL+H)=5.46

K(CoL+Co)=3.41

\*\*\*\*\*

C15H25N3O HL CAS 104197-25-3 (8061)  
2-(1,5,9-Triazacyclododec-2-yl)-phenol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 25°C 0.10M C K1=11.4 1986KMb (92358)4004

B(CoH-1L)=-1.65

\*\*\*\*\*

C15H26N4O L (7722)  
1,4,7,10-Tetraaza[12]-(2,6)anisolephane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.15M C K1=6.34 2000FFa (92423)4005

K(CoL+H)=7.86  
K(CoHL+H)=7.37  
K(CoL+OH)=3.66

Medium: 0.15 M Me4NCl.

\*\*\*\*\*

C15H27N3O7 H3L (7396)  
4,7,11-Tris(carboxymethyl)-1-oxa-4,7,11-triazacyclotridecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C			K1=17.393 K(CoL+H)=3.52	1997CCa (92477)	4006

Medium: Me4NNO3

\*\*\*\*\*

C15H30N2O3 L CAS 72640-82-5 (6040)  
4,7,13-Trioxa-1,10-diazabicyclo[8.5.5]eicosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C	I		K1=4.4	1991DLA (92515)	4007
In 95% v/v MeOH/H2O: K1=6.14										

\*\*\*\*\*

C15H32N4O2 HL (2307)  
4,4,9,9-Tetramethyl-5,8-diazadodecane-2,11-dione dioxime O-methyl ether

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.10M	C			K1=5.73 K(CoHL=CoL+H)=-8.73 K(CoHL+OH)=4.41	1978PRa (92550)	4008

\*\*\*\*\*

C15H36N09P3 L CAS 37909-50-5 (2634)  
(N,N-Dimethylamine)methylenetris(phosphonic acid diethyl ester);  
(CH3)2N.C(CH2.PO(OC2H5)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	con	non-aq	22°C	100%	U			K(CoCl2+L)=2.53	1981SKd (92601)	4009

Medium: acetone

\*\*\*\*\*

C16H9N2OBr3 HL CAS 84317-74-8 (5169)  
1-(2,4,6-Tribromophenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	mixed	25°C	75%	U			K1=7.24 B2=12.57	1972MCb (92645)	4010

Medium: 75% acetone, 0.1 M KNO3

\*\*\*\*\*

C16H11N2OBr HL CAS 7150-24-5 (5172)

1-(4-Bromophenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 75% U K1=7.84 B2=14.48 1972Mcb (92695)4011  
Medium: 75% acetone, 0.1 M KNO3  
\*\*\*\*\*  
C16H11N2OCl HL CAS 24390-65-6 (5170)

1-(2-Chlorophenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 75% U K1=7.48 B2=13.88 1972Mcb (92710)4012  
Medium: 75% acetone, 0.1 M KNO3  
\*\*\*\*\*  
C16H11N2OCl HL CAS 10149-93-6 (5171)

1-(4-Chlorophenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 75% U K1=7.76 B2=14.42 1972Mcb (92725)4013  
Medium: 75% acetone, 0.1 M KNO3  
\*\*\*\*\*  
C16H11N2OI HL CAS 25023-35-2 (5173)

1-(4-Iodophenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 75% U K1=7.97 B2=14.76 1972Mcb (92740)4014  
Medium: 75% acetone, 0.1 M KNO3  
\*\*\*\*\*  
C16H11N2O2Cl H2L CAS 3566-94-7 (3474)

1-(5-Chloro-2-hydroxyphenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=21.82 1952SNa (92757)4015  
\*\*\*\*\*  
C16H11N3O3 HL CAS 6410-09-9 (5151)

1-(2-Nitrophenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 75% U K1=4.46 B2=7.77 1972Mcb (92794)4016  
Medium: 75% acetone, 0.1 M KNO3  
\*\*\*\*\*  
C16H11N3O3 HL CAS 6410-46-1 (5152)

1-(4-Nitrophenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

-----  
Co++ gl mixed 25°C 75% U K1=5.02 B2=9.34 1972Mcb (92809)4017  
Medium: 75% acetone, 0.1 M KNO3

\*\*\*\*\*  
C16H11N3O4 HL (2910)  
1,3-Diphenyl-5-hydroxyimino-hexahydropyrimidine-2,4,6-trione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% C K1=5.34 B2=10.53 1978Mgb (92833)4018

\*\*\*\*\*  
C16H11N3O10S2 H4L (5174)  
2-Hydroxy-1-(2'-hydroxy-4'-nitro)phenylazo-3,6-disulfonaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp oth/un 25°C ? U 1971RCd (92880)4019

K(?)=4.72

\*\*\*\*\*  
C16H11N5O HL (6785)  
5-(4-Benzimidazolylazo)-8-hydroxyquinoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaCl 25°C 0.10M M K1=7.70 B2=12.91 19910Ea (92888)4020

\*\*\*\*\*  
C16H12N2O HL CAS 842-07-9 (5156)  
1-Phenylazo-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl mixed 25°C 75% U K1=8.76 B2=16.20 1972Mcb (92915)4021  
Medium: 75% acetone, 0.1 M KNO3

\*\*\*\*\*  
C16H12N2O2 H2L CAS 9486-98-2 (3462)  
1-(2-Hydroxyphenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl mixed 25°C 75% U 1972Mcb (92946)4022

K(Co+HL)=9.04  
K(CoHL+HL)=8.24

Medium: 75% acetone, 0.1 M KNO3

\*\*\*\*\*  
C16H12N2O2 H2L CAS 14934-27-1 (5157)  
1-(4-Hydroxyphenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl mixed 25°C 75% U 1972Mcb (92967)4023



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	oth/un	30°C	?	U		K1=12.48	1964PCa (93181)	4030
*****									
C16H13N3O			HL				(4077)		
3-(2'-Hydroxyphenyl)-1-quinoly-1,2-diazaprop-2-ene;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	25°C	50%	U		K1=6.3 B2=11.7	1967And (93276)	4031
Medium: 50% MeOH, 0.1 M NaClO4									
*****									
C16H13N3O			L				(5417)		
Tri-(2-pyridyl)-methanol; (C5H4N)3C.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.20M	U		K1=6.4 B2=11.50	1980BHa (93281)	4032
*****									
C16H13N4OBr			HL				CAS 25779-60-6 (4100)		
4-(2'-Bromophenylazo)-1-phenyl-5-methylpyrazol-3(2H)-one;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=5.6 B2=11.45	1967SSg (93299)	4033
*****									
C16H13N4OBr			HL				(3480)		
4-(3-Bromophenylazo)-3-methyl-1-phenyl-5-pyrazolone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=6.1 B2=13.5	1959SKc (93306)	4034
*****									
C16H13N4OBr			HL				CAS 17040-97-0 (3481)		
4-(4-Bromophenylazo)-3-methyl-1-phenyl-5-pyrazolone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=6.4 B2=13.3	1959SKc (93313)	4035
*****									
C16H13N4OCl			HL				CAS 6407-74-5 (4097)		
4-(2'-Chlorophenylazo)-1-phenyl-5-methylpyrazol-3(2H)-one;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=5.9 B2=12.07	1967SSg (93319)	4036
*****									
C16H13N4OCl			HL				(3478)		
4-(3-Chlorophenylazo)-3-methyl-1-phenyl-5-pyrazolone;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=6.1 B2=13.3	1959SKc (93326)	4037
*****										
C16H13N4OCl			HL					CAS 15095-25-7	(3479)	
4-(4-Chlorophenylazo)-3-methyl-1-phenyl-5-pyrazolone;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=6 B2=13	1957SFa (93332)	4038
*****										
C16H13N4OF			HL					CAS 125910-81-8	(4105)	
4-(2'-Fluorophenylazo)-1-phenyl-5-methylpyrazol-3(2H)-one;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=6.1 B2=13.09	1967SSg (93338)	4039
*****										
C16H13N4OI			HL					(4103)		
4-(2'-Iodophenylazo)-1-phenyl-5-methylpyrazol-3(2H)-one;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=5.2 B2=10.87	1967SSg (93348)	4040
*****										
C16H13N4OI			HL					(3482)		
4-(4-Iodophenylazo)-3-methyl-1-phenyl-5-pyrazolone;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=6.0 B2=13.6	1959SKc (93356)	4041
*****										
C16H13N5O3			HL					CAS 42939-98-0	(3464)	
3-Methyl-4-(3-nitrophenylazo)-1-phenyl-5-pyrazolone;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=5.8 B2=13.2 K3=5.3	1959SKc (93362)	4042
*****										
C16H13N5O3			HL					CAS 4702-91-4	(3465)	
3-Methyl-4-(4-nitrophenylazo)-1-phenyl-5-pyrazolone;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=5.3 B2=11.8 K3=5.3	1957SFa (93367)	4043
*****										
C16H13N5O3			HL					CAS 61550-69-0	(4078)	
5-Methyl-4-(2'-nitrophenylazo)-1-phenyl-pyrazol-3(2H)-one;										

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=6.1 B2=12.57 1967SSg (93373)4044  
\*\*\*\*\*  
C16H13N5O3 HL CAS 17041-01-9 (4079)  
5-Methyl-4-(3'-nitrophenylazo)-1-phenyl-pyrazol-3(2H)-one;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=7.0 B2=14.08 1967SSg (93379)4045  
\*\*\*\*\*  
C16H13N5O3 HL CAS 17041-02-0 (4080)  
5-Methyl-4-(4'-nitrophenylazo)-1-phenyl-pyrazol-3(2H)-one;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=6.5 B2=13.35 1967SSg (93385)4046  
\*\*\*\*\*  
C16H13N5O4 HL CAS 75272-98-9 (8459)  
2,4-Dihydro-4-[(2-hydroxyphenyl)azo]-5-methyl-2-(4-nitrophenyl)-3H-pyrazol-3-one;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 70% U K1=12.11 B2=21.22 1994RAb (93390)4047  
Medium: 70% v/v EtOH/H2O, 0.1 M NaCl.  
\*\*\*\*\*  
C16H14N2O HL (1318)  
2-(2-Hydroxynaphthyliminomethyl)pyridine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% A K1=8.03 1981RUa (93411)4048  
Medium: 50% dioxan, 0.1 M NaClO4  
\*\*\*\*\*  
C16H14N2O2 H2L CAS 36458-47-6 (5158)  
2-(2-Hydroxyphenylaminomethyl)-8-hydroxyquinoline;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U 1972HUa (93425)4049  
K(Co+HL)=8.06  
K(CoHL+HL)=8.02  
Medium: 50% v/v dioxan, 0.1 M KCl  
\*\*\*\*\*  
C16H14N2O2S HL CAS 98809-36-0 (1682)  
8-(4-Toluenesulfonamido)quinoline; CH3C6H4SO2NHC9H6N  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----



Co++ gl diox/w 30°C 75% U K1=9.9 B2=18.6 1984NYa (93433)4050  
\*\*\*\*\*

C16H14N4O HL CAS 53847-70-4 (3466)  
3-Methyl-4-phenylazo-1-phenyl-5-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.7 B2=14.25 1957SFa (93453)4051  
\*\*\*\*\*

C16H14N4O HL CAS 98809-14-1 (4081)  
5-Methyl-4-phenylazo-1-phenyl-pyrazol-3(2H)-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.90 B2=14.00 1967SSg (93459)4052  
\*\*\*\*\*

C16H14N4O2 H2L (3467)  
5-Hydroxy-4-(2-hydroxyphenylazo)-3-methyl-1-phenylpyrazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp alc/w 25°C 100% U K1=4.87 B2=8.85 1991EHa (93469)4053  
Medium: EtOH. Data also for other analogues

-----  
Co++ gl diox/w 30°C 75% U K1=16.62 1952SNa (93470)4054  
K(Co+H2L=CoL+2H)=-7.1  
\*\*\*\*\*

C16H14N4O4S HL (5183)  
3-Methyl-1-phenyl-4-(2-sulfophenylazo)-5-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=9.08 1969SSc (93492)4055  
\*\*\*\*\*

C16H14N4O4S HL (5185)  
3-Methyl-1-phenyl-4-(4-sulfophenylazo)-5-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.36 B2=12.36 1969SSc (93497)4056  
\*\*\*\*\*

C16H14N4O4S HL (5184)  
5-Methyl-1-phenyl-4-(2-sulfophenylazo)-3-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=9.11 1969SSc (93504)4057  
\*\*\*\*\*

C16H14N4O4S HL (5186)  
5-Methyl-1-phenyl-4-(3-sulfophenylazo)-3-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=7.36 B2=13.15 1969SSc (93514)4058  
\*\*\*\*\*  
C16H14N4O4S HL (5187)  
5-Methyl-1-phenyl-4-(4-sulfophenylazo)-3-pyrazolone;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=6.95 B2=12.61 1969SSc (93520)4059  
\*\*\*\*\*  
C16H14N4S HL CAS 83177-19-9 (674)  
3-Methyl-1-phenyl-4-(phenylazo)-pyrazol-5(2H)-thione;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=7.09 B2=16.39 1964STc (93526)4060  
\*\*\*\*\*  
C16H14O3 H2L CAS 29976-82-7 (8522)  
1-(2-Hydroxy-5-methylphenyl)-3-phenyl-1,3-propanedione;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 70% U 1996SNa (93538)4061  
K(Co+HL)=8.00  
K(CoHL+HL)=7.10  
Medium: 70% v/v dioxane/H2O, 1.0 M NaClO4.  
\*\*\*\*\*  
C16H14O3 HL CAS 41126-22-1 (3457)  
2-Methoxydibenzoylmethane; CH3.O.C6H4.CO.CH2.CO.C6H5  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=10.60 B2=20.04 1955H0a (93549)4062  
\*\*\*\*\*  
C16H14O3 HL CAS 3327-24-0 (956)  
3-(4''-Methoxyphenyl)-1-(2'-hydroxyphenyl)-2-propen-1-one;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 35°C 70% U K1=5.6 B2=10.80 1978SLb (93562)4063  
\*\*\*\*\*  
C16H15NO7 H4L (4082)  
N-(3-Carboxy-2-hydroxynaphthyl-1-ylmethyl)iminodiethanoic acid;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ EMF oth/un ? ? U K1=14.2 1975DTa (93627)4064  
-----

Co++ gl KCl 25°C 0.10M U K1=14.2 1975TRb (93628)4065  
K(Co+HL)=8.9

\*\*\*\*\*

C16H16N2O2 H2L CAS 94-93-9 (2101)

N,N'-Bis(salicylidene)ethylenediamine; (HO(C6H4)CH:NCH2-)<sub>2</sub>

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl alc/w 25°C 0.2M U 1999MTc (93675)4066

K(Co+HL)=4.70

Medium: 0.2 M KCl in 3:7 v/v H2O/EtOH

-----  
Co++ gl mixed 35°C 0.10M M K1=9.17 1998RJa (93676)4067

Medium: 80% (v/v) DMSO/H2O, 0.2 M KNO3.

-----  
Co++ sp non-aq 14°C 100% U HM 1977SSd (93677)4068

K(CoL+pyridine)=12.7

DH=-33 kJ mol<sup>-1</sup>. Data also for several substituted Salicylidine-imines

\*\*\*\*\*

C16H16N2O2S2 H2L (5188)

N,N'-Ethylene-bis(2-mercaptobenzamide); (HS.C6H4.CO.NH.CH2.)<sub>2</sub>

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp oth/un ? ? U 1966BVa (93686)4069

K(Co+H2L=CoL+2H)=5.92

-----  
C16H16N2O4 H2L (3469)

N,N'-Ethylene(dianthranilic acid); HOOC.C6H4.NH.CH2.CH2.NH.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 35°C 50% U K1=6.4 1958YSa (93698)4070

\*\*\*\*\*

C16H16N2O6S2 HL Cephalothin CAS 153-61-7 (9104)

3-(Acetoxymethyl)-8-oxo-7-(2-thienylacetyl-amino)-5-thia-1-azabicyclo[4.2.0]oct-2-ene-carboxylic

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 25°C 0.10M C K1=5.782 B2= 9.41 2001SGe (93710)4071

\*\*\*\*\*

C16H17N3O2S L CAS 40027-93-8 (5189)

1-Benzoyl-4-ethoxyphenylthiosemicarbazide; C6H5.CO.NH.NH.CS.NH.C6H4.O.CH2.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp mixed 25°C 50% U B2=7.34 1969CFb (93745)4072

Medium: 50% acetone

\*\*\*\*\*

C16H17N3O4S HL Cephalexin CAS 15686-71-2 (7748)  
7-(2-Aminophenylacetyl-amino)-3-methyl-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid.

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.10M U T M K1=5.90 B2=10.10 2000CCd (93757)4073  
K(CoL+ala)=5.56

Also data for 35 C. DH and DS values reported.

-----  
Co++ vlt KNO3 22°C 0.20M C K1=3.09 1990KSb (93758)4074  
Method: differential pulse polarography. Medium: 0.2 M KNO3, pH 7.3.

\*\*\*\*\*

C16H18N2O4S HL Penicillin G CAS 69-57-8 (942)  
Benzylpenicillin;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 30°C 50% U K1=5.20 B2=9.78 1980TSa (93805)4075  
Medium: 50% v/v acetone/H2O

\*\*\*\*\*

C16H18N2O5S HL Penicillin V CAS 87-08-1 (943)  
Phenoxy-methylpenicillinic acid, 4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 30°C 50% U K1=4.51 B2=8.70 1980TSa (93813)4076  
Medium: 50% v/v acetone/H2O

\*\*\*\*\*

C16H18N4 L trans-BPIC (9055)  
N,N'-Bis[1-(2-pyridyl)ethylidene]-1,2-diiminoethane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ dis non-aq 25°C 100% C M 20010Hb (93833)4077  
Method: distribution from buffered 0.10 M NaCl into nitrobenzene.

K(Co+3L(org)+2A=CoL3A2(org))=15.1. HA is picric acid.

\*\*\*\*\*

C16H18N4 L CAS 172665-46-2 (7699)  
N,N'-Dimethyl-1,10-phenanthroline-2,9-dimethanamine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaNO3 25°C 0.10M U K1=8.87 1999SZa (93838)4078  
B(CoHL)=15.47

Also data for the N-ethyl-, N-i-propyl- and N-t-butyl- derivatives.

\*\*\*\*\*

C16H18N4O L Prodipa CAS 219654-53-2 (7575)  
Proline-amido-bis(pyridin-2-yl)methane; C4H8NCONHCH(C5H4N)2

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl      25°C 0.20M C          K1=3.48      1998Vsa (93853)4079
                               B(CoH-1L)=-3.15
                               B(CoH-1L2)=-0.47
                               B(CoH-2L2)=-8.02

```

Additional method: esr.

```

*****
C16H18N4O3          HL          (5162)
3-(4-Antipyrinylazo)-pentane-2,4-dione;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp  NaClO4   ?  0.10M U          B(CoH2L2)=22.20
                               B(CoH4L2)=26.53

```

```

*****
C16H18O8S4          H4L          CAS 51865-21-5 (239)
1,2-Dimethylbenzene-tetrathioethanoic acid; C6H4(CH(S.CH2.COOH)2)2
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaClO4   25°C 0.10M U          K1=6         1974Jba (93885)4081
*****
C16H19NO          HL          (6251)
4-(2-Methyl-2'-hydroxy-5'-methylbenzalamino)toluene;
CH3.C6H4.NH.CH(CH3).C6H3(OH).CH3
-----

```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w  30°C 60% U          K1=6.50  B2=10.95  1979PJa (93908)4082
*****
C16H19N3O4S          HL  Cephadrine      CAS 38821-53-3 (8402)
7-[D-a-Amino-(1,4-cyclohexadienyl)acetamide]-3-desacetoxycephalosporanic acid;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3   25°C 0.10M M    M    K1=2.55      1995SSb (93922)4083
                               K(Co(bpy)+L)=2.89
*****
C16H19N3O4S          HL  Ampicillin      CAS 69-53-4 (6637)
D-alpha-Aminobenzylpenicillin;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3   37°C 0.10M U    M    K1=3.12      1997MGa (93940)4084
                               B(Co(bpy)L)=9.39
                               B(CoAL)=5.69
                               *K(Co(bpy)L)=-9.63

```

\*K(Co(bpy)H-1L)=-10.74

A is imidazole.

-----  
Co++ gl NaNO3 37°C 0.10M U K1=3.12 B2= 5.68 1994MGe (93941)4085  
\*K(CoL)=-9.40  
B(CoH-1L)=-6.28  
-----

Co++ gl NaNO3 25°C 0.2M U M K1=3.12 1993SHb (93942)4086  
B(CoH-1L)=-3.90

K(Co(bpy)+L)=3.09, K(Co(phen)+L)=3.01

\*\*\*\*\*

C16H19OP L CAS 4233-13-0 (5163)  
Butyldiphenylphosphine oxide; (C4H9)(C6H5)2P:O

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp non-aq 20°C 100% U M 1969SAc (93943)4087  
K(CoCl2+L)=3.37  
K(CoCl2+2L)=5.58

Medium: acetone

\*\*\*\*\*

C16H20N2 L (5146)  
1,6-Bis(2-pyridyl)-hexane; C5H4N.(CH2)6.C5H4N

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 20°C 0.10M U K1=1.6 1970BAa (93956)4088  
K(Co+HL)=1.3

\*\*\*\*\*

C16H20N2 L CAS 60508-97-6 (3458)  
N,N'-Dibenzylethylenediamine; C6H5.CH2.NH.CH2.CH2.NH.CH2.C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 50% U K1=5.22 1972GPb (93980)4089

\*\*\*\*\*

C16H20N2O2 H2L (4087)  
1,2-Bis(2'-hydroxybenzylamino)ethane; (HO.C6H4.CH2.NH.CH2.)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 25°C 0.10M U K1=12.78 1968GRa (93985)4090

\*\*\*\*\*

C16H20N2O2 L (2476)  
2,2'-(1,4-Butanediylbis(oxy))bisaminobenzene; H2N.C6H4.0(CH2)4O.C6H4.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 85% C T 1983HBa (93994)4091

K1 < 1.3

\*\*\*\*\*

C16H20N2O3 L (2477)  
1,4,7-Trioxaheptane-1,7-di(2-aminobenzene); (H2N.C6H4.OCH2CH2)2O

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 85% C T H K1=2.15 1983HBa (94002)4092  
DH(K1)=-31 kJ mol-1. At 20 C: K1=2.28; 30 C: 2.11

\*\*\*\*\*

C16H20N2O8 H4L CAS 6411-02-5 (1919)  
1-Phenyl-ethylenediamine-N,N,N',N'-tetraethanoic acid (DL)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 20°C 0.10M U K1=16.91 1989SLa (94025)4093

Co++ vlt KNO3 20°C 0.10M U K1=16.91 1969NDb (94026)4094

-----  
Co++ gl KCl 25°C 0.10M U K1=15.6 19670Tb (94027)4095

\*\*\*\*\*

C16H20N2O10 H6L (704)  
1,2-Dihydroxy-3,6-di-(methyleneiminodiethanoic acid)-benzene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M C K1=15.07 1988ZHa (94062)4096  
K(Co+H2L)=10.83  
K(Co+HL)=13.38  
K(CoHL+H)=8.58  
K(CoL+H)=10.18

B(Co2L)=25.7

\*\*\*\*\*

C16H20N2O10 H6L CAS 28021-27-4 (5166)  
1,4-Dihydroxyphenyl-2,5-bis(methyleneimino)-N,N,N',N'-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl oth/un 25°C 0.0 U 1970TTb (94074)4097  
K(Co+HL)=13.8  
K(Co+H2L)=10.1  
K(Co+H3L)=7.1  
K(2Co+HL)=22.4

\*\*\*\*\*

C16H20N2O10 H4L (4088)  
2,5-Bis(N-carboxymethyl-N-(2-hydroxyethyl)amino)benzene-1,4-dicarboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 22°C 0.10M U K1=7.85 1963UHa (94079)4098  
K(2Co+L)=13.00

K(Co+HL)=5.20  
K(Co+H2L)=2.30

\*\*\*\*\*

C16H21N3 L Pyribenzamine (3460)

2-(N-Benzyl-N-(2-dimethylaminoethyl)amino)pyridine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.06M U T H K1=3.42 B2=6.49 1962ALa (94111)4099  
At 0 C: K1=3.17, K2=2.87. DH(B2)=33 kJ mol<sup>-1</sup>, DS=226 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
Co++ gl diox/w 25°C 50% U T B2=6.34 1957LYa (94112)4100  
B2=5.84(0 C)

\*\*\*\*\*

C16H22N2O6P2 H4L CAS 85425-45-2 (5193)

2,2'-(Ethylenedi-imino)bis(2-hydroxybenzylphosphinic acid);

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.50M U K1=10.5 1972GTa (94140)4101  
K(Co+HL)=5.6  
K(Co+H2L)=3.1

\*\*\*\*\*

C16H22N2O6P2 H4L CAS 86857-07-0 (5192)

2,2'-(Ethylenedi-imino)bis(benzylphosphonic acid);

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.50M U K1=10.5 1972GTa (94150)4102  
K(Co+HL)=5.6  
K(Co+H2L)=3.1

\*\*\*\*\*

C16H22N2O7 HL (5385)

7-((Bis-2-hydroxyethyl)amino)-6-carboxy-4-2(-hydroxyethyl)-9-oxotetrahydro-8-benzo-1,6-oxazapine

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl oth/un 25°C 0.10M U K1=2.05 1973WUa (94155)4103

\*\*\*\*\*

C16H22N4 L CAS 28798-60-9 (4076)

1,2-Bis(2'-aminobenzylamino)ethane; (H2N.C6H4.CH2.NH.CH2.)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M U K1=7.0 1968GRa (94169)4104

\*\*\*\*\*

C16H22N4 L DPTE CAS 81747-99-1 (1852)

N,N-Bis-(2-pyridyl-methyl)-1,4-diaminobutane; (C5H4N.CH2.NH.CH2.CH2)2

-----



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U	H	K1=7.95	1975APc (94180)	4105
DH(K1)=-35.2 kJ mol <sup>-1</sup> DS=35.1 J K <sup>-1</sup> mol <sup>-1</sup>									
*****									
C16H22N4O			L				(5463)		
1,9-Bis(2-pyridyl)-2,8-diaza-5-oxanonane;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C		K1=9.84 K(CoL+H)=3.80	1982BTb (94188)	4106
*****									
C16H22N4O			L				(3471)		
2-(N-(2-Dimethylaminoethyl)-N-(4-methoxybenzyl)amino)pyrimidine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.06M	U	T H	K1=3.15 B2=6.30	1962ALa (94195)	4107
At 0 C: K1=3.46, K2=3.25. DH(B2)=-16 kJ mol <sup>-1</sup> , DS=59 J K <sup>-1</sup> mol <sup>-1</sup>									
*****									
Co++	gl	KCl	25°C	0.14M	U	T	B2=6.30	1957LYa (94196)	4108
B2=6.60(0 C)									
*****									
C16H22N4S			L				(1665)		
Bis(2-(2-pyridylmethylamino)ethyl) sulfide; (C5H4N.CH2.NH.CH2.CH2.)2S									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C	M	K1=11.75 K(CoL+H)=2.92	1982BTb (94211)	4109
Ternary complex with O2									
*****									
C16H22N6O			L				(5439)		
Tri-(4,5-dimethylimidazol-2-yl)-methanol;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.20M	U		K1=9.46	1980BHa (94218)	4110
in 1:1 acetone-water, K1=9.65, K2=8.93									
*****									
C16H22O2			HL				CAS 41070-31-9 (5147)		
2,4,6-Trimethylbenzoyl pivaloyl methane; (CH3)3.C6H2.CO.CH2.CO.C(CH3)3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=9.57 B2=18.63	1972UDa (94238)	4111
Medium: 75% v/v dioxan, 0.01 M Me4NClO4									
*****									
C16H23N5			L				CAS 58214-73-6 (2941)		

1,9-Bis-(2-pyridyl)-2,5,8-triazanonane; (C5H4N.CH2.NH.C2H4)2NH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	cal	KNO3	25°C	0.1M	C	H		K1=14.73	1982TMc	(94290)4112
DH(K1)=-58.7 kJ mol <sup>-1</sup>										
Co++	cal	KNO3	25°C	0.10M	C			DH1=-64.4 kJ/mol	1982TMD	(94291)4113
Co++	gl	KNO3	25°C	0.10M	C			K1=14.73 K(CoL+H)=2.28	1978HMa	(94292)4114
Co++	gl	KNO3	25°C	0.20M	U			K1=14.84 *K(CoL)=-11.51	1977EMa	(94293)4115

\*\*\*\*\*

C16H23N5O4 L (6969)  
12-(4-Nitrobenzyl)-1,4,7,10-tetraazacyclotridecane-11,13-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	30°C	0.10M	M			K1=5.66 B(CoH-1L)=-4.08 B(CuH-2L)=-11.90	1994LZa	(94298)4116

\*\*\*\*\*

C16H26N2O2 HL CAS 67224-31-1 (8358)  
4-Nonyloxybenzylamide oxime, N-Hydroxy-4-(nonyloxy)benzenecarboximidamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	mixed	22°C	70%	U			B2=15.90	1978MGd	(94551)4117
Medium: 0.1 M KNO3 in 70% (v/v) dioxane in H2O										

\*\*\*\*\*

C16H26N4O10 H4L DGBNTA CAS 95193-07-0 (5587)  
N,N'-Diglycyl-1,4-diaminobutane-N'',N''',N''',N'''-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C			K1=8.58 K(CoL+H)=5.42 K(CoL+Co)=5.17	1985SMc	(94619)4118

\*\*\*\*\*

C16H27N5O8 H3L (6621)  
1,4,7-Tris(carboxymethyl)-1,4,7,10,13-pentaazacyclopentadecan-9,14-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C			K1=12.3 B(CoHL)=16.8 B(CoH2L)=18.6	1996IOb	(94662)4119

B(CoH-1L)=0.9  
B(CoH-2L)=-9.7

\*\*\*\*\*

C16H28N2O8 H4L (5168)  
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-pentanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ vlt KNO3 20°C 0.10M U K1=16.0 1969NDc (94730)4120

\*\*\*\*\*

C16H28N2O8 H4L (5138)

1,2-Diaminooctane-N,N,N',N'-tetraethanoic acid;  
(HOOCCH2)2N.CH2.CH(C6H13)N(CH2COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ vlt KNO3 20°C 0.10M U K1=17.90 1979MBd (94756)4121

\*\*\*\*\*

C16H28N2O8 H4L (2850)

1,8-Diaminooctane-N,N,N',N'-tetraethanoic acid; ((HOOCCH2)2N(CH2)4)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 20°C 0.10M U H K1=12.91 1964ANa (94789)4122

K(Co+HL)=7.99

K(Co+CoL)=3.4

By calorimetry: DH(K1)=-19.9 kJ mol<sup>-1</sup>, DS=179 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

C16H28N4O4S HL d-Biocytyl CAS 576-19-2 (5195)

N(6)-d-Biotinyl-L-lysine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 25°C 0.10M U K1=4.10 1970GPa (94809)4123

\*\*\*\*\*

C16H28N4O8 H4L DOTA CAS 60239-18-1 (1017)

1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 25°C 0.01M C M K1=14.93 2003GRa (94863)4124

K(CoL+H)=6.14

K(CoL+2H)=4.10

B(CoH-1L)=4.46

B(CoH-2L)=-3.16

B(CoLA)=19.69, K(CoLA+H)=6.43, B(CoH-1LA)=-10.25.

A is 2,2':6',2"-terpyridine.

-----  
Co++ gl R4N.X 25°C 0.10M C K1=20.27 1992CDd (94864)4125

B(CoHL)=24.35

B(CoH2L)=27.73

Medium: 0.10 M Me4NNO3.

```
-----
Co++      gl  KCl   25°C 0.10M C      K1=19.3      1991CMB (94865)4126
                K(CoL+H)=5.35
                K(CoHL+H)=3.8
                *K(CoL)=-10.46
```

Method: batch potentiometry

```
-----
Co++      cal R4N.X 25°C 0.10M C  H      1984DFa (94866)4127
Medium: 0.10 M Me4NNO3. DH(K1)=-55.6 kJ mol-1, DS(K1)=201 J K-1 mol-1.
```

```
-----
Co++      gl  R4N.X 25°C 0.10M C      K1=20.17     1982DSa (94867)4128
                K(Co+HL)=12.08
                K(Co+H2L)=6.05
```

```
-----
Co++      EMF KCl   20°C 0.10M C      K1=18.4      1981SFa (94868)4129
Method: Pt/H2 electrode.
```

```
-----
Co++      gl  KCl   20°C 0.10M U      K1=18.42     1976SFb (94869)4130
*****
C16H29N3O7          H3L              (7395)
4,8,12-Tris(carboxymethyl)-1-oxa-4,8,12-triazacyclotetradecane;
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
```

```
-----
Co++      gl  R4N.X 25°C 0.10M C      K1=12.94     1997CCa (94950)4131
Medium: Me4NNO3
```

```
*****
C16H29N3O8          H3L              CAS 259211-79-5 (7775)
1,4-Dioxa-7,10,13-triazacyclopentadecane-7,10,13-triethanoic acid;
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
```

```
-----
Co++      gl  R4N.X 25°C 0.10M C      K1=16.47     2000CDd (94960)4132
                K(CoL+H)=3.99
                K(CoL+Co)=3.30
                K(Co2L+H)=3.95
```

Medium: 0.10 M (Me4N)NO3. \*K(CoL)=-8.9

```
*****
C16H29N3O8          H3L              (6699)
1,7-Dioxa-4,10,13-triazacyclopentadecane-N,N',N''-triethanoic acid;
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
```

```
-----
Co++      gl  KCl   25°C 0.10M C      K1=16.38     1993DSa (94971)4133
                K(CoL+H)=3.73
                B(Co2L)=18.11
                K(Co(OH)L+H)=11.20
```

\*\*\*\*\*

C16H30N2O8 H2L CAS 72912-01-7 (1568)  
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-N,N'-diethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M C H K1=7.983 1989DSa (95024)4134  
B(Co2L)=10.28

By calorimetry: DH(K1)=10.9 kJ mol<sup>-1</sup>; DS=188.

\*\*\*\*\*

C16H32N2O5 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  
-----

Co++ gl R4N.X 25°C 0.05M C K1=4.6 1997BCc (95170)4135  
Medium: 0.05 M Me4NClO4

Co++ gl alc/w 25°C 100% U K1=13.40 1985BUd (95171)4136  
Medium: MeOH, water content approx. 0.1 M. Without supporting electrolyte.

Co++ gl alc/w 25°C 95% C K1=5.92 1981ANa (95172)4137  
Medium: 95% MeOH, 0.1 M Me4NCl

-----  
Co++ gl R4N.X 25°C 0.10M C K1=5.40 1977ASc (95173)4138

\*\*\*\*\*

C16H32N6 L CAS 145883-53-0 (8899)  
2,6-Bis[[bis-(2-Aminoethyl)amino]methyl]benzene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.15M C K1=9.65 2002FGc (95342)4139  
B(CoHL)=18.32  
B(CoH2L)=26.93  
B(CoH-1L)=-1.09  
B(Co2L)=15.28

Medium: 0.15 M Me4NCl. B(Co2H-1L)=4.45, B(Co2H-2L)=-6.33.

\*\*\*\*\*

C16H32N6 L CAS 71277-17-3 (1874)  
Tetrakis(2-aminoethyl)-a,a'-diamino-4-xylene; C6H4.(CH2.N(CH2.CH2.NH2)2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M U M K(Co+H2L)=6.84 1979CMA (95348)4140  
B(Co2L)=14.58

Ternary complexes with ethylenediamine or glycine and dioxygen

-----  
Co++ gl KNO3 25°C 0.10M C M 1979NMA (95349)4141  
B(CoHL)=18.88  
B(CoH2L)=26.6

B(Co2L)=14.59  
B(Co2L(Gly))=23.38

B(Co2L(en))=23.32

\*\*\*\*\*

C16H32N6O HL CAS 303962-27-8 (7706)  
2,6-Bis[(bis(2-aminoethyl)amino)methyl]phenol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.15M C 2002FGc (95361)4142

B(CoHL)=22.46  
B(CoH2L)=27.52  
B(CoH-1L)=4.24  
B(Co2H-1L)=14.25

Medium: 0.15 M Me4NCl. B(Co2H-2L)=5.68, B(Co2H-3L)=-5.27.

-----  
Co++ gl R4N.X 25°C 0.15M C 2001CFa (95362)4143

K(Co+HL)=13.81  
K(CoHL+H)=8.65  
K(CoH2L+H)=5.06  
K(CoL+H)=9.57

K(CoL+Co=Co2L)=10.01, K(Co2L+OH)=5.16, K(Co2(OH)L+OH)=2.78.

Medium: 0.15 M NMe4Cl.

\*\*\*\*\*

C16H34N2O5 L (6953)  
7,13-Bis(2-methoxyethyl)-1,4,10-trioxa-7,13-diazacyclopentadecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M C K1=3.76 1995LLa (95410)4144

Medium: Et4NClO4

\*\*\*\*\*

C16H34N2O6 L CAS 69930-74-1 (1321)  
N,N'-Bis(2-hydroxyethyl)-1,7,10,16-tetraoxa-4,13-diazacyclooctadecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M C K1=2.80 1995LLa (95443)4145

Medium: Et4NClO4

\*\*\*\*\*

C16H34N4O2 L CAS 60598-04-1 (1530)  
4,7-Dimethyl-1,4,7,10-tetraaza-13,18-dioxabicyclo[8,5,5]eicosane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M U K1=9.9 1978LMa (95468)4146

\*\*\*\*\*

C16H36NCl L (1306)

Tetrabutylammonium chloride; (C4H9)4N+Cl-

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo	
Co++	sp	oth/un	25°C	?	U	M		1981SSb (95521)	4147	
							K(CoCl <sub>2</sub> (pyridine) <sub>2</sub> +LCl)=4.10			
							K(LCoCl <sub>3</sub> (pyridine)+LCl)=0.48			
							K(LCoCl <sub>3</sub> (2-Me-Py)+LCl)=1.18			
							K(CoCl <sub>2</sub> (3-Me-Py) <sub>2</sub> +LCl)=3.70			
							K(LCoCl <sub>3</sub> (3-Me-Py)+LCl)=0.27, K(CoCl <sub>2</sub> (4-Me-Py) <sub>2</sub> +LCl)=3.48,			
							K(LCoCl <sub>3</sub> (4-Me-Py)+LCl)=0.08. Data available for 4-Acetyl and 4-Cyanopyridine			
*****										
C16H36N4			L				CAS 54622-44-5	(147)		
5,5,7,12,12,14-Hexamethyl-1,4,8,11-tetraazacyclotetradecane;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	oth/un	25°C	0.10M	U	M		1990BEa (95534)	4148
							K(CoClL+O <sub>2</sub> )=2.75		
							K(CoSCNL+O <sub>2</sub> ) > 4.18		
							K(CoL+Cl)=0.58		
							K(CoL+SCN)=2.24		
Electrolytes: K(CoClL+O <sub>2</sub> ) in 1.0M NaCl, K(CoL+SCN) and K(CoLSCN+O <sub>2</sub> ) in 0.1M (LiClO <sub>4</sub> +LiSCN), K(CoL+Cl) in 0.50M (LiClO <sub>4</sub> +NaCl)									
*****									
C16H36N4O2			L				(7297)		
1,11-Bis(2-hydroxyethyl)-4,8-dimethyl-1,4,8,11-tetraazacyclotetradecane;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C		K1=8.19	1996BCc (95548)	4149
							B(CoH-1L)=1.86		
Medium: Et4ClO4									
*****									
C16H36N4O2			L				(7296)		
1,4-Bis(2-hydroxyethyl)-8,11-dimethyl-1,4,8,11-tetraazacyclotetradecane;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C		K1=8.3	1996BCc (95556)	4150
							B(CoH-1L)=2.1		
Medium: Et4ClO4									
*****									
C16H36N4O4			L				(6703)		
1,4,7,10-Tetrakis(2-hydroxyethyl)-1,4,7,10-tetraazacyclododecane;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	C		K1=6.0	1995TDa (95567)	4151
							K(Co+HL)=5.8		
							B(CoH-1L)=-2.5		
*****									

C16H38N6 L (6697)  
1,4,7,13-Tetramethyl-1,4,7,10,13,16-hexaazacyclooctadecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.15M C K1=13.14 1993BBa (95604)4152  
\*\*\*\*\*

C16H38N6O2 L O-BisDien CAS 43090-52-4 (5479)  
1,4,7,13,16,19-Hexaaza-10,22-dioxacyclotetracosane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M C M K1=2.93 1994MMa (95619)4153  
B(CoHL)=6.09  
B(Co2HLA)=23.00  
B(Co2LA)=15.39  
B(CoHLA)=20.33

B(CoH2LA)=27.47, B(CoH3LA)=33.55, B(Co2HLB)=27.74, B(CoH2LB)=31.49,  
B(CoH3LB)=38.79, B(CoH4LB)=44.75, B(CoH5LB)=51.67. H2A=H3PO3, H3B=H3PO4

-----  
Co++ gl KCl 25°C 0.10M C M K1=9.81 1992MMb (95620)4154  
\*K(Co2L)=-4.50  
K(CoL+H)=7.37  
K(CoHL+H)=6.27

Data also for mixed complexes with malonic acid, phosphoric acid, glycine  
and acetohydroxamic acid.

-----  
Co++ gl KCl 25°C 0.10M C M K1=15.01 1991MMa (95621)4155  
B(CoLA)=15.01  
B(CoHLA)=23.76  
B(CoH2LA)=29.79  
B(CoH3LA)=35.08

B(CoH-1LA)=4.74, B(Co2LA)=20.03, B(Co2H-1LA)=8.9, K(CoL+A)=5.28  
K(Co2LA+O2=Co2L(OH)A02+H)=-7.01. H2A=Dihydroxy malonic acid.

-----  
Co++ gl KCl 25°C 0.10M C M K1=10.35 1990SMb (95622)4156  
K(Co+HL)=8.74  
K(Co+H2L)=5.28  
K(Co+H3L)=4.74  
B(Co2L)=13.45

B(Co2LA)=25.75, B(Co2LB)=26.42. H2A=1,2-Dihydroxybenzene, H4B=1,2-dihydroxy-  
benzene-3,5-disulfonic acid. Other constants and O2 binding data also

-----  
Co++ gl KCl 25°C 0.10M C M K1=12.4 1988MMf (95623)4157  
B(Co2L)=12.4  
K(Co2L(O2)(OH)2+H)=8.25  
K(Co2L(O2)(OH)3+H)=9.36  
(Co2L(O2)OH)(H)/(Co2L)pO2=-3.3

K(CoHL+oxalate)=4.36; K(CoH2L+oxalate)=6.50; K(Co2L+oxalate)=9.06  
-----





Co++ gl NaClO4 25°C 0.01M U K1=8.43 1981GMe (95700)4163  
\*\*\*\*\*

C17H12N4O7S2 H3L (6784)  
2-(4-Benzimidazolylazo)-2-hydroxynaphthalene-3,6-disulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaCl 25°C 0.10M M K1=7.43 B2=12.24 19910Ea (95728)4164  
\*\*\*\*\*

C17H13NO3S H2L CAS 119516-70-0 (6185)  
7-Hydroxy-8((2-mercaptophenyl)iminomethyl)-4-methyl-2H-1-benzopyran-2-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 20°C 70% U T H K1=21.70 1988KOb (95747)4165  
25 C:K=20.56; 32 C: K=19.06; 45 C:K=16.32. DH=-382 kJ mol<sup>-1</sup>, DS=-888  
\*\*\*\*\*

C17H13N5O5 HL CAS 158728-44-0 (8460)  
2-[[4,5-Dihydro-3-methyl-1-(4-nitrophenyl)-5-oxo-1H-pyrazol-4-yl]azo]benzoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl alc/w 25°C 70% U K1=11.95 B2=21.95 1994RAb (95781)4166  
Medium: 70% v/v EtOH/H2O, 0.1 M NaCl.  
\*\*\*\*\*

C17H14N2O HL CAS 2046-17-5 (5214)  
1-(2-Methylphenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl mixed 25°C 75% U K1=9.45 B2=17.71 1972MCb (95792)4167  
Medium: 75% acetone, 0.1 M KNO3  
\*\*\*\*\*

C17H14N2O HL CAS 6756-41-8 (5215)  
1-(4-Methylphenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl mixed 25°C 75% U K1=9.82 B2=17.73 1972MCb (95807)4168  
Medium: 75% acetone, 0.1 M KNO3  
\*\*\*\*\*

C17H14N2O2 HL CAS 1229-55-6 (5216)  
1-(2-Methoxyphenylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl mixed 25°C 75% U K1=9.94 B2=18.98 1972MCb (95826)4169  
Medium: 75% acetone, 0.1 M KNO3  
\*\*\*\*\*

C17H14N2O2 HL CAS 13441-91-1 (5217)

1-(4-Methoxyphenylazo)-2-hydroxynaphthalene;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  mixed  25°C  75%  U           K1=9.32  B2=17.09  1972Mcb (95841)4170
Medium: 75% acetone, 0.1 M KNO3
*****
C17H14N2O2          L           CAS 4551-69-3 (698)
4-Benzoyl-3-methyl-1-phenyl-2-pyrazolin-5-one;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      dis non-aq 25°C 100%  U    M           1973AAb (95869)4171
           K(CoL2+py)=3.48
           K(CoL2+2py)=6.60
           K(CoL2+A)=2.69
           K(CoL2+2A)=4.23
Medium: benzene. K(CoL2+B)=3.52, K(CoL2+2B)=6.71; K(CoL2+C)=3.57,
K(CoL2+2C)=6.79. A=2-methylpyridine, B=3-methylpyridine, C=4-methylpyridine
-----
```

```
-----
Co++      dis non-aq 25°C 100%  U    M           1973AAb (95870)4172
           K(CoL2+A)=2.77
           K(CoL2+2A)=4.46
           K(CoL2+B)=2.23
           KCoL2+2B)=3.93
Medium: benzene. K(CoL2+C)=4.12, K(CoL2+2C)=8.1. A=2,4-dimethylpyridine,
B=2,6-dimethylpyridine, C=pyridine N-oxide
-----
```

```
-----
Co++      dis non-aq 25°C 100%  U    M           1973AAb (95871)4173
           K(CoL2+A)=3.74
           K(CoL2+B)=3.85
           K(CoL2+C)=3.74
           K(CoL2+D)=3.44
Medium: benzene. A=2-methylpyridine N-oxide, B=3-methylpyridine N-oxide,
C=4-methylpyridine N-oxide, D=2,6-dimethylpyridine N-oxide.
-----
```

```
*****
C17H14N2O5S          H3L    Calmagite          CAS 3147-14-6 (2875)
1-(1-Hydroxy-4-methyl-2-phenylazo)-2-naphthol-4-sulfonic acid;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp  NaClO4 25°C 0.30M U           K1=21.03  1969Kmb (95927)4174
*****
C17H14N4O          L           CAS 313254-53-4 (9127)
N-(Bis(2-pyridyl)methyl)pyridine-2-carboxamide;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.10M U           K1=5.15   2004GLb (95954)4175
           B(Co2H-2L2)=-3.61
-----
```

B(Co2H-3L2)=-14.43

\*\*\*\*\*

C17H14O2 HL CAS 6271-22-3 (8518)  
1,5-Diphenyl-4-pentene-1,3-dione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 28°C 0.10M M K1=7.40 B2=14.22 1998VKc (95959)4176  
Medium: 50% v/v dioxane/H2O, 0.2 M KCl. Data for 3',4'-substituted  
(HO-, CH3O-) derivatives.

\*\*\*\*\*

C17H14O3 HL (6843)  
1,1-Dibenzoylpropan-2-one; CH3.CO.CH(CO.C6H5)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 25°C 0.20M U K1=4.57 1992CMd (95964)4177

\*\*\*\*\*

C17H14O3 H2L CAS 1467-40-9 (795)  
1,5-Diphenylpentane-1,3,5-trione; C6H5.CO.CH2.CO.CH2.CO.C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl alc/w 25°C 70% C B(CoHL)=16.29 1985HWa (95975)4178

Medium: 70% v/v MeOH/H2O

-----  
Co++ gl diox/w 30°C 75% U K1=9.62 B2=18.13 1960KFc (95976)4179

\*\*\*\*\*

C17H15NO3 HL (6321)  
Benzoylacetoneanthranilic acid; C6H5.CO.CH2.C(CH3):N.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 50% U K1=6.82 B2=11.37 1975PNa (95985)4180

\*\*\*\*\*

C17H15N3OS HL (1292)  
2-(4',5'-Dimethyl-2-thiazolylazo)-4-phenylphenol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 60% U K1=8.22 B2=17.07 1981KTa (95993)4181

\*\*\*\*\*

C17H16N2O HL CAS 36458-48-7 (5219)  
2-(4-Tolylaminomethyl)-8-hydroxyquinoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 50% U K1=8.78 B2=16.84 1972HUb (96023)4182  
Medium: 50% v/v dioxan, 0.1 M KCl

\*\*\*\*\*

C17H16N4O HL (3487)  
3-Methyl-1-phenyl-4-(2-tolylazo)-5-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=8.2 B2=16.2 1959SKb (96051)4183  
\*\*\*\*\*

C17H16N4O HL (3488)  
3-Methyl-1-phenyl-4-(3-tolylazo)-5-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.3 B2=13.8 1959SKc (96055)4184  
\*\*\*\*\*

C17H16N4O HL (3489)  
3-Methyl-1-phenyl-4-(4-tolylazo)-5-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.5 B2=14.1 1957SFa (96059)4185  
\*\*\*\*\*

C17H16N4O HL (4112)  
4-(2'-Tolylazo)-1-phenyl-5-methylpyrazol-3(2H)-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.15 B2=12.34? 1967SSg (96065)4186  
\*\*\*\*\*

C17H16N4OS HL (4121)  
3-Methyl-4-(2'-methoxyphenylazo)-1-phenylpyrazol-5(2H)-thione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=11.3 B2=21.5 1964STc (96075)4187  
\*\*\*\*\*

C17H16N4OS HL (3494)  
3-Methyl-4-(2-methylthiophenylazo)-1-phenyl-5-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=8.6 B2=17.9 1959SKb (96081)4188  
\*\*\*\*\*

C17H16N4OS HL (4122)  
5-Methyl-4-(2'-methylthiophenylazo)-1-phenylpyrazol-3(2H)-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=8.7 B2=16.02 1967SSg (96087)4189  
\*\*\*\*\*

C17H16N4O2 HL CAS 15095-98-5 (4115)  
4-(2'-Methoxyphenylazo)-1-phenyl-5-methylpyrazol-3(2H)-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=8.8 B2=16.16 1967SSg (96095)4190  
\*\*\*\*\*

C17H16N4O2 HL CAS 37613-32-4 (3490)  
4-(4-Methoxybenzylazo-3-methyl-1-phenyl-5-pyrazolone);

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=6.4 B2=13.7 1959SKb (96104)4191  
K3=3.6

\*\*\*\*\*  
C17H16N4O2S HL CAS 202867-34-3 (7313)  
2-[2-(5-Methylbenzothiazolyl)azo]-5-dimethylaminobenzoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp alc/w RT 16% C 1998FZa (96108)4192  
B2eff=11.06

Medium: 16% EtOH/H2O, 0.5% sodium dodecyl sulfate.

\*\*\*\*\*  
C17H16O4 H2L CAS 29976-84-9 (8523)

1-(2-Hydroxy-5-methylphenyl)-3-(4-methoxyphenyl)-1,3-propanedione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 70% U 1996SNa (96125)4193  
K(Co+HL)=5.30  
K(CoHL+HL)=5.00

Medium: 70% v/v dioxane/H2O, 1.0 M NaClO4.

\*\*\*\*\*  
C17H16O4 H2L CAS 58134-82-0 (6193)

Benzoyl-2-hydroxy-4-methoxy-3-methylacetophenone;  
C6H5.CO.CH2.CO.C6H2(OH)(OCH3)(CH3)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 30°C 60% M I K1=6.23 B2=12.36 1991GDb (96142)4194  
Medium: 60%v/v acetone/water; 0.1M NaClO4; data also for 65% and 75%; for  
75% v/v dioxane/water and EtOH/water.

-----  
Co++ gl mixed 30°C 60% M I K1=6.23 B2=12.36 1991GDc (96143)4195  
Medium: 60%v/v acetone/water; 0.1M NaClO4; data also for 65% and 75%; for  
75% v/v dioxane/water and EtOH/water

-----  
Co++ gl alc/w 30°C 75% M TI K1=6.30 B2=11.38 1990DGc (96144)4196  
Medium: 75% v/v EtOH/H2O

\*\*\*\*\*

C17H16O4 HL CAS 18362-51-1 (3485)  
Di-2-methoxybenzoylmethane; CH3.O.C6H4.CO.CH2.CO.C6H4.O.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=10.32 B2=19.32 1955HOa (96170)4197  
\*\*\*\*\*

C17H16O6 HL (4111)  
2-Hydroxy-2',4',4'-trimethoxydibenzoyl; HO.C6H4.CO.CO.C6H2(OCH3)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 ? 0.10M U K1=5.15 B2=10.00 1963DSa (96180)4198  
\*\*\*\*\*

C17H17NO3 HL CAS 58434-59-6 (1213)  
2'-Hydroxy-4-methoxy-5'-methylbenzylidene acetophenone oxime

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=7.41 1983BSc (96189)4199  
Medium: 50% v/v dioxan/H2O, 0.2 M KNO3.  
\*\*\*\*\*

C17H18N2O2 H2L (6774)  
1,3-Bis(salicylaldimino)propane; CH2(CH2.N:CH.C6H4.OH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 35°C 0.10M M K1=9.10 1998RJa (96201)4200  
Medium: 80% (v/v) DMSO/H2O, 0.2 M KNO3.  
\*\*\*\*\*

C17H18N2O4 H2L CAS 59400-11-2 (3491)  
N,N'Trimethylenedianthranilic acid; HOOC.C6H4.NH.(CH2)3.NH.C6H4.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 35°C 50% U K1=5.0 1958YSa (96208)4201  
\*\*\*\*\*

C17H18N3O3F HL Ciprofloxacin CAS 189257-90-7 (7142)  
1-Cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-7[1-piperazinyl]-3-quinoline carboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.20M C 1996TBc (96222)4202

B(CoHL)=12.40  
B(CoH2L2)=24.96  
B(CoHL2)=17.65

\*\*\*\*\*

C17H18O2 HL (5207)

alpha-Naphthoyl pivaloyl methane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=9.71 B2=19.03 1972UDa (96234)4203  
Medium: 75% v/v dioxan, 0.01 M Me4NC104  
\*\*\*\*\*  
C17H18O2 HL (5208)  
beta-Naphthoyl pivaloyl methane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=9.95 B2=19.33 1972UDa (96239)4204  
Medium: 75% v/v dioxan, 0.01 M Me4NC104  
\*\*\*\*\*  
C17H19N3 L Antazoline CAS 91-75-8 (3486)  
2-(N-(Benzyl)-N-phenylaminomethyl)-1,4,5H-1,3-diazole, antistine;  
C3H5N2.CH2.N(C6H5)CH2.C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.06M U T H K1=3.96 B2=7.65 1962ALa (96262)4205  
At 0 C: K1=3.69, K2=3.41. DH(B2)=46 kJ mol<sup>-1</sup>, DS=301 J K<sup>-1</sup> mol<sup>-1</sup>  
\*\*\*\*\*  
C17H19N3O2S2 HL BMPBzH CAS 93341-39-0 (6239)  
2-(1'-Benzenesulfonylamino-3-methylmercapto)propylbenzimidazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 50% C M K1=5.10 1987MSd (96275)4206  
\*K(CoL2)=-9.03  
K(Co(gly)+L)=4.92  
B(Co(gly)L)=10.62  
Medium: 50% v/v dioxane/H2O, 0.2 M NaNO3.

-----  
Co++ gl diox/w 20°C 50% C T H K1=6.12 B2=11.20 1984MSd (96276)4207  
30 C: K1= 6.05, K2=5.10; 40 C:K1=6.00, K2=5.12  
DH(K1)=2.2 kJ mol<sup>-1</sup>, DS=150 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-10.4, DS=92  
\*\*\*\*\*  
C17H20N4O L CAS 192878-10-7 (8495)  
Di(2-ethylphenyl)carbazone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=5.26 B2=10.09 1996SKb (96302)4208  
Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.  
\*\*\*\*\*  
C17H20N4O6 HL Riboflavin CAS 83-88-5 (1438)  
7,8-Dimethyl-10(D-1'-ribityl)isoalloxazine, Vitamin B2, Vitamin H  
-----



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	30°C	0.20M	M		K1=4.13	1987MMc (96331)	4209
Co++	sol	mixed	25°C	95%	U		K1=0.95	1986Lda (96332)	4210
Medium: CH3CN, 1 M LiClO4.3H2O									
Co++	gl	KNO3	35°C	0.10M	U		K1=4.09 K(Co+HL)=3.54	1973TMa (96333)	4211
Co++	gl	oth/un	20°C	0.01M	U		K1=3.9	1953ALa (96334)	4212
*****									
C17H20O2Fe			HL				(5222)		
Ferrocenoyl pivaloyl methane;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=9.98 B2=19.58	1972UDa (96357)	4213
Medium: 75% v/v dioxan, 0.01 M									
*****									
C17H21NO			L			Benadryl	CAS 58-73-1	(3492)	
N,N-Dimethyl-2-(diphenylmethoxy)ethylamine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.06M	U T H		K1=3.32 B2=6.55	1962ALa (96369)	4214
At 0 C: K1=3.47, K2=3.30. DH(B2)=-8 kJ mol <sup>-1</sup> , DS=100 J K <sup>-1</sup> mol <sup>-1</sup>									
*****									
C17H21N4O9P			H3L				CAS 130-40-5	(3495)	
Flavin mononucleotide, Riboflavin-5'-phosphoric acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	35°C	0.10M	U		K1=5.80	1973TMa (96384)	4215
Co++	ix	NaCl	23°C	0.10M	U		K1=2.41	1958WAa (96385)	4216
*****									
C17H23N3O4			H2L				(6691)		
N,N'-((Pyridine-2,6-diyl)bis-methylene)bis-proline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	U		K1=15.01	1992BSb (96410)	4217
*****									
C17H24N4O6			H3L				(7349)		
3,6,9,15-Tetraazabicyclo[9.3.1]pentadeca-1(15),11,13-triene-3,6,9-triethanoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C		K1=18.92	1997DQa (96449)	4218

K(CoL+H)=2.95  
K(Co(OH)L+H)=9.45

Medium:Me4NNO3

-----  
Co++ EMF KCl 20°C 0.10M C K1=13.3 1981SFa (96450)4219  
Method: Pt/H2 electrode.

\*\*\*\*\*  
C17H26N4O2 L CAS 63972-20-3 (5497)  
6-Benzyl-1,4,8,11-tetraazacyclotetradecane-5,7-dione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 35°C 0.20M U M 1983MKb (96491)4220  
B(CoH-2L)=-11.43

Ternary complex with dioxygen: B(Co2H-4L2(O2))=-9.03

\*\*\*\*\*  
C17H26N4O4 H2L CAS 205595-08-0 (8972)  
3,11-Bis(carboxymethyl)-3,7,11,17-tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M C K1=15.58 1998CDa (96502)4221  
Medium: 0.10 M Me4NNO3.

\*\*\*\*\*  
C17H29N5O8 H3L (6622)  
1,4,7-Tris(carboxymethyl)-1,4,7,10,14-pentaazacyclohexadecane-9,15-dione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 25°C 0.10M C K1=13.1 1996IOb (96589)4222  
B(CoHL)=17.2  
B(CoH-1L)=1.3  
B(CoH-2L)=-7.2

\*\*\*\*\*  
C17H30N4 L CAS 63972-25-8 (5492)  
6-Benzyl-1,4,8,11-tetraazacyclotetradecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 35°C 0.20M U M K1=9.28 1983MKb (96596)4223  
Ternary complex with dioxygen: B(Co2L2(O2))=27.38

\*\*\*\*\*  
C17H30N4O8 H4L TRITA CAS 60239-20-5 (1018)  
1,4,7,10-Tetraazacyclotridecane-1,4,7,10-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M C K1=19.84 1992CDd (96631)4224  
B(CoHL)=24.04

B(CoH2L)=27.02

-----  
Co++ gl KCl 25°C 0.10M C K1=17.5 1991CMb (96632)4225  
K(CoL+H)=4.83  
K(CoHL+H)=3.57  
K(CoH-1L+H)=13.06

Method: batch potentiometry

-----  
Co++ cal KNO3 25°C 0.10M C H 1984DFa (96633)4226  
DH(K1)=-34.3 kJ mol<sup>-1</sup>, DS(K1)=268 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Co++ gl KNO3 25°C 0.10M C K1=20.10 1982DSa (96634)4227  
K(Co+HL)=12.73  
K(Co+H2L)=6.17

-----  
Co++ EMF KCl 20°C 0.10M C K1=15.0 1981SFa (96635)4228  
Method: Pt/H2 electrode.

-----  
Co++ gl KCl 20°C 0.10M U K1=14.98 1976SFb (96636)4229  
\*\*\*\*\*  
C17H31N3O8 H3L CAS 282717-18-4 (7776)  
1,4-Dioxa-7,10,14-triazacyclohexadecane-7,10,14-triethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl R4N.X 25°C 0.10M C K1=12.31 2000CDd (96679)4230  
K(CoL+H)=5.66  
K(CoHL+H)=3.44  
K(CoL+Co)=3.71  
K(Co2L+H)=4.67

Medium: 0.10 M (Me4N)NO3. K(Co2H-1L+H)=7.11, K(Co2H-2L+2H)=15.61,  
\*K(CoL)=-10.49.

-----  
C17H38N4O3 L (7318)  
1,4,8-Tris(2-hydroxyethyl)-11-methyl-1,4,8,11-tetraazacyclotetradecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl R4N.X 25°C 0.10M C K1=7.6 1997RWa (96796)4231  
B(CoH-1L)=0.6

Medium: Et4NC104

-----  
C17H38N6 L CAS 191231-50-2 (7348)  
1,5-Bis(1,4,7-triaza-1-cyclononyl)pentane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl R4N.X 25°C 0.10M C K1=16.9 1997WTa (96809)4232  
B(CoHL)=21.9

Medium: NEt4C104

\*\*\*\*\*  
 C17H39N5 L (5933)  
 1-(2-(Dimethylamino)ethyl)-4,8,11-trimethyl-1,4,8,11-tetraazacyclotetradecane;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	KNO3	25°C	0.50M	M				1983BKa	(96822)4233
								K(CoL+SCN)=2.67		
								K(CoL+N3)=2.19		

\*\*\*\*\*  
 C18H11NO2 HL CAS 83-08-9 (4126)  
 2-(2'-Quinolyl)indan-1,3-dione;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=9.8	1964CMb	(96839)4234

\*\*\*\*\*  
 C18H12N6 L CAS 3682-35-7 (1891)  
 2,4,6-Tris(2-pyridyl)-1,3,5-triazine; C3N3(C5H4N)3  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	NaCl	25°C	0.23M	U				1971PPa	(96878)4235
								K(CoL2+2H=CoL+H2L)=0.42		
								K(CoL+2H=Co+H2L)=-0.22		

\*\*\*\*\*  
 C18H13NO3 H2L (5238)  
 N-(2-Hydroxy-1-naphthalidene)anthranilic acid Schiff base;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	50%	U			K1=7.47 B2=11.90	1971MSh	(96893)4236
		Medium: 50% dioxan, 0.1 M NaClO4								

\*\*\*\*\*  
 C18H14N2O4 H2L (3499)  
 2-(2-Hydroxy-1-naphthylazo)phenoxyethanoic acid;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=11.97	1964PCa	(96929)4237

\*\*\*\*\*  
 C18H14N4 L BPIB CAS 18653-73-1 (9054)  
 N,N'-Bis(2-pyridinylmethylene)-1,2-benzenediamine;  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	dis	non-aq	25°C	100%	C	M			20030Ha	(96961)4238
		Method: Distribution from buffered 0.10 M KNO3 into nitrobenzene.								
		K(Co+3L(org)+2A=CoL3A2(org))=15.4. HA is picric acid.								

\*\*\*\*\*

C18H15N3OS L (5254)  
1-Benzoyl-4-(1-naphthyl)thiosemicarbazide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp mixed 25°C 50% U B2=5.75 1969CFb (96999)4239  
Medium: 50% acetone

\*\*\*\*\*  
C18H15N3O3S HL CAS 61625-17-0 (4139)  
Di-4-tolylthiovioluric acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 25% M T H K1=4.58 B2= 8.66 1978MGe (97011)4240  
Medium: 25% dioxane/H2O, 0.10 M NaClO4. Data for 40, 45 and 50 C. DH(K1)=  
-47.7 kJ mol<sup>-1</sup>, DS(K1)=-69.9 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-47.7, DS(K2)=-78.7.

\*\*\*\*\*  
C18H15N4O3Br HL (5257)  
1-Phenyl-3-carbethoxy-5-(2-bromobenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=5.57 B2=12.39 1971SRa (97024)4241  
\*\*\*\*\*

C18H15N4O3Br HL (5258)  
1-Phenyl-3-carbethoxy-5-(4-bromobenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.47 B2=14.02 1971SRa (97030)4242  
\*\*\*\*\*

C18H15N4O3Cl HL (5255)  
1-Phenyl-3-carbethoxy-5-(2-chlorobenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=5.65 B2=12.67 1971SRa (97036)4243  
\*\*\*\*\*

C18H15N4O3Cl HL (5256)  
1-Phenyl-3-carbethoxy-5-(4-chlorobenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.74 B2=14.06 1971SRa (97042)4244  
\*\*\*\*\*

C18H15N4O3F HL (5261)  
1-Phenyl-3-carbethoxy-5-(2-fluorobenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.14 B2=12.88 1971SRa (97048)4245  
\*\*\*\*\*

C18H15N4O3F HL (5262)  
1-Phenyl-3-carbethoxy-5-(4-fluorobenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.61 B2=14.07 1971SRa (97054)4246  
\*\*\*\*\*

C18H15N4O3I HL (5259)  
1-Phenyl-3-carbethoxy-5-(2-iodobenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=5.74 B2=11.86 1971SRa (97060)4247  
\*\*\*\*\*

C18H15N4O3I HL (5260)  
1-Phenyl-3-carbethoxy-5-(4-iodobenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.66 B2=13.97 1971SRa (97066)4248  
\*\*\*\*\*

C18H15N5O3S H2L (5263)  
N-(2-Pyridyl)-N'-(4-phenylsulfonic acid)-C-phenyl-formazan;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp KCl 30°C 0.10M U K1=14.7 1971MKa (97071)4249  
By glass electrode: K1=10.4, K2=6.8  
\*\*\*\*\*

C18H15N5O5 HL (5239)  
1-Phenyl-3-carbethoxy-5-(2-nitrobenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=5.27 B2=12.06 1971SRa (97077)4250  
\*\*\*\*\*

C18H15N5O5 HL (5240)  
1-Phenyl-3-carbethoxy-5-(4-nitrobenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=5.89 B2=13.31 1971SRa (97083)4251  
\*\*\*\*\*

C18H15OP L CAS 791-28-6 (32)  
Triphenylphosphine oxide; (C6H5)3PO

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp non-aq 25°C 100% U M 1978MMc (97091)4252  
K(CoCl2+L)=4.15  
K(CoCl2+2L)=6.83  
K(CoCl2+3L)=9.25

Medium: acetone

Co++ oth non-aq 25°C 100% U M 1973RHa (97092)4253  
K(CoI2A2+L=CoI2AL+A)=1.57  
K(CoI2AL+L=CoI2L2+A)=0.16

Medium: benzene. A=triphenylphosphine

Co++ sp non-aq 20°C 100% U 1969SSi (97093)4254  
K(CoCl2+L)=2.64  
K(CoCl2+2L)=4.25

Medium: acetone. In THF, K(CoCl2+L)=2.69, K(CoCl2+2L)=4.66

\*\*\*\*\*

C18H15P L CAS 603-35-0 (621)  
Triphenylphosphine; (C6H5)3P

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp non-aq 30°C 100% U T M 1982SOa (97128)4255  
K(CoA2+L)=1.6

Medium: CHCl3. HA=0,0'-diethyldithiophosphoric acid

\*\*\*\*\*

C18H16N4O3 HL (5241)  
1-Phenyl-3-carbethoxy-5-benzeneazo-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.57 B2=14.21 1971SRa (97191)4256  
\*\*\*\*\*

C18H16N4O3S HL (3505)  
(2-(4,5-Dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-yl)azophenylthio)ethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=13.50 1962SCc (97197)4257  
\*\*\*\*\*

C18H16N4O4 H2L (3500)  
2-(4,5-Dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-4-ylazo)phenoxyethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=10.66 1962SCc (97208)4258  
\*\*\*\*\*

C18H16N4O6S HL (5267)  
3-Ethoxycarbonyl-1-phenyl-4-(4-sulfophenylazo)-5-pyrazolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=5.81 B2=11.25	1969SSc (97218)	4259
*****									
C18H18N2O2S		HL					CAS 16082-60-3	(1678)	
8-(2,4,6-Trimethylbenzenesulfonamido)quinoline;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=9.3 B2=17.5	1984NYa (97227)	4260
*****									
C18H18N4		L					CAS 16858-01-8	(1528)	
Tris(2-pyridylmethyl)amine; (C5H4NCH2)3N									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	20°C	0.10M	C	H	K1=11.38 K(CoL(OH)+H)=8.54	1977AHc (97251)	4261
DH1=-46.8 kJ mol <sup>-1</sup> , DS1=58.2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	20°C	0.10M	U	H	K1=11.4	1970WAa (97252)	4262
By calorimetry, DH(K1)=-46.8 kJ mol <sup>-1</sup> , DS=58.1 J K <sup>-1</sup> mol <sup>-1</sup>									
*****									
C18H18N4O		HL					(4128)		
4-(2'-Ethylphenylazo)-5-methyl-1-phenylpyrazol-3(2H)-one;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=5.98 B2=12.01	1967SSg (97282)	4263
*****									
C18H18O3		HL					(5233)		
Ethyl-2,4-diphenyl acetoacetate; C6H5.CH2.CO.CH(C6H5).CO.O.CH2.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	C		K1=9.83	1973AAa (97297)	4264
*****									
C18H19N5O		HL					CAS 58858-65-5	(4130)	
4-(2'-Dimethylaminophenylazo)-3-methyl-1-phenylpyrazol-5(2H)-one;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=11.02 B2=20.90	1963SYa (97315)	4265
*****									
C18H20N2O2		H2L					CAS 5464-60-8	(8519)	
2,2'-[1,2-Ethanediybis(nitriloethylidyne)]bisphenol;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	mixed	35°C	0.10M	M		K1=8.62	1998RJa (97328)	4266



Medium: 80% (v/v) DMSO/H2O, 0.2 M KNO3.

\*\*\*\*\*

C18H20N2O4 HL Bzl-Tyr-Gly CAS 80014-09-1 (2494)  
(O-Benzyl)tyrosyl-glycine; H2N.CH(CH2.C6H4.O.CH2.C6H5).CO.NH.CH2.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ EMF NaNO3 30°C 0.10M U 1979EHa (97334)4267

B(CoH-1L)=-4.15  
B(CoH-2L)=-12.79

Plus other O-benzyl protected peptides involving tyrosine.

\*\*\*\*\*

C18H20N2O4 HL Gly-(Bzl-Tyr) CAS 69817-73-8 (2495)  
Glycyl-(O-benzyl)tyrosine; H2N.CH2.CO.NH.CH(CH2.C6H4.O.CH2.C6H5).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ EMF NaNO3 30°C 0.10M U 1979EHa (97340)4268

B(CoH-1L)=-5.44  
B(CoH-2L)=-16.01

Plus other O-benzyl protected peptides involving tyrosine.

\*\*\*\*\*

C18H20N2O6 H4L CAS 10328-28-6 (3501)  
Ethylenedinitrilo-N,N'-bis(2'-hydroxyphenyl)-N,N'-diethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M C K1=20.11 1993MMa (97388)4269

K(CoL+H)=6.23  
K(CoHL+H)=4.18

-----  
Co++ gl KNO3 25°C 0.10M C K1=19.9 1992GVa (97389)4270

K(Co+HL)=15.7  
K(Co+H2L)=10.0  
\*K(CoH2L)=-5.8  
\*K(CoHL)=-9.4

-----  
Co++ EMF oth/un ? ? U K1=11.0 1968TRc (97390)4271

K(Co+HL)=7.48  
K(Co+H2L)=4.83

\*\*\*\*\*

C18H20N2O12S2 H6L (5478)  
1,6-Bis(2,3-dihydroxy-5-sulfo benzoyl)-1,6-diazahexane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=13.6 1982KRb (97449)4272

-----  
C18H20N4 L CAS 284497-48-9 (9056)  
(1R,2R)-N,N'-Bis(2-pyridylmethylidene)-trans-1,2-diiminocyclohexane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ dis non-aq 25°C 100% C M 20010Hb (97459)4273  
Method: distribution from buffered 0.10 M NaCl into nitrobenzene.  
K(Co+3L(org)+2A=CoL3A2(org))=15.5. HA is picric acid.

\*\*\*\*\*  
C18H20N4 L cis-BPIC CAS 90605-88-2 (9053)  
(1R,2S)-N,N'-Bis(2-pyridinylmethylene)-1,2-cyclohexanediamine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ dis non-aq 25°C 100% C M 20030Ha (97466)4274  
Method: Distribution from buffered 0.10 M KNO3 into nitrobenzene.  
K(Co+3L(org)+2A=CoL3A2(org))=15.3. HA is picric acid.

\*\*\*\*\*  
C18H21NO2 HL (683)  
trans-5-(3-Methylbutyl)-2-hydroxy-diphenylketoxime;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 35°C 0.10M C K1=12.10 1978JIa (97488)4275  
\*\*\*\*\*  
C18H22N2O2 L (1563)  
1,4-Diaza-6,7:12,13-dibenzo-8,11-dioxacyclotetradecan-6,12-diene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl alc/w 25°C 65% C I K1=3 1988ALa (97522)4276  
Medium: 65% EtOH/H2O, 0.1 M Me4NNO3

-----  
Co++ gl alc/w 25°C 65% U K1=5.68 1982WCa (97523)4277  
Medium: 65% EtOH, 0.1 M Me4NNO3  
\*\*\*\*\*

C18H22N4O HL (5243)  
N-Methylanabasine-alpha'-azo-4-cresol;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp oth/un ? ? U B2=21.4 1972KTb (97528)4278  
\*\*\*\*\*  
C18H22N4O4 H2L CAS 2444-14-6 (3502)  
N,N'-Bis(2-pyridylmethyl)diaminoethane-N,N'-diethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl oth/un 25°C 0.10M U K1=14.0 1965LCa (97537)4279  
\*\*\*\*\*  
C18H22O4 H2L B(CH2AcAcH)2 (2252)  
1,3-Di(hexa-3,5-dione)-benzene; C6H4((CH2)2.CO.CH2.CO.CH3)2

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 24°C  50% U      K1=8.8      1979ACa (97558)4280
*****
C18H24N2O4      L      (2478)
1,4,7,10-Tetraoxadecane-1,10-di(2-aminobenzene)
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 25°C  85% C T H    K1=2.00      1983HBa (97590)4281
DH(K1)=-10 kJ mol-1. At 20 C: K1=2.00; 30 C: 1.80
*****
C18H24N6O2      L      (5247)
N,N'-Bis(2-(2-pyridylmethyl-amino)-ethyl)-oxamide;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl    25°C 0.10M U      K1=4.8      1973BZa (97618)4282
K(Co+HL)=4.2
K(Co+L=CoH-1L+H)=-1.33
K(CoH-1L=CoH-2L+H)=-9.31
*****
C18H24N10      L      CAS 85264-42-2 (7796)
N,N,N',N'-Tetrakis(1'-pyrazolylmethyl)-1,2-diaminoethane;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      dis non-aq 25°C 100% U      K(M+3L+2ClO4=ML3.2ClO4)=15.06
1997HIb (97633)4283
Method: extraction form 0.1 M NaClO4 into nitrobenzene.
Reaction is: Co(aq)+3L(org)+2ClO4(aq)=CoL3.2ClO4(org)
*****
C18H25N3      L      CAS 17327-80-9 (7651)
1,9-Diphenyl-2,5,8-triazanonane;
-----

```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaClO4 25°C 0.15M C      K1=6.03      1998PGc (97638)4284
K(CoL+OH)=4.76
*****
C18H26O8N2P2      H6L      CAS 53431-87-1 (2325)
N,N'-Bis(2-hydroxybenzyl)ethylenediamine-N,N'-bis(methylenephosphonic)
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.10M C      K1=18.0      1975MMc (97739)4285
K(Co+H2L)=9.58
K(CoL+H)=9.88
K(CoHL+H)=6.70
-----

```

K(CoH2L+H)=5.09

\*\*\*\*\*

C18H27N5 L (2942)  
1,11-Bis-(2-pyridyl)-2,6,10-triazaundecane; (C5H4N.CH2.NH.C3H6)2NH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ cal KNO3 25°C 0.1M C H K1=11.47 1982TMc (97764)4286  
DH(K1)=-54.7 kJ mol-1

-----  
Co++ cal KNO3 25°C 0.10M C 1982TMd (97765)4287  
DH1=-54.8 kJ/mol

-----  
Co++ gl KNO3 25°C 0.10M C K1=11.47 1978HMa (97766)4288  
K(CoL+H)=4.42

\*\*\*\*\*

C18H28N4O4 H2L (7378)  
7-Methyl-3,7,11,17-tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene-3,11-diethan  
oic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M C K1=14.4 1997CDb (97782)4289  
K(CoL+H)=4.1

Medium: NMe4NO3

\*\*\*\*\*

C18H28O6 H2L O(EAcAcE)20 CAS 73199-63-0 (2251)  
1,11-Dioxacycloeicosane-5,7,15,17-tetraone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 24°C 50% U K1=9.7 1979ACa (97828)4290

\*\*\*\*\*

C18H28O10 H2L (OEOAcAcOE)2 CAS 62950-36-1 (2254)  
1,4,10,13,16,22-Hexaoxacyclotetracosane-6,8,18,20-tetraone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 24°C 50% U K1=9.9 1979ACa (97866)4291

\*\*\*\*\*

C18H29N5O2 L (6542)  
15-Benzyl-1,4,7,10,13-pentaazacyclohexadecane-14,16-dione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ oth KCl 20°C 0.10M C T HM 1991Cma (97888)4292  
Keff(2CoH-2L+O2)=0.60

Keff in 0.05M KCl/0.05M borate, pH 9.0. DH=-77.8 kJ mol-1,1

DS=-255.1 J K-1 mol-1. Keff at 25 C=0.43. Method, volumetric gas uptake

\*\*\*\*\*

C18H30N4O12 H6L TTHA CAS 869-52-3 (694)  
 Triethylenetetraaminehexaethanoic acid;((HOOC.CH2)2N.CH2.CH2.N(CH2.COOH).CH2)2

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ vlt oth/un 25°C ? U M 1981MNa (97998)4293  
 K(Cd+CoHL=CdLCo+H)=8.10

-----  
 Co++ gl KNO3 25°C 0.10M U K1=17.1 1970HAa (97999)4294  
 K(CoL+H)=8.12  
 K(CoL+Co)=11.7  
 K(Co2L+H)=3.0  
 K(Co2HL+H)=2.6

By ion-selective electrode (Hg): B(Co2L)=28.8

-----  
 Co++ gl KNO3 25°C 0.10M U K1=20.4 1968SCa (98000)4295

-----  
 Co++ gl KNO3 25°C 0.10M U K1=20.6 1967BMd (98001)4296  
 K(CoH3L+H)=1.57  
 K(CoH2L+H)=2.63  
 K(CoHL+H)=4.03  
 K(CoL+H)=7.97

-----  
 Co++ gl KNO3 25°C 0.10M U K(2Co+L)=28.0 1965BMf (98002)4297

\*\*\*\*\*

C18H31N5O8 H3L (7300)  
 1,4,7-Tris(carboxymethyl)-1,4,7,10,14-pentaazacycloheptadeca-9,15-dione;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KCl 25°C 0.10M C K1=13.2 1996IOb (98125)4298  
 B(CoHL)=17.3  
 B(CoH2L)=19.4  
 B(CoH-1L)=1.7  
 B(CoH-2L)=-11.8

\*\*\*\*\*

C18H32N4O8 H4L TETA CAS 60239-22-7 (1019)  
 1,4,8,11-Tetraazacyclotetradecane-1,4,8,11-tetraethanoic acid;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl R4N.X 25°C 0.1M C I R K1=16.6 2005AAa (98176)4299  
 K(CoL+H)=4.2  
 K(CoHL+H)=2.84

IUPAC recommended values.

-----  
 Co++ gl KNO3 25°C 0.10M C K1=16.38 1992CDd (98177)4300  
 B(CoHL)=20.42  
 B(Co2L)=19.25

B(Co2HL)=23.07

-----  
Co++ gl KCl 25°C 0.10M C K1=16.70 1991CMb (98178)4301  
K(CoL+H)=4.44

K1 by direct potentiometry, K(CoL+H) by batch potentiometry

-----  
Co++ cal KNO3 25°C 0.10M C H 1984DFa (98179)4302  
DH(K1)=-19.2 kJ mol<sup>-1</sup>, DS(K1)=255 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Co++ gl KNO3 25°C 0.10M C K1=16.557 1982DSa (98180)4303  
K(Co+HL)=9.949  
K(Co+H2L)=2.63

-----  
Co++ EMF KCl 20°C 0.10M C K1=15.0 1981SFa (98181)4304  
Method: Pt/H2 electrode.

-----  
Co++ gl KCl 20°C 0.10M U K1=15.00 1976SFb (98182)4305  
\*\*\*\*\*  
C18H32N4O8 H4L (8192)  
3-Methyl-1,5,8,11-tetraazacyclotridecane-1,5,8,11-tetraethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ EMF KCl 20°C 0.10M C K1=17.4 1981SFa (98243)4306  
Method: Pt/H2 electrode. For the 3-ethyl- derivative, K1=13.5;  
for the 3,3-dimethyl- derivative, K1=7.3

-----  
C18H32N4O9 H4L CAS 189282-31-3 (8974)  
4,7,10,13-Tetrakis-(carboxymethyl)-1-oxa-4,7,10,13-tetraazacyclopentadecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl R4N.X 25°C 0.10M C K1=15.38 1999CDb (98253)4307  
K(CoL+H)=5.77  
K(CoL+Co)=4.57  
K(Co2L+H)=4.72

Medium: 0.10 M NMe4NO3.

-----  
C18H33N3O9 H3L (6700)  
1,7,13-Trioxa-4,10,16-triazacyclooctadecane-N,N',N''-triethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl KCl 25°C 0.10M C K1=9.33 1993DSa (98295)4308  
K(CoL+H)=7.53  
B(Co2L)=12.10  
K(Co2L+H)=6.57  
K(Co(OH)L+H)=10.38

-----  
C18H33N3O9 H3L CAS 241486-67-9 (8509)

N,N',N''-Tris[2(S)-hydroxybutanoic acid]-1,4,7-triazacyclononane;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C			K1=15.78 K(CoL+H)=3.65 *K(CoL)=-8.90	2000DDc (98304)	4309

---

\*\*\*\*\*  
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
Co++	cal	non-aq	25°C	100%	C	H		K1=3.22	1999SBe (98506)	4310
Medium: acetonitrile. DH(K1)=-47.7 kJ mol <sup>-1</sup> .										

---

Co++	gl	R4N.X	25°C	0.05M	C			K1=2.8	1997BCc (98507)	4311
Medium: 0.05 M Me4NClO4										

---

Co++	cal	alc/w	25°C	100%	U	H		K1=2.47	1985BUd (98508)	4312
Medium: MeOH, 0.05 M Et4NNO3. DH=8.1 kJ mol <sup>-1</sup>										

---

Co++	gl	alc/w	25°C	95%	C			K1=<4	1981ANa (98509)	4313
Medium: 95% MeOH, 0.1 M Me4NCl										

---

Co++	gl	R4N.X	25°C	0.10M	C			K1=<2.5	1977ASc (98510)	4314
------	----	-------	------	-------	---	--	--	---------	-----------------	------

\*\*\*\*\*  
C18H36N6 L CAS 450416-34-9 (8878)  
1,3,5-Tri(n-2',5'-diazahexane)benzene;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	M			K1=9.32 B(CoHL)=17.62 B(CoH2L)=26.74 B(CoH3L)=35.45 B(CoH4L)=42.91	2004GGa (98797)	4315

---

B(Co3H-1L)=22.77, B(Co3L)=30.79, B(Co2H2L)=40.12.

\*\*\*\*\*  
C18H38N2O6 L CAS 72911-99-0 (649)  
4,13-Bis(2-methoxyethyl)-1,7,10,16-tetraoxo-4,13-diazacyclooctadecane;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C			K1=2.68	1995LLa (98835)	4316
Medium: Et4NClO4										

---

\*\*\*\*\*  
C18H40N4O4 L CAS 89066-60-2 (867)  
N,N',N'',N'''-Tetrakis(2-hydroxyethyl)-1,4,8,11-tetraazacyclotetradecane;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	1.50M	C		K1=5.87 K(CoH-1L+H)=6.82	1993DCa (98919)	4317

Co++	gl	NaNO3	25°C	0.10M	U		K1=6.10 K(CoL+OH)=6.85	1984MMc (98920)	4318
------	----	-------	------	-------	---	--	---------------------------	-----------------	------

\*\*\*\*\*  
 C18H42N6O2 L (7321)  
 1,13-Dioxa-4,7,10,16,20,24-hexaazacyclohexacosane

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C		K1=8.04 K(CoL+H)=9.50 K(CoHL+H)=7.41 K(CoH2L+H)=5.9 *K(CoL)=-10.77	1996MLa (98943)	4319

K(CoL+Co)=3.1  
 \*\*\*\*\*  
 C18H44N8 L (6737)  
 N,N',N'',N'''-Tetrakis(2-aminoethyl)-1,4,8,11-tetraazacyclotetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C		B(Co2L)=13.9 B(Co2H-1L)=6.6 *K(Co2L)=-7.3	1993TTa (98963)	4320

Medium: 0.1 M Et4NC104.  
 \*\*\*\*\*  
 C18H45N9 L (5838)  
 1,4,7,10,13,16,19,22,25-Nonaazacycloheptacosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	NaClO4	25°C	0.15M	C	M	B(Co2L(O2))=24.63 B(Co2H-1L(O2))=16.64 K(Co2L+O2)=5.8 K(Co2L(O2)+OH)=5.7	2000BBb (98969)	4321

K(Co2H-1L+O2)=6.8. By kinetics, K(Co2L+OH)=5.1 [Polyhedron,19,2447]

Co++	gl	NaClO4	25°C	0.15M	C		K1=11.84 B(CoHL)=21.46 B(CoH2L)=28.91 B(Co2L)=18.85 B(Co2H2L)=31.32	1989BBd (98970)	4322
------	----	--------	------	-------	---	--	---	-----------------	------

K(2Co+L+H2O=Co2LOH+H)=9.88, K(CoL+H)=9.62, K(CoHL+H)=7.45, K(Co2L+OH)=4.76  
 \*\*\*\*\*



C18H47N9 L CAS 133128-72-0 (6458)  
2,5,8,11,14,17,20,23,26-Nonaaza-heptacosane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp NaCl04 25°C 0.15M C M 2000BBb (98981)4323  
B(Co2L(O2))=29.23  
B(Co2H-1L(O2))=20.71  
K(Co2L+O2)=7.5  
K(Co2L(O2)+OH)=5.2  
K(Co2H-1L+O2)=7.4. By kinetics, K(Co2L+OH)=4.8 [Polyhedron,19,2447]

-----  
Co++ gl NaCl04 25°C 0.15M C K1=15.68 1993BBE (98982)4324  
B(CoHL)=25.08  
B(CoH2L)=32.15  
B(CoH3L)=37.99  
B(Co2L)=21.69

B(Co2H-1L)=13.31; B(Co2H-2L)=3.80

\*\*\*\*\*

C19H1209Br2S H6L Bromo Pyrog.Red CAS 16574-43-9 (706)  
5',5''-Dibromopyrogallolsulfonephthalein;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp oth/un 25°C ? U I B2=10.0 1985XZa (99009)4325  
B(Co+2L+surfactant=CoL2)=11.58

\*\*\*\*\*

C19H13N3O4S H2L CAS 85413-91-9 (4144)  
1-Hydroxy-2-(8'-quinolylazo)naphthalene-4-sulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl alc/w 25°C 50% U K1=10.5 1967ANd (99028)4326  
Medium: 50% MeOH, 0.1 M NaCl04

\*\*\*\*\*

C19H13N3O7S2 H3L SNAZOXS CAS 117-87-3 (995)  
8-Hydroxy-7-(4'-sulfo-1'-naphthylazo)-quinoline-5-sulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp NaCl04 25°C 0.10M U K1=6.97 B2=14.82 1978MCC (99045)4327

\*\*\*\*\*

C19H15N08 H4L Alizarin Comp. CAS 3952-78-1 (671)  
(3,4-Dihydroxy-2-anthraquinonyl-methyl)iminodiethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp NaNO3 20°C 0.10M U 1982WIA (99127)4328  
K(Co+HL)=12.25

\*\*\*\*\*

C19H16N2O2 HL CAS 29126-31-6 (8348)  
N-[4-[[2-Hydroxy-1-naphthalenyl)methylene]amino]phenyl] acetamide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 75% U K1=5.93 1981MGb (99156)4329  
Medium: 75% dioxane/H2O, 0.10 M NaClO4.

\*\*\*\*\*  
C19H16N2O2BrPS2 HL CAS 51040-14-3 (5286)  
1-(4-Bromophenyl)-3-(diphenoxyphosphinothioyl)thiourea;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 20°C 100% U 1973ADc (99159)4330  
K(CoCl2+L=CoClL+Cl)=2.14  
K(CoCl2+2L=CoL2+2Cl)=4.59

Medium: acetone

\*\*\*\*\*  
C19H16N2O2IPS2 HL CAS 51040-15-4 (5287)  
1-(4-Iodophenyl)-3-(diphenoxyphosphinothioyl)thiourea;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 20°C 100% U 1973ADc (99161)4331  
K(CoCl2+L=CoClL+Cl)=2.14  
K(CoCl2+2L=CoL2+2Cl)=4.57

Medium: acetone

\*\*\*\*\*  
C19H16O3 HL CAS 29632-57-3 (5270)  
alpha-(1-Oxo-3-phenyl-2-propynyl)-benzeneethanoic acid ethyl ester;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=8.83 B2=16.28 1973AAA (99176)4332  
\*\*\*\*\*

C19H17N2O2PS2 HL CAS 51040-09-6 (5285)  
1-Phenyl-3-(diphenoxyphosphinothioyl)thiourea; PhNH.CS.NH.PS(OC6H5)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 20°C 100% U 1973ADc (99180)4333  
K(CoCl2+L=CoClL+Cl)=2.53  
K(CoCl2+2L=CoL2+2Cl)=5.09

Medium: acetone

\*\*\*\*\*  
C19H17N3O4S2 HL Cephaloridine CAS 50-59-9 (8404)  
7-[a-(2-Thienyl)acetamido]-3-(1-pyridylmethyl)-3-cephem-4-carboxylic acid betaine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 25°C 0.10M U T M K1=5.60 B2= 9.20 2000CCe (99190)4334  
K(CoL+ala)=4.87

Also data at 35 C.

\*\*\*\*\*

C19H17N5OS HL CAS 220035-54-1 (8655)  
alpha-Pyridoin 4-phenylthiosemicarbazide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 50% U TIH K1=10.07 B2=18.79 19980Fa (99199)4335  
Medium: 50% H2O/dioxane, 0.10 M KNO3. Data for 50% v/v H2O/dioxane, I =  
0.05-0.20 M, and for 40 and 50 C at I=0.10. DH and DS values.

\*\*\*\*\*

C19H18N2O4S HL (7397)  
2-Methyl-8-(toluene-4-sulfonamide)-6-quinolyethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl alc/w 25°C 0.10M C K1=8.12 B2=17.06 1997HRa (99209)4336  
B3=25.56

Medium: 50% v/v EtOH/H2O; 0.1 M NaClO4.

\*\*\*\*\*

C19H18N4O3 HL (5276)  
1-Phenyl-3-carbethoxy-5-(2-methylbenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=5.91 B2=12.81 1971SRa (99215)4337

\*\*\*\*\*

C19H18N4O3 HL (5277)  
1-Phenyl-3-carbethoxy-5-(4-methylbenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=6.58 B2=14.46 1971SRa (99221)4338

\*\*\*\*\*

C19H18N4O3S H2L (4145)  
4-(2'-(2''-Carboxyethylthio)Phe-azo)-3-Me-1-Phe-pyrazole-5(2H)-one;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=11.41 1965SMh (99227)4339

\*\*\*\*\*

C19H18N4O3S HL CAS 16182-36-8 (1204)  
Sulfamethazine-salicylaldimine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 25°C 0.20M U K1=4.68 B2=6.07 1976JCa (99234)4340

\*\*\*\*\*

C19H18N4O4 HL (5278)  
1-Phenyl-3-carbethoxy-5-(4-methoxybenzeneazo)-4-pyrazolone;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=6.62 B2=14.28	1971SRa (99240)	4341

\*\*\*\*\*

C19H18N4O4 H2L (4142)  
4-(2'-(2''-Carboxyethoxy)phenylazo)-3-methyl-1-Phe-pyrazol-5(2H)-one;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=10.67	1965SMh (99247)	4342

\*\*\*\*\*

C19H19N3O2 L (6370)  
2,6-Bis(2'-aminophenoxymethyl)pyridine; H2N.C6H4.O.CH2.C5H3N.CH2.O.C6H4.NH2

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	U			K1=<3	1990ADa (99265)	4343

In 95% ethanol/H2O, 0.1 M Et4NClO4.  
\*\*\*\*\*

C19H19N7O6 H3L Folic acid CAS 75708-92-8 (194)  
Pteroylglutamic acid;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	KNO3	25°C	0.20M	C				1996TFa (99281)	4344

K(Co+HL)=0.90  
\*K(CoHL)=-5.70

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	oth/un	20°C	0.01M	U			B2=8.1	1953ALa (99282)	4345

\*\*\*\*\*

C19H20N2O2S L (1679)  
2-Methyl-8-(2,4,6-trimethylbenzenesulfonamido)quinoline;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U			K1=8.7 B2=18.3	1984NYa (99298)	4346

\*\*\*\*\*

C19H21N5 L CAS 90719-79-2 (4141)  
2,6-Bis(N-(2'-pyridylmethyl)aminomethyl)pyridine;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	U			K1=14.8	1968GRa (99311)	4347

\*\*\*\*\*

C19H22N2O2 H2L CAS 54216-01-2 (8520)  
2,2'-[1,3-Propanediylbis(nitriloethylidene)]bisphenol;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	mixed	35°C	0.10M	M			K1=8.27	1998RJa (99318)	4348
Medium: 80% (v/v) DMSO/H2O, 0.2 M KNO3.										
*****										
C19H24N2O2			L					(1564)		
1,5-Diaza-7,8:13,14-dibenzo-9,12-dioxacyclopentadecan-7,13-diene;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	65%	C			K1=3	1988ALa (99361)	4349
Medium: 65% EtOH/H2O, 0.1 M Me4NNO3										
*****										
C19H24N2O3			L					(6471)		
3,4:8,9-Dibenzo-1,11-diaza-5,7,14-trioxacyclohexadeca-3,8-diene;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	C			K1=<3.5	1992AAa (99372)	4350
Medium: 95% MeOH/H2O, 0.10 M Et4NClO4. Data also for many analogous ligands with varying ring size and N,O,S donors										
*****										
C19H25N3O2			L					(6469)		
3,4:8,9-Dibenzo-1,11,14-triaza-5,7-dioxacyclohexadeca-3,8-diene;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	C			K1=6.1	1992AAa (99384)	4351
Medium: 95% MeOH/H2O, 0.10 M Et4NClO4. Data also for many analogous ligands with varying ring size and N,O,S donors										
*****										
C19H28N4O6			H3L					CAS 106967-44-6 (8973)		
3,7,11-Tris(carboxymethyl)-3,7,11,17-tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C			K1=15.07 K(CoL+H)=4.24	1998CDa (99405)	4352
Medium: 0.10 M Me4NNO3.										
*****										
C19H30N6			L					(7509)		
1,13-Bis(2-pyridyl)-2,5,9,12-tetraazatridecane; C5H4N.CH2NHC2H4NHC3H6NHC2H4NHCH2.C5H5N										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U			K1=20.75	1998KKd (99428)	4353
*****										
C19H31N3O4			H2L					(6692)		

N,N'-(Pyridine-2,6-diyl)bis-methylene)bis-N-methylvaline;  
 C5H3N(CH2.N(CH3)CH(CH(CH3)2)COOH)2

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  NaNO3  25°C 0.10M M          K1=11.80      1992BSb (99449)4354
*****
C19H34N4O8          H4L    cPenta          CAS 98515-24-3 (8328)
1,4,8,12-Tetrazacyclopentadecane-N,N',N'',N'''-tetraethanoic acid;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  R4N.X  25°C 0.10M C          K1=15.93      1988DDa (99463)4355
                        K(Co+HL)=10.32
                        K(Co+H2L)=4.57
                        K(Co+H3L)=3.86
                        B(Co2L)=20.69
-----
```

Medium: 0.10 M Me4NNO3.

```
*****
C19H39N3O5          L          CAS 60598-00-7 (1537)
4-Methyl-1,4,10-triaza-7,13,16,21,24-pentaoxa-bicyclo[8,8,8]hexacosane;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  R4N.X  25°C 0.10M U          K1=5.2        1978LMa (99487)4356
*****
C19H42N4O4          L    THEC-15          (6950)
N,N',N'',N'''-Tetrakis(2-hydroxyethyl)-1,4,8,12-tetraazacyclopentadecane;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  NaNO3  25°C 0.10M C          K1=4.2        1995TDa (99514)4357
                        K(Co+HL)=8.0
                        B(CoH-1L)=-4.6
-----
```

```
*****
C20H13N3O7S          H3L    Eriochrome Bl T  CAS 1787-61-7 (997)
1-(1-Hydroxy-2-naphthylazo)-6-nitro-2-naphthol-4-sulfonic acid;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       sp  oth/un 20°C 0.30M U          K1=20.0       1967K0a (99556)4358
*****
C20H14N2O           HL          (5291)
1-(1-Naphthylazo)-2-hydroxynaphthalene;
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  mixed  25°C 75% U          K1=8.05      B2=15.30     1972MCb (99596)4359
Medium: 75% acetone, 0.1 M KNO3
-----
```

\*\*\*\*\*

C20H14N2O HL CAS 2653-64-7 (5292)  
1-(2-Naphthylazo)-2-hydroxynaphthalene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 75% U K1=8.52 B2=16.38 1972MCb (99611)4360  
Medium: 75% acetone, 0.1 M KNO3

\*\*\*\*\*  
C20H14N2O4S H2L (7499)  
4-(9-Hydroxy-10-phenanthrylazo)-benzene-4-sulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp NaNO3 20°C 0.1M C 1998IEa (99632)4361  
K(Co+HL=CoH-1L+H)=-13.8

\*\*\*\*\*  
C20H15NO3 H2L (2120)  
2-(alpha-Phenyl-2-hydroxybenzylideneimino)benzoic acid; HO.C6H4.C(C6H5):N.C6H4.CO0H

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl NaClO4 25°C 0.10M U TIH K1=8.60 B2=15.40 1986SGb (99748)4362  
35 C: K1= 8.90, K2=7.07; 45 C:K1= 9.30, K2= 7.20  
DH(K1)=-69.9 kJ mol<sup>-1</sup>, DS=113 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*  
C20H16N2O HL CAS 36458-50-1 (5293)  
2-(Naphthylaminomethyl)-8-hydroxyquinoline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=8.6 1972HUb (99761)4363  
Medium: 50% v/v dioxan, 0.1 M KCl

\*\*\*\*\*  
C20H16N2O2 H2L CAS 3946-91-6 (2733)  
N,N'-Bis(2'-hydroxybenzylidene)-1,2-diaminobenzene; (HOC6H4CH:N)2.C6H4

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 80% C K1=14.64 1997HMc (99771)4364  
B(CoHL)=20.75  
Medium: 80% w/w DMSO/H2O, 0.5 M NaClO4.

\*\*\*\*\*  
C20H16N2O2 H2L (7405)  
N,N'-Bis(salicylidene)-1,3-phenylenediamine; (HO.C6H4.CH:N)2C6H4

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 80% C K1=7.13 B2=11.06 1997HMb (99783)4365  
K(Co+H2L)=2.63  
K(Co+HL)=5.11

K(Co+2HL)=8.96

B(Co2L)=10.82

Medium: 80% (w/w) DMSO/H2O, 0.1 M NaClO4. K(2Co+HL+L)=15.36, B(Co2L2)=17.75, K(Co+HL+L)=10.20, K(2Co+HL)=7.64.

\*\*\*\*\*

C20H16N4O5S H2L EriochromeRed B CAS 14954-75-7 (3510)  
4-(4,5-Dihydro-3-Me-5-oxo-1-Phe-1H-pyrazol-4-ylazo)-3-naphthol-1-sulfonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U 1957SFb (99793)4366  
K(Co+H2L=CoL+2H)=-5.8

\*\*\*\*\*

C20H17NO HL (6215)  
N-(2-Hydroxy-5-phenylbenzylidene)-2-methylaniline; C6H5.C6H3(OH).CH:N.C6H4.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=5.279 B2=9.42 1986MBd (99809)4367

\*\*\*\*\*

C20H17NOCl2S2 L CAS 77915-63-0 (5428)  
2-(2-Pyridyl)-1,3-dithio-(4'-chlorophenyl)-2-propanol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 50% U K1=0.66 1981CBa (99816)4368

\*\*\*\*\*

C20H18N4O2 HL (5917)  
Pyruvic monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U B2=17.59 1985RSb (99828)4369  
K(Co+HL)=4.74  
K(Co+2HL)=10.55  
K(Co+L+HL)=14.58

\*\*\*\*\*

C20H19NOS2 L CAS 77915-62-9 (5427)  
2-(2-Pyridyl)-1,3-dithiophenyl-2-propanol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 50% U K1=0.81 1981CBa (99849)4370

\*\*\*\*\*

C20H19N2O2PS2 HL CAS 51040-10-9 (5303)  
1-(3-Methylphenyl)-3-(diphenoxyphosphinothioyl)thiourea;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp non-aq 20°C 100% U 1973ADc (99855)4371



K(CoCl2+L=CoClL+Cl)=2.49  
K(CoCl2+2L=CoL2+2Cl)=5.12

\*\*\*\*\*

C20H19N2O2PS2 HL CAS 51040-11-0 (5304)

1-(4-Methylphenyl)-3-(diphenoxyphosphinothioyl)thiourea;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp non-aq 20°C 100% U 1973ADc (99857)4372

K(CoCl2+L=CoClL+Cl)=2.62  
K(CoCl2+2L=CoL2+2Cl)=5.21

Medium: acetone

\*\*\*\*\*

C20H19N2O3PS2 HL CAS 51040-12-1 (5305)

1-(4-Methoxyphenyl)-3-(diphenoxyphosphinothioyl)thiourea;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp non-aq 20°C 100% U 1973ADc (99859)4373

K(CoCl2+L=CoClL+Cl)=2.73  
K(CoCl2+2L=CoL2+2Cl)=5.40

Medium: acetone

\*\*\*\*\*

C20H19N3O3S HL CAS 380496-11-7 (9099)

1,3-Di(2-ethylphenyl)-4,5,6-pyrimidinetrione-2-thioxo-5-oxime;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 75% U T H K1=4.62 B2= 8.97 2001SSd (99865)4374

Medium: 75% v/v dioxan/H2O, 0.10 NaCl04. Data for 30 and 35 C.

DH(B2)=-0.46 kJ mol-1.

\*\*\*\*\*

C20H19N3O3S HL CAS 380496-12-8 (9100)

1,3-Di(3-ethylphenyl)-4,5,6-pyrimidinetrione-2-thio-5-oxime;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 75% U T H K1=4.54 B2= 8.53 2001SSd (99872)4375

Medium: 75% v/v dioxan/H2O, 0.10 NaCl04. Data for 30 and 35 C.

DH(B2)=-0.08 kJ mol-1.

\*\*\*\*\*

C20H19N3O3S HL CAS 380496-13-9 (9101)

1,3-Di(4-ethylphenyl)-4,5,6-pyrimidinetrione-2-thio-5-oxime;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 25°C 75% U T H K1=4.67 B2= 8.32 2001SSd (99882)4376

Medium: 75% v/v dioxan/H2O, 0.10 NaCl04. Data for 30 and 35 C.

DH(B2)=-0.46 kJ mol-1.

\*\*\*\*\*

C20H20N4O2S L CAS 90012-52-5 (8482)  
3-(4-Tolyl)-1-phenylpyrazol-5-ylthiourea;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 70% U K1=6.78 B2=13.44 1995EEa (99894)4377  
Medium: 70% v/v EtOH/H2O, 0.10 M NaCl.

\*\*\*\*\*  
C20H20N4O3 HL (5294)  
1-Phenyl-3-carbethoxy-5-(2-ethylbenzeneazo)-4-pyrazolone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=5.92 B2=12.44 1971SRa (99900)4378

\*\*\*\*\*  
C20H22N4O2 L CAS 253799-42-7 (7627)  
6-(9-Fluorenyl)-1,4,8,11-tetraazaundecane-5,7-dione;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M M K1=2.50 1999JLa (99923)4379  
B(CoH-1L)=-5.53  
B(CoH-2L)=-14.13

\*\*\*\*\*  
C20H24N2O6 H4L HBED CAS 3625-89-6 (2208)  
N,N'-Di-(2-hydroxybenzyl)-diaminoethane-N,N'-diethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M U K1=19.43 1994MMe (99984)4380  
K(CoL+H)=8.00  
K(CoHL+H)=5.72

-----  
Co++ gl KNO3 25°C 0.10M U K1=19.89 1967LMd (99985)4381  
K(Co+HL)=15.20  
K(Co+H2L)=9.76

\*\*\*\*\*  
C20H24N2O12S2 H6L CAS 3625-85-3 (5755)  
N,N'-Bis(2-hydroxy-5-sulfobenzyl)-diaminoethane-N,N'-diethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M C K1=20.66 1984TMb (100025)4382  
K(CoL+H)=6.51  
K(CoHL+H)=4.97

\*\*\*\*\*  
C20H24N6O6 H2L EDTAPA CAS 41314-78-7 (7801)  
Ethylenedinitrilo-N,N'-diethanoic-N,N'-bis(2-pyridylacetamido) acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl NaClO4 25°C 0.10M M H K1=7.96 1998DTa (100043)4383  
Medium: 0.10 M KClO4. By calorimetry, DH(K1)=-17.42 kJ mol<sup>-1</sup>,  
DS(K1)=94.0 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*  
C20H24O6 L DiBz-18-Crown-6 CAS 14187-32-7 (604)  
2,3:11,12-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,11-diene  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	con	mixed	25°C	90%	C			K1=1.89	2003ISa (100076)	4384

Medium: 90% v/v DMSO/H2O.

-----  
Co++ vlt alc/w 25°C 100% C K1=3.60 1987CBd (100077)4385  
Medium: methanol, 0.10 M Et4NI or Bu4NClO4. Method: polarography.  
\*\*\*\*\*  
C20H26N2O2 L (270)  
3,4:10,11-Dibenzo-1,13-diaza-5,9-dioxacyclohexadecane-3,10-diene;  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	65%	C			K1=3.1	1988ALa (100301)	4386

Medium: 65% EtOH/H2O, 0.1 M Me4NNO3

-----  
Co++ gl alc/w 25°C 65% U K1=5.23 1982WCa (100302)4387  
Medium: 65% EtOH, 0.1 M Me4NNO3  
\*\*\*\*\*  
C20H26N2O3 L OdienNtnH4 CAS 85735-84-8 (5943)  
1,15-Diaza-3,4:12,13-dibenzo-5,8,11-trioxacycloheptadecan-3,12-diene;  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	C			K1=4.6	1998DDb (100318)	4388

Medium: 95% MeOH/H2O, 0.1 M Et4NClO4.

-----  
C20H27N3O2 L CAS 168279-86-5 (7556)  
1,8,15-Triaza-3,4:12,13-dibenzo-5,11-dioxacycloheptadecan-3,12-diene;  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	C			K1=5.8	1998DDb (100379)	4389

Medium: 95% MeOH/H2O, 0.1 M Et4NClO4.

-----  
C20H29NO HL CAS 13545-11-6 (6098)  
7-(4-Ethyl-1-methyloctyl)-8-hydroxyquinoline;  
-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	kin	alc/w	20°C	100%	U			K1=12.4 B2=21.7	1988BTb (100403)	4390

K(Co+HL=CoL+H)=-2.0

$$K(\text{Co}+2\text{HL}=\text{CoL}_2+2\text{H})=-7.1$$

\*\*\*\*\*

C20H30N2O8P2                      H4L                      CAS 112827-88-0 (8105)  
 N,N'-Bis(2-hydroxybenzyl)diaminoethane-N,N'-bis(methylenephosphonic acid monomethyl ester);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C			K1=19.11 K(CoL+H)=6.92 K(CoHL+H)=5.93 K(Co+H2L)=8.09	1984Tmd (100412)	4391

\*\*\*\*\*

C20H30N4                                      L                                      CAS 140840-03-5 (7652)  
 1,12-Diphenyl-2,5,8,11-tetraazadodecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl04	25°C	0.15M	C			K1=9.33 K(CoL+H)=6.03 K(CoL+OH)=3.99	1998PGc (100420)	4392

\*\*\*\*\*

C20H32N6                                      L                                      (7510)  
 1,14-Bis(2-pyridyl)-2,6,9,13-tetraazatetradecane;  
 C5H4N.CH2NHC3H6NHC2H4NHC3H6NHCH2.C5H5N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U			K1=17.75	1998KKd (100465)	4393

\*\*\*\*\*

C20H32N6O12S2                      H4L                      GSSG                      CAS 27025-41-8 (1241)  
 Glutathione oxidized; (HOOC.CH(NH2)C2H4.CO.NH.CH(CO.NH.CH2.COOH)CH2.S)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	M			K1=7.17	1990SHa (100485)	4394
Co++	gl	KCl	25°C	0.20M	C			K1=7.12 B(CoHL)=13.81 B(Co2L)=8.7	1988VSb (100486)	4395

Co++	gl	KNO3	25°C	0.15M	C			K1=7.21    B2=10.17 B(Co2L)=10.03	1981AEa (100487)	4396
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\*\*\*\*\*

C20H36N4O8                                      H4L                                      (8193)  
 3,3-Dimethyl-1,5,8,12-tetraazacyclotetradecane-1,5,8,12-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	EMF	KCl	20°C	0.10M	C			K1=6.9	1981SFa (100573)	4397

Method: Pt/H2 electrode. For the 3,3,10,10-tetramethyl- homologue, K1=7.0  
\*\*\*\*\*

C20H36O6 L DiCy-18-crown-6 CAS 16069-36-6 (1653)  
2,3:11,12-Dicyclohexyl-1,4,7,10,13,16-hexaoxacyclooctadecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ con mixed 25°C 90% C K1=1.95 2003ISa (100618)4398  
Medium: 90% v/v DMSO/H2O.

-----  
Co++ con alc/w 25°C 40% C K1=1.53 2002ISa (100619)4399  
Medium: 40% EtOH/H2O.

-----  
Co++ con alc/w 25°C 40% C K1=1.82 2001ISa (100620)4400  
Medium: 40% v/v EtOH/H2O.

\*\*\*\*\*  
C20H39N5O2 HL CAS 333309-52-7 (8662)  
16-Aminodocosahydro-16-methyl-dibenzo[b,i][1,4,8,11]tetraazacyclotetradecine-7-carb  
oxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.5M U K1=14.6 2002WHa (100767)4401  
K(CoL+H)=4.95  
K(CoHL+H)=10.2

Data for the trans isomer. For the cis-isomer K1=12.45, K(CoL+H)=6.25

\*\*\*\*\*  
C20H40N6 L CAS 66128-37-8 (8641)  
N,N,N',N'-Tetrakis(3-aminopropyl)-1,3-benzenedimethanamine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M U 1998KSe (100830)4402  
B(CoHL)=16.63  
B(CoH2L)=23.12  
B(Co2L)=12.74

\*\*\*\*\*  
C20H40N6 HL CAS 189076-31-1 (8642)  
N,N,N',N'-Tetrakis(3-aminopropyl)-1,4-benzenedimethanamine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M U 1998KSe (100834)4403  
B(CoHL)=14.08  
B(CoH2L)=21.00  
B(Co2L)=11.07

\*\*\*\*\*  
C20H40N8O4 L (1003)  
1,4,7,10-Tetrakis(2-carbamoylethyl)-1,4,7,10-tetraazacyclododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C			K1=17.11 *K(CoL)=-7.67 *K(CoH-1L)=-6.59	2000KXa (100839)	4404
*****										
C20H42N4O4		L		CAS 39678-14-3 (1543)						
4,7-Dimethyl-1,4,7,10-tetraaza-13,16,21,24-tetraoxa-bicyclohexacosane;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	U			K1=4.9	1978LMa (100883)	4405
*****										
C20H42N8		L		(5871)						
1,3-Bis(2,5,8,11-tetraazaundecyl)benzene;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C	M		K1=10.53 K(CoL+Co)=8.82 K(CoL+H)=9.26 K(CoHL+H)=8.49 K(CoH2L+H)=6.20	1989MMc (100899)	4406
K(CoH3L+H)=5.37, K(Co2L+H)=5.69, K(CoL=CoLOH+H)=-11.16, K(Co2L=Co2LOH+H)=-9.76, K(Co2LOH=Co2L(OH)2+H)=-10.95, K(Co2L+O2=Co2LOH02+H)=0.60										
*****										
C20H46N6O2		L		CAS 177840-90-3 (8099)						
1,15-Dioxa-4,8,12,18,22,26-hexaazacyclooctacosane;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C			K1=5.98 K(CoL+H)=8.26 K(CoHL+H)=8.68 K(CoH2L+H)=8.35 *K(CoL)=-10.00	1996MLa (100974)	4407
K(CoL+Co)=3.40										
*****										
C20H46N6O4		L		(355)						
1,4,7,16,19,22-Hexaaza-10,13,25,28-tetraoxacyclotriacontane;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.15M	C			K1=7.17 B(CoHL)=15.80 B(CoH2L)=23.45 B(CoH3L)=29.75 B(Co2L)=12.46	1996BBh (100983)	4408
K(Co2L+OH)=4.91, K(Co2LOH+OH)=4.01										
*****										

C20H50N10 L CAS 862-28-2 (5839)  
1,4,7,10,13,16,19,22,25,28-Decaazacyclotriacontane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp NaCl04 25°C 0.15M C M 2000BBb (101001)4409  
B(Co2L(O2))=26.51  
B(Co2H-1L(O2))=18.48  
K(Co2L+O2)=4.7  
K(Co2L(O2)+OH)=5.7  
K(Co2H-1L+O2)=6.5. By kinetics, K(Co2L+OH)=4.5 [Polyhedron,19,2447]

-----  
Co++ gl NaCl04 25°C 0.15M C 1989BBd (101002)4410  
B(Co2L)=21.85  
B(Co2H3L)=39.79  
B(Co2H2L)=34.67  
B(Co2H-1L)=11.94  
K(Co2H2L+H)=5.12, K(Co2L+OH)=3.82

\*\*\*\*\*  
C21H13N3O HL (6256)  
1-(2'-Quinolylazo)-acenaphthylen-2-ol; C9H6N.N:N.C12H6.OH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U IH K1=6.29 B2=11.81 1979SGd (101012)4411  
\*\*\*\*\*

C21H15N5O2 L CAS 91022-00-3 (5923)  
2-Nitro-benzylazo-4,5-diphenylimidazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp alc/w 25°C 100% U K1=6.95 1986MHa (101053)4412  
\*\*\*\*\*

C21H15N5O2 L CAS 31993-08-5 (5922)  
4-Nitro-benzylazo-4,5-diphenyl imidazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp alc/w 25°C 100% U K1=6.96 1986MHa (101056)4413  
\*\*\*\*\*

C21H16N2O HL CAS 19726-10-4 (8338)  
3-(2-Hydroxyphenyl)-1,5-diphenylpyrazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 35°C 60% U H K1=8.18 B2=14.42 1993ALb (101060)4414  
Medium: 60% v/v MeOH/H2O, 0.1 M KNO3. DH(K1)=-109 kJ mol<sup>-1</sup>, DS(K1)=-198 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-84, DS(K2)=-154.

\*\*\*\*\*  
C21H18N2O2 H2L (7406)

N,N'-2,4-Toluenebis(salicylideneimine); CH3.C6H3(N:CH.C6H4OH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 80% C K1=7.85 B2=12.12 1997HMb (101103)4415  
K(Co+H2L)=3.10  
K(Co+HL)=5.57  
K(Co+2HL)=10.64  
B(Co2L)=11.73

Medium: 80% (w/w) DMSO/H2O, 0.1 M NaClO4. K(2Co+HL+L)=16.83, B(Co2L2)=19.19,  
K(Co+HL+L)=11.13, K(2Co+HL)=8.43.

\*\*\*\*\*

C21H18N2O2 H2L (7407)  
N,N'-2,6-Toluenebis(salicylideneimine); CH3.C6H3(N:CH.C6H4OH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 80% C K1=6.90 B2=11.1 1997HMb (101108)4416  
K(Co+H2L)=2.38  
K(Co+HL)=5.01  
K(Co+2HL)=10.05  
B(Co2L)=10.74

Medium: 80% (w/w) DMSO/H2O, 0.1 M NaClO4. K(2Co+HL+L)=14.63, B(Co2L2)=16.80,  
K(Co+HL+L)=9.67, K(2Co+HL)=7.63.

\*\*\*\*\*

C21H18N2O2 H2L (7319)  
N,N'-3,4-Toluenebis(salicylideneimine); CH3.C6H3(N:CH.C6H4OH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 80% C K1=15.77 1997HMa (101114)4417  
B(CoHL)=21.53

In 80 % (wt/wt) DMSO-H2O, I= 0.5 M NaClO4

\*\*\*\*\*

C21H18N4O6S H2L CAS 86170-15-2 (8412)  
2-[5-(2-Methoxy-5-sulfohenyl)-3-phenyl-1-formazano]-benzoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp NaClO4 26°C 0.10M C K1=11.25 1983UCa (101118)4418  
For the ligand, K1=14.4, K2=3.6.

\*\*\*\*\*

C21H19NO HL (6216)  
N-(2-Hydroxy-5-phenylbenzylidene)-2,6-dimethylaniline;  
C6H5.C6H3(OH).CH:N.C6H3(CH3)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=5.232 1986MBd (101136)4419

\*\*\*\*\*



C21H20N4O HL (1408)  
2,3-Butanedione-3-(4-benzyl-6-phenyl)-pyridazinyI hydrazone;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 30°C 75% U K1=10.62 B2=20.24 1983RRa (101153)4420  
\*\*\*\*\*

C21H21N2O3PS2 HL (5315)  
1-(4-Ethoxyphenyl)-3-(diphenoxyphosphinothioyl)thiourea;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 20°C 100% U 1973ADc (101165)4421  
K(CoCl2+L=CoClL+Cl)=2.72  
K(CoCl2+2L=CoL2+2Cl)=5.38

Medium: acetone

\*\*\*\*\*  
C21H21N2O8Cl H2L Demeclocycline CAS 64-73-3 (5759)  
7-Chloro-6-demethyltetracycline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M C K1=8.49 1979DDd (101180)4422  
K(Mg+HL)=5.02

Also data for other tetracycline analogues.

\*\*\*\*\*  
C21H23NO6 HL Colchicine (7054)  
Colchicine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 20°C 75% U I K1=7.28 B2=13.58 1994SHc (101220)4423  
\*\*\*\*\*

C21H24N3O4SF HL CAS 215190-91-3 (9102)  
6-Fluoro-7-(5-nonyl-1,3,4-oxadiazol-2-ylsulphanyl)-4-quinolone-3-carboxylic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 20% C K1=5.73 2001SCc (101235)4424  
Medium: 20% DMF/H2O, 0.1 M NaClO4.

\*\*\*\*\*  
C21H24N4 L (931)  
Tris((6-methyl-2-pyridyl)methyl)-amine; (CH3.C5H3N.CH2)3N

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 20°C 0.10M C H K1=5.55 1977AHc (101244)4425  
Calorimetry: DH1=-11.0 kJ mol-1, DS1=68.6

\*\*\*\*\*  
C21H26N4O4Br2 H2L CAS 354154-84-0 (8978)

N,N'-Bis-(2-(N"-2-hydroxy-5-bromobenzyl)aminoethyl)malondiamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	25°C	13%	C			K1=7.05 B(CoH-1L)=-2.96 B(CoH-2L)=-13.33 B(CoHL)=15.48	2001CLa (101283)	4426

Medium: 13% v/v dioxane/H2O, 0.10 M KNO3.

\*\*\*\*\*  
C21H28N2O2 L (2318)  
5,9-Diaza-2,3:11,12-dibenzo-1,13-dioxa-cycloheptadecan-2,11-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	EMF	alc/w	25°C	95%	U			K1=<4	1994ACb (101316)	4427

Medium: 95% MeOH/H2O, 0.1 M NEt4ClO4.

\*\*\*\*\*  
C21H28N2O3 L OdienNtnH4 CAS 85735-85-9 (5944)  
1,15-Diaza-3,4:12,13-dibenzo-5,8,11-trioxacyclooctadecan-3,12-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	C			K1=<4.2	1998DDb (101325)	4428

Medium: 95% MeOH/H2O, 0.1 M Et4NClO4.

\*\*\*\*\*  
C21H28N2O3 L (6971)  
2,3:10,11-Dibenzo-5,8-diaza-5-(2-hydroxyethyl)-1,12-dioxacyclopentadeca-2,10-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	EMF	alc/w	25°C	95%	U I			K1=< 4	1994ACb (101332)	4429

Medium: 95% MeOH/H2O, 0.1 M NEt4ClO4

\*\*\*\*\*  
C21H30O2 HL Delta-THC CAS 5957-75-5 (1206)  
D'-6a,10a-Tetrahydrocannabinol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	non-aq	30°C	100%	U			K1=12.407 B2=23.655	1976WPa (101382)	4430

Medium: t-BuOH, 0.15 M Bu4NNO3

\*\*\*\*\*  
C21H31N5O8 H4L (8194)  
3,6,9,12,18-Pentaazabicyclo[12.3.1]heptadeca-1(18),14,16-triene-3,6,9,12-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	EMF	KCl	20°C	0.10M	C			K1=9.5	1981SFa (101414)	4431

Method: Pt/H2 electrode.

\*\*\*\*\*  
 C21H42N6 L CAS 450416-35-0 (8879)  
 1,3,5-Tri(n-2',5'-diazahptane)benzene;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl KNO3 25°C 0.10M M K1=4.16 2004GGa (101473)4432  
 B(CoHL)=14.19  
 B(CoH2L)=23.77  
 B(CoH3L)=33.05  
 B(CoH4L)=41.02  
 B(Co3H-1L)=20.85, B(Co3L)=28.57, B(Co2H2L)=37.79.

\*\*\*\*\*  
 C22H15N3O HL (6255)  
 1-(4'-Methyl-2'-quinolyazo)-acenaphthylen-2-ol; CH3.C9H5N.N:N.C12H6.OH

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl diox/w 30°C 75% U IH K1=7.30 B2=13.82 1979SGd (101520)4433

\*\*\*\*\*  
 C22H16N2O6 H2L CAS 66532-88-5 (9138)  
 N,N'-Bis-(2-carboxy-1-oxophenyl)-1,2-phenylenediamine;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl NaClO4 25°C 0.10M U K1=3.45 B2= 4.62 2003GSc (101529)4434

\*\*\*\*\*  
 C22H16N4O8S2 H4L (7496)  
 1,4-Bis-p-sulfonylazo-2,3-dihydroxynaphthalene;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ gl NaNO3 20°C 0.1M C 1998IEa (101533)4435  
 K(Co+H2L=CoL+2H)=-12.88  
 K(Co+H2L=CoH-1L+3H)=-23.69  
 K(2Co+H2L=Co2L+2H)=-9.32  
 K(2Co+H2L=Co2H-2L+4H)=-27.11

Additional method: spectrophotometry.

\*\*\*\*\*  
 C22H17N2Cl L CAS 23593-75-1 (8609)  
 1-[(2-Chlorophenyl)diphenylmethyl]-1H-imidazole;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co++ sp non-aq 20°C 100% C H 1997SZa (101561)4436  
 K(CoP+L)=3.43  
 Medium: CH2Cl2. Data for 15-30 C. H2P is 5,10,15,20-tetra(4-methylphenyl)-  
 porphyrin. DH= -40.6 kJ mol-1, DS=-73.0 J K-1 mol-1.

\*\*\*\*\*  
 C22H18N4 L CAS 22902-77-8 (5919)

4-Methyl-benzylazo-4,5-diphenyl imidazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp alc/w 25°C 100% U B2=10.29 1986MHa (101593)4437  
\*\*\*\*\*  
C22H18N4O L CAS 51124-76-6 (5921)  
2-Methoxy-benzylazo-4,5-diphenyl imidazole;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp alc/w 25°C 100% U K1=6.32 1986MHa (101596)4438  
\*\*\*\*\*  
C22H18N4O L CAS 91021-97-5 (5920)  
4-Methoxy-benzylazo-4,5-diphenyl imidazole;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp alc/w 25°C 100% U K1=6.03 1986MHa (101599)4439  
\*\*\*\*\*  
C22H21N7O3S H2L CAS 76313-93-4 (9224)  
4-Sulfamethazineazo-3-methyl-1-phenyl-2-pyrazolin-5-one;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 35°C 40% C T H K1=9.31 B2=16.42 2004MUb (101714)4440  
Medium: 40% v/v EtOH/H2O, 0.10 M KCl. DH(K1)=28.3 kJ mol<sup>-1</sup>, DS(K1)=270  
J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=29.2, DS(K2)=231. Also data for 25 and 45 C.  
\*\*\*\*\*  
C22H22N4O2 H2L CAS 75651-32-0 (5318)  
N,N'-Bis(8-hydroxy-2-quinolylmethyl)ethylenediamine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=22.5 1972HUa (101731)4441  
K(CoHL+H)=3.59  
K(CoL+H)=5.99  
K(Co+H2L)=12.49  
K(Co+HL)=19.0  
Medium: 50% v/v dioxan, 0.1 M KCl  
\*\*\*\*\*  
C22H23NOS2 L (5426)  
2-(2-Pyridyl)-1,3-dithio-(4'-methylphenyl)-2-propanol;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 50% U K1=0.86 1981CBa (101738)4442  
\*\*\*\*\*  
C22H23NOS2 L (5425)  
2-(2-Pyridyl)-1,3-dithio-(4'-methoxyphenyl)-2-propanol;  
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 25°C 50% U      K1=0.84      1981CBa (101742)4443
*****
C22H23N2O8Cl      H2L      Aureomycin      CAS 56235-18-8 (3515)
Chlorotetracycline;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  oth/un 20°C 0.01M U      K1=4.8      1956ARd (101756)4444
*****
C22H24N2O8      H2L      Tetracycline      CAS 60-54-8 (2201)
Tetracycline;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaCl04 25°C 0.10M C      B(CoHL)=6.56
      B(CoH2L)=10.01
      1996SJa (101800)4445
-----

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-----
Co++      gl  NaNO3 25°C 0.10M C      K1=10.4      1992GAa (101801)4446
-----
Co++      gl  oth/un 20°C 0.01M U      K1=5.4      B2=9.80      1956ARd (101802)4447
*****
C22H24N2O8      H4L      CAS 91044-24-5 (1920)
meso-1,2-Diphenyl-1,2-diaminoethane-N,N,N',N'-tetraethanoic acid;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3 20°C 0.10M U      K1=11.70      1989SLa (101837)4448
*****
C22H24N2O8      H4L      CAS 91044-25-6 (1921)
rac-1,2-Diphenyl-1,2-diaminoethane-N,N,N',N'-tetraethanoic acid;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3 20°C 0.10M U      K1=17.30      1989SLa (101851)4449
-----
Co++      gl  KCl 25°C 0.10M U      K1=17.9      19670Tb (101852)4450
*****
C22H24N2O9      H2L      Oxotetracycline CAS 79-57-2 (2202)
Oxytetracycline, 5-Hydroxy-tetracycline;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  oth/un 20°C .005M U      K1=5.1      1956ARd (101878)4451
*****
C22H26N4O8      H4L      (5526)
N,N'-Dipyridoxylethylenediamine-N,N'-diethanoic acid;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl    25°C 0.10M C          K1=17.29      1989MSc (101946)4452
                    K(CoL+H)=8.85
                    K(CoHL+H)=8.14
                    K(CoH2L+H)=1.93

```

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-----
Co++      nmr none 15°C 0.0 U          K1=16.82      1985TMa (101947)4453
                    K(CoL+H)=9.29
                    K(CoHL+H)=8.46

```

```

-----
Co++      gl  KCl    25°C 0.10M C          K1=16.87      1984TMb (101948)4454
                    K(CoL+H)=9.29
                    K(CoHL+H)=8.46

```

```

-----
Co++      gl  KCl    25°C 0.10M C          K1=16.87      1984TMc (101949)4455
                    K(CoL+H)=9.29
                    K(CoHL+H)=8.46

```

```

*****
C22H26N4O10      H4L      BAPTA      (7230)
1,2-Bis(o-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;
((HOOCCH2)2NCH(OC6H4NH2)2

```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  R4N.X 25°C 0.10M C          K1=8.67      1993YTa (101971)4456
*****
C22H30N2O4      L          CAS 173547-24-5 (7560)
1,15-Diaza-3,4:12,13-dibenzo-5,8,11,18-tetraoxacycloeicosan-3,12-diene;

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  alc/w 25°C 95% C          K1=<4.5      1998DDb (102108)4457
Medium: 95% MeOH/H2O, 0.1 M Et4NC104.
*****
C22H31N3O2      L          CAS 218931-85-2 (7841)
1,12,15-Triaza-3,4:9,10-dibenzo-5,8-dioxa-2,11-dimethylcycloheptadecan-3,9-diene;

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  alc/w 25°C 95% U          K1=5.6      1998ABf (102157)4458
Medium: 95% MeOH/H2O, 0.1 M Et4NC104.
*****
C22H31N3O3      L          CAS 12859-24-4 (7557)
1,15,18-Triaza-3,4:12,13-dibenzo-5,8,11-trioxacycloeicosan-3,12-diene;

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  alc/w 25°C 95% C I      K1=8.7      1998DDb (102175)4459

```



K(CoL+H)=6.19  
K(CoL+OH)=3.75

\*\*\*\*\*

C22H37N5O14 H7L CAS 3234-59-1 (2425)

Tetraethylenepentamineheptaethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M C K1=17.9 1999LLa (102317)4465

K(CoL+H)=9.6  
K(CoH2L+H)=4.1  
K(CoHL+H)=5.3  
K(CoH3L+H)=2.6

K(CoL+Co)=14.6; K(Co2L+H)=4.1; K(Co2HL+H)=2.2

\*\*\*\*\*

C22H40N4O11 H4L (6529)

1,4,7-Trioxa-10,13,16,19-tetraazacycloheneicosane-10,13,16,19-tetraethanoicacid

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M C K1=17.0 1990SBc (102364)4466

K(Co+HL)=12.6  
K(Co+H2L)=6.9

\*\*\*\*\*

C22H48N4O4 L (7292)

N,N',N'',N'''-Tetrakis(3-hydroxypropyl)-1,4,8,11-tetraazacyclotetradecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M C K1=4.1 1996DTa (102468)4467

B(CoHL)=12.2  
B(CoH-1L)=-3.0

Medium: Et4NClO4

\*\*\*\*\*

C22H48N6O2 L CAS 39678-22-3 (1542)

4,7,13,16-Tetramethyl-1,4,7,10,13,16-hexaaza-21,24-dioxabicyclohexacosane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl R4N.X 25°C 0.10M U K1=5.2 1978LMa (102483)4468

\*\*\*\*\*

C22H51N7O4 L (5349)

1,4,19,22-Tetraoxa-7,10,13,16,25,28,31-Heptaazacyclotritriacontane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaCl 25°C 0.15M C M K1=9.3 2004BBc (102500)4469

B(CoHL)=18.0  
B(CoH2L)=25.6  
B(Co2L)=14.95



K(Co2L+OH)=6.31

K(Co2H-1L+OH)=5.29. Ternary complexes with dioxygen also reported.

K(Co2H-1L+O2)=6.4, K(Co2H-2L+O2)=6.3, K(Co2H-1L(O2)+OH)=5.27.

\*\*\*\*\*

C22H55N11 L CAS 60464-68-8 (5836)  
1,4,7,10,13,16,19,22,25,28,31-Undecaazacyclotritriacontane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 25°C 0.15M C 1989BBd (102509)4470

B(Co2L)=22.90  
B(Co2H3L)=40.91  
B(Co2H2L)=35.83  
K(Co2LOH+H)=12.72

K(Co2H2L+H)=5.08, K(Co2L+OH)=3.55

\*\*\*\*\*

C23H16O9Cl2S H4L Chrome azuro1 S CAS 1667-99-8 (711)  
Chromazuro1 S;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp oth/un ? ? U B2=8.00 1968MPb (102538)4471  
pH=10.5-11.5

\*\*\*\*\*  
C23H18O3 L CAS 29549-01-7 (5321)  
Ethyl alpha-(alpha-naphthyl)phenylpropiolethanoate;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl diox/w 30°C 75% U K1=8.86 B2=16.58 1973AAa (102615)4472

\*\*\*\*\*  
C23H25N3O2 L CAS 132097-05-3 (6407)  
4,5:12,13-Dibenzo-7,10,20-triaza-3,14-dioxabicyclo[14.3.1]eicosa-1(20),16,18-triene  
;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl alc/w 25°C 95% U K1=4.51 1991BFa (102698)4473

Medium: 95% MeOH/H2O, 0.1 M Et4NClO4

\*\*\*\*\*  
C23H25N2+ (5323)  
Malachite green  
L+

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp non-aq ? 100% U 1973KKd (102701)4474

K(Co(SCN)3+L)=4.32

Medium: 7:1 CHCl3:cyclohexanone

\*\*\*\*\*

C23H27N07 HL CAS 203302-24-3 (8395)  
4'-(omega-Salicylaldiminoacetyl)benzo-15-crown-5;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M M K1=8.49 1998ADb (102711)4475  
B(CoH-1L)=0.56  
B(CoH-2L)=-8.82  
B(CoH-3L)=-17.34

\*\*\*\*\*  
C23H28N2O6 H2L CAS 119673-46-0 (1922)  
Dibenz[b,k]-1,13-dioxa-5,9-diazacyclopentadecane-N,N'-diethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U K1=7.6 1988ALb (102735)4476  
\*\*\*\*\*

C23H29N5 L (5558)  
Bis(2-pyridylmethyl)-4-benzyl-diethylenetriamine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 70% U K1=11.09 1984MMe (102741)4477  
K(CoL+H)=6.64  
K(CoH-1L+H)=10.00

\*\*\*\*\*  
C23H30N4O4Br2 H2L CAS 354154-85-1 (8979)  
N,N'-Bis-(3-N"-2-hydroxy-5-bromobenzyl)aminopropyl malondiamide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl diox/w 25°C 13% C K1=7.20 2001CLa (102763)4478  
B(CoHL)=16.06  
B(CoH-1L)=-2.47  
B(CoH-2L)=-12.56

Medium: 13% v/v dioxane/H2O, 0.10 M KNO3.

\*\*\*\*\*  
C23H33N3O3 L CAS 173547-19-8 (7558)  
1,15,19-Triaza-3,4:12,13-dibenzo-5,8,11-trioxacycloheneicosan-3,12-diene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 95% C I K1=7.0 1998DDb (102814)4479  
Medium: 95% MeOH/H2O, 0.1 M Et4NClO4.  
In 95% MeOH/H2O, 0.1 M Me4NCl, K1=6.8.

\*\*\*\*\*  
C24H20N2P L CAS 76032-64-9 (5329)  
Triphenylphosphazobenzene; (C6H5)3.P.N:N.C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
 Co++ sp non-aq ? 100% U 1970YSa (102911)4480  
 K(CoCl2+L)=4.0  
 K(CoCl2+2L)=7.3

Medium: tetrahydrofuran  
 \*\*\*\*\*  
 C24H23N07S H3L (1980)  
 3-(N-Carboxymethyl)aminomethyl-o-cresolsulfonephthalein;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co++ gl KNO3 25°C 0.10M U K1=7.6 B2=13.00 1979YMb (102928)4481  
 \*\*\*\*\*

C24H27N3O2 L CAS 132097-06-4 (6408)  
 4,5:13,14-Dibenzo-7,11,21-triaza-3,15-dioxabicyclo[15.3.1]heneicosa-1(21),4,13,17,19-pentaene;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co++ gl alc/w 25°C 95% U K1=4.36 1991BFa (102995)4482  
 Medium: 95% MeOH/H2O, 0.1 M Et4NC104  
 \*\*\*\*\*

C24H30N2O6 H2L (1923)  
 Dibenz[b,k]-1,13-dioxa-5,9-diazacyclohexadecane-N,N'-diethanoic acid;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co++ gl KNO3 25°C 0.10M U K1=8.3 1988ALb (103026)4483  
 \*\*\*\*\*

C24H31N3O8 H3L CAS 35369-55-2 (6972)  
 N,N''-Bis(2-hydroxybenzyl)-2,5,8-triazanonane-N,N',N''-triethanoic acid;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co++ gl KCl 25°C 0.10M C K1=18.16 1994MMF (103054)4484  
 K(CoL+H)=10.26  
 K(CoHL+H)=7.76  
 K(CoH2L+H)=5.79  
 K(CoH3L+H)=2.9  
 \*\*\*\*\*

C24H32O8 L DiBz-24-Crown-8 CAS 14174-09-5 (580)  
 2,3:14,15-Dibenzo-1,4,7,10,13,16,19,22-octaoxacyclotetracos-2,14-diene;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co++ con mixed 25°C 90% C K1=1.54 2003ISa (103105)4485  
 Medium: 90% v/v DMSO/H2O.  
 -----

Co++ vlt alc/w 25°C 100% C K1=2.79 1987CBd (103106)4486  
 Medium: methanol, 0.10 M Et4NI or Bu4NC104. Method: polarography.

Additional method conductivity in methanol: K1=2.71.

\*\*\*\*\*

C24H34N4O12 H6L (5480)  
1,4-Bis(2,5,5-tris(carboxymethyl)-2,5-diazapentyl)benzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C			K1=15.88 K(CoL+H)=9.80 K(CoHL+H)=4.98 K(CoH2L+H)=2.49 K(CoH3L+H)=2.05	1983NMa	(103224)4487

\*\*\*\*\*

C24H35N3O3 L CAS 173547-21-2 (7559)  
1,15,19-Triaza-3,4:12,13-dibenzo-5,8,11-trioxacyclodocosan-3,12-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	C			K1=4.9	1998DDb	(103252)4488
Medium: 95% MeOH/H2O, 0.1 M Et4NClO4.										

\*\*\*\*\*

C24H36N4S2 CAS 638211-87-7 (9252)  
Eicosahydro-7,10:19,22-diepithiodibenzo[1,4,11,14]tetraazacycloeicosine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C			K1=18.50	2003GMb	(103278)4489

\*\*\*\*\*

C24H36N6 L CAS 240410-16-6 (8656)  
N,N'-Bis[2-[(1-methylethyl)amino]ethyl]-1,10-phenanthroline-2,9-dimethanamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	C			K1=12.22 B(CoHL)=19.26 B(CoH2L)=25.76	1999SLa	(103284)4490

\*\*\*\*\*

C24H38N6 L CAS 130433-51-1 (6536)  
3,6,9,17,20,23-Hexaazatricyclo[23.3.1.1(11,15)]triaconta-1(29),11(30),12,14,25,27-h  
exaene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C	M		K1=5.40 K(CoL+H)=9.26 K(CoHL+H)=7.26 *K(CoL)=-9.30 K(CoL+Co)=3.76	2003AZa	(103343)4491

K(Co2L+H)=9.00, \*K(Co2L)=-7.72, \*K(Co2H-1L)=-9.49, K(Co2L+A)=4.76,  
K(Co2L(OH)+A)=1.86, K(Co2L(OH)2+A)=3.83. A: 4-methoxy-1,2-phenylenediamine



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	dis	non-aq	25°C	100%	U				1990UKa (103540)	4497

K(CoA2+L)=5.28  
K(CoA2+2L)=7.23

Medium: benzene. HA=1-phenyl-3-methyl-4-benzoyl-5-pyrazolone

Co++	dis	non-aq	20°C	100%	U	M			1974HHc (103541)	4498
------	-----	--------	------	------	---	---	--	--	------------------	------

K(CoA2+L)=4.18  
K(CoA2+2L)=7.40

A=thenoyltrifluoroacetone, (4,4,4-trifluoro-1-(2-thienyl)-1,3-butanedione)

Medium: cyclohexane

\*\*\*\*\*

C24H54N8O3 L O-BisTren CAS 64819-97-2 (5473)  
7,19,30-Trioxa-1,4,10,13,16,22,27,33-octaazabicyclo[11.11.11]pentatriacontane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl04	25°C	0.10M	C	M			1988MMF (103570)	4499

B(Co2L)=16.8  
(Co2L(O2)OH)(H)/(Co2L)pO2=-6.0

Co++	gl	KCl	25°C	0.10M	C	M	K1=11.20		1988MMg (103571)	4500
------	----	-----	------	-------	---	---	----------	--	------------------	------

B(Co2L)=16.80  
K(CoLOH+H)=9.13  
K(Co2LOH+H)=7.20  
K(Co2L(OH)2+H)=8.80

K(Co2(OH)L+O2)=4.57 at 25 C; 3.94 at 45 C; 3.44 at 65 C; 3.22 at 75 C.

Co++	gl	oth/un	25°C	0.10M	C		K1=11.20		1982MMb (103572)	4501
------	----	--------	------	-------	---	--	----------	--	------------------	------

B(Co2L)=16.80  
B(CoH3L)=33.73  
K(CoL+H)=8.52  
K(CoHL+H)=7.16

\*\*\*\*\*

C24H56N8O4 L CAS 255366-90-6 (63)  
1,4,19,22-Tetraoxa-7,10,13,16,25,28,31,34-octaazacyclohexatriacontane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.15M	C	M	K1=8.40		2004BBc (103577)	4502

B(CoHL)=17.61  
B(CoH2L)=25.87  
B(Co2L)=16.24  
K(Co2L+OH)=3.8

K(Co2H-1L+OH)=3.2. Ternary complexes with dioxygen also reported.

K(Co2H-1L+O2)=10.4, K(Co2H-2L+O2)=11.4, K(Co2H-2L(O2)+OH)=3.9.

\*\*\*\*\*

C24H60N12 L CAS 24904-24-3 (5837)

1,4,7,10,13,16,19,22,25,28,31,34-Dodecaazacyclohexatriacontane;

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaCl04 25°C 0.15M C                                1989BBd (103585)4503
```

```
B(Co2L)=24.55
B(Co2H4L)=48.76
B(Co2H3L)=43.45
B(Co2H2L)=37.62
```

```
B(Co2HL)=31.29, B(2Co+L+H2O=Co2LOH+H)=13.87, K(Co2L+H)=6.73,
K(Co2HL+H)=6.34, K(Co2H2L+H)=5.83, K(Co2L+OH)=3.05
```

```
*****
```

```
C25H22O2P2          L          CAS 207-21-8 (2099)
```

```
Methylenebis(diphenylphosphine oxide); Ph2P(O)CH2P(O)Ph2
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      dis non-aq 25°C 100% U                                1990UKa (103625)4504
```

```
K(CoA2+L)=6.82
```

```
Medium: benzene. HA=1-phenyl-3-methyl-4-benzoyl-5-pyrazolone
```

```
*****
```

```
C25H28N4O10        L          CAS 752-13-6 (2940)
```

```
Tetraacetylrifloflavine;
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      nmr non-aq 38°C 100% U          K1=3.1   B2=5.68  1975LHa (103673)4505
```

```
In acetone. B2 measured by ESR at 38 C, K1 by spectrophotometry at 25 C
```

```
*****
```

```
C25H30N4O2          L          CAS 336181-87-4 (8558)
```

```
Octahydro-12H-7,11-nitrilo-6H,18H-dibenzo[b,m][1,15,5,8,11]dioxatriazacyclodocose
;
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  alc/w 25°C 95% U          K1=9.2      2002FGa (103698)4506
```

```
Medium:95% MeOH/H2O, 0.10 M Et4NCl04. For the 2,16-t-butyl derivative,
K1=9.1.
```

```
*****
```

```
C25H31N3O2          H2L          (5559)
```

```
Bis(2-hydroxybenzyl)-4-benzyl-diethylenetriamine;
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 25°C 70% U          K1=22.0     1984MMe (103718)4507
```

```
K(CoH2L+H)=10.96
```

```
K(CoHL+H)=6.86
```

```
K(CoL+H)=2.00
```

```
*****
```

```
C25H32N2O6          H2L          (1924)
```

```
Dibenz[b,k]-1,13-dioxo-5,9-diazacycloheptadecane-N,N'-diethanoic acid;
```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.10M U          K1=6.8      1988ALb (103723)4508
*****
C25H32N6          L          CAS 132177-84-5 (536)
3,11-Bis(2-pyridylmethyl)-3,7,11,17-tetraazabicyclo[11.3.1]heptadeca-1(17),13,15-triene;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KNO3   25°C 0.10M C          K1=13.5     1999CDa (103743)4509
*****
C25H36N2O4        L          (6970)
2,3:11,12-Dibenzo-5,9-diaza-5,9-(2-hydroxyethyl)-1,13-dioxacycloheptadeca-2,11-diene;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      EMF alc/w 25°C 95% U I      K1=4        1994ACb (103755)4510
Medium: 95% MeOH/H2O, 0.1 M NEt4ClO4. Also data for analogous ligands with smaller rings and for 95% MeOH/H2O, 0.1 M NMe4Cl.
*****
C25H48N6O8        H3L      Desferrioxamine CAS 70-51-9 (2488)
Desferrioxamine B; NH2.((CH2)5.NOH.CO.C2H4.CO.NH)2.(CH2)5.NOH.CO.CH3
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  NaNO3  20°C 0.1M U          K(Co+HL)=10.31
                                   K(Co+H2L)=7.36
                                   K(Co+H3L)=4.18
*****
C26H22N4O         HL          (1410)
1-Phenyl-1-propanone-3-(4-benzyl-6-phenyl)-pyridazinylyl hydrazone;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 30°C 75% U          K1=10.13    1983RRa (103866)4512
*****
C26H23N5O2        HL          (5918)
Hippuric monohydrazone-3-hydrazino-4-benzyl-6-phenylpyridazine;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  diox/w 30°C 75% U          K1=9.96     B2=18.14    1985RSb (103875)4513
*****
C26H24O2P2        L          (6648)
Bis(diphenylphosphiny)ethane; (C6H5)2PO.CH2CH2.PO(C6H5)2
-----

```



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	dis	non-aq	25°C	100%	U			K(CoA2+L)=5.06	1990UKa (103909)	4514

Medium: benzene. HA=1-phenyl-3-methyl-4-benzoyl-5-pyrazolone  
 \*\*\*\*\*  
 C26H25N09S H4L Semi-Xylenol O (426)  
 3-(N,N-Di(carboxymethyl)aminomethyl)-2-cresolsulfonephthalein;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U			K1=12.4 K(CoL+H)=6.0	1981MUa (103940)	4515

\*\*\*\*\*  
 C26H27N3O10 H4L (7231)  
 2-((2-Amino-5-methylphenoxy)-methyl)-6-methoxy-8-aminoquinoline-N,N,N',N'-tetraetha  
 noic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C			K1=10.27	1993YTa (103957)	4516

\*\*\*\*\*  
 C26H28N6 L CAS 16858-02-9 (933)  
 N,N,N',N'-Tetrakis-(2-pyridylmethyl)-diaminoethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	20°C	0.10M	C H			K1=16.59	1977AHc (103997)	4517

Calorimetry: DH1=-72.1 kJ mol-1, DS1=69.5

Co++	cal	KNO3	20°C	0.10M	U H				1970WAa (103998)	4518
------	-----	------	------	-------	-----	--	--	--	------------------	------

\*\*\*\*\*  
 C26H28O4 H2L B(CH2AcAcCH2)2B (2253)  
 3,5,16,18-Tetraoxo[7.7]metacyclophane ;Cyclo-(-C6H4.(CH2)2.CO.CH2.CO.(CH2)2-)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	24°C	50%	U			K1=8.6	1979ACa (104018)	4519

\*\*\*\*\*  
 C26H30N2O2 L CAS 268727-12-4 (8553)  
 6,7,8,9,10,11,17,18-Octahydro-6-(phenylmethyl)-5H-dibenzo[e,n][1,4,8,12]dioxadiazac  
 ylopentadecin

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	C			K1=<4	2002KAb (104030)	4520

Medium: 95% MeHO/H2O, 0.10 M Et4NClO4.

\*\*\*\*\*  
 C26H33N3O8 H3L CAS 119673-43-7 (1925)

Dibenz[b,m]-1,15-dioxa-5,8,11-triazacycloheptadecane-N,N',N''-triethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M U K1=14.2 1988ALb (104054)4521  
\*\*\*\*\*

C26H34N4O6 H2L EDTAMBA CAS 144150-09-4 (7802)  
Ethylenedinitrilo-N,N'-diethanoic-N,N'-bis(1-phenylethylacetamido) acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaClO4 25°C 0.10M M H K1=8.93 1998DTa (104084)4522  
Medium: 0.10 M KClO4. By calorimetry, DH(K1)=-19.14 kJ mol<sup>-1</sup>,  
DS(K1)=106.8 J K<sup>-1</sup> mol<sup>-1</sup>.  
\*\*\*\*\*

C26H36N2O6Cl2 H2L (7215)  
7,16-Bis((5-chloro-2-hydroxybenzyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane);

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ cal alc/w 25°C 100% U H K(Cu+HL)=2.27 1996BBf (104154)4523

Medium: MeOH; 0.1 M Me4NCl. DH(K)=-14.4 kJ mol<sup>-1</sup>. Data also for similar  
ariat ligands

\*\*\*\*\*  
C26H40N6 L CAS 240410-17-7 (8657)  
N,N'-Bis[2-(diethylamino)ethyl]-1,10-phenanthroline-2,9-dimethanamine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaNO3 25°C 0.10M C K1=8.52 1999SLa (104231)4524  
B(CoHL)=17.02  
B(CoH2L)=24.88  
\*\*\*\*\*

C26H40N10 L CAS 85264-43-3 (7797)  
N,N,N',N''-Tetrakis(3',5'-dimethylpyrazol-1'-ylmethyl)-1,2-diaminoethane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ dis non-aq 25°C 100% U K(M+3L+2ClO4=ML3.2ClO4)=16.79 1997HIb (104239)4525

Method: extraction form 0.1 M NaClO4 into nitrobenzene.  
Reaction is: Co(aq)+3L(org)+2ClO4(aq)=CoL3.2ClO4(org)

\*\*\*\*\*  
C26H42N6O4 L O2-BISBAMP CAS 75620-07-4 (5909)  
3,12,20,29,35,36-Hexaaza-6,9,23,26-tetraoxatricyclo[29.3.1.1]-hexatrica-hexaene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M C K1=8.86 1989Mca (104268)4526

K(CoL+H)=6.89  
 K(CoHL+H)=6.43, K(CoL+Co)=4.1  
 K(CoL=CoLOH+H)=-11.2  
 K(Co2L=Co2LOH+H)=-8.4

\*\*\*\*\*

C26H48N4O13 H4L (6531)  
 1,4,7,10,13-Pentaoxa-16,19,22,25-tetraazacycloheptacosane-16,19,22,25-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C			K1=16.6 K(Co+HL)=12.4 K(Co+H2L)=7.2	1990SBc	(104301)4527

\*\*\*\*\*

C26H56N8 L TCOA-14 (7430)  
 1,5,9,12,16,20,24,27-Octaazatricyclo[18.10.2.2(5,16)]tetratriacontane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C			K1=10.01 K(Co+H3L)=2.9 K(Co+CoL)<2.9 *K1(Co2L)<-6.6 *K1(Co2H-1L)=-10.22	1998DDa	(104371)4528

Medium: 0.1 M NEt4ClO4.

\*\*\*\*\*

C27H27N3O2 H2L (5859)  
 N,N-Bis(2-((2-hydroxybenzyl)amino)phenyl)methylamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	25°C	70%	C			K1=14.21 K(CoL+2H=CoH2L)=16.20	1988MMd	(104414)4529

\*\*\*\*\*

C27H27N3O3 H3L CAS 444311-20-0 (8670)  
 2,2',2''-[1,3,5-Benzenetriyltris(methyleneimino)]trisphenol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	mixed	25°C	20%	C			B(CoH4L)=39.06 B(Co3L)=12.14 B(Co3H-1L)=3.67 B(Co3H-2L)=-4.70	2002LWa	(104419)4530

Medium: 80% v/v DMSO/H2O, 0.10 M KNO3.

\*\*\*\*\*

C27H30N6 L CAS 444311-21-1 (8671)  
 N,N',N''-Tris(2-pyridinylmethyl)-1,3,5-benzenetriethanamine;

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U			K1=8.25 B(Co2H2L)=31.25 B(Co3L)=16.97 B(Co3H-1L)=7.82 B(CoH4L)=41.39	2003GGa (104489)	4531
B(CoH3L)=34.54, B(CoH2L)=25.72, B(CoHL)=17.23.										

Co++	gl	KNO3	25°C	0.10M	C			B(Co2H2L)=31.25 B(Co3L)=16.97 B(Co3H-1L)=7.82	2002LWa (104490)	4532
------	----	------	------	-------	---	--	--	---	------------------	------

\*\*\*\*\*

C27H30O16		H4L		Rutin				CAS 153-18-4	(4169)	
3,3',4',5,7-Pentahydroxyflavone-3-beta-rutinoside;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO3	20°C	0.10M	C			K1=8.23 K(CoL+H)=9.14 K(CoHL+H)=7.66	1991ESa (104504)	4533

\*\*\*\*\*

C27H33N3O2		L						CAS 540522-39-2	(9154)	
1,12,15-Triaza-3,4:9,10-dibenzo-5,8-dioxacycloheptadecane;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	U			K1=5.7	2004FRa (104532)	4534
Medium: 95% methanol/water, 0.1 M Et4NC104.										

\*\*\*\*\*

C27H33N9O15P2		H2L		FAD				CAS 146-14-5	(3521)	
Flavin adenine dinucleotide;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	ix	NaCl	23°C	0.1M	U			K1=2.36	1958WAa (104544)	4535
*****										
C27H44O		L		Vitamin D3				CAS 67-97-0	(6103)	
7-Dehydrocholesterol, Cholecalciferol										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	70%	U			K1=7.6 B2=14.10	1998MSc (104612)	4536
Medium: 70% v/v EtOH/H2O, 0.1 M KNO3										
*****										
C27H44O2		L						CAS 19356-17-3	(8052)	
25-Hydroxycholecalciferol;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

-----  
Co++ sp none 25°C 0.0 C K1=4.7 1994GKb (104616)4537  
For 1,25-dihydroxycholecalciferol, K1=6.1

\*\*\*\*\*  
C27H48N6O10 H3L Nocardamin (3519)  
Desferri-ferrioxamin E;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl NaNO3 20°C 0.1M U K1=11.88 1963AEa (104635)4538  
K(Co+HL)=8.42  
K(Co+H2L)=4.76

\*\*\*\*\*  
C27H54N6 L CAS 450416-37-2 (8881)  
1,3,5-Tri(n-2',5'-diazanonane)benzene;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KNO3 25°C 0.10M U K1=7.52 2003GGa (104648)4539  
B(CoH4L)=41.18  
B(Co2H2L)=35.64  
B(Co3L)=25.59  
B(Co3H-1L)=18.31

B(CoH3L)=34.12, B(CoH2L)=25.91, B(CoHL)=16.70.  
\*\*\*\*\*  
C28H22N2O8S2 H2L CAS 4403-90-1 (2911)  
1,4-Di(4-methylanilino)anthraquinone; (Alizarin cyanin green)  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp oth/un 25°C ? U K1=5.5 B2=9.8 1978ISb (104662)4540

\*\*\*\*\*  
C28H30N2O7 L CAS 105169-83-3 (7173)  
4,'5-Bis(salicylideneimino)-1,4,7,10,13-pentaoxa[13]orthocyclophan;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl KCl 25°C 1.00M C K1=4.11 1995ABb (104732)4541  
B(CoHL)=11.00  
B(CoH-1L=Co(OH)L)=-4.00

\*\*\*\*\*  
C28H44N2O2 HL CAS 84356-27-4 (8397)  
1-Phenyl-3-methyl-4-stearoyl-5-hydroxypyrazole;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ dis non-aq 25°C 100% C 1998SGc (104934)4542  
Method: extraction from 0.33 M SO4 medium into toluene.  
K(Co+2HL(org)=CoL2(org)+2H)=-8.40. For 1 M ClO4 medium, K=-7.40.

\*\*\*\*\*

C28H46N6O L CAS 74126-85-5 (5440)  
Tri-(4,5-diisopropylimidazol-2-yl)-methanol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.20M U K1=<7.0 1980BHa (104954)4543  
\*\*\*\*\*

C28H46N6O2 L CAS 402562-58-7 (8007)  
3,6,10,18,21,25-Hexaaza-31,32-dihydroxy-14,29-dimethyltricyclo[25,3,1,1]dotriaconta  
-1,12,14,16,27

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KCl 25°C 0.10M C K1=18.02 2002KMa (104961)4544  
K(CoL+H)=10.99  
K(CoHL+H)=9.54  
K(CoH2L+H)=7.99  
K(CoH3L+H)=6.17

K(CoL+Co)=9.23, K(Co2(OH)L+H)=11.38.  
K(Co2L+O2)=3.19, K(Co2(OH)L+O2)=0.9, K(Co2(OH)L(O2)+H)=9.09.

\*\*\*\*\*

C28H52N4O14 H4L (6532)  
1,4,7,10,13,16-Hexaoxa-19,22,25,28-tetraazacyclotriacontane-19,22,25,28-tetraethano  
ic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl R4N.X 25°C 0.10M C K1=16.5 1990SBc (104995)4545  
K(Co+HL)=12.1  
K(Co+H2L)=6.8

\*\*\*\*\*

C29H37N3O4S2 L CAS 173547-29-0 (7564)  
1,8,15-Triaza-3,4:12,13-dibenzo-8-tosyl-5,11-dioxa-18-thiacycloeicosan-3,12-diene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 95% C K1=3.4 1998DDb (105114)4546  
Medium: 95% MeOH/H2O, 0.1 M Et4NClO4.

\*\*\*\*\*

C29H37N3O5S L CAS 173547-28-9 (7563)  
1,8,15-Triaza-3,4:12,13-dibenzo-8-tosyl-5,11,18-trioxacycloeicosan-3,12-diene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 95% C K1=3.9 1998DDb (105122)4547  
Medium: 95% MeOH/H2O, 0.1 M Et4NClO4.

\*\*\*\*\*

C29H38N4O4S L CAS 168279-83-2 (7561)  
1,8,15,18-Tetraaza-3,4:12,13-dibenzo-8-tosyl-5,11-dioxacycloeicosan-3,12-diene;

-----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	C		K1=8.0 B(CoHL)=14.2	1998DDb (105131)	4548

Medium: 95% MeOH/H2O, 0.1 M Et4NClO4.

\*\*\*\*\*

C30H26N2O13	H6L	Calcein	CAS 1461-15-0	(2873)
-------------	-----	---------	---------------	--------

bis(N,N-Bis(carboxymethyl)aminomethyl)fluorescein

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	oth/un	20°C	0.10M	U		Keff=5.5 (pH=5.05) Keff=8.2 (pH=7.05)	1984SSa (105182)	4549

By fluorescence.

\*\*\*\*\*

C30H27N3O18S3	H9L	TRIMCAMS	CAS 77069-63-7	(5468)
---------------	-----	----------	----------------	--------

1,3,5-Tris(2,3-dihydroxy-5-sulfobenzoyl)carbamido)benzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C		B(CoHL)=26.3 B(CoH2L)=33.9	1982KRb (105202)	4550

\*\*\*\*\*

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]henLetetraco ntadodecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	non-aq	25°C	100%	U		K1=6.2	1996AAb (105249)	4551

Medium: MeCN

tacyclo[12.12.12.1(6,9).1(19,22).1(31,34)]hentetetraconta-4,6,8.....dodecaene

\*\*\*\*\*

C30H40N4O4S	L		CAS 173547-27-8	(7562)
-------------	---	--	-----------------	--------

1,8,15,19-Tetraaza-3,4:12,13-dibenzo-8-tosyl-5,11-dioxacycloheneicosan-3,12-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	C		K1=7.0 B(CoHL)=14.1	1998DDb (105289)	4552

Medium: 95% MeOH/H2O, 0.1 M Et4NClO4.

\*\*\*\*\*

C30H48N8O3	L		CAS 137447-39-3	(7704)
------------	---	--	-----------------	--------

39,40,41-Tetraoxa-1,4,11,14,17,24,29,36-octazapentacyclo[12.12.12.1.1.1]henetetraco nta-hexaene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	-------------	-----------	--------

Co++ gl R4N.X 25°C 0.10M C K1=7.8 2000AFa (105331)4553  
 B(CoHL)=15.81  
 B(Co2HL)=4.2  
 B(CoH-1L)=-5.8

Medium: 0.1 M Et4NClO4.

\*\*\*\*\*

C30H50N6O2 L CAS 380446-61-7 (8002)  
 3,7,11,19,23,27-Hexaaza-33,34-dihydroxy-15,31-dimethyltricyclotetraatriaconta-1,13,15,17,29,30-hex

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co++ gl KCl 25°C 0.10M C K1=13.78 2002WMa (105366)4554  
 K(CoL+H)=10.60  
 K(CoHL+H)=9.32  
 K(CoH2L+H)=7.42  
 K(CoH3L+H)=3.37

K(CoL+Co)=8.28, K(Co2L+H)=7.07, \*K(Co2L)=-10.01, B(Co2HL)=29.14,  
 B(Co2L)=22.07, B(Co2H-1L)=12.06.

-----  
 Co++ gl KCl 25°C 0.10M C M 2002WMa (105367)4555

K(Co2H2L+O2)=5.81  
 K(Co2HL+O2)=5.99  
 K(Co2L+O2)=5.55  
 K(Co2L+O2=Co2H-1L(O2)+H)=5.46

K(CoCuH2L+O2)=3.55, K(CoCuHL+O2)=1.88, K(CoCuL+O2)=1.25,  
 K(CoCuL+O2=CoCuH-1L(O2)+H)=3.99. Data for Co-Ni and Co-Pb complexes

-----  
 Co++ gl KCl 25°C 0.10M C M K1=13.78 2001Wka (105368)4556

K(CoH2L+H)=7.42  
 K(CoHL+H)=9.32  
 K(CoL+H)=10.60  
 K(Co2L+H)=7.07

K(CoL+Co)=8.28, \*K(Co2L)=-10.01. Also data for dinuclear complexes, M2HnL,  
 and heterodinuclear complexes, MM'HnL.

\*\*\*\*\*

C31H24N4O HL CAS 88700-85-0 (1409)  
 1,2-Diphenyl-1,2-ethanedione-3-(4-benzyl-6-phenyl)-pyridazinyl hydrazone;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co++ gl diox/w 30°C 75% U I K1=10.14 B2=19.70 1983RRa (105398)4557  
 In 75% DMF: K1=6.99, B2=13.34

\*\*\*\*\*

C31H32N2O13S H6L Xylenol orange CAS 63721-85-5 (432)  
 5,5'-Bis-N,N-bis(carboxymethyl)aminomethyl-4'-hydroxy-3,3'-dimethylfuchsone-2"-sulfonic acid;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----



Co++ gl NaClO4 30°C 0.10M C 1995STa (105446)4558  
K(Co+H2L)=6.94  
K(Co+HL)=10.19

-----  
Co++ ISE NaClO4 25°C 0.10M U K1=12.63 1980MOa (105447)4559  
K(Co+HL)=10.58  
K(Co+H2L)=4.64  
K(CoL+H)=10.18  
K(CoHL+H)=4.62

K(Co+CoL)=11.61, K(Co+CoHL)=5.43, K(Co2L+H)=4.4  
\*\*\*\*\*

C31H34N4O2 L (6979)  
3,4:9,10-Dibenzo-1,12-diaza-1,12-di(pyridylmethyl)-5,8-dioxacyclopentadeca-3,9-diene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl alc/w 25°C 95% U K1=7.17 1994ALb (105522)4560  
Medium: 95% MeOH/H2O, 0.01 NEt4ClO4. Data for homologous macrocycles

-----  
C31H52N6O L CAS 74126-86-6 (5441)  
Tri-(4,5-diisopropyl-N-methylimidazol-2-yl)-methanol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl KNO3 25°C 0.20M U K1=4.0 1980BHa (105557)4561

-----  
C32H32N2O12 H6L Cresolphthalexo CAS 2411-89-4 (1997)  
o-Cresolphthalein-3,3'-bis(methyliminodiethanoic acid)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl NaClO4 30°C 0.1M U TIH K1=14.13 1996STa (105606)4562  
K(Co+HL)=12.90  
K(Co+H2L)=9.44

\*K1=-7.53.

-----

C32H34N4O4S2 L CAS 463304-27-0 (8534)  
N,N'-[1,2-Ethanediylylbis(nitriloethylidyne-2,1-phenylene)]bis-4-methylbenzenesulfonamide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ dis non-aq 25°C 100% C Kex=-13.03 2002HTa (105642)4563

Method: extraction from 0.1 M KNO3 into CHCl3/H2L solution.

Kex: Co+H2L(o)=CoL(o)+2H

-----

C32H37N09S H4L SemiMeThymolBlu (427)  
3-(N,N-Di(carboxymethyl)-aminomethyl)thymolsulfonephthalein;

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp  KNO3   25°C 0.10M M          K1=12.75      1974YMb (105661)4564
                               B(CoHL)=19.28
                               B(CoH2L)=22.24
*****
C32H38N4O6Cl2      H2L                      (7214)
7,16-Bis((5-chloro-8-hydroxy-7-quinolinyl)methyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      cal alc/w 25°C 100% U  H          K(Co+H2L)=5.14  1996BBf (105687)4565
Medium: MeOH; 0.1 M Me4NCl. DH(K)=-91.1 kJ mol-1. Data also for similar
ariat ligands with substituted oxine side chains
*****
C32H39N7          L                      CAS 265987-10-8 (7764)
1-[4'-p-Tolyl-(2,2':6',2''-terpyridyl)]-1,4,8,11-tetraazacyclotetradecane;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  mixed 25°C 70% C          K1=12.76      2001PMb (105701)4566
                               B(CoH-1L)=0.83
                               B(CoHL)=18.82
                               B(CoH3L2)=42.81
                               B(CoH4L2)=47.20
Medium: 70% v/v acetonitrile/H2O, 0.10 M Bu4NClO4. Also data for P04
complexes: B(CoH5L2(P04))=68.12, B(CoH2L2(P04))=46.00.
*****

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C32H40N2O8P4      H4L                      CAS 78558-60-8 (1334)
N,N'-Di(diphenylphosphorylethyl)ethylenediamine-bismethylphosphonic acid;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl  KCl    25°C 0.10M M          K1=10.5       1981MGa (105706)4567
                               K(Co+HL)=6.7
*****
C32H40N4O4          L                      CAS 340963-90-8 (8926)
8,8'-[1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diylbis(methylene)bisquinoline;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      cal alc/w 25°C 100% C  H          K1=3.21       2001DXa (105711)4568
Medium: MeOH. DH(K1)=14.4 kJ mol-1, DS(K1)=110 J K-1 mol-1.
*****
C32H40N4O6          H2L                      CAS 254900-30-6 (8916)
7,16-Bis(8-hydroxyquinoline-7-ylmethyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane
-----

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e;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ cal alc/w 25°C 100% C H K(Co+H2L)=3.91 1999SBg (105721)4569  
Medium: MeOH. DH(K)=-91.2 kJ mol<sup>-1</sup>, DS(K)=-231 J K<sup>-1</sup> mol<sup>-1</sup>.  
\*\*\*\*\*  
C32H42N6O2S H2L CAS 226211-88-7 (7999)  
2,2'-(7,10-DiMe-1-thia-4,7,10,13-tetraazacyclopentadeca-4,13-diyl)bis(methylene)bis-quinolinol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl R4N.X 25°C 0.10M C K1=12.00 2001LIa (105740)4570  
B(CoHL)=15.30  
B(CoH-1L)=6.41  
Medium: 0.10 M Me4NCl.  
\*\*\*\*\*  
C32H42N6O3 H2L CAS 226211-86-5 (7997)  
2,2'-(7,10-DiMe-1-oxa-4,7,10,13-tetraazacyclopentadecan-4,13-diyl)bis(methylene)-bis-quinolinol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl R4N.X 25°C 0.10M C K1=12.34 B2=20.19 2001LIa (105747)4571  
B(CoH-1L)=6.44  
Medium: 0.10 M Me4NCl.  
\*\*\*\*\*  
C32H44N10O4 L CAS 702699-42-1 (9126)  
2,9-Di[4-(1,4,7,10-tetraazacyclotridecane-11,13,-dione)methyl]-1,10-phenanthroline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl KNO3 25°C 0.10M U B(CoH3L)=25.88 2004GLa (105772)4572  
B(CoH2L)=19.87  
B(Co2L)=11.90  
B(Co3H-2L)=5.56  
B(Co3H-3L)=-7.62, B(Co3H-4L)=-16.20.  
\*\*\*\*\*  
C32H66N2O4 L 22DD Kryptofix CAS 79495-97-9 (6655)  
1,10-Didecyl-1,10-diaza-4,7,13,16-tetraoxacyclooctadecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ cal alc/w 25°C 100% U H K1=2.36 1985BUd (105859)4573  
Medium: MeOH, 0.05 M Et4N.NO3. DH=+2.8 kJ mol<sup>-1</sup>  
\*\*\*\*\*  
C33H36N2O2 L CAS 225918-78-5 (8554)

6,7,8,9,10,11,17,18-Octahydro-6,10-bis(phenylmethyl)-5H-dibenzo[1,4,8,12]dioxadiaza cyclopentadeci

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 95% C K1=<4 2002KAb (105885)4574  
Medium: 95% MeHO/H2O, 0.10 M Et4NClO4.

\*\*\*\*\*

C33H36N4O4S2 L CAS 463304-29-2 (8536)  
N,N'-[1,3-Propanediylbis(nitriloethylidyne-2,1-phenylene)]bis-4-methylbenzenesulfonamide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ dis non-aq 25°C 100% C Kex=-12.97 2002HTa (105894)4575  
Method: extraction from 0.1 M KNO3 into CHCl3/H2L solution.

Kex: Co+H2L(o)=CoL(o)+2H

\*\*\*\*\*

C33H38N2O6P2 H2L CAS 361523-72-0 (7842)  
1,12-Diaza-3,4:9,10-dibenzo-5,8-dioxacyclopentadecan-1,2-bis(methylenephosphonic acid);

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 95% C K1=10.5 2001FLa (105905)4576  
Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

\*\*\*\*\*

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]tetratetracontapentadecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 25°C 100% U K1=7.2 1996AAb (105914)4577  
Medium: CH3CN

.13.1(6,10).1(20,24).1(33,37)]tetratetraconta-4-6-8-10(44),11...pentadecaene

\*\*\*\*\*

C33H44N6O2S H2L CAS 226211-89-8 (8000)  
2,2'-(7,11-DiMe-1-thia-4,7,11,14-tetraazacyclohexadecan-4,14-diyl)bis(methylene)bis-quinolinol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl R4N.X 25°C 0.10M C K1=9.68 2001LIa (105944)4578  
B(CoHL)=15.32  
B(CoH-1L)=2.16

Medium: 0.10 M Me4NCl.

\*\*\*\*\*

C33H44N6O3 H2L CAS 226211-87-6 (7998)

2,2'-(7,11-DiMe-1-oxa-4,7,11,14-tetraazacyclohexadecan-4,14-diyl)bis(methylene)bis-8-quinolinol;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl R4N.X 25°C 0.10M C K1=10.03 2001LIa (105951)4579  
B(CoH-1L)=3.68  
B(CoH-2L)=-3.47

Medium: 0.10 M Me4NCl.

\*\*\*\*\*

C33H51N11 L CAS 137447-41-7 (7705)  
1,4,12,15,18,26,31,39,42,43,44-Undecaazapentacyclo[13.13.13.1.1.1]tetratetraconta-  
onaene;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl R4N.X 25°C 0.10M C K1=12.02 2000AFa (105991)4580  
B(CoHL)=20.63  
B(CoH2L)=27.89  
B(CoH3L)=33.94  
B(Co2L)=17.70

Medium: 0.1 M Et4NClO4. B(Co2HL)=24.0, B(Co2H-1L)=9.70.

\*\*\*\*\*

C34H36N6O4 L (7514)  
1,2-Diaminoethane-N,N,N',N'-tetraacetanilide; ((C6H5NH.CO.CH2)2NCH2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ cal non-aq 25°C 100% U H K1=4.18 1997DGa (106017)4581  
Medium: water-saturated butanol. DH(K1)=-22.16 kJ mol<sup>-1</sup>,  
DS=5.7 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*

C34H38N2O3 L CAS 268727-13-5 (8555)  
Decahydro-17,20-bis(phenylmethyl)dibenzo[h,p][1,4,7,11,14]trioxadiazacycloheptadeci  
ne;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 95% C K1=<4 2002KAb (106024)4582  
Medium: 95% MeHO/H2O, 0.10 M Et4NClO4.

\*\*\*\*\*

C34H44N4O6 H2L CAS 254900-31-7 (8917)  
7,16-Bis(5-methyl-8-hydroxyquinoline-7-ylmethyl)-1,4,10,13-tetraoxa-7,16-diazacyclo  
octadecane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ cal alc/w 25°C 100% C H K(Co+H2L)=3.96 1999SBg (106071)4583  
Medium: MeOH. DH(K)=-84.5 kJ mol<sup>-1</sup>, DS(K)=-208 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*  
C34H46N4O14 H2L CAS 226947-33-7 (8530)  
N,N'-Bis[(benzo-15-crown-5)-oymethyl]diaminoglyoxime;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl mixed 25°C 60% U K1=10.85 1999ADd (106076)4584  
B(CoHL)=16.47  
B(CoH2L2)=33.78  
B(CoH-1L)=2.75

Medium: 60% v/v acetone/H2O, 0.20 M KNO3.

\*\*\*\*\*  
C34H52N6O H2L Hydroxy-8H-HDP (5950)  
1-Hydroxy-hexadecamethyl-octahydro-diazaporphine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ vlt alc/w 21°C 100% U I M 1984WRc (106086)4585  
K(CoL+pyridine)=2.2  
K(CoL+Br)=1.0

Medium: MeOH. In dimethylacetamide, K(CuL+Pyridine)=1.3, K(CuL+Br)=1.9

\*\*\*\*\*  
C34H54O8 H2L Lasalocid CAS 25999-20-6 (2335)  
Lasalocid acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ cal alc/w 25°C 100% U T H 1990PJa (106116)4586  
Medium: MeOH. DG(K1)=-27.5 kJ mol<sup>-1</sup>, DH=26.6; DG(B2)=-44.5, DH=25  
-----  
Co++ gl alc/w 25°C 100% M K1=4.8 B2=7.8 1988LTa (106117)4587

Medium: MeOH

\*\*\*\*\*  
C35H40N2O3 L CAS 268727-14-6 (8556)  
Decahydro-17,21-bis(phenylmethyl)-16H-dibenzo[h,q][1,4,7,11,15]trioxadiazacycloocta  
decine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 25°C 95% C K1=<4 2002KAb (106194)4588  
Medium: 95% MeHO/H2O, 0.10 M Et4NClO4.

\*\*\*\*\*  
C36H36N24O12 L Cucurbituril CAS 283175-97-3 (6744)  
Cucurbit[6]uril;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sol none 25°C 0.0 C K1=1.98 2001BCe (106252)4589  
Method: total organic carbon analysis of dissolved species.  
For the homologous cucurbit[5]uril, K1=1.82

\*\*\*\*\*

C36H44N4 L CAS 18084-64-5 (8777)  
1,4,7,10-Tetrakis(phenylmethyl)-1,4,7,10-tetraazacyclododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C			K1=19.79 *K(CoL)=-9.04 *K(CoH-1L)=-10.52	2002KHa	(106321)4590

\*\*\*\*\*

C36H44N4O2 L CAS 446875-57-6 (8559)  
3,17-Bis(1,1-dimethylethyl)-tetrahydro-dinitrilodibenzodioxadiazacyclotetracosine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	U			K1=9.4	2002FGa	(106327)4591

Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

\*\*\*\*\*

C36H46N4 L (9018)  
2,3,6,7,11,12,17,18-Octaethylporphycene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	non-aq	RT	100%	C	M		K(CoL+py)=3.00 K(Co(py)+py)=3.30	2002FSa	(106350)4592

Medium: toluene.

\*\*\*\*\*

C36H46N4 L CAS 130351-26-7 (9017)  
2,3,6,7,12,13,16,17-Octaethylporphycene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	non-aq	RT	100%	C	M		K(CoL+py)=1.04 K(CoL(py)+py)=1.85	2002FSa	(106354)4593

Medium: toluene.

\*\*\*\*\*

C36H46N4 L (9019)  
2,3,7,8,11,12,17,18-Octaethylhemiporphycene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	non-aq	RT	100%	C	M		K(CoL+py)=2.71 K(CoL(py)+py)=3.00	2002FSa	(106358)4594

Medium: toluene.

\*\*\*\*\*

C36H46N4 H2L Octaethylporph. CAS 2683-82-1 (1794)  
2,3,7,8,12,13,17,18-Octaethyl-21H,23H-porphine;

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       sp non-aq RT 100% C M                2002FSa (106365)4595
                K(CoL+py)=2.54
                K(Co(py)+py)=<0

```

Medium: toluene.

```

*****
C36H54N8          L                CAS 119142-71-1 (7703)
1,4,11,14,17,24,29,36-Octaazapentacyclo[12.12.12.2.2.2]tetratetraconta-nonaene;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl R4N.X 25°C 0.10M C                K1=6.9          2000AFa (106405)4596
                B(CoHL)=15.8
                B(CoH2L)=24.1
                B(CoH3L)=31.60

```

Medium: 0.1 M Et4NClO4.

```

*****
C36H54N8          L                CAS 135469-17-9 (6574)
1,4,12,15,18,26,31,39-Octaazapentacyclo[13.13.13.1.1.1]tetratetraconta-nonaene;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl R4N.X 25°C 0.10M C                K1=7.53         2000AFa (106415)4597
                B(CoHL)=16.41

```

Medium: 0.1 M Et4NClO4.

```

-----
Co++       gl KNO3 25°C 0.10M C                K1=9.81         1991MRa (106416)4598
                B(Co2L)=13.56
                K(CoLOH+H)=11.01
                K(Co2LOH+H)=7.81
                K(CoL+H)=9.10

```

```

*****
C36H56N8O8S2      L      L-Allothreonine CAS 108312-45-4 (4586)
Cyclo(-L-allothreonyl-2-[(1R)-1-amino-2-methylpropyl]-4-thiazolecarbonyl-L-isoleucyl-
1-)-2;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl NaNO3 25°C 0.10M C                K1=4.13 B2= 7.17 1982KPC (106434)4599
                B(CoH-1L2)=-2.28

```

```

*****
C36H60N8O8        L                CAS 121925-84-6 (7152)
Cyclo(Gly-eLL-Gly)2 (eLL=N,N'-ethylene-bridged (S)-leucyl-(S)-leucine
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       sp non-aq 25°C 100% U                K1=2.20         1994MKa (106452)4600
Medium: MeCN

```



\*\*\*\*\*

C37H44N2O13S H6L MeThymol Blue (428)  
3,3'-Bis(N,N-di(carboxymethyl)aminomethyl)thymolsulfonephthalein;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	NaNO3	25°C	0.10M	C	I		K1=4.50 K(CoL+Co)=3.57	1997GAc	(106576)4601

Medium pH 4.45 (acetate buffer). Also data for 15-45% w/w MeOH/H2O, 0.10 M NaNO3.

Co++	gl	KNO3	30°C	0.0		U T H		K1=12.28	1978SSj	(106577)4602
------	----	------	------	-----	--	-------	--	----------	---------	--------------

Extrapolated from data for I=0.1-1.0 M KNO3. Data for 40 C.  
DH(K1)=-24 kJ mol<sup>-1</sup>, DS(K1)=154 J K<sup>-1</sup> mol<sup>-1</sup>.

Co++	sp	KNO3	25°C	0.10M		U		K1=12.69 B(CoHL)=23.53 B(CoH2L)=34.67 B(CoH3L)=32.71 K(Co+CoL)=11.0	1974YIa	(106578)4603
------	----	------	------	-------	--	---	--	---	---------	--------------

\*\*\*\*\*

C38H42N4O24S4 H9L (5477)  
1,5,10,14-Tetrakis(2,3-dihydroxy-5-sulfobenzoyl)-1,5,10,14-tetraazatetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M		C		B(CoH4L)=53.24 B(CoH3L)=45.2 B(CoH2L)=37.7 B(Co2L)=27.9	1982KRb	(106668)4604

\*\*\*\*\*

C40H47N3O10 H7L CAS 86728-01-0 (5503)  
Bis(3-(((2-hydroxy-5-methylbenzyl)amino)methyl)-2-hydroxy-5-methylbenzyl)amine-triethanoic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	oth/un	25°C	0.10M		U		K1=9.80 K(CoL+H)=5.86 K(CoHL+H)=4.39 K(CoH-1L+H)=7.95 K(CoH-2L+H)=10.16	1983YMa	(106784)4605

\*\*\*\*\*

C40H48O4S4 H4L CAS 182496-55-5 (7816)  
Tetra(4-tert-butyl)tetrathiacalix[4]arene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	dis	non-aq	20°C	none		C			1998IMa	(106792)4606



Method: extraction from 0.1 M KNO3 into CHCl3/H2L solution.

Kex: Co+H2L(o)=CoL(o)+2H

\*\*\*\*\*

C43H58N4O12 H3L Rifampicin CAS 13292-46-1 (8977)

3-[[[(4-Methyl-1-piperaziny]imino]methyl]rifamycin;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ gl alc/w 30°C 50% C T H 2001SKd (107018)4612

K(Co+H2L)=7.09  
K(CoH2L+H2L)=5.44

Medium: 50% v/v MeOH/H2O, 0.05 M KCl. DH(Co+H2L)=-50.11 kJ mol<sup>-1</sup>, DS=-30.8

J K-1 mol<sup>-1</sup>; DH(CoH2L+H2L)=-40.86, DS=-31.0. Also data for 35 and 40 C.

\*\*\*\*\*

C44H26N4Cl4 H2L CAS 22112-77-2 (1783)

5,10,15,20-4-Tetra-(4-chlorophenyl)porphine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 25°C 100% U T M 1976WBa (107040)4613

K(CoL+piperidine)=3.70  
K(CoL+pyridone)=3.00

Medium: toluene. At -72 C: K(CoLpy+O2)=2.90; -38 C: 1.45

\*\*\*\*\*

C44H26N4F4 H2L CAS 37095-43-5 (1782)

5,10,15,20-Tetra-(4-fluorophenyl)porphine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 25°C 100% U T M 1976WBa (107045)4614

K(CoL+piperidine)=2.972

Medium: toluene. At -72 C: K(CoLpy+O2)=3.0; -38 C: 1.53

\*\*\*\*\*

C44H26N8O8 H2L CAS 24843-73-8 (1779)

5,10,15,20-Tetra-(4-nitrophenyl)porphine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 25°C 100% U T M 1976WBa (107047)4615

K(CoL+piperidine)=4.036  
K(CoL+py)=3.39

Medium: toluene. At -70 C: K(CoLpy+O2)=2.66

\*\*\*\*\*

C44H30N4 H2L Tetraphenylpor. CAS 917-23-7 (1781)

5,10,15,20-Tetraphenyl-21H,23H-porphine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co++ sp non-aq 25°C 100% U T M 1976WBa (107060)4616

K(CoL+piperidine)=3.62

K(CoL+py)=2.88

Medium: toluene. At -70 C: K(CoLpy+O2)=2.98; -38 C: 1.48

\*\*\*\*\*

C44H76N2O34 L CAS 60984-63-6 (7835)

6A-(2-Aminoethylamino)-6A-deoxy-beta-cyclodextrin;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	U	M		K1=12.00 B2=18.22 K(CoL+(R)-Trp)=8.71 K(CoL+(S)-Trp)=8.54	1999SEc (107201)	4617

\*\*\*\*\*

C45H32N4O12S4 CAS 144513-76-8 (7172)

N-Methyl-tetra(4-sulfonatophenyl)porphin;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	oth/un	25°C	0.10M	U			K(Co+HL=CoL+H)=1.2	1995RSa (107209)	4618

\*\*\*\*\*

C45H48N3O3P3 L CAS 90179-28-5 (5682)

N,N',N''-tris(Diphenylphosphinylmethyl)-1,4,7-triazacyclononane;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	con	non-aq	25°C	100%	U			K(Co(CNS)+L)=4.67 K(2CoCNS+L=(CoCNS)2L)=7.28	1985KSa (107222)	4619

Medium: acetone+CHCl3 1:1 (vol)

\*\*\*\*\*

C46H48N4O2 HL CAS 688348-38-1 (9161)

Octahydro-19,22,25-tris(phenylmethyl)-12H-7,11-nitrilo-6H,18H-dibenzo[1,15,5,8,11]dioxatriazac;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	alc/w	25°C	95%	U			K1=< 4	2004PFa (107267)	4620

Medium: 95 % methanol/H2O, 0.1 M Et4NClO4.

\*\*\*\*\*

C46H75N3O38 H2L CAS 280122-72-7 (7836)

6A-[Bis(carboxymethyl)amino]-6A-deoxy-beta-cyclodextrin;

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	U	M		K1=7.29 K(CoL+(R)-Trp)=5.49 K(CoL+(S)-Trp)=5.16	2000SMf (107313)	4621

\*\*\*\*\*

C48H26N8 H2L CAS 64397-83-7 (1778)

5,10,15,20-Tetrakis-(4-cyanophenyl)-21H,23H-porphine;

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp non-aq 25°C 100% U T M                        1976WBa (107342)4622
                                                K(CoL+piperidine)=3.937
                                                K(CoL+py)=3.27
Medium: toluene. At -70 C: K(CoLpy+O2)=2.76; -38 C: 1.44
*****
C48H38N4      H2L                        CAS 14527-51-6 (1780)
5,10,15,20-Tetrakis-(4-methylphenyl)-21H,23H-porphine;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp non-aq 25°C 100% U T M                        1976WBa (107348)4623
                                                K(CoL+piperidine)=3.517
                                                K(CoL+py)=2.74
Medium: toluene. At -70 C: K(CoLpy+O2)=3.07; -38 C: 1.61
*****
C52H69N3O6      H2L                        CAS 136158-03-7 (9132)
Tetra-t-butyl-calix[4]azacrown dione;
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp non-aq 20°C 100% C                        B2=10.30      20030Aa (107520)4624
Medium: 100% acetonitrile, 0.01 M Et4NClO4.
*****
C54H62N8O14S4      H2L                        CAS 187828-35-9 (8875)
Bis[(4,10-Diaza-4,10-ditosyl-benzo-12-crown-4)4'-yl]diaminoglyoxime;
-----

```

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      gl mixed 25°C 70% U                        1996ADc (107538)4625
                                                K(Co+HL)=5.40
                                                K(Co+H+HL)=15.02
                                                K(Co+HL=CoH-1L+2H)=-5.52
Medium: 70% v/v acetone/H2O, 1.0 M NaNO3.
*****
C69H102N4O9      L                        CAS 116352-85-3 (9286)
para-t-Butyldihomooxacalix[4]arene tetra(diethyl)amide;
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++      sp alc/w 25°C 100% C                        K1=3.40      2004MFa (107829)4626
Medium: MeOH, 0.01 M Et4NCl.
*****
Polymer                        (1877)
4-Bis(carboxymethyl)-iminomethylene-oligostyrene; (C13H15N04)n
-----

```

```

-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----

```

Co++ gl KNO3 25°C 0.10M U K1=7.45 B2=13.45 1980YTb (108044)4627  
(H2L)n: (.CH2.CH.C6H4.CH2.N(CH2.COOH)2)n where n=6-8

\*\*\*\*\*

Polymer (5383)

4-Polyvinyl-N-benzyliminodiethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ EMF oth/un ? ? U K1=6.11 1966HEa (108050)4628

\*\*\*\*\*

Polymer HL Bleomycin (2324)

Bleomycin A2, B2 etc.

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl oth/un 25°C ? U K1=9.74 1980SUB (108084)4629

\*\*\*\*\*

Polymer CPA CAS 11075-17-5 (1758)

Carboxypeptidase A

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ oth NaCl 4°C 1.0M U 1961VWa (108112)4630

$K(\text{Co}+\text{HxL}=\text{CoHyL}+(\text{x}-\text{y})\text{H})=7.0$

Medium: 0.05 M tris buffer pH 8

\*\*\*\*\*

Polymer DNA (4185)

Deoxyribonucleic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ sp NaCl 27°C dil C T H 2004ASa (108134)4631

$K(\text{CoP}+\text{L})=5.0$

Calf thymus DNA. Medium: 0.005 M NaCl. Data for 7-37 C. P is N,N',N'',  
tetramethyltetra-3,4-pyridinoporphyrazine.  $\text{DH}(\text{K})=39.6 \text{ kJ mol}^{-1}$ ,  $\text{DS}(\text{K})=227$ .

-----  
Co++ sp none 20°C dil C 2003SYa (108135)4632

$K(\text{Co}(\text{H4A})_2+\text{L})=3.3$

Ligand is calf thymus DNA. H5A is morin.

-----  
Co++ vlt NaCl 25°C 0.01M C M 2000AIa (108136)4633

$K(\text{Co}(\text{bipy})_3+\text{L})=6.30$

Method: differential pulse voltammetry.

Medium: 0.01 M NaCl, 0.01 M Tris, pH 7.

-----  
Co++ nmr NaCl 25°C 0.01M C 2000CCb (108137)4634

$K_{\text{leff}}=4.74$

Method: 23 Na nmr, using calf thymus Na-DNA.  $K_{\text{leff}}$  at pH 6.0.

-----  
Co++ sp NaCl04 25°C 0.01M C 1994SDB (108138)4635

K1eff=5.0

At pH 7.0.

\*\*\*\*\*

Polymer (5379)

Dextran derivative of N-propyliminodiethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl oth/un 20°C 0.10M U K1=6.86 1968VGa (108160)4636

\*\*\*\*\*

Polymer Fulvic acid (1523)

Fulvic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ ix oth/un 25°C 0.01M U I K1=7.30 1989EMa (108175)4637

I=0.1, K=6.46

\*\*\*\*\*

Polymer Gelatin (4187)

Gelatin

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ oth none 24°C 0.0 C T 2001THa (108195)4638

K1eff=3.36

Method: fluorescence quenching. Medium: pH 10.0.

At 32 C, K1eff=3.45.

\*\*\*\*\*

Polymer Humic acid (1524)

Humic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ oth NaCl04 RT 0.10M U I 1992VGa (108236)4639

K1eff=4.40 (pH=5.11)

Method: combination of ligand exchange and equilibrium dialysis (EDLE), using 60Co++ and a reference ligand. Constants at several pH values

\*\*\*\*\*

Polymer Dowex A-1 (4193)

Poly-N-benzyliminodiethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co++ gl oth/un 40°C 0.10M U T 1968EMb (108286)4640

K'=7.02

K'=7.36(10 C),7.24(25 C). See reference for definition

\*\*\*\*\*

Polymer (5382)

Polyacroleinoxime;

-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl KNO3 25°C 0.10M U B2=13.6 1971MKb (108298)4641

\*\*\*\*\*

Polymer (4195)

Polyethylene and maleic anhydridecopolymer (1:1)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

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Co++ gl oth/un 25°C 0.0 U 1968BHd (108333)4642

K'=8.63

\*\*\*\*\*

Polymer Pectin (7149)

Polygalacturonic acid; (C6H8O6)n

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ gl oth/un 20°C 0.10M U I K1=3.14 1994DMa (108343)4643

At I=0.5: K1=3.49; I=1.0: K1=3.40; I=1.5: K1=3.31; I=2.0: K1=3.15

\*\*\*\*\*

Polymer (1642)

Polymethacrylic acid;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ vlt KNO3 25°C 0.01M U I 1996CAa (108372)4644

K1eff=4.50

Method: differential pulse polarography. Also K1eff=3.81 (I=0.02 M),

3.53 (I=0.03) and 3.26 (I=0.05).

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Co++ gl oth/un 25°C 0.05M U 1975AMb (108373)4645

K1eff=1.1

Polarography also used

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Co++ gl NaNO3 20°C 0.05M U 1964MLa (108374)4646

\*K'=-5.7

See reference for definitions

\*\*\*\*\*

Polymer H5L (6715)

ProTyrLysCysProGluCysGlyLysSerPheSerGlnLysSerAspLeuValLysHisGlnArgThrHisThr

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co++ sp NaCl 25°C 0.05M U 1993KMa (108390)4647

Keff(Co+L)=7.20

Keff at pH 7.0, HEPES buffer

\*\*\*\*\*

Polymer (4203)

Procarboxypeptidase;



Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	oth	NaCl	4°C	1.0M	U			K1=5.4	1967PVa (108396)	4648

Method: dialysis

\*\*\*\*\*

Polymer	L	Penicillinase	CAS 9001-75-4	(2216)
beta-Lactamase II, penicillinase;				

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	NaCl	4°C	1.00M	U				1980BGa (108423)	4649

K1eff=0.89 at pH 6

K2eff=-0.42 at pH 6

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#### EXPLANATORY NOTES

DATA Flags are :-

T Data at other TEMPERATURES  
I Data with various BACKGROUNDS  
H Data for THERMOCHEMICAL quantities  
M Data for TERNARY Complexes

EVALUATION Flags are :-

T or IUP=T signifies EVALUATION RATING = Tentative by IUPAC  
R or IUP=R signifies EVALUATION RATING = Recommended by IUPAC

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END

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 794 experiments for  
(no ligands specified)

Metal : Co+++

(no references specified)

(no experimental details specified)

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e- HL Electron (442)  
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo	
Co+++	EMF	NaClO4	-5°C	6.50M	C	H			1986B0a	(412)	1
E(e + Co+++)=1.841 V											
Medium: 6.5 molal HClO4											
Co+++	EMF	none	25°C	0.00	U				1974RBa	(413)	2
K(Co+++ + e)=24.5(1.45V)											
Co+++	EMF	NaClO4	23°C	3.00M	U	T			1970WAb	(414)	3
K(Co+++ e)=31.7(1.86V)											
K=33.4(1.83V, 3 C)											
Co+++	EMF	none	25°C	0.00	U				1969KRa	(415)	4
K=3.04(180mV)											
K: Co(en)3+++ + e=Co(en)3++; (dEo/dT=-1.07mV/K)											
Co+++	EMF	oth/un	25°C	5.60M	U	T			1967BRc	(416)	5
K(Co+e)=23.3, 1380 mV											
Medium: 5.6 M HClO4. At 2 C: K=24.7											
Co+++	cal	oth/un	15°C	4.0MM	U	H			1964JSa	(417)	6
K(Co+e)=33, 1.95 V											
DH(Co+++ + Fe++ = Co++ + Fe+++)= -109.9 kJ mol-1.											
Co+++	sp	R4N.X	25°C	1.0M	U				1962YAA	(418)	7
K=5.6(330 mV)											
Medium: NH4ClO4. K: Co(NH3)5(H2O)+e=Co(II)(NH3)5(H2O). From thermodynamic data K=6.3(370 mV)											
Co+++	sol	none	25°C	0.0	U				1961RKA	(419)	8
K(Co+e=Co(II))=22.0(1300 mV)											
Co+++	sol	oth/un	?	var	U				1959KRe	(420)	9
K=2											
K: CoOOH(s)+2H=Co(II)+1.5H2O+0.25O2(g)											
Co+++	oth	none	25°C	0.0	U				1952LAB	(421)	10



Co+++	sol	oth/un	25°C	0.50M	U	H	1985ISc (1825)	19
							Kout(Co(NH3)3(NO3)3+Br)=1.9	
Medium: 0.50 M NaF. DH(Kout)=-13.4 kJ mol <sup>-1</sup> , DS(Kout)=-51 J K <sup>-1</sup> mol <sup>-1</sup> .								
Co+++	sol	oth/un	25°C	0.1M	C	T	1984ISd (1826)	20
							Kout(Co(NH3)3(NO2)3+L)=-0.36	
Medium: NaF;for I=0.2M K1out=-0.37; I=0.3 K1out=-0.35; I=0.4 K1out=-0.36 I=0.5 K1out=-0.34								
Co+++	con	oth/un	25°C	?	U	M	1978KWb (1827)	21
							Kout(Co(en)3+L)=1.45	
Co+++	vlt	NaClO4	25°C	0.16M	U	M	1977IGa (1828)	22
							Kout(Co(NH3)6+Br)=1.43	
Co+++	con	non-aq	25°C	100%	U	I M	1976THa (1829)	23
							Kout(Co(en)3+L)=3.32	
Medium: DMSO. In DMF: Kout(Co(en)3+L) > 5								
Co+++	sp	NaClO4	25°C	1.00M	U	M	1975ABc (1830)	24
							K(CoA+L)=-0.85	
A=Tetra(4-N-methylpyridyl)porphine								
Co+++	kin	NaClO4	25°C	2.0M	U	M	1974FSb (1831)	25
							K=0.1	
K: (NH3)4Co(NH2)(OH)Co(NH3)4+H+L=(NH3)4Co(NH2)(Br)Co(NH3)4+H2O) in which NH2 and OH, NH2 and Br bridge two Co ions. 25-40 C. K=0 by spec. Also other cpx								
Co+++	sp	NaClO4	25°C	1.0M	U		1974RMe (1832)	26
							K(Co(NH3)5+L)=-0.6 ?	
Co+++	sol	NaClO4	25°C	1.0M	U	I	1973J0a (1833)	27
							K(Co(NH3)6+L)=-0.40	
							K(Co(NH3)6+2L)=-1.4	
							Kso(Co(NH3)6L3)=-2.87	
							Kso(Co(NH3)6L(ClO4))=-3.88	
At I=4: values: -0.36, -1.3, -2.48, -3.35 respectively								
Co+++	EMF	NaClO4	25°C	3.0M	U	I M	1973MKd (1834)	28
							K(Co(NH3)5F+L)=0.04	
							K(Co(NH3)5F+2L)=-0.26	
							K(Co(NH3)5NO2+L)=0.11	
							K(Co(NH3)5NO2+2L)=-0.36	
Data also in 3 M LiClO4 and with many other Co(NH3)5x complexes								
Co+++	vlt	NaClO4	25°C	0.1M	C		1973MSh (1835)	29
							Kout(Co(dipy)3+L)=0.30	
Co+++	sp	oth/un	25°C	0.01M	U	I	1972HEb (1836)	30

						K(Co(NH <sub>3</sub> ) <sub>6</sub> +L)=1.55	
At I=0.012. K1=1.58(I=0.0048), 1.61(I=0.0024), 1.78(I=0)							
Co+++	cal	none	25°C	0.0	U	H	1972POa (1837) 31
DH(Co(NH <sub>3</sub> ) <sub>5</sub> +L)=5.0 kJ mol <sup>-1</sup>							
Co+++	sp	NaClO <sub>4</sub>	19°C	0.20M	U		1971BBd (1838) 32
						K=-0.46	
Medium: HClO <sub>4</sub> . K: cis-Co(en) <sub>2</sub> (OH) <sub>2</sub> Br=trans-Co(en) <sub>2</sub> (OH) <sub>2</sub> Br). 19.6 to 48.7 C							
Co+++	con	none	25°C	0.0	U		1971KUb (1839) 33
						K(Co(en) <sub>2</sub> C <sub>2</sub> O <sub>4</sub> +L)=0.5	
Co+++	con	non-aq	25°C	100%	U		1971PWb (1840) 34
						K(cis-Co(NH <sub>3</sub> ) <sub>4</sub> (NO <sub>2</sub> ) <sub>2</sub> +L)=1	
Medium: DMSO							
Co+++	kin	NaClO <sub>4</sub>	25°C	0.50M	U	M	1970GSc (1841) 35
						K=1.58	
K: (NH <sub>3</sub> ) <sub>5</sub> CoO <sub>2</sub> Co(NH <sub>3</sub> ) <sub>5</sub> +L)							
Co+++	sol	NaClO <sub>4</sub>	25°C	0.20M	U	TI	1970MLc (1842) 36
						K(Co(NH <sub>3</sub> ) <sub>6</sub> +L)=-0.10	
Medium: 0.2 M LiClO <sub>4</sub> . K=0.04(35 C), 1.34(45 C); At I=0: K=1.98(25 C), 1.85(35 C), 1.90(45 C)							
Co+++	sp	non-aq	30°C	100%	U	T	1968FWa (1843) 37
						K(cis-Co(en) <sub>2</sub> L <sub>2</sub> +L)=3.71	
Medium:sulpholan(C <sub>4</sub> H <sub>8</sub> S <sub>2</sub> O <sub>2</sub> ). K(cis)=3.70(40C)							
By kinetics: K(Co(en) <sub>2</sub> L <sub>2</sub> cis-trans)=1.08, K(Co(en) <sub>2</sub> L <sub>2</sub> +L)=3.3(cis),0.6(trans)							
Co+++	con	oth/un	25°C	0.0	U		1968KTa (1844) 38
						K(Co(NH <sub>3</sub> ) <sub>6</sub> +L)=1.65	
Co+++	sp	NaClO <sub>4</sub>	15°C	5.0M	U		1968Wmb (1845) 39
						B(Co <sub>2</sub> Br <sub>2</sub> )=2.46	
Co+++	oth	oth/un	37°C	0.0	U		1967MAF (1846) 40
						K(Co(en) <sub>2</sub> NCSCl+L)=0.44	
Co+++	oth	oth/un	37°C	0.0	U		1967MMd (1847) 41
						K(cis-Co(en) <sub>2</sub> NH <sub>3</sub> NO <sub>2</sub> +L)=1.36	
						K(trans)=1.26	
Co+++	con	non-aq	25°C	100%	U	I	1967Mwc (1848) 42
						K(cis-Co(en) <sub>2</sub> Cl <sub>2</sub> +L)=2.26	
						K(trans-Co(en) <sub>2</sub> Cl <sub>2</sub> +L)=1.34	
						K(cis-Co(en) <sub>2</sub> L <sub>2</sub> +L)=1.86	
						K(cis-Co(en) <sub>2</sub> ClL+L)=2.10	
Medium: DMSO. Also in DMF and Me <sub>2</sub> NCOME							

-----  
Co+++ sp NaClO4 25°C 0.07M U 1967TKb (1849) 43  
K(Co(NH3)6+L)=0.34  
-----

Co+++ kin non-aq var 100% U 1966FWa (1850) 44  
Kout(trans-Co(en)2Cl2+L)=1.70  
Kout(cis-Co(en)2Cl2+L)=2.54  
Medium: Me2SO. K(cis) at 45 C, K(trans) at 31 C  
-----

Co+++ sp non-aq 55°C 100% U 1966FWb (1851) 45  
K(Co(en)2Cl2)cis-trans)=0.13  
Kout(cis-Co(en)2Cl2+L)=2.44  
Kout(trans-Co(en)2Cl2+L)=1.53  
Medium: Me2NCOMe  
-----

Co+++ sp non-aq 30°C 100% U H 1966LWa (1852) 46  
Kout(Co(en)2Cl+L)=3.96  
Kout(Co(en)2ClL+L)=2.48  
DH(Co(en)2Cl+L)=30.1 kJ mol<sup>-1</sup>, DS=175.6 J K<sup>-1</sup> mol<sup>-1</sup>  
DHout(Co(en)2ClL+L)=5.3, DSout=36.8. 1-21 C  
-----

Co+++ sp non-aq 30°C 100% U 1966Mwa (1853) 47  
Kout(cis-Co(en)2Cl2+L)=3.00  
Medium: DMF  
-----

Co+++ sp oth/un 0°C dil U T 1963CTa (1854) 48  
K(Coen2BrH2O, cis=trans)=-0.52  
K=-0.50(25, 35C)  
-----

Co+++ sp oth/un 25°C 0.50M U 1963HTa (1855) 49  
K(Co(NH3)5+L)=-0.41  
-----

Co+++ sp oth/un 45°C 1.0M U M 1962YAa (1856) 50  
K(Co(NH3)5+L)=-0.32  
-----

Co+++ sp oth/un 40°C 1.0M U M 1961GHa (1857) 51  
K(Co(CN)5+L)=-0.06  
K=-0.02 by kinetics  
-----

Co+++ oth oth/un 25°C 0.0 U M 1960MTb (1858) 52  
K(Co(NH3)3+L)=-0.76  
Method: from thermodynamic data. I=0 corr.  
-----

Co+++ sp NaClO4 35°C 0.90M U M 1959KEa (1859) 53  
K(Co(NH3)6+L)<-0.7  
-----

Co+++ sp alc/w 25°C 100% U 1957PHa (1860) 54  
K(cis-Co(en)2Cl2+L)=1.54  
Medium: MeOH, I=0.02  
-----

Co+++ sp none 25°C 0.0 U HM 1955NAa (1861) 55  
 $K(\text{Cu}(\text{NH}_3)_6+\text{L})=2.38$   
 I=0 corr.  $\text{DH}(\text{K})=11.8 \text{ kJ mol}^{-1}$ ,  $\text{DS}=84 \text{ J K}^{-1} \text{ mol}^{-1}$

Co+++ sp NaCl04 25°C .054M U TIHM 1953ENa (1862) 56  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=1.66$   
 $K=1.72(35 \text{ C})$ ;  $\text{DH}(\text{K})=8.7 \text{ kJ mol}^{-1}$ ,  $\text{DS}=63 \text{ J K}^{-1} \text{ mol}^{-1}$ . At I=0.3 M: $K(\text{Co}(\text{en})_3+\text{L})=1.32(25 \text{ C})$ ,  $1.37(35 \text{ C})$ ;  $\text{DH}(\text{K})=8.2$ ,  $\text{DS}=54$

\*\*\*\*\*  
 CN- HL Cyanide CAS 74-90-8 (230)  
 Cyanide;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co+++ sp KCl 25°C 1.0M C 2004RBa (2618) 57  
 $K(\text{RCo}(\text{AH})_2\text{OH}+\text{L})=10.01$   
 R- is trifluoroethyl-. H2A is dimethylglyoxime. Medium pH 10.0.

Co+++ sp NaCl04 25°C 0.50M C M 2001HZa (2619) 58  
 $K(\text{CoA}+\text{CN})=-0.42$   
 $K(\text{CoB}+\text{CN})=2.09$   
 CoA=methylcobalamin, CoB=trifluoromethylcobalamin. Data for other halo-cobalamin derivatives.

Co+++ sp non-aq RT 100% U 2000HSa (2620) 59  
 $K(\text{Co}(\text{CN})\text{P}+3\text{CN}=\text{Co}(\text{CN})_4\text{P})=12.3$   
 Medium: methanol. Reaction is:  $\text{Co}(\text{CH}_3\text{OH})(\text{CN})\text{P}+3\text{CN}=\text{Co}(\text{CN})_4\text{P}+\text{CH}_3\text{OH}$ .  
 P: 5,10,15,20-tetraphenylporphyrin.

Co+++ sp non-aq 25°C 100% U TIHM 1993GIa (2621) 60  
 $K(\text{MeCoA}+\text{L})=6.32$   
 Medium: Dimethylacetamide, 0.1 M 1,8-diazabicyclo[5.4.0]undec-7-ene, 25-50 C  
 A:Phthalocyanine.  $K=5.30(50\text{C})$ .  $\text{DH}=-71 \text{ kJ mol}^{-1}$ ;  $\text{DS}=-67$

Co+++ sp NaCl04 25°C 0.20M U 1983BBe (2622) 61  
 $K(\text{CoA}(\text{H}_2\text{O})+\text{L})=6.8$   
 CoA(H2O)=ethynylaquocobinamide

Co+++ gl NaCl04 25°C 1.0M U 1982BCb (2623) 62  
 $*K(\text{CoL}_5(\text{H}_2\text{O}))=-10.15$

Co+++ kin NaCl04 40°C 1.0M U 1965HGa (2624) 63  
 $K(\text{CoL}_5\text{OH}+\text{H})=9.7$

Co+++ gl oth/un rt var U 1961HWa (2625) 64  
 $K(\text{Co}_{20}\text{L}_{10}+\text{H})=10.5$

Co+++ con oth/un 2°C var U 1950BJa (2626) 65  
 B6=64

\*\*\*\*\*



CO3-- H2L Carbonate CAS 465-79-6 (268)  
Carbonate;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co+++	kin	NaClO4	25°C	2.0M	C				2000KYb (3168)	66
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\*K(Co(NH3)5HCO3)=-6.12  
\*K(Co(NH3)4(H2O)HCO3)=-0.28  
\*K(Co(en)2(H2O)HCO3)=-0.62  
\*K(Co(tren)(H2O)HCO3)=-1.0

\*K is for loss of proton from HCO3-. \*K(a-Co(trien)(H2O)HCO3)=-1.40,  
\*K(b-Co(trien)(H2O)HCO3)=-0.20, \*K(Co(nta)(H2O)HCO3)=-1.30.

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Co+++	sp	NaCl	25°C	1.00M	U				1978TAa (3169)	67
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K(CoL3+H)=9.34

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Co+++	kin	NaClO4	25°C	1.0M	M				1976DH a (3170)	68
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K(Co(CO3)3+H)=9.12

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Co+++	vlt	NaClO4	25°C	0.1M	C				1975PKa (3171)	69
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Kout(cisCo(en)2NH3Cl+L)=0.23

Also for I=0.5 M K1out=-0.03

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Co+++	vlt	NaClO4	25°C	0.1M	C				1975PKa (3172)	70
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Kout(transCo(en)2NH3Cl+L)=0.19

Also for I=0.5 M K1out=-0.01

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Co+++	vlt	NaClO4	25°C	0.1M	C				1975PKa (3173)	71
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Kout(Co(NH3)5Cl+L)=0.32

Also for I=0.5 M K1out=0.06

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Co+++	EMF	NaClO4	25°C	0.10M	U	I M	K1=1.4	B2=2.6	1974KPe (3174)	72
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B3=3.5

Metal ion: Co(NH3)CO3. When I=0.3: K1=1.2, B2=2.0, B3=2.5. I=0.5:1.1,1.2,1.5

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Co+++	EMF	none	25°C	0.0	U	I M	K1=1.8	B2=2.9	1974KPe (3175)	73
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B3=2.6

Metal ion: Co(NH3)4CO3. Data also for I=0.2, 0.4, 3.0

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Co+++	cal	oth/un	25°C	3.00M	U	HM			1974MKh (3176)	74
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Metal:Co(NH3)5NO2;Medium:Na2CO3. DH(K1)=4.0 kJ mol-1, DS=21; DH(B2)=5.9, DS=29; DH(B3)=10, DS=33; DH(B5)=4.8, DH=33; DH(B5)=8.4, DS=46

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Co+++	EMF	oth/un	25°C	0.0	U	I M	K1=3.47	B2=3.3	1974PKb (3177)	75
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Medium:KF. Metal ion: (Co(NH3)6). K1=2.19(I=0.1); K1=2.40, B2=1.85(I=0.5)  
With: (Coen3): K1=2.06, B2=3.06(I=0.1); 1.34, 2.08(I=0.5); 3.33, 5.1(I=0)

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Co+++	EMF	oth/un	25°C	0.0	U	I M	K1=3.27	B2=4.9	1974PKb (3178)	76
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B3=4.3

Medium:KF. Metal ion: (Co(pn)3); K1=2.00(I=0.1), K1=1.24, B2=1.57, B3=2.26,

B4=3.3(I=0.5). Data also for I=0.2, 0.3, 0.4

---

Co+++ EMF NaCl 25°C 0.50M U M 1973CDa (3179) 77  
K(Co(NH3)5CO3+H)=6.7

---

Co+++ EMF NaCl04 25°C 3.00M U M K1=0.46 B2=0.53 1973MKd (3180) 78  
B3=0.65  
B4=0.78

Metal ion: (Co(NH3)5X), X=F. When X=Cl, K1=0.34, B2=0.57, B3=0.78.  
X=Br: K1=0.36, B2=0.59, B3=0.48, B4=0.89. Data also for X=NO2, HCOO, MeCOO

---

Co+++ vlt NaCl04 25°C 0.1M C 1973MKF (3181) 79  
Kout(Co(pren)3+L)= 0.30

Also for I=0.5 M K1out=0.09  
pren=propylenediamine

---

Co+++ vlt NaCl04 25°C 0.1M C 1973MKF (3182) 80  
Kout(Co(en)3+L)= 0.17

Also for I=0.5 M K1out=-0.12  
pren=propylenediamine

---

Co+++ vlt oth/un 25°C 0.1M C 1973MKF (3183) 81  
Kout(Co(en)3+L)= 2.07

Medium: NaF;

---

Co+++ vlt oth/un 25°C 0.1M C 1973MKF (3184) 82  
Kout(Co(pren)3+L)= 2.0

pren=propylenediamine  
Medium: NaF;

---

Co+++ vlt NaCl04 25°C 0.1M C 1973MSh (3185) 83  
Kout(Co(dipy)3+L)=1.38

For I=3.0 M K1out=-0.05

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Co+++ kin NaCl04 20°C 0.50M U 1968DHa (3186) 84  
K(H+Co(NH3)5L)=6.41

By glass electrode: K=6.7?

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Co+++ kin NaCl04 25°C 1.0M U 1967FJa (3187) 85  
K(H+Co(NH3)5)=8.23

By spectrophotometry: K(Co(NH3)5OH+HL=Co(NH3)5HL+OH)=-3.53

---

Co+++ kin oth/un 25°C 0? U 1967JFa (3188) 86  
K((NH3)5CoL+H)=8.22

---

Co+++ kin oth/un 20°C dil U 1965SSb (3189) 87  
K(trans-(en)2CoL(OH)+H)=7.2  
K(cis=trans(en)2CoL(H2O))=1.23  
K(cis=trans(en)2CoL(OH))=-0.32  
K(cis-(en)2CoL(H2O)+H)=-8.75

K(cis-(en)2CoHL(H2O))=-5.32

-----  
Co+++ sp oth/un 20°C var U M 1956COa (3190) 88  
K(Co(NH3)6+L)=1.73  
K(Co(en)3+L)=1.95

\*\*\*\*\*

C2N3- HL Dicyanamide CAS 504-66-5 (2917)  
Dicyanamide; (NC.N.CN)-

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ EMF NaClO4 25°C 1.0M U T H 1971BJb (3471) 89  
K(Co(NH3)5HL+H)=5.18

Medium: 1M LiClO4. K=4.95(34.8 C), 4.74(43.8 C). DH(K)=-41.8 kJ mol-1,  
DS=-41.8 J K-1 mol-1

\*\*\*\*\*

C6N6Co--- H3L Cyanocobaltate (5470)  
Hexacyanocobaltate; [Co(CN)6]---

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ con non-aq 25°C 100% U 1965JTb (3488) 90  
K(Co(en)3+L)=2.78

Medium: H2NCHO

\*\*\*\*\*

C6N6Fe---- H4L (2191)  
Hexacyanoferrate (II); Fe(II)(CN)6----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ oth NaClO4 20°C 2.0M U I 1967LAa (3561) 91  
K(Co(en)3+L)=0.4  
K(Co(en)3+2L)=1.62

Method: polarimetry. By circular dichroism, I=0.21: K(Co(en)3+L)=2.0, +2L=3.8

\*\*\*\*\*

C6N6Fe--- H3L Ferricyanide (2491)  
Hexacyanoferrate (III); Fe(III)(CN)6---

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ kin NaClO4 35°C 1.00M U 1994MPa (3636) 92  
Kout(Co(NH3)5(H2O)+L)=1.88  
Kout(Co(NH3)5(OH)+L)=1.88(45C)  
Kout(Co(MeNH2)5(H2O)+L)=1.56

Also Kout(Co(EtNH2)5(H2O)+L)=1.36 (45 C); Kout(Co(EtNH2)5(OH)+L)=1.26 (45 C)

-----  
Co+++ con non-aq 25°C 100% U M 1965JTb (3637) 93  
K(Co(NH3)6+L)=2.63  
K(Co(en)3+L)=2.66

Medium: H2NCHO

\*\*\*\*\*

Cl- HL Chloride CAS 7647-01-0 (50)  
Chloride;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ con alc/w 25°C 10% C TIH 2002PAa (4612) 94  
Kout(Co(NH3)6+Cl)=2.043

Medium: 10% w/w EtOH/H2O. Also data for 30-70% w/w EtOH/H2O and  
10-50 C. DH=5.4 kJ mol<sup>-1</sup>, DS=57.2 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Co+++ kin NaClO4 25°C 1.00M U 1995PBa (4613) 95  
K(CoA+L)=-0.08

-----  
Co+++ con oth/un 25°C ? C T 1992YOb (4614) 96  
Kout(Co(en)3+L)=1.73

K=1.73 (0.0 C), 1.72 (5 C), 1.72 (10 C), 1.73 (15 C), 1.73 (20 C)  
1.74 (30 C), 1.74 (35 C), 1.75 (40 C), 1.76 (45 C), 1.77 (50 C)

-----  
Co+++ EMF none 25°C 0.0 U T H 1991YKa (4615) 97  
Kout(Co(NH3)6+Cl)=1.70

Data for T=0-50 C. DH=2.7 kJ mol<sup>-1</sup> at 25 C.

-----  
Co+++ con NaCl 25°C 0.01M C 1990IIa (4616) 98  
Kout(Co(NH3)6+L)=1.40

Kout(Co(bpy)3+L)=1.26  
Kout(Co(phen)3+L)=1.26

-----  
Co+++ sol oth/un 25°C 0.1M U 1986KPb (4617) 99  
Kout(Co(bpy)3+Cl)=0.99

Kout(Co(bpy)3+2Cl)=1.38

Medium: 0.1 M NaF.

-----  
Co+++ sol oth/un 25°C 0.50M U H 1985ISc (4618) 100  
Kout(Co(NH3)3(NO3)3+Cl)=3.1

Medium: 0.50 M NaF. DH(Kout)=-10.9 kJ mol<sup>-1</sup>, DS(Kout)=-47 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Co+++ sol oth/un 25°C 0.1M C T 1984ISd (4619) 101  
Kout(Co(NH3)3(NO2)3+L)=-0.54

Medium: NaF; for I=0.2M K1out=-0.57; I=0.3 K1out=-0.55; I=0.4 K1out=-0.54  
I=0.5 K1out=-0.54.

-----  
Co+++ con none 25°C 0.0 U 1984TWa (4620) 102  
Kout(Co(NH3)6+L)=1.85

-----  
Co+++ nmr non-aq 25°C 100% U M 1982NSc (4621) 103  
Kout(cis(Co(en)2(CN)2)+L)=1.83

Kout(cis(Co(en)2(NO2)2)+L)=1.6  
Kout(cis(Co(en)2(N3)2)+L)=2.10  
Kout(cis(Co(en)2Cl2)+L)=1.66

K values also by difference circular dichroism, but values depend on wave-length used. Medium: 0.12 M Et4N.ClO4 in DMSO

-----  
 Co+++ con oth/un 25°C ? U M 1978KWb (4622) 104  
 Kout(Co(en)3+L)=1.45  
 -----

Co+++ con non-aq 25°C 100% U 1976THa (4623) 105  
 Kout(Co(en)3+L)=5.22  
 -----

Medium: DMSO

-----  
 Co+++ sp NaClO4 25°C 1.00M U M 1975ABc (4624) 106  
 K(CoA+L)=-1.10  
 -----

A=Tetra(4-N-methylpyridyl)porphine

-----  
 Co+++ kin NaClO4 25°C 1.0M U 1974BMD (4625) 107  
 K((NH3)5Co(OH)Co(NH3)5+L)=0.46  
 -----

Co+++ sp NaClO4 45°C 1.0M U 1973BRc (4626) 108  
 K(Co(NH3)6+L)=0.41  
 Kout(Co(NH3)6+L)=0.13  
 -----

In 1 M Al(ClO4)3: K(Co(NH3)6+Cl)=0.39, Kout=0.09

-----  
 Co+++ EMF NaClO4 25°C 3.0M U M 1973MKd (4627) 109  
 K(Co(NH3)5F+L)=0.11  
 K(Co(NH3)5F+2L)=-0.14  
 K(Co(NH3)5NO2+L)=0.08  
 K(Co(NH3)5NO2+2L)=-0.22  
 -----

Data also with HCOO (0.04, -0.10), Br(0.04, -0.33) and many other ions

-----  
 Co+++ vlt NaClO4 25°C 0.1M C 1973MSh (4628) 110  
 Kout(Co(dipy)3+L)=0.34  
 -----

Co+++ sp NaClO4 25°C 0.16M U 1973SPa (4629) 111  
 K(Co(CH3NH2)5(H2O)+L)=0.89  
 -----

Co+++ sp mixed 50°C 2.5% U I M 1973SSk (4630) 112  
 K(Co(NH3)6+L)=1.06  
 -----

in 2.5% glycerol/H2O. K=0.95(0%), 1.19(5%), 1.28(7.5%), 1.41(10%), 1.65(19.5%);  
 Also at 60, 70 C. In ethyleneglycol/H2O: K=1.28(2.5%), 1.60(12.5%), 1.69(20%)

-----  
 Co+++ cal none 25°C 0.0 U H 1972POa (4631) 113  
 DH(Co(NH3)3+L)=6.7 kJ mol-1  
 -----

Co+++ kin NaClO4 25°C 1.0M U 1971FKa (4632) 114  
 K(cis-Co(en)2L2+Hg)=2.7  
 -----

Co+++ kin NaClO4 25°C 2.0M U T H 1971FMa (4633) 115  
 K=1.03  
 -----

K: ((NH3)4Co(NH2)(OH)Co(NH3)4+H+L)=(NH3)4H2OCo-NH2-CoL(NH3)4 in which NH2 & OH bridge two Co's. K=1.12(30 C)

-----

Co+++ sp KNO3 33°C 0.01M U M 1971MPb (4634) 116  
 $K(\text{trans-CoANO}_2+\text{L})=2.57$   
 $K(\text{trans-CoACN}+\text{L})=1.62$   
 Medium: HNO3. A=1,4,8,11-tetrazacyclotetradecane. 33 and 67 C

-----

Co+++ sp alc/w 25°C 90% U I 1971TKd (4635) 117  
 $K(\text{Co}(\text{en})_3+\text{L})=2.91$   
 Medium; 90% v/v EtOH/H2O, 0.007 M NaCl.  $K=4.00$  (I=0 corr)

-----

Co+++ kin none 45°C 0.0 U 1970BUa (4636) 118  
 $K_{\text{lin}}(\text{Co}(\text{NH}_3)_6+\text{L})=-0.18$

-----

Co+++ kin NaClO4 25°C 0.50M U M 1970GSc (4637) 119  
 $K((\text{NH}_3)_5\text{CoO}_2\text{Co}(\text{NH}_3)_5+\text{L})=0.80$

-----

Co+++ sol NaClO4 25°C 0.20M U T M 1970MLc (4638) 120  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=0.08$   
 Medium: LiClO4.  $K_1=-0.17(15\text{ C}), 0.40(35\text{ C}), 0.62(45\text{ C})$ .  
 At I=0(corr):  $K_1=2.18(15\text{ C}), 2.16(25\text{ C}), 2.21(35\text{ C}), 2.18(45\text{ C})$

-----

Co+++ kin NaClO4 13°C 0.50M U T H  $K_1=1.36$  1970MMd (4639) 121  
 $K_1=1.24(2.5\text{ C}), 1.30(8\text{ C}), 1.5(25\text{ C})$ .  $\text{DH}=15.9\text{ kJ mol}^{-1}$ ,  $\text{DS}=83.6\text{ J K}^{-1}\text{ mol}^{-1}$

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Co+++ sp none 35°C 0.0 U M 1969IBa (4640) 122  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=2.04$

-----

Co+++ kin NaClO4 25°C 2.0M U 1968DSd (4641) 123  
 $K(\text{A}+\text{L})=-0.03$   
 Medium: LiClO4. A=doubly bridged  $(\text{NH}_3)_4\text{Co}(-\text{NH}_2, -\text{O}_2)\text{Co}(\text{NH}_3)_4$

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Co+++ sol non-aq 25°C 100% U TI 1968FPb (4642) 124  
 $K_{\text{so}}(\text{cis-Co}(\text{en})_2\text{L}_2)=-7.02$   
 $K_{\text{so}}(\text{trans-Co}(\text{en})_2\text{L}_2)=-6.47$   
 $K(\text{cis-trans})=-0.05$   
 Medium: Me2NCOME. In DMF:  $K(\text{cis})=-5.92$ ,  $K(\text{trans})=-5.74$ . In DMSO:  $K(\text{cis})=-4.1$   
 $K(\text{trans})=-4.0$ . In MeOH:  $K(\text{cis})=-5.40$ ,  $K(\text{trans})=-3.11$ . In H2O:  $-2.05, -0.52$

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Co+++ sp non-aq 50°C 100% U T H 1967FWa (4643) 125  
 $K_{\text{out}}(\text{cis-Co}(\text{en})_2\text{L}_2+\text{L})=4.32$   
 Medium:sulpholan.  $K_{\text{out}}=4.62(30\text{ C}), 4.46(40\text{ C}), 4.04(70\text{ C})$ .  $\text{DH}(K_{\text{out}})=30\text{ kJ mol}^{-1}$ ,  $\text{DS}=-10\text{ J K}^{-1}\text{ mol}^{-1}$ . At 70 C:  $K(\text{cis-trans})=1.56$ ,  $\text{DH}=-10$ ,  $\text{DS}=0$

-----

Co+++ sp NaClO4 45°C 1.0M U 1967LMc (4644) 126  
 $K_{\text{out}}(\text{Co}(\text{NH}_3)_5+\text{L})=0.5$

-----

Co+++ sp NaClO4 25°C 1.0M U T H 1967LMe (4645) 127  
 $K_{\text{out}}(\text{Co}(\text{NH}_3)_3+\text{L})=-0.05$   
 $K_{\text{out}}=0.08(35\text{ C}), 0.15(47\text{ C}), 0.20(57\text{ C}), 0.18(66\text{ C}), 0.11(86\text{ C})$ .  
 $K(\text{out-in})=0.18(25-57\text{ C}), 0.36(77-86\text{ C})$ .  $\text{DH}=1.5\text{ kJ mol}^{-1}$

-----  
Co+++ oth oth/un 37°C 0.0 U M 1967MMd (4646) 128  
K(cis-Co(en)2(NH3)NO2+L)=1.15  
K(tr-Co(en)2(NH3)NO2+L)=1.12  
K(Co-(en)2(NCS)L+L)=0.26

Method: partial pressure of H2O

-----  
Co+++ con non-aq 25°C 100% U I M 1967Mwc (4647) 129  
K(cis-Co(en)2L2+L)=2.60  
K(trans-Co(en)2L2+L)=2.0  
K(cis-Co(en)2BrL+L)=2.49  
K(Co(trien)L2+L)=2.53 and 2.71

Medium: DMSO. In DMF: K(cis-Co(en)2L2+L)=3.91; in Me2NCOMe: 4.31

-----  
Co+++ con oth/un 25°C 0.0 U 1967TIa (4648) 130  
K(Co(NH3)6+L)=1.5  
K(Co(NH3)5NO2+L)=1.3

-----  
Co+++ sp NaClO4 25°C 0.07M U 1967TKb (4649) 131  
K(Co(NH3)6+L)=0.34  
K(Co(en)3+L)=0.46

-----  
Co+++ kin NaClO4 25°C 3.0M U K1=1.42 1966CNa (4650) 132

-----  
Co+++ sp non-aq 60°C 100% U M 1966LWa (4651) 133  
K(Co(en)2L(H2O)+L)=4.22  
K(Co(en)2L(H2O)L+L)=1.85  
K(cis-Co(en)2L2+L)=3.34  
K(Co(en)2L2)cis-trans=1.04

Medium: DMF

-----  
Co+++ sp non-aq 30°C 100% U H 1966LWa (4652) 134  
Kout(Co(en)2L(H2O)+L)=4.18  
Kout(Co(en)2L(H2O)+2L)=6.08

Medium: DMF. 1-21 C. DH(K1)=3.9 kJ mol<sup>-1</sup>, DS=92 J K<sup>-1</sup> mol<sup>-1</sup>. DH(B2)=-16, DS=64

-----  
Co+++ sp non-aq 30°C 100% U TI 1966Mwa (4653) 135  
K(cis-Co(en)2L2+L)=3.72  
K(trans-Co(en)2L2+L)=2.25

Medium: DMF. In Me2COMe: K(cis)=4.31. In DMSO: K(cis)=2.50(20 C),  
2.44(25 C), 2.42(30 C)

-----  
Co+++ sol oth/un 25°C 0.0 U 1965AEa (4654) 136  
K(Co(NH3)5L+L)=1.0

-----  
Co+++ kin alc/w 35°C 100% U 1965BIa (4655) 137  
K(Co(en)2L2+L)=2.40

Medium: MeOH

-----  
Co+++ sp oth/un 25°C 0.01M U I 1965CHa (4656) 138

K(Co(en)2L(H2O)cis-trans=-0.43

Medium: HNO3. In D2O: K=-0.40

---

Co+++ sp non-aq 60°C 100% U 1964TWa (4657) 139  
K(Co(en)2L2)cis-trans)=0.60  
Kout(cis-Co(en)2L2+L)=2.60  
Kout(trans-Co(en)2L2+L)=1.43

Medium:Me2SO. Equilib.constants for Co(en)2(Me2SO)Cl and in MeOH also given

---

Co+++ con oth/un 25°C dil U T 1963STd (4658) 140  
K'(Co(NH3)6+L)=0.30

K': K1out(100 atm)/K1out(1 atm). At 200 atm: K=0.34; 300 atm: K=0.42;  
400 atm: 0.44; 500 atm: 0.42; 600 atm: 0.41

---

Co+++ kin NaClO4 25°C 2.0M U M 1963SYb (4659) 141  
K((NH3)5CoO2Co(NH3)5+L)=0.10

---

Co+++ sol NaCl 25°C var U TIH B2=0.08 1962FMa (4660) 142  
Kout(Co(NH3)6+Cl)=1.18

10 C: Kout=1.38, B2=0.30; 45 C: Kout=0.88, B2=-0.09. By calorimetry DH(K1)=  
2.5 kJ mol-1. At I=0 corr.: K1=2.45, B2=0.0

---

Co+++ sol NaClO4 25°C 1.0M U TIH 1962MFC (4661) 143  
Kout(Co(NH3)6+Cl)=-0.31

Kout=-0.54(10 C), -0.06(45 C), DH=23 kJ mol-1, DS=75 J K-1 mol-1.  
At I=0 corr.: Kout=0.6

---

Co+++ sp non-aq 60°C 100% U I 1962TWa (4662) 144  
K(Co(en)2L2)cis-trans)=0.85

Kout(cis-Co(en)2L2+L)=3.26  
Kout(trans-Co(en)2L2+L)=1.48

Medium: DMF. Also data for MeCONMe2

---

Co+++ sp oth/un 45°C 1.0M U 1962YAA (4663) 145  
K(Co(NH3)5+L)=0.10

---

Co+++ sp oth/un 20°C dil U 1961BCa (4664) 146  
K(Co(en)2L(H2O)cis-trans=-0.43

---

Co+++ oth none 25°C 0.0 U 1960MTb (4665) 147  
K(Co(NH3)5+L)=-2.80

From thermodynamic data

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Co+++ sp NaCl 25°C 0.30M U TI 1960TAA (4666) 148  
K(Co(NH3)5+L)=0.17

K=0.35(51 C), 0.56(80 C). At I=0 corr.: K=0.99. In 87% D2O, 0.3 NaCl: K=0.30

---

Co+++ sp alc/w 25°C 100% U 1957PHA (4667) 149  
K(cis-Co(en)2L2+L)=2.13

Medium:MeOH



-----  
 Co+++ sp NaClO4 25°C .054M U TIH 1953ENa (4668) 150  
 K(Co(NH3)6+L)=1.87  
 K=1.96(35 C), DH(K)=15.6 kJ mol<sup>-1</sup>, DS=88 J K<sup>-1</sup> mol<sup>-1</sup>. At I=0 corr. K=2.59,  
 DH=18.1, DS=109(25 C)  
 -----

Co+++ sp NaClO4 25°C 5.0M U T H 1953YLa (4669) 151  
 K1(Co(NH3)3+L)=-0.52  
 K2(Co(NH3)3L+L)=-1.47  
 DH(K1)=32 kJ mol<sup>-1</sup>, DS=107 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=29, DS=79.  
 At 0 C: K1=-0.52, K2=-1.47  
 -----

Co+++ con none 25°C 0.0 U M 1951JMa (4670) 152  
 K(Co(NH3)6+L)=1.49  
 K(Co(en)3+L)=1.72  
 K(Co(pn)3+L)=1.60  
 -----

Co+++ con none 25°C 0.0 U 1949MOa (4671) 153  
 K(Co(NH3)6+L)=1.52  
 -----

Co+++ con none 25°C 0.0 U M 1947JAa (4672) 154  
 K(Co(NH3)6+L)=1.57  
 -----

Co+++ sp oth/un 25°C .057M U I 1941ADa (4673) 155  
 K(Co(NH3)5+L)=0.64  
 K=0.92(I=0.028)  
 -----

Co+++ cal none 20°C 0.0 U H 19360Ta (4674) 156  
 DH(Co(NH3)4Cl2, cis-trans)=-7.7 kJ mol<sup>-1</sup>, DH(Co(en)2Cl2, cis-trans)=-7.4  
 \*\*\*\*\*  
 ClO4- HL Perchlorate CAS 7001-90-3 (287)  
 Perchlorate;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co+++ con alc/w 25°C 10% C TIH 2002PAa (6177) 157  
 Kout(Co(NH3)6+ClO4)=2.089  
 Medium: 10% w/w EtOH/H2O. Also data for 30-70% w/w EtOH/H2O and  
 10-50 C. DH=-6.5 kJ mol<sup>-1</sup>, DS=17.6 J K<sup>-1</sup> mol<sup>-1</sup>.  
 -----

Co+++ con oth/un 25°C ? C T 1992YOb (6178) 158  
 Kout(co(en)3+L)=1.57  
 K=1.63 (0 C), 1.61 (5 C), 1.60 (10 C), 1.59 (15 C), 1.58 (20 C)  
 1.67 (30 C), 1.56 (35 C), 1.56 (40 C), 1.56 (45 C), 1.57 (50.C)  
 -----

Co+++ EMF none 25°C 0.0 U T H 1991YKa (6179) 159  
 Kout(Co(NH3)6+L)=1.59  
 Data for T=0-50 C. At 25 C, DH=-3.6 kJ mol<sup>-1</sup>.  
 -----

Co+++ sp NaClO4 25°C 1.00M U I M 1988ROa (6180) 160  
 -----

									$K_{out}(\text{Co}(\text{NH}_3)_5\text{NO}_3+\text{L})=0.03$
Co+++	con oth/un	25°C	?	U	M			1978KWb	(6181) 161
									$K_{out}(\text{Co}(\text{en})_3+\text{L})=1.18$
Co+++	con non-aq	25°C	100%	U	I M			1977THa	(6182) 162
									$K_{out}(\text{Co}(\text{pn})_3+\text{L})=3.77$
	Medium: MeCN.	In DMF:							$K_{out}(\text{Co}(\text{en})_3+\text{L})=2.21$
Co+++	con non-aq	25°C	100%	U	I M			1976THa	(6183) 163
									$K_{out}(\text{Co}(\text{en})_3+\text{L})=1.72$
	Medium: DMSO.	In DMF:							$K_{out}(\text{Co}(\text{en})_3+\text{L})=2.39$ ; in MeCN: 3.64
Co+++	con non-aq	-40°C	100%	U	T			1975BPe	(6184) 164
									$K_{out}(\text{Co}(\text{NH}_3)_6\text{L}_2+\text{L})=2.24$
	Medium: liquid ammonia.	At -49 C:							$K_{out}=2.22$ ; -71 C: 2.30
Co+++	con none	25°C	0.0	U	M			1974PKa	(6185) 165
									$K(\text{Co}(\text{NH}_3)_6+\text{L})=1.40$
									$K(\text{Co}(\text{en})_3+\text{L})=1.14$
									$K(\text{Co}(\text{pn})_3+\text{L})=1.08$
									$K(\text{Co}(\text{bpy})_3+\text{L})=0.90$
									$K(\text{Co}(\text{phen})_3+\text{L})=0.78$
Co+++	sol NaClO4	25°C	1.0M	U	I			1973JOa	(6186) 166
									$K_{so}(\text{Co}(\text{NH}_3)_6\text{L}_3)=-3.71$
	Kso: $\text{Co}(\text{NH}_3)_6\text{L}_3(\text{s})=\text{Co}(\text{NH}_3)_6+3\text{L}$ .								$K_{so}=-2.88(I=4)$
Co+++	sol none	25°C	0.0	U				1971HEb	(6187) 167
									$K(\text{Co}(\text{NH}_3)_6+\text{L})=1.34$
									$K_{so}(\text{Co}(\text{NH}_3)_6\text{L}_3)=-6.82$
Co+++	sol NaClO4	25°C	4.0M	U				1971JOb	(6188) 168
									$K(\text{Co}(\text{en})_3+\text{L}) < -0.25$
									$K_{so}(\text{Co}(\text{en})_3\text{L}_3=\text{Co}(\text{en})_3+3\text{L})=0.17$
Co+++	kin oth/un	31°C	var	U				1970BUa	(6189) 169
									$K_{out}(\text{Co}(\text{NH}_3)_5\text{H}_2\text{O}_5\text{O}_4+\text{ClO}_4)=0.80$
Co+++	sol alc/w	25°C	100%	U				1968FPb	(6190) 170
									$K_{so}(\text{cis-Co}(\text{en})_2\text{Cl}_2)=-5.76$
									$K_{so}(\text{trans-Co}(\text{en})_2\text{Cl}_2)=-5.59$
	Medium: MeOH.	At $I=0$ corr:							$K_{so}=-2.75(\text{cis}), -3.88(\text{trans})$
Co+++	ISE none	25°C	0.0	U	T			1968HRb	(6191) 171
									$K_{so}(\text{Co}(\text{NH}_3)_6\text{L}_3)=-5.47$
	Kso: $\text{Co}(\text{NH}_3)_6\text{L}_3(\text{s})=\text{Co}(\text{NH}_3)_6+3\text{L}$ .								$K_{so}=-6.04(15\text{ C}), -5.03(35\text{ C})$
Co+++	con oth/un	25°C	0.0	U				1968KTa	(6192) 172
									$K(\text{Co}(\text{NH}_3)_6+\text{L})=1.40$

-----  
Co+++ sol oth/un 35°C 0.0 U T 1965AEa (6193) 173  
K(Co(NH3)5Cl+L)=1.05

K=1.15(25 C)

\*\*\*\*\*

CrO4-- H2L Chromate CAS 7738-94-5 (2382)

Chromate;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ kin NaClO4 25°C 0.25M U 1973WSb (6481) 174  
\*K(Co(NH3)5(H2O)+L)=-2.01

-----  
Co+++ sp oth/un 25°C 0.0 U TI M 1964SFa (6482) 175  
K(CoA5+HL=CoA5L+H)=-1.01

A=NH3. Data for I=0.0025-0.488 and 10-35 C

\*\*\*\*\*

F- HL Fluoride CAS 7644-39-3 (201)

Fluoride;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ EMF NaClO4 25°C 3.0M U M 1973MKd (6812) 176

K(Co(NH3)5CO3+F)=0.46

B(Co(NH3)5CO3+2F)=0.53

B(Co(NH3)5CO3+3F)=0.65

B(Co(NH3)5CO3+4F)=0.78

Data also for SO4 complex: 0.40, 0.46, 0.48; S2O3: 0.53, 0.70, 0.77, 0.98;

SeO3: 0.53, 0.60, 0.73, 1.07

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1973MSh (6813) 177  
Kout(Co(dipy)3+L)=0.66

-----  
Co+++ sp oth/un 40°C dil U 1966CPa (6814) 178  
K(cis-Co(en)2H2OF=trans)=-0.79

\*\*\*\*\*

FClBrI HL (541)

Halides, comparative (for book data under ligand 80)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ sp NaClO4 1.0M U M 1968TWb (7390) 179

K(CoA2+SCN)=2.36

K(CoA2+I)=0.40

K(CoA2+Br) < 0

K(CoA2+OH)=3.46

CoA2=Co(dimethylglyoximate)2(SO3)(H2O)

-----  
Co+++ sp NaClO4 40°C 1.0M U M 1967GHa (7391) 180  
K(Co(CN)5+L=Cl)=-0.6

K=-0.06(Br), 1.56(I)

-----  
Co+++ oth oth/un 37°C 0.0 U M 1966BMb (7392) 181  
K(Co(NH3)5(CH3COO)Cl)=1.15

Method: partial pressure of H2O. K=1.12(Br), 1.01(I), 1.10(NO3)  
Also with other substituents

\*\*\*\*\*

I- HL Iodide CAS 10034-85-2 (20)  
Iodide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ con alc/w 25°C 10% C TIH 2002PAa (7932) 182  
Kout(Co(NH3)6+I)=2.011

Medium: 10% w/w EtOH/H2O. Also data for 30-70% w/w EtOH/H2O and  
10-50 C. DH=0.0 kJ mol-1, DS=38.4 J K-1 mol-1.

-----  
Co+++ sp KCl 25°C 2.20M U T H 1994MMc (7933) 183  
K(CoA+L)=1.46

Kout(CoA+L)=-0.57

CoA=aquacobalamin. Also data at 5C: K=2.11, 10C: K=1.94, 15C: K=1.78.  
DH=-51.3 kJ mol-1, DS=-144 J K-1 mol-1. At 5 and 10C: Kout=-1.05, -0.68

-----  
Co+++ sp alc/w 25°C 100% U M 1994NSa (7934) 184  
K(CoA2B+L=CoA2L+B)=-1.57

K(CoA2C+L=CoA2C+L)=-2.28

Medium: MeOH. A=Benzoquinonediimine, B=Triphenylstibine, C=Triphenylarsine

-----  
Co+++ sp NaClO4 25°C 0.15M U I 1992MLa (7935) 185  
K(CoA+L)=1.41

CoA=aquacobalamin. Also data for 20-100% v/v methanol/H2O. For 20% K=1.78,  
40% K=2.18, 50% K=2.41, 70% K=2.95, 90% K=3.62, 100% K=3.96.

-----  
Co+++ con oth/un 25°C ? C T 1992YOb (7936) 186  
Kout(Co(en)3+L)=1.70

K=1.73 (0 C), 1.72 (5 C), 1.71 (10 C), 1.71 (15 C), 1.70 (20 C)  
1.70 (30 C), 1.70 (35 C), 1.70 (40 C), 1.70 (45 C), 1.71 (50 C)

-----  
Co+++ EMF none 25°C 0.0 U T H 1991YKa (7937) 187  
Kout(Co(NH3)6+I)=1.58

Data for T=0-50 C. At 25 C DH=-0.1 kJ mol-1.

-----  
Co+++ sol oth/un 25°C 0.50M U H 1985ISc (7938) 188  
Kout(Co(NH3)3(NO3)3+I)=1.1

Medium: 0.50 M NaF. DH(Kout)=-14.6 kJ mol-1, DS(Kout)=-53 J K-1 mol-1.

-----  
Co+++ sol oth/un 25°C 0.1M C T 1984ISd (7939) 189  
Kout(Co(NH3)3(NO2)3+L)=-0.20

Medium: NaF; for I=0.2M K1out=-0.20; I=0.3 K1out=-0.19; I=0.4 K1out=-0.19  
I=0.5 K1out=-0.20

-----  
Co+++ sp NaClO4 25°C 0.10M U 1976AAb (7940) 190  
K(CoTPPS4(H2O)2+L)=1.06

Constants also determined in 1.0 M NaClO4. CoTPPS4(H2O)2=  
A,B,C,D-tetra(p-sulfonatophenyl)porphinatodiaquocobaltate(III)

-----  
Co+++ con non-aq 25°C 100% U I M 1976THa (7941) 191  
Kout(Co(en)3+L)=2.53

Medium: DMSO. In DMF: Kout(Co(en)3+L)=3.41

-----  
Co+++ sp NaClO4 25°C 1.00M U HM 1975ABc (7942) 192  
K(CoA+L)=1.53

A=Tetra(4-N-methylpyridyl)porphine  
DH=84 kJ mol<sup>-1</sup>.

-----  
Co+++ sp non-aq 25°C 100% U M 1974BGb (7943) 193  
K(Co(furyldioximato)2+L)=5.54

K(Co(furyldioximato)2+2L)=8.41

Medium: DMF. In DMSO: B2=1.16. In acetonitrile: K1=5.48, K2=3.97.

Data also for Co(nioximato)2+L, K1=5.10, B2=8.58 etc.

-----  
Co+++ sp NaClO4 25°C 1.0M U I 1974J0c (7944) 194  
K(Co(pn)3+I)=0.23

pn=diaminopropane. K=0.28, K(Co(pn)3+3L)=-0.21(I=4)

-----  
Co+++ sol NaClO4 25°C 1.0M U I 1973J0a (7945) 195  
K(Co(NH3)6+L)=-0.4

K'(Co(NH3)6+2L)=-1.4

Kso(Co(NH3)6L3)=-4.12

K=-0.3, K'=-0.8, Kso=-4.00(I=2). K=-0.4, K'=-0.7, Kso=-4.15(I=4)

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1973MSh (7946) 196  
Kout(Co(dipy)3+L)=0.23

-----  
Co+++ cal none 25°C 0.0 U H 1972P0a (7947) 197  
DH(Co(NH3)5+L)=-3.8 kJ mol<sup>-1</sup>

-----  
Co+++ EMF NaClO4 25°C 0.40M U I M 1971DUb (7948) 198  
K(CoA2+L)=5.69

K(CoA2+2L)=8.14

K(CoACl+L)=5.58

K(CoA(SCN)+L)=2.85

K(CoA2Br+L)=5.35. HA=dimethylglyoxime

-----  
Co+++ sp NaClO4 25°C var U 1971HEb (7949) 199  
K(Co(NH3)6+I)=0.97 to 1.11

-----  
Co+++ sol NaClO4 25°C 1.0M U I 1971J0a (7950) 200  
K(Co(en)3+I)=0.15

K(Co(en)3+3L)=-0.29

Kso=-2.91

K1=0.24(spec), 0.33(I=0.5, spec), At I=4: K1=0.04, B3=-0.36, Kso(-2.78)

---

Co+++	con none	25°C	0.0	U		1971KUb	(7951)	201
						K(Co(C2O4)(en)2+I)=1.3		

---

Co+++	sp NaClO4	25°C	0.06M	U		1971YYa	(7952)	202
						K(Co(NH3)6+I)=0.95		
						Kout(Co(NH3)6+I)=0.73		

---

Co+++	sol NaClO4	25°C	0.20M	U T		1970MLc	(7953)	203
						K(Co(NH3)6+I)=-0.30		
Medium: LiClO4. K=0.30(45 C),(I=0.2). At I=0 corr: K1=1.78(25 C), 1.86(45 C)								

---

Co+++	con oth/un	25°C	0.0	U		1968KTa	(7954)	204
						K(Co(NH3)6+L)=1.38		

---

Co+++	oth oth/un	37°C	0.0	U	M	1967MMc	(7955)	205
						K(cis-Co(en)2(NH3)NO2+L)=1.27		
						K(trans-Co(en)2NH3NO2+L)=1.15		
						K(Co(en)2(NCS)Cl+L)=0.54		

Method:partial pressure of H2O.

---

Co+++	sp NaClO4	25°C	0.07M	U		1967TKb	(7956)	206
						K(Co(NH3)6+L)=-0.15		

---

Co+++	sp non-aq	30°C	100%	U	M	1966Mwa	(7957)	207
						K(cis-Co(en)2Cl2+L)=2.93		

Medium: DMF

---

Co+++	sp none	25°C	0.0	U	HM	1955NAa	(7958)	208
						K(Co(NH3)6+L)=1.95		
I=0 corr. DH(K1)=8.9 kJ mol <sup>-1</sup> , DS=67 J K <sup>-1</sup> mol <sup>-1</sup>								

---

Co+++	sp NaClO4	25°C	.054M	U	HM	1953ENa	(7959)	209
						K(Co(NH3)6+L)=1.23		
						K(Co(en)3+L)=0.93		
DH(Co(NH3)6L)=6.8 kJ mol <sup>-1</sup> , DS=46 J K <sup>-1</sup> mol <sup>-1</sup> . K=1.27(35 C)								
DH(Co(en)3+L)=5.1, DS=33. K=0.95(35 C)								

---

Co+++	sp oth/un	0°C	var	U	M	1951LWb	(7960)	210
						Kout(Co(NH3)5F+L)=1.04		

---

Co+++	sp oth/un	20°C	var	U	M	1944LIb	(7961)	211
						K(Co(NH3)6+L)=1.58		

\*\*\*\*\*

I03- HL Iodate CAS 7782-68-5 (1257)

Iodate;

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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-----  
Co+++ sp NaClO4 25°C 1.0M U M 1975WTa (8504) 212  
K(Co(NH3)5(H2O)+L)=1.04  
K(Co(en)2(H2O)2+L)=0.36  
-----

Co+++ sol none 25°C 0.0 U 1963LMb (8505) 213  
Kso(Co(NH3)6L3)=-8.56  
-----

\*\*\*\*\*  
I04- HL Periodate CAS 13444-71-8 (6063)  
Periodate;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ kin oth/un 60°C 0.10M U 1961LIa (8598) 214  
B2eff=15.77 in 0.1 M NaOH  
-----

Successive Ka(H6Co(I06)2)=-1.95, -7.1, -8.0, -12.1. Also in 1.4 M NaClO  
\*\*\*\*\*

Mo04-- H2L Molybdate (443)  
Molybdate;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ EMF NaClO4 25°C 0.10M U 1977MPd (8718) 215  
K1out[Co(NH3)6+L]=0.26  
B2out[Co(NH3)6+2L]=0.54  
-----

for I=0.5 M K1out=-0.05; B2out=0.18  
-----

Co+++ EMF NaClO4 25°C 0.10M U 1977MPd (8719) 216  
K1out[Co(en)3+L]=0.25  
B2out[Co(en)3+2L]=0.47  
-----

for I=0.5 M K1out=-0.30; B2out=-0.22  
-----

Co+++ EMF NaClO4 25°C 0.10M U 1977MPd (8720) 217  
K1out[Co(NH3)5Cl+L]=0.27  
B2out[Co(NH3)5Cl+2L]=0.57  
-----

for I=0.5 M K1out=0.03; B2out=0.28  
-----

Co+++ sp NaClO4 25°C 1.0M C M 1977TAa (8721) 218  
K(Co(NH3)5(H2O)+L)=2.68  
-----

Co+++ vlt NaCl 25°C 0.10M U I 1973LHa (8722) 219  
K(Co(NH3)6 + L)=1.34  
-----

K=2.60 (0 corr)  
\*\*\*\*\*

NH2SO3- H2L Sulfamate CAS 5329-14-6 (452)  
Sulfamate;  
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ gl oth/un 25°C .004M U T 1968PJa (8799) 220  
-----





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Co+++ oth none 25°C 0.0 U K1=7.00 B2=13.35 1975DDb (9109) 231  
B3=19.16  
B4=24.44  
-----

Co+++ kin NaClO4 25°C 1.0M U 1974EWb (9110) 232  
Medium:LiClO4.  $K((Co)_2(NH_3)_8(OH)_2NH_2+H)=0.18$ ,  $DH=-40.6$  kJ mol<sup>-1</sup>,  $DS=-129.6$   
-----

Co+++ kin NaClO4 21°C 1.0M U I 1972BKa (9111) 233  
 $K(Co(NH_3)_4OH(H_2O)+H)=8.5$   
I=0.3: K=8.2; I=2, K=8.3  
-----

Co+++ kin NaClO4 26°C 1.0M U 1972SRb (9112) 234  
 $K((NH_3)_5CoOSO_2NH_2+OH=(NH_3)_5CoOSO_2NH_2+H_2O)=0.7$   
-----

Co+++ sp NaClO4 25°C 1.0M U 1971BLa (9113) 235  
 $K(Cr(NH_3)_5OH+H)=5.7$   
By EMF measurements, K=5.75  
-----

Co+++ sol alc/w 25°C 75% U I 1971KBi (9114) 236  
 $K(Co(en)_3L)=-0.34$   
 $K(Co(en)_3+2L)=-1.70$   
 $K(Co(en)_3+3L)=-1.46$   
Medium:w% EtOH, 3 M LiClO4.  $K_1=-0.77(w=0)$ ,  $-0.52(w=25)$ ,  $-0.38(w=50)$ ,  
 $-0.2(w=100)$ ,  $B_2=-0.57$ ,  $B_3=-0.66(w=100)$   
-----

Co+++ kin NaClO4 20°C 0.10M U M 1971SBc (9115) 237  
 $K(cisCo(NH_3)_4(OH)(H_2O)+H)=5.69$   
 $K(cis-Co(NH_3)_4(OH)_2+H)=7.99$   
 $K(Co(NH_3)_2(NO_2)_2OH(H_2O)+H)=6.93$ .  $K(Co(NH_3)_2(NO_2)_2(OH)_2+H)=8.78$   
-----

Co+++ sp NaClO4 25°C 2.0M U T H 1971TSd (9116) 238  
Medium:LiClO4.  $K((Co)_2(NH_3)_6(OH)_2NH_2+H+H_2O)=1.8(25C)$ ,  $1.5(50C)$ ,  $DH=-25.08$   
kJ mol<sup>-1</sup>  
-----

Co+++ kin oth/un 62°C 0.0 U 1970TJa (9117) 239  
 $K(Cr(NH_3)_5(NH_2)+H)=12.1$   
-----

Co+++ sp NaClO4 20°C 1.0M U 1969LSc (9118) 240  
 $K(H_2O(NH_3)_3Co(OH)_2Co(NH_3)_3OH)=1.7$  to 1.8  
-----

Co+++ gl KNO3 25°C 0.10M A I 1969SMg (9119) 241  
 $K(Cr(NH_3)_5OH+H)=6.4$   
Medium:MX.  $K=6.31(M=Na, X=ClO_4)$ ,  $6.15(M=Li, X=ClO_4)$   
-----

Co+++ EMF NaClO4 25°C 0.10M U 1969SMg (9120) 242  
Medium:LiClO4.  $K(Co_2(NH_3)_8(OH)NH(X)+H)=6.4(X=Cl)$ ,  $5.9(X=Br)$ ,  $6.3(X=H_2O)$   
-----

Co+++ oth none 25°C 0.0 U M 1961KYa (9121) 243  
 $B(CoL_5Cl)=34.7$   
-----

Method: combination of thermodynamic data. I=0 corr.

-----  
Co+++ oth none 25°C 0.0 U H 1961KYa (9122) 244  
B5=32.82  
B6=29.70

Method: combination of thermodynamic data. I=0 corr.  
DH(B5)=-204 kJ mol<sup>-1</sup>, DH(B6)=-238; DS(B5)=-57.3, DS(B6)=-226.

-----  
Co+++ oth none 25°C 0.0 U 1960MTb (9123) 245  
K6=0.23

Method: combination of thermodynamic data. I=0 corr.

-----  
Co+++ gl oth/un ? 1.12M U M 1958JBa (9124) 246  
K(CoL4(OH)2+HL=CoL5OH+H2O)=2.6  
K(CoL5OH+HL=CoL6+H2O)=1.0

Additionak method: chemical analysis. Medium: 0.12M NO3, ca 1M SCN.

-----  
Co+++ sol R4N.X 20°C 1.0M U I 1958LAb (9125) 247  
K7=-0.62  
K7.K8=-1.3

Medium: NH4ClO4. In 0.1 M, by spectrophotometry, K7=-0.5

-----  
Co+++ sol R4N.X 20°C 1.0M U M 1957LAa (9126) 248  
K(CoL6+H2O=CoL5OH+HL)=-1.4  
K(CoL6+NO2=CoL5NO2+L)=1.63  
K(CoL6+SCN=CoL5SCN+L)=-0.5  
K(CoL5SCN+SCN=CoL4(SCN)2+L)=0

Medium: NH4ClO4.

-----  
Co+++ cal oth/un 25°C dil U HM 1950YAa (9127) 249  
K: CoL5+X=CoL5X. DH(K)=8.8 kJ mol<sup>-1</sup>(X=CO3--), -28.9(X=L), -33.9(X=NO2-),  
0.4(X=NO3-), 15.1(X=SO4--), 13.8(X=Cl-), 6.7(X=Br-), and additional DH(K).

-----  
Co+++ cal oth/un 25°C dil U H 1949YPa (9128) 250  
DH(K5)=-6.3 kJ mol<sup>-1</sup>; DH(K6)=-29.

-----  
Co+++ EMF R4N.X 30°C 2.0M U I 1941BJa (9129) 251  
K5=5.05  
K6=4.41  
B6=35.21

Also by chemical analysis. Medium: NH4NO3. In 1 M NH4NO3: B6=34.36

-----  
Co+++ EMF oth/un 25°C dil U 1920LLa (9130) 252  
B6=33.66

\*\*\*\*\*  
NH3O L Hydroxylamine; CAS 5470-11-1 (1808)  
Hydroxylamine; NH2.OH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ kin KCl 24°C 1.00M U T HM 1992MBa (9260) 253  
K(CoA+L)=-0.60

CoA=aquacobalamin. DH=45 kJ mol<sup>-1</sup>, DS=139 J K<sup>-1</sup> mol<sup>-1</sup>. Also K at 5C: -1.18  
15C: -0.85, 36C: -0.21.

-----  
Co+++ kin oth/un 5°C 2.0M U K1=1.2 1969JSc (9261) 254  
Medium:H2SO4

\*\*\*\*\*  
NO2- HL Nitrite CAS 7782-77-6 (635)  
Nitrite;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ kin KCl 25°C 2.20M U T H 1994MMc (9357) 255  
Kout(CoA+L)=-0.46

CoA=aquacobalamin. Also data at 5C: K=-0.49, 15C: K=-0.51, 35C: K=-0.30.

-----  
Co+++ EMF NaClO4 25°C 3.0M U K1=0.40 B2=0.52 1973MKd (9358) 256  
B3=0.59  
B4=0.84  
B5=0.97

Reaction: Co(NH3)5CO3+nL. For Co(NH3)5SO4+L: K1=0.32, B2=0.45, B3=0.54.  
For Co(NH3)5SeO3, K1=0.48, B2=0.48, B3=0.57, B4=0.88. Also Co(NH3)5TeO3

-----  
Co+++ kin NaClO4 25°C 2.50M U 1966MGa (9359) 257  
K(Co(NH3)4(HL)LC1+H)=-0.22  
Kout(Co(NH3)4L2+Cl)=0.40

-----  
Co+++ sol oth/un 25°C 0.0 U T M 1960MTa (9360) 258  
Ks(KCo(NH3)2L4(s))=-3.51

Ks=-3.13(0 C), -3.26(15 C), -3.51(25 C), -3.91(30 C). Data also for cis- and  
trans-Co(NH3)4L2.Co(NH3)2L4) and others

-----  
Co+++ oth oth/un 25°C 0.0 U 1960MTb (9361) 259  
K(Co(NH3)5+L)=38.5

From thermodynamic data

-----  
Co+++ sol oth/un 20°C 0.0 U M 1958KSa (9362) 260  
Ks(Tl3CoL6(s)=3Tl+CoL6)=-14.94  
Ks(Cs3CoL6(s)=3Cs+CoL6)=-15.46

-----  
Co+++ kin oth/un 75°C ? U HM 1956BSa (9363) 261  
Medium: solid Co(NH3)5LC12. K(Co(NH3)5ONO=Co(NH3)5NO2)=0.21. K=0.34(45.5 C)  
-0.28(58 C). DH=7.8 kJ mol<sup>-1</sup>

\*\*\*\*\*  
NO3- HL Nitrate CAS 7697-37-2 (288)  
Nitrate;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ con alc/w 25°C 10% C TIH 2002PAa (9626) 262  
 $K_{out}(\text{Co}(\text{NH}_3)_6+\text{NO}_3)=2.158$   
 Medium: 10% w/w EtOH/H<sub>2</sub>O. Also data for 30-70% w/w EtOH/H<sub>2</sub>O and  
 10-50 C. DH=-4.1 kJ mol<sup>-1</sup>, DS=24.8 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
 Co+++ con oth/un 25°C ? C T 1992YOb (9627) 263  
 $K_{out}(\text{Co}(\text{en})_3+\text{L})=1.67$   
 K=1.72 (0 C), 1.71 (5 C), 1.70 (10 C), 1.69 (15 C), 1.68 (20 C)  
 1.67 (30 C), 1.67 (35 C), 1.67 (40 C), 1.66 (45 C), 1.68 (50 C)

-----  
 Co+++ EMF none 25°C 0.0 U T H 1991YKa (9628) 264  
 $K_{out}(\text{Co}(\text{NH}_3)_6+\text{L})=1.70$   
 Data for T=0-50 C. At 25 C, DH=-2.2 kJ mol<sup>-1</sup>.

-----  
 Co+++ con oth/un 25°C ? U M 1978Kwb (9629) 265  
 $K_{out}(\text{Co}(\text{en})_3+\text{L})=1.28$

-----  
 Co+++ sp NaNO<sub>3</sub> 25°C 2.0M U 1970STc (9630) 266  
 $K(\text{Co}_2(\text{NH}_3)_8(\text{OH})(\text{NH}_2)+\text{H}+\text{L}=\text{CO}_2(\text{NH}_3)_8(\text{OH}_2)\text{L})=-1.7$

-----  
 Co+++ con oth/un 25°C 0.0 U 1968KTa (9631) 267  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=1.63$

-----  
 Co+++ oth oth/un 37°C 0.0 U M 1967MAF (9632) 268  
 $K(\text{Co}(\text{en})_2(\text{SCN})\text{Cl}+\text{L})=0.3$

-----  
 Co+++ oth oth/un 37°C 0.0 U M 1967MMd (9633) 269  
 $K(\text{cis-Co}(\text{en})_2(\text{NH}_3)\text{NO}_2+\text{L})=2.3$   
 $K(\text{tr-Co}(\text{en})_2(\text{NH}_3)\text{NO}_2+\text{L})=2.3$

Method: partial pressure of H<sub>2</sub>O

-----  
 Co+++ sol oth/un 25°C 0.0 U 1965AEa (9634) 270  
 $K(\text{Co}(\text{NH}_3)_5\text{Cl}+\text{L})=1.15$

-----  
 Co+++ sp oth/un 25°C 1.0M U M 1963HTa (9635) 271  
 $K(\text{Co}(\text{NH}_3)_5+\text{L})=-0.19$

-----  
 Co+++ oth oth/un 25°C 0.0 U 1960MTb (9636) 272  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=-1.30$

Method: From thermodynamic data

\*\*\*\*\*

N<sub>2</sub>H<sub>4</sub> L Hydrazine CAS 302-01-2 (2117)  
 Hydrazine; H<sub>2</sub>N.NH<sub>2</sub>

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co+++ kin oth/un 5°C 2.0M U T K<sub>1</sub>=1.44 1969JSc (10078) 273  
 Medium: H<sub>2</sub>SO<sub>4</sub>. K<sub>1</sub>=1.44(5 C), 1.74(10 C)

\*\*\*\*\*

N<sub>3</sub>- HL Azide CAS 7782-79-8 (441)

Azide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	sp	NaN <sub>3</sub>	25°C	0.50M	U	T H		K(CoA+L)=1.08 K(CoB+L)=1.04	1998HBb (10183)	274
CoA: beta-trifluoromethylcobinamide, CoB: beta-cyanomethylcobinamide. Data at 5, 15, 35 and 45 C. DH(CoA+L)=-16.4 kJ mol <sup>-1</sup> , DS=-34.9 J K <sup>-1</sup> mol <sup>-1</sup>										
Co+++	kin	KCl	25°C	2.20M	U	T H		Kout(CoA+L)=-0.52	1994MMc (10184)	275
CoA=aquacobalamin. Also data at 5C: K=-0.21, 10C: K=-0.39, 15C: K=-0.28, 20C: K=-0.48.										
Co+++	EMF	NaClO <sub>4</sub>	25°C	2.00M	U			K1=8.477 B2=15.00 B3=19.85 B4=23.18 B5=23.11 B6=24.00	1989CNb (10185)	276
Co+++	sp	oth/un	25°C	1.00M	U	I M		Kout(Co(NH <sub>3</sub> ) <sub>5</sub> NO <sub>3</sub> +L)=-0.05	1988ROa (10186)	277
Medium: NaN <sub>3</sub>										
Co+++	sp	oth/un	35°C	0.0	U	M		K1out(Co(NH <sub>3</sub> ) <sub>6</sub> +L)=1.15	1969IBa (10187)	278
Co+++	kin	NaClO <sub>4</sub>	25°C	0.51M	U			K(Co(NH <sub>3</sub> ) <sub>5</sub> +L)=2.92	1969SGb (10188)	279
Co+++	kin	oth/un	25°C	var	U	M		K(Co(NH <sub>3</sub> ) <sub>5</sub> L+H)=2.78	1968STb (10189)	280
Co+++	sol	oth/un	25°C	0.0	U	T		K(Cr(NH <sub>3</sub> ) <sub>5</sub> Cl+L)=-1.07	1965AEa (10190)	281
K1=0.96(35 C)										
Co+++	sp	NaClO <sub>4</sub>	25°C	0.50M	U			K(cis=trans)=-0.66	1964HAb (10191)	282
Complex: Co(NH <sub>3</sub> ) <sub>4</sub> (H <sub>2</sub> O)L										
Co+++	sp	NaClO <sub>4</sub>	40°C	1.0M	U	M		K(Co(CN) <sub>6</sub> +L)=3.18 K(Co(CN) <sub>5</sub> L+H)=0.67	1962HWa (10192)	283
Co+++	sp	NaClO <sub>4</sub>	25°C	0.05M	U	IHM		K(Co(NH <sub>3</sub> ) <sub>6</sub> +L)=1.30 K'(Co(en) <sub>3</sub> +L)=1.06	1953ENa (10193)	284
DH(K)=-16.5 kJ mol <sup>-1</sup> , DS=-29.3 J K <sup>-1</sup> mol <sup>-1</sup> . At 35 C: K=1.20, K'=0.93										

I=0 corr., 25 C: K=2.01, DH=-12.6, DS=-4

\*\*\*\*\*

OH- HL Hydroxide (57)  
Hydroxide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp NaClO4 25°C 2.2M C H 2002MKa (11133) 285  
\*K(CoA(H2O))=-10.71

CoA(H2O) is 10-nitrosoaquacobalamin. DH(\*K)=120 kJ mol<sup>-1</sup>,  
DS(\*K)=198 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Co+++ sp NaClO4 25°C 0.30M M T M 1993DNa (11134) 286  
\*K(Co(NH3)5(3-NO2-sal))=-7.75  
\*K(Co(NH3)5(5-NO2-sal))=-7.79  
\*K(CoNH3(en)2(3-NO2-sal))=-7.5  
\*K(Co(tetren)(3-NO2-sal))=-7.61

Also data at 15, 30 and 35 C. Also data for K(Co((NH3)5(3-NO2)+Ni): 3.68,  
3.69, 3.61 and 3.37 respectively. 3-NO2-sal: 3-nitrosalicylate- (HA-).

-----  
Co+++ sp oth/un 25°C 1.0M U 1990ITa (11135) 287  
K{[Co(NH3)5(OH)][NH4]/[[Co(NH3)6][H2O]]=-1.35 Medium: NH4NO3

-----  
Co+++ sp NaClO4 25°C 1.00M U I 1988ROa (11136) 288  
Kout(Co(NH3)5NO3+L)=-0.22

-----  
Co+++ sp NaNO3 25°C 1.00M U 1986Mcc (11137) 289  
\*K(cis-Co(en)3A(H2O))=-7.67  
K(Coen3HAaq=Coen3Aaq+H)=-1.76

H2A=oxalic acid

-----  
Co+++ sp NaClO4 25°C 0.20M U 1983BBe (11138) 290  
\*K1(CoA)=-5.9  
\*K2(CoA)=-10.3

CoA is diaquacobinamide.

-----  
Co+++ sp NaClO4 25°C 0.20M U 1983BBe (11139) 291  
K(CoA(H2O)L+H)=5.9  
K(CoAL2+H)=10.3  
K(CoB(H2O)+L)=1.0

CoA=cobinamide, vitamin B12. CoB(H2O)=ethynylaquocobinamide

-----  
Co+++ gl NaClO4 40°C 1.0M U I M 1981BGa (11140) 292  
K(Co(CN)5aq+L=Co(CN)5L+aq)=3.4

Ionic strength range: 0.22-4.10 M

-----  
Co+++ kin NaClO4 25°C 1.00M U H 1977JSb (11141) 293  
K(Co2L3+H=Co2L2(H2O)2)=0.37

Medium: LiClO4. Co2L3 = (Co(NH3)3)2(OH)3

-----

Co+++ oth none 25°C 0.0 U M K1=12.36 1975DDb (11142) 294  
 B6=48.16  
 B(CoL(NH3))=18.49  
 B(CoL4(NH3)2)=44.82

---

Co+++ sp NaCl 15°C 0.50M U TIHM 1975DHa (11143) 295  
 \*K(CoA(H2O)2)=-5.36, \*K(CoA(OH)(H2O))=-8.05. A=triaminotriethylamine

---

Co+++ EMF NaClO4 ? 1.00M U 1973BLb (11144) 296  
 K(CoA5+H2O=CoA5OH+H)=-5.75  
 A=NH3. By spectrophotometry, \*K1=-5.70

---

Co+++ nmr oth/un 25°C U 1972YKa (11145) 297  
 K'=0.40  
 K"=-0.28  
 K'''=0.08  
 K': trans-Co(en)2(NH3)(OH)=cis. K":trans-Co(en)2(OH)2=cis.  
 K''': trans-Co(en)(NH3)2(OH)2=cis

---

Co+++ nmr oth/un 25°C 1.00M U 1971YYb (11146) 298  
 K(CoA5+H2O=CoA5OH+H)=-6.36  
 A=NH3. Method: nmr

---

Co+++ nmr oth/un 25°C 2.00M U 1971YYb (11147) 299  
 \*K'=-6.30  
 \*K"=-6.06  
 Medium: NaBr. \*K': cis-Co(en)2(NH3)(H2O)=cis-Co(en)2(NH3)(OH)+H.  
 \*K'': trans isomer. Method: nmr

---

Co+++ cal NaClO4 25°C 0.10M U H 1970CHb (11148) 300  
 K(CoA5+H2O=CoA5OH+H)=-6.07  
 A=NH3. DH(\*K)=37.78 kJ mol<sup>-1</sup>, DS=12.1 J K<sup>-1</sup> mol<sup>-1</sup>

---

Co+++ kin diox/w 25°C 10% U TI 1970CHE (11149) 301  
 K(Co(NH3)5F+OH)=1.08  
 Medium: 10% w/w dioxan/H2O, 0.1 M NaOH. K1=0.95(10%); 1.26(20%, 15 C)

---

Co+++ EMF NaClO4 3°C 3.00M U 1970WAb (11150) 302  
 \*K1(Co(H2O)6) < -2

---

Co+++ sp NaClO4 26°C 1.00M U T H 1969FJa (11151) 303  
 K(Co(en)2A+OH)=1.69  
 A=CO3<sup>--</sup>. DH=-27.2 kJ mol<sup>-1</sup>. K=1.56(34 C), 1.42(44 C)

---

Co+++ gl NaNO3 20°C 0.10M U I 1968CHb (11152) 304  
 \*K1(Co(NH3)5(H2O))=-6.18  
 \*K1=-6.35(D2O), -6.33(20% dioxan)

---

Co+++ kin oth/un 7°C 0.25M U 1968HMd (11153) 305  
 \*K1(Co(H2O)6)=-1.3

-----  
Co+++ sp NaClO4 25°C 1.00M U 1968LSa (11154) 306  
K(c-t(Co(en)2(OH)(H2O)))=-0.10

K: cis = trans

-----  
Co+++ gl NaClO4 25°C 0.30M U I 1968SHd (11155) 307  
\*K1(Co(NH3)5(H2O))=-6.22

In D2O: \*K=-6.81. \*K1(Co(ND3)5(D2O))=-6.70

-----  
Co+++ sp NaCl 25°C 1.00M U M 1967B0a (11156) 308  
\*K1(Co(NH3)5(OCNH3))=-0.83

-----  
Co+++ sp oth/un 15°C 0.01M U TI 1967CHb (11157) 309  
K(Co(en)3+L)=1.40

K=1.42(25 C), 1.44(35 C). At 25 C, 10% dioxan: K=1.66, 2.01(40%), 2.46(30%), 3.10(40%)

-----  
Co+++ sp oth/un 25°C 1.00M U T 1966ATa (11158) 310  
\*K1(Co(NH3)5C2O4H)=-2.06

\*K=-1.77(70 C)

-----  
Co+++ gl NaClO4 25°C 1.00M U T 1966CEa (11159) 311  
\*K1(Co(en)2(H2O)2)=-5.98 (cis)

\*K1(trans)=-4.55

\*K1(Co(en)2NH3H2O)=-6.05 (cis)

\*K1(trans)=-5.70

At 2 C: values respectively: -6.34(cis), -5.02(trans); -6.55(cis), -6.35(tr)

At 28 C: -5.93, -4.49; -5.95, -5.62

-----  
Co+++ kin NaClO4 0°C 0.10M U T M 1966CHa (11160) 312  
K(Co(NH3)5Cl+L)=0.61

K(Co(en)2(NH3)Cl+L)=0.52

K(Co(trien)(NH3)Cl+L)=0.32

K(Co(NH3)5Cl+L)=0.57(25 C)

-----  
Co+++ sp NaClO4 25°C 0.01M U 1966CLc (11161) 313  
K(Co(en)3+L)=1.42

By dilatometry, I=0.02 to 0.09 M: K=1.7

-----  
Co+++ sp oth/un 25°C dil? U 1966CLc (11162) 314  
K(Co(en)2(NH3)2+L)=1.79

K(Co(en)2(NH3)(NH2OH)+L)=1.73

K(Co(en)2(NH3)(EtNH2)+L)=1.70

-----  
Co+++ kin NaClO4 25°C 3.00M U 1966CNa (11163) 315  
\*K1(Co(H2O)6)=-0.66

-----  
Co+++ gl oth/un 20°C 0.10M U M 1966JSa (11164) 316  
\*K1(Co(NH3)5(CH3OH))=-5.58



Co+++ gl oth/un 0°C ? U 1965BMc (11165) 317  
 \*K1(Co(en)2(SO4)(H2O))=-6.3

---

Co+++ gl oth/un 18°C dil U 1964BBf (11166) 318  
 \*K1(trans-Co(NH3)4CN(H2O))=-8.6  
 \*K1(trans-Co(NH3)4NO2H2O)=-9.0

---

Co+++ gl NaClO4 10°C 0.10M U T 1964HSb (11167) 319  
 \*K1(Co(en)2Cl(H2O))=-7.47(cis)  
 \*K1(Co(en)2Cl(H2O))=-6.37(tra)  
 At 20 C: \*K1=-7.13(cis), -6.11(trans)

---

Co+++ gl NaClO4 10°C 0.10M U T 1964HSb (11168) 320  
 \*K1(Co(trien)(H2O)2)=-5.4 cisA  
 \*K1=-7.3 (cis-beta)  
 \*K1(cis-Co(NH3)4Cl(H2O))=-6.6  
 At 10 C: \*K1(cis-alpha)=-5.8, \*K1(cis-beta)=-5.6

---

Co+++ kin oth/un 25°C dil U 1963CHc (11169) 321  
 \*K1(Co(en)2Cl(H2O))=-6.7(cis)  
 \*K1(Co(en)2Cl(H2O))=-5.7(tran)

---

Co+++ gl NaClO4 40°C 1.0M U 1962HWa (11170) 322  
 \*K(Co(CN)5H2O)=-9.7

---

Co+++ kin NaClO4 50°C 0.10M U T 1962MTa (11171) 323  
 \*K(Co(en)2NH3H2O)=-5.1  
 \*K=-5.2(60 C)

---

Co+++ gl KNO3 25°C 1.0M U 1961APb (11172) 324  
 \*K1(Co(phen)2(H2O)2)=-4.45  
 \*K2(Co(phen)2(H2O)2)=-6.8

---

Co+++ sol none 25°C 0.0 U 1961RKA (11173) 325  
 Kso(Co(OH)3)=-40.5

---

Co+++ sp none 25°C 0.0 U 1960BHb (11174) 326  
 \*K(in D2O)/\*K(in H2O)=-0.18  
 K(in D2O)/K(in H2O)=0.64  
 K: Co(NH3)5H2O+OH). \*K: Co(NH3)5H2O=Co(NH3)5OH+H

---

Co+++ sol oth/un 20°C dil U 1959ASa (11175) 327  
 K(Co(OH)3(s)=Co(OH)3)=-4.54  
 B3=38.47

---

Co+++ kin oth/un 64°C 1 U H 1959BSe (11176) 328  
 \*K(Co(NH3)6)=-10.46  
 DH(\*K)=39.7 kJ mol-1

---

Co+++ gl oth/un ? dil U 1959GVa (11177) 329

\*K(Co(NH3)6) < -12

\*K(Co(en)3) < -12

---

Co+++ gl oth/un 20°C var U 1958FPa (11178) 330  
\*K1(Co(NH3)4SO4H2O)=ca.-6

---

Co+++ gl NaNO3 25°C 1.0M U 1957SCf (11179) 331  
\*K1(Co(NH3)5(H2O))=-6.55  
\*K1(cis-Co(NH3)4(H2O)2)=-5.95  
\*K2(cis-Co(NH3)4(H2O)2)=-8.05

---

Co+++ kin none 25°C 0.0 U 1956CPa (11180) 332  
Kout(Co(NH3)6+OH)=1.85

---

Co+++ sp none 25°C 0.0 U 1956PBa (11181) 333  
Kout(Coen3+OH)=1.50

---

Co+++ sp none 25°C 0.0 U 1956PBa (11182) 334  
Kout(Copn3+OH)=1.27

---

Co+++ sp NaClO4 23°C 1.0M U T H 1956SWb (11183) 335  
\*K1=-1.78  
DH(\*K1)=42 kJ mol<sup>-1</sup>, DS=105; \*K1=-2.10(12.5 C), -1.98(18.5 C), -1.71(28 C)

---

Co+++ gl none 19°C 0.0 U T H 1953S0a (11184) 336  
\*Kso=-2.71  
Kso(Co(OH)3(s))=-44.49  
\*Kso: K(Co(OH)3(s)+3H=Co+3H2O); DH(\*Kso)=-94.1 kJ mol<sup>-1</sup>; \*Kso=-5.65(81 C),  
Kso=-43.50(81 C). Redox also used

---

Co+++ gl NaNO3 25°C 1.0M U 1952BRa (11185) 337  
\*K1(cis-Coen2(H2O)2)=-6.06  
\*K2=-8.19 (cis)  
\*K1(trans-Coen2(H2O)2)=-4.45  
\*K2=-7.94 (trans)

---

Co+++ gl R4N.X 30°C 0.25M U I 1941BJa (11186) 338  
\*K(Co(NH3)5H2O)=-6.16  
Medium:NH4NO3. \*K=-6.58(I=2), -6.40(I=1), -6.25(I=0.5). Redox also used

---

Co+++ sol oth/un 20°C dil U 1938CFa (11187) 339  
Kso(Co(OH)3)=-25.55

---

Co+++ gl oth/un 25°C var U 1937LDa (11188) 340  
\*K1(Co(NH3)4(H2O)2)=-5.32  
\*K2(Co(NH3)4(H2O)2)=-7.30

---

Co+++ sol none 15°C 0.0 U H 1928BVa (11189) 341  
\*K1(Co(NH3)5H2O)=-5.69  
\*K1(Co(NH3)4(H2O)2)=-5.21

\*K1(Co(NH3)3(H2O)3)=-4.7

\*K1(Co(NH3)2(H2O)4)=-3.4

Kinetics also used

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O2 L Oxygen CAS 7782-44-7 (83)  
Dioxygen, also oxide; O-- , and superoxide, O2-

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co+++ sp non-aq 25°C 100% U M 1988UMa (12610) 342  
K(CoA(py)+L=CoA(py)L)=-1.90

Medium: toluene. A=5a,15a-Bis(2-(2,2-dimethylpropanamido)phenyl)-10a,20a-(nonadiamidodi-o-phenylene)porphyrin. Data also for other similar porphyrins

-----  
Co+++ sp non-aq 25°C 100% U M 1988UMa (12611) 343  
K(CoA(MeIm)+L=CoA(MeIm)L)=-0.9

Medium: toluene. A=5a,15a-Bis(2-(2,2-dimethylpropanamido)phenyl)-10a,20a-(nonadiamidodi-o-phenylene)porphyrin. Data also for other similar porphyrins

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O2-- H2L Peroxide CAS 7772-84-1 (2813)  
Peroxide; -O.O-

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co+++ sp NaClO4 25°C 0.25M U T HM 1967Mwb (12653) 344  
K(H+Coen2(L,NH2)Coen2)=0.85

Constant: brown to orange. K=0.84(kinetics). At 10 C: K=1.05(spec),0.99(kin)  
15 C: 0.98(kin and spec); 20 C: 0.91(kin) 0.90(spec). Other constants also

-----  
Co+++ sp oth/un 30°C 0.14M U T M 1963BFc (12654) 345  
K(2Co(dien)+O2)=6.40

K=7.50(15 C); 7.15(20 C); 6.80(25 C)

-----  
Co+++ kin NaClO4 13°C var U T H 1957Bwb (12655) 346  
K(Co+HL)=13.95

Medium: HClO4. K(Co+HL)=14.15(0 C). DH(K)=-21 kJ mol-1; DS=192 J K-1 mol-1

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P04--- H3L Phosphate CAS 7664-38-2 (176)  
Phosphate;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
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Co+++ sol oth/un 25°C 0.10M C I M 2003ZPa (13133) 347  
Kout[Co(dipy)3+HL]=2.04

Kout[Co(bipy)3+H2L]=1.27

in NaF; for 0.3 M NaF Kout[Co(dipy)3+HL]=1.63; Kout[Co(dipy)3+H2L]=1.16

for 0.5 M NaF Kout[Co(dipy)3+HL]=1.12; Kout[Co(dipy)3+H2L]=0.95

-----  
Co+++ sp NaClO4 25°C 0 C 2000ZSa (13134) 348  
Kout([Co(NH3)5(SO4)]+H2L)=0.96

Kout([Co(NH3)5(SO4)]+HL)=1.92

Kout([Co(NH3)5(SO4)]+L)=2.90

Extrapolation from 0.1-1.0 M NaClO4 to I=0.

-----  
Co+++ sp NaClO4 25°C 0 C 2000ZSa (13135) 349

Kout([Co(NH3)5C2O4]+H2L)=1.01

Kout([Co(NH3)5C2O4]+HL)=1.97

Kout([Co(NH3)5C2O4+L)=2.93

Extrapolation from 0.1-1.0 M NaClO4 to I=0.

-----  
Co+++ sp NaClO4 25°C 0 C 2000ZSa (13136) 350

Kout([Co(NH3)5(OH)]+H2L)=1.54

Kout([Co(NH3)5(OH)]+HL)=2.45

Kout([Co(NH3)5(OH)]+L)=3.67

Extrapolation from 0.1-1.0 M NaClO4 to I=0.

-----  
Co+++ sp NaClO4 25°C 0 C 2000ZSa (13137) 351

Kout([Co(NH3)5(NO2)]+H2L)=1.25

Kout([Co(NH3)5(NO2)]+HL)=2.50

Kout([Co(NH3)5(NO2)]+L)=3.79

Extrapolation from 0.1-1.0 M NaClO4 to I=0.

-----  
Co+++ sp NaClO4 25°C 0 C 2000ZSa (13138) 352

Kout([Co(NH3)6]+H2L)=1.57

Kout([Co(NH3)6]+HL)=3.04

Kout([Co(NH3)6]+L)=4.60

Extrapolation from 0.1-1.0 M NaClO4 to I=0.

-----  
Co+++ sp NaClO4 25°C 0 C 2000ZSa (13139) 353

Kout([Co(en)3]+H2L)=1.52

Kout([Co(en)3]+HL)=2.96

Kout([Co(en)3]+L)=4.48

Extrapolation from 0.1-1.0 M NaClO4 to I=0.

-----  
Co+++ gl NaCl 25°C 1.00M U M 1987BCa (13140) 354

K(Co(NH3)5HL+H)=3.2

K(Co(NH3)5L+H)=8.6

-----  
Co+++ vlt NaClO4 25°C 1.0M U I M 1977IGa (13141) 355

Kout(Co(en)3+HL)=1.23

Values also at I=0.0

-----  
Co+++ vlt NaClO4 25°C 0.0 U M 1977IGa (13142) 356

Kout(Co(en)3+HL)=3.26

Kout(Co(en)3L+HL)=2.79

-----  
Co+++ EMF NaClO4 25°C 2.00M U M 1973EFb (13143) 357

K((NH3)4Co-(NH2)(HL)-Co(NH3)4+H)=1.52. K((NH3)4Co-(NH2)(L)-Co(NH3)4+H)=6.0

-----  
Co+++ nmr oth/un 25°C var U M 1973Mfa (13144) 358

$$K_{\text{out}}(\text{Co}(\text{en})_3+\text{L})=1.1$$

-----  
 Co+++      kin NaClO4 25°C 2.00M U      M      1971GTb (13145) 359  
 Medium:LiClO4.  $K((\text{NH}_3)_4\text{Co}-(\text{NH}_2)(\text{HL})-\text{Co}(\text{NH}_3)_4 + \text{H})=1.48$   
 -----

Co+++      gl NaClO4 25°C 1.00M U      M      1971LPb (13146) 360  
 $K(\text{Co}(\text{en})_2(\text{NH}_3)\text{L}+\text{H})=7.85$  (cis)  
 $K=7.73$  (trans)  
 $K(\text{Co}(\text{en})_2(\text{NH}_3)\text{HL}+\text{H})=3.20$  (cis)  
 $K=3.00$  (trans)  
 -----

Co+++      EMF NaClO4 21°C 1.00M U T      1969LJa (13147) 361  
 $K(\text{Co}(\text{NH}_3)_5\text{HL}+\text{H})=3.45$   
 $K(\text{Co}(\text{NH}_3)_5\text{L}+\text{H})=7.95$   
 $K(\text{Co}(\text{NH}_3)_5\text{HL}+\text{H})=3.51(45 \text{ C}), -3.7(60 \text{ C})$ .  $K(\text{Co}(\text{NH}_3)_5\text{L}+\text{H})=7.91(45 \text{ C}), 8.00(60\text{C})$   
 -----

Co+++      gl NaClO4 5°C 1.0M U TI M      1968LSb (13148) 362  
 $K(\text{Co}(\text{en})_2\text{L}+\text{H})=4.25$   
 $K(\text{Co}(\text{en})_2(\text{OH})\text{L}+\text{H})=9.75$   
 $K(\text{Co}(\text{en})_2(\text{OH})\text{HL}+\text{H})=7.25$   
 $K(\text{Co}(\text{en})_2(\text{H}_2\text{O})\text{HL}+\text{H})=3.30$   
 $K((\text{NH}_3)_4\text{Co}(\text{OH})\text{L}+\text{H})=9.2$ ;  $K(\text{NH}_3)_4\text{Co}(\text{OH})\text{HL}+\text{L})=6.7$ ;  $K(\text{NH}_3)_4\text{Co}(\text{H}_2\text{O})\text{HL}+\text{H})=3.2$ ;  
 Data also at 23 C, 30 C and at I=0 corr.  
 -----

Co+++      sp NaClO4 25°C 3.00M U TI M      1963STf (13149) 363  
 $K(\text{Co}(\text{NH}_3)_5\text{H}_2\text{L}+\text{H})=-0.67$   
 In 1 M NaClO4:  $K(\text{Co}(\text{NH}_3)_5\text{HL}+\text{H})=3.60$ ,  $K(\text{Co}(\text{NH}_3)_5\text{L}+\text{H})=8.50$ .  $K_{\text{in}}(\text{Co}(\text{NH}_3)_5+\text{H}_2\text{L})=$   
 $0.90(25 \text{ C}), 1.00(37.5 \text{ C}), 1.11(50 \text{ C})$ .  $K_{\text{out}}/K_{\text{in}}=-0.43(25 \text{ C}), -0.51(37.5 \text{ C}), -0.60$   
 \*\*\*\*\*  
 P207----      H4L      Pyrophosphate      CAS 2466-09-3 (198)  
 Diphosphate; from  $(\text{HO})_2\text{PO}.0.\text{PO}(\text{OH})_2$   
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	sp	NaClO4	25°C	0	C				2000ZSa (13570)	364
									$K_{\text{out}}([\text{Co}(\text{en})_3]+\text{L})=5.83$	
Extrapolation from 0.1-1.0 M NaClO4 to I=0.										

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Co+++	sp	NaClO4	25°C	0	C				2000ZSa (13571)	365
									$K_{\text{out}}([\text{Co}(\text{NH}_3)_6]+\text{H}_2\text{L})=5.90$	
Extrapolation from 0.1-1.0 M NaClO4 to I=0.										

-----

Co+++	sp	NaClO4	25°C	0	C				2000ZSa (13572)	366
									$K_{\text{out}}([\text{Co}(\text{NH}_3)_5(\text{NO}_2)]+\text{L})=4.79$	
Extrapolation from 0.1-1.0 M NaClO4 to I=0.										

-----

Co+++	sp	NaClO4	25°C	0	C				2000ZSa (13573)	367
									$K_{\text{out}}([\text{Co}(\text{NH}_3)_5(\text{OH})]+\text{L})=4.87$	
Extrapolation from 0.1-1.0 M NaClO4 to I=0.										

-----

Co+++ sp NaClO4 25°C 0 C 2000ZSa (13574) 368  
Kout([Co(NH3)5(ox)]+L)=3.83

Extrapolation from 0.1-1.0 M NaClO4 to I=0.  
H2ox=oxalic acid

Co+++ sp NaClO4 25°C 0 C 2000ZSa (13575) 369  
Kout([Co(NH3)5(SO4)]+L)=3.76

Extrapolation from 0.1-1.0 M NaClO4 to I=0.

Co+++ gl oth/un 25°C 1.00M U M 1987BCa (13576) 370  
K(Co(NH3)5H2L+H) > 0.1  
K(Co(NH3)5HL+H)=3.3  
K(Co(NH3)5L+H)=5.6  
K(Co(NH3)4HL+H) > 0.1

Medium: LiCl. K(Co(NH3)4L+H)=4.0

Co+++ cal oth/un 20°C 0.10M U HM 1968ANa (13577) 371  
K(Co(NH3)5Cl+L)=2.8

Medium:Me4NNO3. DH=4.8 kJ mol<sup>-1</sup>, DS=70 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

P3010----- H5L CAS 10380-08-2 (1001)  
Tripolyphosphate; from (HO)2PO.O.PO(OH).O.PO(OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

Co+++ gl oth/un 25°C 1.00M U M 1987BCa (13847) 372  
K(Co(NH3)5H3L+H)=-0.1  
K(Co(NH3)5H2L+H)=2.5  
K(Co(NH3)5HL+H)=3.4  
K(Co(NH3)5L+H)=6.6

Medium: LiCl. Data for Gamma isomer, data also for beta isomer  
For beta/gamma mix.: K(Co(NH3)4H2L+H)=> 0.1; K(Co(NH3)4HL+H)=2.3

Co+++ cal R4N.X 20°C 0.10M U H 1968ANa (13848) 373  
K(Co(NH3)5Cl+L)=4.23

Medium:Me4NNO3. DH=4.4 kJ mol<sup>-1</sup>, DS=102 J K<sup>-1</sup> mol<sup>-1</sup>

\*\*\*\*\*

P309--- H3L CAS 13566-25-1 (235)  
Cyclotrimetaphosphate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

Co+++ sp NaClO4 25°C 0 C 2000ZSa (13952) 374  
Kout([Co(en)3]+L)=4.43

Extrapolation from 0.1-1.0 M NaClO4 to I=0.

Co+++ sp NaClO4 25°C 0 C 2000ZSa (13953) 375  
Kout([Co(NH3)6]+H2L)=4.50

Extrapolation from 0.1-1.0 M NaClO4 to I=0.

-----

Co+++ sp NaClO4 25°C 0 C 2000ZSa (13954) 376  
 Kout([Co(NH3)5(NO2)]+L)=3.70  
 Extrapolation from 0.1-1.0 M NaClO4 to I=0.

Co+++ sp NaClO4 25°C 0 C 2000ZSa (13955) 377  
 Kout([Co(NH3)5(OH)]+L)=3.60  
 Extrapolation from 0.1-1.0 M NaClO4 to I=0.

Co+++ sp NaClO4 25°C 0 C 2000ZSa (13956) 378  
 Kout([Co(NH3)5(ox)]+L)=2.80  
 Extrapolation from 0.1-1.0 M NaClO4 to I=0.  
 H2ox=oxalic acid

Co+++ sp NaClO4 25°C 0 C 2000ZSa (13957) 379  
 Kout([Co(NH3)5(SO4)]+L)=2.84  
 Extrapolation from 0.1-1.0 M NaClO4 to I=0.

Co+++ cal oth/un 25°C 0.10M C H 1983GGb (13958) 380  
 K(Co(NH3)6+P309)=3.11  
 Medium: 0.10 M HCl. DH(K)=2.28 kJ mol<sup>-1</sup>, DS(K1)=67 J K<sup>-1</sup> mol<sup>-1</sup>.

Co+++ con none 25°C 0.0 U 1952MOa (13959) 381  
 K(Co(NH3)6+L)=4.44

\*\*\*\*\*  
 P4012---- H4L CAS 13598-74-8 (234)

Cyclotetrametaphosphate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

Co+++ sp NaClO4 25°C 0 C 2000ZSa (14000) 382  
 Kout([Co(en)3]+L)=5.89  
 Extrapolation from 0.1-1.0 M NaClO4 to I=0.

Co+++ sp NaClO4 25°C 0 C 2000ZSa (14001) 383  
 Kout([Co(NH3)6]+L)=5.98  
 Extrapolation from 0.1-1.0 M NaClO4 to I=0.

Co+++ sp NaClO4 25°C 0 C 2000ZSa (14002) 384  
 Kout([Co(NH3)5(NO2)]+L)=4.97  
 Extrapolation from 0.1-1.0 M NaClO4 to I=0.

Co+++ sp NaClO4 25°C 0 C 2000ZSa (14003) 385  
 Kout([Co(NH3)5(OH)]+L)=4.93  
 Extrapolation from 0.1-1.0 M NaClO4 to I=0.

Co+++ sp NaClO4 25°C 0 C 2000ZSa (14004) 386  
 Kout([Co(NH3)5(ox)]+L)=3.97  
 Extrapolation from 0.1-1.0 M NaClO4 to I=0.  
 H2ox=oxalic acid

Co+++ sp NaClO4 25°C 0 C 2000ZSa (14005) 387  
 Kout([Co(NH3)5(SO4)]+L)=3.90  
 Extrapolation from 0.1-1.0 M NaClO4 to I=0.

Co+++ cal oth/un 25°C 0.10M C H 1983GGb (14006) 388  
 K(Co(NH3)6+P4012)=2.28  
 Medium: 0.10 M HCl. DH(K)=3.79 kJ mol<sup>-1</sup>, DS(K)=56 J K<sup>-1</sup> mol<sup>-1</sup>.

Co+++ con none 25°C 0.0 U 1952MOa (14007) 389  
 K(CoNH3)6+L)=5.74

\*\*\*\*\*

S-- H2L Sulfide CAS 7783-06-4 (705)  
 Sulfide;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co+++ oth none 25°C 0 U 1988LIa (14332) 390  
 Kso(Co2S3)=-49.9  
 \*Kso(Co2S3)=2.1

Derived from thermodynamic data and K(H+S=HS)=17.3.

\*\*\*\*\*

SCN- HL Thiocyanate CAS 463-56-9 (106)  
 Thiocyanate;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co+++ kin KCl 25°C 2.20M U T H 1994MMc (14857) 391  
 Kout(CoA+L)=-0.51

CoA=aquacobalamin. Also data at 5C: K=-0.48, 10C: K=-0.37, 15C: K=-0.43,  
 20C: K=-0.48.

Co+++ sp alc/w 25°C 100% U M 1994NSa (14858) 392  
 K(CoA2B+L=CoA2L+B)=-0.72  
 K(CoA2C+L=CoA2L+C)=-1.32

Medium: MeOH. A=Benzoquinonediimine, B=Triphenylstibine, C=Triphenylarsine

Co+++ sp NaClO4 25°C 0.50M C T H K1=1.077 B2=1.735 1985SMe (14859) 393  
 B3=1.988  
 B4=0.079

DH(K1)=-20.33 kJ mol<sup>-1</sup>, DH(B2)=-25.17, DH(B3)=-26.58, DH(B4)=27.08.

DS(K1)=-46.79 J mol<sup>-1</sup> K<sup>-1</sup>, DS(B2)=-71.86, DS(B3)=-83.98, DS(B4)=50.136

Co+++ sp alc/w 25°C 95% C T H K1=2.504 B2=5.720 1985SMe (14860) 394  
 B3=7.021  
 B4=7.797

Medium: 95% MeOH/H2O. DH(K1)=-3.51 kJ mol<sup>-1</sup>, DH(B2)=-5.92, DH(B3)=-11.55,  
 DH(B4)=11.9

Co+++ kin NaClO4 15°C 1.00M U T 1978EHa (14861) 395  
 K(CoA5B+L=CoA4BL+A)=-0.92



A=NH<sub>3</sub>, B=SO<sub>3</sub> in 1.0 M LiClO<sub>4</sub>. K=-1.10 (35 C), -1.30 (35 C)

-----  
Co+++ kin NaClO<sub>4</sub> 15°C 1.00M U T 1978EHa (14862) 396  
K(CoA<sub>5</sub>B+L=CoA<sub>4</sub>BL+A)=-1.52

A=NH<sub>3</sub>, B=C<sub>6</sub>H<sub>5</sub>.SO<sub>2</sub> in 1.0 LiClO<sub>4</sub>. K=-1.10 (25 C), -1.00 (35 C)

-----  
Co+++ kin NaClO<sub>4</sub> 25°C 1.00M U 1978EHa (14863) 397  
K(CoA<sub>5</sub>B+L=CoA<sub>4</sub>BL+A)=-0.89

A=NH<sub>3</sub>, B=CH<sub>3</sub>.C<sub>6</sub>H<sub>4</sub>.SO<sub>2</sub> in 1.0 LiClO<sub>4</sub>

-----  
Co+++ sp NaClO<sub>4</sub> 25°C 0.10M U 1976AAb (14864) 398  
K(CoTPPS<sub>4</sub>(H<sub>2</sub>O)<sub>2</sub>+L)=3.42  
K(CoTPPS<sub>4</sub>(H<sub>2</sub>O)L+L)=0.44

Constants also determined in 1.0 M NaClO<sub>4</sub>. CoTPPS<sub>4</sub>(H<sub>2</sub>O)<sub>2</sub>=  
A,B,C,D-tetra(4-sulphonatophenyl)porphinatodiaquocobaltate(III)

-----  
Co+++ sp NaNO<sub>3</sub> 25°C 0.50M U 1976PPa (14865) 399  
K(CoTCPP(H<sub>2</sub>O)<sub>2</sub>+L)=3.46

TCPP=tetracarboxyphenylporphine

-----  
Co+++ con non-aq 25°C 100% U I M 1976THa (14866) 400  
Kout(Co(en)<sub>3</sub>+L)=2.46

Medium: DMSO. In DMF: Kout(Co(en)<sub>3</sub>+L)=3.28

-----  
Co+++ sp NaClO<sub>4</sub> 25°C 1.00M U 1975ABc (14867) 401  
\*K<sub>1</sub>(CoA(H<sub>2</sub>O)<sub>2</sub>)=-5.5  
\*K<sub>2</sub>(CoA(OH)(H<sub>2</sub>O))=-10.7

A=tetra(4-N-methylpyridyl)porphinate

-----  
Co+++ sp NaClO<sub>4</sub> 25°C 1.00M U M 1975ABc (14868) 402  
K(CoA+L)=3.81  
K(CoAL+L)=1.14

A=Tetra(4-N-methylpyridyl)porphine

-----  
Co+++ ISE oth/un 25°C 0.10M U 1975LMa (14869) 403  
K(Co(NH<sub>3</sub>)<sub>5</sub>NCS+Ag)=3.38

-----  
Co+++ kin NaNO<sub>3</sub> 25°C 0.50M U 1975PCb (14870) 404  
K(CoTMpyP+L)=3.81  
K(CoTMpyPL+L)=1.11

CoTMpyP=tetrakis(4-N-methylpyridyl)porphinecobalt(III)

Both NaNO<sub>3</sub> and NaClO<sub>4</sub> were used as the ionic medium

-----  
Co+++ EMF NaClO<sub>4</sub> 25°C 3.0M U 1973MKd (14871) 405  
K(Co(NH<sub>3</sub>)<sub>5</sub>F+L)=-0.57  
K(Co(NH<sub>3</sub>)<sub>5</sub>F+2L)=-1.40

With Cl, values are -0.82, -1.30. With Br, -0.57, -1.16. With NO<sub>2</sub>, -0.50,  
-1.70. With HCOO, -0.77, -1.77. With MeCOO, -0.70, -1.30

-----  
Co+++ kin NaClO<sub>4</sub> 88°C 0.10M U 1972JCa (14872) 406

K(Co(NH3)5H2O+L)=2.69

Medium: LiClO4

-----  
Co+++ sp oth/un 25°C 0.10M U 1971FLb (14873) 407  
K(Hg+Co(NH3)5L)=4.99  
K(2HgCo(NH3)5L=dimer)=4.15

Data also for other ternary complexes

-----  
Co+++ ISE KNO3 25°C 0.03M U M 1971PBa (14874) 408  
K(Ag+Co(NH3)5L)=4.02  
K(Ag+trans-Co(en)2L2)=3.96  
K(Ag+cis-Co(en)2L2)=5.54

-----  
Co+++ oth KNO3 75°C 0.01M U T H 1970FVa (14875) 409  
K2=4.84  
Complex is Co(DM)2,HDM=dimethylglyoxime.DH(K2)=-36.0 kJ mol-1; K2=4.77(80 C)  
4.69(85 C), 4.62(90 C). Method: chemical analysis

-----  
Co+++ sp none 35°C 0.0 U 1969IBa (14876) 410  
K1out(Co(NH3)6+L)=0.90

-----  
Co+++ sp KCl 22°C 1.0M U I 1969IBa (14877) 411  
K1out(Co(bpy)3+L)=-0.02

-----  
Co+++ kin non-aq 70°C 100% U M 1968APb (14878) 412  
Kout(tr-Co(en)2(NO2)Cl+L)=0.91

Medium: sulfolan

-----  
Co+++ sp NaClO4 45°C 1.0M U 1967LMc (14879) 413  
K1out(Co(NH3)5+L)=-0.37

-----  
Co+++ sp oth/un 25°C 0.50M U 1963HTa (14880) 414  
K1out(Co(NH3)5+L)=0.65

-----  
Co+++ sol none 25°C 0.0 U 1963LMb (14881) 415  
K(Co(NH3)6+L)=0.89

-----  
Co+++ sp NaClO4 40°C 1.0M U 1962HWa (14882) 416  
K(Co(CN)5+L)=3.16

-----  
Co+++ sol NaClO4 20°C 3.0M U 1960LAa (14883) 417  
Kout(trans-CoL2en2+L)=-0.52

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S03-- H2L Sulfite CAS 7782-99-2 (801)  
Sulfite;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

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Co+++ EMF oth/un 25°C 0.0 U 1974PKb (15435) 418  
K(Co(NH3)6+L)=3.59

K(Co(NH3)6+2L)=5.15

With Co(en)3: K1=3.58, B2=3.5; Co(pn)3: 3.61, 3.25

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1973MKF (15436) 419  
Kout(Co(pren)3+L)= 0.35

Also for I=0.5 M K1out=0.17  
pren=propylenediamine

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1973MKF (15437) 420  
Kout(Co(en)3+L)= 0.33

Also for I=0.5 M K1out=0.15

-----  
Co+++ EMF NaClO4 25°C 3.0M U H K1=0.61 B2=0.79 1973MRb (15438) 421  
K3=-0.05  
K4=-0.40

Complex: Co(en)3. For Co(pn)3: K1=0.30, K2=0.15, K3=-0.10, K4=-0.30

-----  
Co+++ gl NaClO4 25°C 1.0M U T 1970SYa (15439) 422  
K(trans-Co(en)2LOH+H)=9.45

At 5 C: K=9.60. K(trans-Co(en)2LOH+L=trans=Co(en)2L2+OH)=-0.43; -0.45(5 C);  
-0.54(40 C)

-----  
Co+++ sp NaClO4 25°C 1.0M U M 1967TGb (15440) 423  
K(Co(CN)4LOH+NH3)=1.99

Products: Co(CN)4LNH3+OH

-----  
Co+++ sp NaClO4 25°C 1.0M U I M 1966CTa (15441) 424  
K(Co(CN)5L+H)=1.80  
K(Co(CN)4L+H)=1.00  
K(Co(CN)4L+OH)=2.9  
K(Co(CN)4L2+H)=-2.04

K(HCo(CN)4L2+H)=1.35. Also at I=0.018 and I=0.0016 M

-----  
Co+++ sp oth/un 20°C var U M 1956COa (15442) 425  
K(Co(NH3)6+L)=1.08  
K(Co(en)3+L)=1.04

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S04-- H2L Sulfate CAS 7664-93-9 (15)  
Sulfate;

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ sp NaClO4 25°C 0.10M U HM 1994MPb (16070) 426  
Kout(Co(NH3)5H2O+L)=1.98

Medium: 0.1-0.5 NaClO4. DH=1.3 kJ mol-1, DS=42 J K-1 mol-1

-----  
Co+++ vlt mixed 25°C 0.1M C 1984SPb (16071) 427  
Kout(Co(en)3+L)=1.86  
Kout(Co(en)3+2L)=3.77

NaClO4 in H2O (100%);also for I=0.2 M K1out=1.72; for I=0.3 M Kout=1.7

For acetonitrile/H<sub>2</sub>O v/v: K<sub>out</sub>=1.92(10%); 2.03(20%); 2.14(30%); 2.31(40%)

---

Co+++ vlt NaClO<sub>4</sub> 25°C 0.1M C 1975PKa (16072) 428  
K<sub>out</sub>(cisCo(en)2NH<sub>3</sub>Cl+L)=0.25

Also for I=0.5 M K<sub>lout</sub>=0.03

---

Co+++ vlt NaClO<sub>4</sub> 25°C 0.1M C 1975PKa (16073) 429  
K<sub>out</sub>(transCo(en)2NH<sub>3</sub>Cl+L)=0.20

Also for I=0.5 M K<sub>lout</sub>=0.03

---

Co+++ vlt NaClO<sub>4</sub> 25°C 0.1M C 1975PKa (16074) 430  
K<sub>out</sub>(Co(NH<sub>3</sub>)<sub>5</sub>Cl+L)=0.29

Also for I=0.5 M K<sub>lout</sub>=0.08

---

Co+++ EMF NaClO<sub>4</sub> 25°C 0.0 U IH 1974KPe (16075) 431  
K(Co(NH<sub>3</sub>)<sub>4</sub>(CO<sub>3</sub>)+L)=2.1  
K(Co(NH<sub>3</sub>)<sub>4</sub>(CO<sub>3</sub>)+2L)=3.0  
K(Co(NH<sub>3</sub>)<sub>4</sub>(CO<sub>3</sub>)+3L)=2.9

At I=0.1 M values are: 1.6, 2.7, 3.5. I=0.3 M: 1.2, 1.9, 2.5. I=0.5: 0.9, 1.2, 1.3

---

Co+++ cal oth/un 25°C 3.0M U H 1974MKh (16076) 432  
Medium: Na<sub>2</sub>SO<sub>4</sub>. DH(Co(NH<sub>3</sub>)<sub>5</sub>(NO<sub>2</sub>)+L)=8.2 kJ mol<sup>-1</sup>, DS=33 J K<sup>-1</sup> mol<sup>-1</sup>.  
DH(Co(NH<sub>3</sub>)<sub>5</sub>(NO<sub>2</sub>)+2L)=3.6, DS=21; DH(Co(NH<sub>3</sub>)<sub>5</sub>(NO<sub>2</sub>)+3L)=0, DS=-10.5

---

Co+++ EMF oth/un 25°C 0.10M U I 1974PKb (16077) 433  
K(Co(bpy)<sub>3</sub>+L)=2.11  
K(Co(bpy)<sub>3</sub>+2L)=2.93

At I=0.5 M KF: 1.22, 1.40, K(Co(NH<sub>3</sub>)<sub>6</sub>+3L)=2.40.  
I=0:3.41, 4.8, 4.5. Data also for Co(en)<sub>3</sub>, Co(pn)<sub>3</sub>, Co(bpy)<sub>3</sub> at I=0 to 0.4

---

Co+++ con oth/un 15°C 0.0 U T 1974USa (16078) 434  
K(Co(NH<sub>3</sub>)<sub>5</sub>(NO<sub>2</sub>)+L)=2.71

At 25 C: K=2.69; 40 C: 2.67. 500 kg cm<sup>-2</sup>, 15 C:2.59; 25 C:2.63; 40 C:2.61.  
At 1000 kg cm<sup>-2</sup>:2.48, 2.52, 2.53; 2000: 2.38,2.362.38; 3000: 2.25,2.28,2.30

---

Co+++ EMF NaClO<sub>4</sub> 25°C 3.0M U M 1973MKd (16079) 435  
K(Co(NH<sub>3</sub>)<sub>5</sub>F+L)=0.40  
K(Co(NH<sub>3</sub>)<sub>5</sub>F+2L)=0.46  
K(Co(NH<sub>3</sub>)<sub>5</sub>F+3L)=0.48

With Co(NH<sub>3</sub>)<sub>5</sub>Cl) values are: 0.19, 0.19, 0.02, K(Co(NH<sub>3</sub>)<sub>5</sub>Cl+4L)=0.66.  
Co(NH<sub>3</sub>)<sub>5</sub>Br: 0.28, 0.34, 0.34, 0.20. Co(NH<sub>3</sub>)<sub>5</sub>NO<sub>2</sub>: 0.32, 0.45, 0.54 plus other

---

Co+++ EMF NaClO<sub>4</sub> 25°C 0.10M U I M 1973MKe (16080) 436  
K(Co(en)<sub>3</sub>+L)=2.00  
K(Co(en)<sub>3</sub>+2L)=3.49  
K(Co(en)<sub>3</sub>+3L)=4.85

At I=0.5 values are: 1.23, 1.96, 2.88. At I=0(corr): 3.2, 5.0, 6.0. With  
Co(NH<sub>3</sub>)<sub>6</sub>: I=0.1: 2.11, 3.18, 5.12; I=0.5: 1.32,1.66,2.74. I=0: 3.4,5.1,6.4

---

Co+++ EMF NaClO4 25°C 0.10M U I M 1973MKe (16081) 437

K(Co(pn)3+L)=1.95  
K(Co(pn)3+3L)=3.22

At I=0.5 values are 1.22, 2.83. At I=0(corr): 3.2, 5.0

-----  
Co+++ vlt oth/un 25°C 0.1M C 1973MKf (16082) 438

Kout(Co(NH3)6+L)= 2.11

Also for I=0.5 M K1out=1.22

Medium: NaF

-----  
Co+++ vlt oth/un 25°C 0.1M C 1973MKf (16083) 439

Kout(Co(en)3+L)= 2.1

Also for I=0.5 M K1out=1.21

Medium: NaF

-----  
Co+++ vlt oth/un 25°C 0.1M C 1973MKf (16084) 440

Kout(Co(pren)3+L)= 2.0

Also for I=0.5 M K1out=1.23

Medium: NaF; pren=propylenediamine

-----  
Co+++ vlt oth/un 25°C 0.1M C 1973MKf (16085) 441

Kout(Co(bipy)3+L)= 1.13

Also for I=0.5 M K1out=0.48

Medium: NaF;

-----  
Co+++ kin NaClO4 65°C 1.0M U M 1973M0a (16086) 442

K1out(Co(NH3)5+L)=1.05  
K1in(Co(NH3)5+L)=0.4

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1973MSh (16087) 443

Kout(Co(dipy)3+L)=1.40

-----  
Co+++ vlt NaClO4 25°C 0.10M U 1973NVa (16088) 444

K1out(Co(NH3)6+L)=2.04

-----  
Co+++ sol NaClO4 25°C 3.0M U H 1972MRe (16089) 445

K(Co(en)3+L)=0.56  
K(Co(en)3L+L)=0.15  
K(Co(en)3L2+L)=-0.4

-----  
Co+++ EMF NaClO4 25°C 3.0M U HM 1972MSj (16090) 446

K(CoA3+L)=0.22  
K(CoA3L+L)=0.04  
K(CoA3L2+L)=-0.08

A=Trispropylene diamine

-----  
Co+++ con oth/un 25°C var U M 1971HPb (16091) 447

K(Co(NH3)5(NO2)+L)=2.57

-----  
Co+++ kin oth/un 25°C var U M 1970BAd (16092) 448

$K(\text{Co}(\text{NH}_3)_6+\text{L})=3.5$  approx

Medium:  $(\text{NH}_4)_2\text{SO}_4$

-----  
Co+++ kin NaClO4 31°C var U M 1970BUa (16093) 449  
 $K_{\text{1out}}(\text{Co}(\text{NH}_3)_5(\text{H}_2\text{O})+\text{L})=0.7$   
 $K_{\text{1in}}(\text{Co}(\text{NH}_3)_5(\text{H}_2\text{O})+\text{L})=-0.03$   
-----

Co+++ oth none 25°C 0.0 U M 1970EPb (16094) 450  
 $K(\text{Cu}(\text{en})_3+\text{L})=3.1$   
 $K(\text{Cu}(\text{NH}_3)_6+\text{L})=3.1$

Method: ultrasonic absorption

-----  
Co+++ con oth/un 25°C 0.0 U I 1970KTa (16095) 451  
 $K(\text{Cu}(\text{NH}_3)_6+\text{L})=3.56$   
 $K(\text{Cu}(\text{en})_3+\text{L})=3.60$

In  $\text{Na}_2\text{SO}_4$ ,  $I=0.003$ :  $K(\text{Co}(\text{NH}_3)_6+\text{L})=3.26$ ,  $K(\text{Co}(\text{en})_3+\text{L})=3.42$ ;  $I=0.01$ : 3.03, 2.87;  $I=0.1$ : 2.23, 2.09

-----  
Co+++ con oth/un 25°C var U M 1970MBc (16096) 452  
 $K(\text{Co}(\text{NH}_3)_5(\text{NO}_2)+\text{L})=2.60$   
-----

Co+++ con none 15°C 0.0 U T M 1970NSa (16097) 453  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=3.67$

At 500 atm,  $K=3.59$ ; 1000 atm: 3.51; 1500 atm: 3.45; 2000 atm: 3.35; 3000 atm: 3.32. Also at 25, 40 C

-----  
Co+++ con none 40°C 0.0 U T 1970NSa (16098) 454  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=3.69$

At 500 atm: 3.65; 1000 atm: 3.62(1000), 1500 atm: 3.57; 2000 atm: 3.53; 3000 atm: 3.51; 4000 atm: 3.52; 5000 atm: 3.55

-----  
Co+++ sp NaClO4 25°C 2.0M U 1970SSd (16099) 455  
 $K((\text{NH}_3)_4\text{Co}(\text{OH})(\text{NH}_2)\text{Co}(\text{NH}_3)_4+\text{H}+\text{L})=3.35$ , OH and NH2 are bridging  
-----

Co+++ sp NaClO4 25°C 0.10M U M 19690Gb (16100) 456  
 $K(\text{Co}(\text{en})_3+\text{L})=1.69$   
 $K(\text{Co}(\text{d-pn})_3+\text{L})=1.8$   
 $K(\text{Co}(\text{l-pn})_3+\text{L})=1.6$   
-----

Co+++ kin oth/un 25°C var U 1968Mwa (16101) 457  
 $K(\text{cis-CoCl}_2(\text{en})_2+\text{L})=1.4$   
-----

Co+++ sp NaClO4 25°C 0.07M U 1967TKb (16102) 458  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=2.06$   
-----

Co+++ vlt NaClO4 25°C 1.0M U 1967TYa (16103) 459  
 $K(\text{Co}(\text{en})_3+\text{L})=2.00$

By spec. :  $K=2.01$

-----  
Co+++ con oth/un 25°C 0.0 U T 19660Sc (16104) 460

$K(\text{Co}(\text{NH}_3)_6+\text{L})=3.71$

At 1 atm.  $K=3.74(30\text{ C}), 3.76(40\text{ C})$ . At 600 atm:  $K=3.65(25\text{ C}), 3.66(30\text{ C}), 3.60(40\text{ C})$ . Also K values for 200 & 400 atm

-----  
Co+++ vlt NaCl04 25°C 0.10M U 1966TOa (16105) 461  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=1.84$   
-----

Co+++ sol oth/un 35°C 0.0 U T 1965AEa (16106) 462  
 $K(\text{Co}(\text{NH}_3)_5\text{Cl}+\text{L})=2.52$   
 $K_1=2.46(25\text{ C})$   
-----

Co+++ kin oth/un 35°C 0.0 U 1965LMb (16107) 463  
 $K(\text{Co}(\text{NH}_3)_5\text{Cl}+\text{L})=2.46$   
-----

Co+++ sol oth/un 25°C 0.0 U 1963LMb (16108) 464  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=3.60$   
-----

Co+++ vlt NaCl04 25°C 0.10M U I M 1961VLd (16109) 465  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=2.10$   
 $K(\text{Co}(\text{NH}_3)_5\text{H}_2\text{O}+\text{L})=1.9$   
 $K(\text{Co}(\text{NH}_3)_5\text{N}_3+\text{L})=1.2$   
 $K(\text{Co}(\text{NH}_3)_5\text{NO}_2+\text{L})=1.7$

At  $I=0.02\text{ M}$   $K(\text{Co}(\text{NH}_3)_6+\text{L})=2.71$

-----  
Co+++ oth oth/un 25°C 0.0 U  $K_1=4.95$  1960MTb (16110) 466  
From thermodynamic data  
-----

Co+++ sol oth/un 0°C 0.0 U 1958DWa (16111) 467  
 $K(\text{Co}(\text{NH}_3)_5\text{Cl}+\text{L})=2.55$   
-----

Co+++ sp NaCl04 25°C 0.34M U 1957PTa (16112) 468  
 $K(\text{Co}(\text{NH}_3)_5\text{Cl}+\text{L})=0.68$   
-----

Co+++ kin NaCl04 15°C 2.72M U  $K_1=1.34$  1956AHa (16113) 469  
-----

Co+++ sp oth/un 25°C 0.0 U 1956BDa (16114) 470  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=2.95$   
-----

Co+++ kin NaCl04 25°C 1.0M U HM 1956PTa (16115) 471  
 $K_{\text{out}}(\text{Co}(\text{NH}_3)_5+\text{L})=1.05$   
 $K_{\text{in}}(\text{Co}(\text{NH}_3)_5+\text{L})=-0.05$   
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=3.32$   
-----

Co+++ kin oth/un 31°C dil U HM 1953TPa (16116) 472  
 $K_{\text{out}}(\text{Co}(\text{NH}_3)_5+\text{L})=3.04$   
 $K_{\text{in}}(\text{Co}(\text{NH}_3)_5+\text{L})=0.28$   
-----

Co+++ con oth/un 25°C 0.0 U M 1951JMa (16117) 473  
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=3.56$   
 $K(\text{Co}(\text{en})_3+\text{L})=3.45$

$$K(\text{Co}(\text{pn})_3+\text{L})=2.76$$

-----  
 Co+++ sol oth/un 25°C 0.0 U 1930DAa (16118) 474

$$K(\text{Co}(\text{NH}_3)_6+\text{L})=3.52$$

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S203-- H2L Thiosulfate CAS 73686-28-7 (177)

Thiosulfate;

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 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
 Co+++ kin KCl 25°C 2.20M U T H 1994MMc (16810) 475

$$K_{\text{out}}(\text{CoA}+\text{L})=-0.046$$

CoA=aquacobalamin. Also data at 15C: K=-0.15, 34C: K=-0.046, 45C: K=-0.045.

-----  
 Co+++ vlt NaClO4 25°C 0.1M C 1975PKa (16811) 476

$$K_{\text{out}}(\text{cisCo}(\text{en})_2\text{NH}_3\text{Cl}+\text{L})=0.25$$

Also for I=0.5 M K<sub>1</sub>out=0.09

-----  
 Co+++ vlt NaClO4 25°C 0.1M C 1975PKa (16812) 477

$$K_{\text{out}}(\text{transCo}(\text{en})_2\text{NH}_3\text{Cl}+\text{L})=0.29$$

Also for I=0.5 M K<sub>1</sub>out=0.1

-----  
 Co+++ vlt NaClO4 25°C 0.1M C 1975PKa (16813) 478

$$K_{\text{out}}(\text{Co}(\text{NH}_3)_5\text{Cl}+\text{L})=0.36$$

Also for I=0.5 M K<sub>1</sub>out=0.15

-----  
 Co+++ cal oth/un 25°C 3.0M U HM 1974MKh (16814) 479

Medium:Na2S2O3. Complex:Co(NH3)5NO2. DH(K1)=-1.9 kJ mol<sup>-1</sup>, DH(B2)=-4.77, DH(B3)=-6.28, DH(B4)=-7.94; DS(K1)=5.43, DS(B2)=-0.42, DS(B3)=-0.836, DS(B4)=-6.7

-----  
 Co+++ EMF oth/un 25°C 0.0 U M 1974PKb (16815) 480

$$K(\text{Co}(\text{NH}_3)_6+\text{L})=3.69$$

$$K(\text{Co}(\text{en})_3+\text{L})=3.62$$

$$K(\text{Co}(\text{pn})_3+\text{L})=3.66$$

-----  
 Co+++ EMF NaClO4 25°C 3.0M U M K1=0.53 B2=0.70 1973MKd (16816) 481

$$B3=0.77$$

$$B4=0.98$$

Complex:(Co(NH3)5X),X=F. When X=Cl: K1=0.49, B2=0.64; B3=0.72; B4=0.82.

When X=Br: K1=0.59; B2=0.76; B3=0.87; B4=0.96.

-----  
 Co+++ EMF NaClO4 25°C 3.0M U M K1=0.63 B2=0.83 1973MKd (16817) 482

$$B3=1.07$$

$$B4=1.04$$

Complex:(Co(NH3)5X),X=NO2. When X=HCOO: K1=0.59; B2=0.67; B3=0.72; B4=0.95.

When X=CH3COO: K1=0.52; B2=0.58; B3=0.67; B4=0.91

-----  
 Co+++ EMF NaClO4 25°C 3.0M U H K1=0.72 B2=0.23 1973MRb (16818) 483

$$K3=0.0$$

$$K4=-0.3$$





-----  
Co+++ vlt NaClO4 25°C 0.1M C 1975PKa (17045) 494  
Kout(transCo(en)2NH3Cl+L)=0.23

Also for I=0.5 M K1out=0.01

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1975PKa (17046) 495  
Kout(Co(NH3)5Cl+L)=0.32

Also for I=0.5 M K1out=0.09

-----  
Co+++ cal oth/un 25°C 3.0M U H 1974MKh (17047) 496  
Medium:Na2L. Reaction: Co(NH3)5NO2+nL. DH(K1)=10.3 kJ mol<sup>-1</sup>, DS=42 J K<sup>-1</sup> m<sup>-1</sup>;  
DH(B2)=6.1, DS=29; DH(B3)=10.9, DS=46.0; DH(B4)=14.0, DS=63

-----  
Co+++ EMF none 25°C 0.0 U M 1974PKb (17048) 497  
K(Co(en)3+L)=3.56  
K(Co(en)3+2L)=5.55

K(Co(pn)3+L)=3.55, K(Co(pn)3+2L)=5.45

-----  
Co+++ EMF NaClO4 25°C 3.0M U K1=0.53 B2=0.60 1973MKd (17049) 498  
B3=0.73  
B4=1.07

Reaction: Co(NH3)5F+nL. With Co(NH3)5Cl: K1=0.39, B2=0.68, B3=0.88, B4=0.61;  
Co(NH3)5Br: K1=0.52, B2=0.85, B3=0.59

-----  
Co+++ EMF NaClO4 25°C 3.0M U K1=0.48 1973MKd (17050) 499  
B2=0.48  
B3=0.57  
B4=0.88

Reaction: Co(NH3)5(NO2)+nL. With Co(NH3)5(HCOO): K1=0.40, B2=0.45, B3=0.53,  
B4=0.85; Co(NH3)5(CH3COO): K1=0.51, B2=0.48, B3=0.54, B4=0.92

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1973MKf (17051) 500  
Kout(Co(pren)3+L)= 0.34

Also for I=0.5 M K1out=0.16  
pren=propylenediamine

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1973MKf (17052) 501  
Kout(Co(en)3+L)= 0.34

Also for I=0.5 M K1out=0.15  
en=ethylenediamine

-----  
Co+++ EMF NaClO4 25°C 3.0M U K1=0.56 B2=0.71 1973MRb (17053) 502  
B3=0.56  
B4=0.04

Reaction: Co(en)3+nL. With Co(pn)3: K1=0.28, B2=0.32, B3=0.22, B4=0.12

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1973MSh (17054) 503  
Kout(Co(dipy)3+L)=1.42

-----  
Co+++ sp NaClO4 ? 2.88M U M 19670Ba (17055) 504

K(Co(en)3+L)=0.08

-----  
Co+++ oth NaClO4 20°C 2.0M U M K1=2.11 B2=3.92 1966LMb (17056) 505  
B3=4.46  
B4=5.15

Metal: Co(en)3+++ Method: circular dichroism

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TeO3-- H2L Tellurite CAS 10049-23-7 (1165)  
Tellurate(IV)

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

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Co+++ vlt NaClO4 25°C 0.1M C 1975PKa (17273) 506  
Kout(cisCo(en)2NH3Cl+L)=0.27

Also for I=0.5 M K1out=-0.06

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1975PKa (17274) 507  
Kout(transCo(en)2NH3Cl+L)=0.24

Also for I=0.5 M K1out=-0.11

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1975PKa (17275) 508  
Kout(Co(NH3)5Cl+L)=0.27

Also for I=0.5 M K1out=0.03

-----  
Co+++ cal oth/un 25°C 3.0M U H 1974MKh (17276) 509  
Medium:Na2L. Reaction: Co(NH3)5(NO2)+DH(K1)=8.6 kJ mol-1,DS=37.7 J K-1 mol-1  
DH(B2)=11.5, DS=46; DH(B3)=12.1,DS=50; DH(B4)=3.6,DS=29

-----  
Co+++ EMF NaClO4 25°C 3.0M U M K1=0.29 B2=0.56 1973MKd (17277) 510  
B3=0.80  
B4=0.83

Reaction: Co(NH3)5Br+nL. With Co(NH3)5Cl: K1=0.22, B2=0.36, B3=1.13;  
Co(NH3)5(NO2): K1=0.43, B2=0.45, B3=0.51, B4=0.88

-----  
Co+++ EMF NaClO4 25°C 3.0M U M K1=0.24 B2=0.56 1973MKd (17278) 511  
B3=0.81

Reaction: Co(NH3)5(HCOO)+nL. With Co(NH3)5(CH3COO): K1=0.29, B2=0.48, B3=0.57

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1973MKf (17279) 512  
Kout(Co(en)3+L)= 0.40

Also for I=0.5 M K1out=0.11  
en=ethylenediamine

-----  
Co+++ vlt NaClO4 25°C 0.1M C 1973MKf (17280) 513  
Kout(Co(pren)3+L)= 0.35

Also for I=0.5 M K1out=0.16  
pren=propylenediamine

-----  
Co+++ EMF NaClO4 25°C 3.0M U K1=0.30 B2=0.34 1973MRb (17281) 514  
B3=0.04

Reaction: Co(en)<sub>3</sub>+nL. With Co(pn)<sub>3</sub>: K<sub>1</sub>=0.18, B<sub>2</sub>=0.22, B<sub>3</sub>=0

\*\*\*\*\*

TeO<sub>4</sub>-- H<sub>2</sub>L Tellurate (5750)  
Tellurate(VI); TeO<sub>4</sub>-- or TeO<sub>2</sub>(OH)<sub>4</sub>--

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ EMF oth/un ? dil U 1961LIa (17307) 515  
K(H<sub>8</sub>Co(TeO<sub>6</sub>)<sub>2</sub>+H)=3.0  
K(H<sub>7</sub>Co(TeO<sub>6</sub>)<sub>2</sub>+H)=8  
K(H<sub>6</sub>Co(TeO<sub>6</sub>)<sub>2</sub>+H)=9

\*\*\*\*\*

WO<sub>4</sub>-- H<sub>2</sub>L Tungstate CAS 13783-36-3 (445)  
Tungstate;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ EMF NaClO<sub>4</sub> 25°C 0.10M U 1977MPd (17432) 516  
K<sub>1out</sub>[Co(NH<sub>3</sub>)<sub>6</sub>+L]=0.23  
B<sub>2out</sub>[Co(NH<sub>3</sub>)<sub>6</sub>+2L]=0.51

for I=0.5 M K<sub>1out</sub>=-0.09; B<sub>2out</sub>=0

Co+++ EMF NaClO<sub>4</sub> 25°C 0.10M U 1977MPd (17433) 517  
K<sub>1out</sub>[Co(en)<sub>3</sub>+L]=0.14  
B<sub>2out</sub>[Co(en)<sub>3</sub>+2L]=0.39

for I=0.5 M K<sub>1out</sub>=-0.49; B<sub>2out</sub>=-0.22

Co+++ EMF NaClO<sub>4</sub> 25°C 0.10M U 1977MPd (17434) 518  
K<sub>1out</sub>[Co(en)<sub>3</sub>+L]=0.14  
B<sub>2out</sub>[Co(en)<sub>3</sub>+2L]=0.39

for I=0.5 M K<sub>1out</sub>=-0.48; B<sub>2out</sub>=-0.22

Co+++ EMF NaClO<sub>4</sub> 25°C 0.10M U 1977MPd (17435) 519  
K<sub>1out</sub>[Co(NH<sub>3</sub>)<sub>5</sub>Cl+L]=0.19  
B<sub>2out</sub>[Co(NH<sub>3</sub>)<sub>5</sub>Cl+2L]=0.54

for I=0.5 M K<sub>1out</sub>=0.04; B<sub>2out</sub>=0.29

Co+++ vlt NaCl 25°C 0.10M U I 1973LHa (17436) 520  
K(Cr(NH<sub>3</sub>)<sub>6</sub>+WO<sub>4</sub>)=1.33

I=0 (corr), K=2.59

\*\*\*\*\*

CH<sub>2</sub>O<sub>2</sub> HL Formic acid CAS 64-18-6 (37)  
Methanoic acid; H.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sol oth/un 25°C 0.1M U 1986KPb (17599) 521  
K<sub>out</sub>(Co(bpy)<sub>3</sub>+L)=1.63  
K<sub>out</sub>(Co(bpy)<sub>3</sub>+2L)=2.58

Medium: 0.1 M NaF.

-----  
 Co+++ EMF NaClO4 25°C 3.00M U M 1971KMf (17600) 522  
 K(Co(NH3)5F+L)=-0.19  
 K(Co(NH3)5Cl+L)=-0.58  
 K(Co(NH3)5FL+L)=-0.51  
 K(Co(NH3)5ClL+L)=-0.74  
 K(Co(NH3)5(NO2)+L)=-0.14, K(Co(NH3)5(NO2)L+L)=-0.70; K(Co(NH3)5L+L)=-0.21,  
 K(Co(NH3)5L2+L)=-0.54, K(Co(NH3)5A+L)=-0.19. HA=ethanoic acid  
 -----

Co+++ sol NaClO4 25°C 3.00M U M 1971KMf (17601) 523  
 K(Co(NH3)5Cl+L)=-0.68  
 K(Co(NH3)5Br+L)=-0.50  
 K(Co(NH3)5L+L)=-0.58  
 K(Co(en)3+L)=-0.40  
 K(Co(NH3)5A+L)=-0.38, HA=ethanoic acid. Additional data also  
 -----

Co+++ EMF NaClO4 25°C 3.00M U M 1971KMf (17602) 524  
 K(Co(en)3+L)=-0.19  
 K(Co(en)3L+L)=-0.82  
 -----

\*\*\*\*\*  
 CH403S HL CAS 75-75-2 (595)  
 Methanesulfonic acid; CH3.S03H  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co+++ con NaCl 25°C 0.01M C 1990IIa (17937) 525  
 Kout(Co(NH3)6+L)=1.30  
 Kout(Co(bpy)3+L)=1.00  
 -----

\*\*\*\*\*  
 CH5N L Methylamine CAS 74-89-5 (155)  
 Methylamine; CH3.NH2  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co+++ sp KCl 25°C 1.0M C M 2004BSa (18009) 526  
 K(RCo(HA)2OH+L)=3.072  
 R is CH3. H2A is dimethylglyoxime.  
 -----

Co+++ sp oth/un 25°C 0.10M U 1994HPa (18010) 527  
 K(CoA(H2O)+L=CoAL+H2O)=3.4  
 CoA(H2O): Co(III)aquacyanocobinamide. Medium:phosphate buffer. Also data for  
 substituted methylamines and ethylamines, hydrazine and hydroxylamine.  
 -----

Co+++ sol oth/un 25°C 3.0M C T 1984ISc (18011) 528  
 Kout(Co(bipy)3+L)=-0.31  
 Medium: LiClO4;  
 -----

Co+++ vlt NaClO4 25°C 3.0M C 1976KMc (18012) 529  
 Kout(Co(en)3+L)=-0.89  
 -----

\*\*\*\*\*

C2H02Cl3 HL Trichloroacetic CAS 76-03-9 (1205)  
Trichloroethanoic acid; Cl3C.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ vlt NaCl04 25°C 3.0M C 1984PBf (18328) 530  
Kout(Cr(DMSO)6+L)=0.64  
Kout(Cr(DMSO)6+2L)=1.30

Medium: NaF

DMSO= dimethylsulfoxide, (CH3)2SO

\*\*\*\*\*

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  
-----  
Co+++ sp KCl 25°C 0.35M U 1996ADb (18836) 531  
Kout(Co(pic)+L)=0.72  
pic: 2-aminomethylpyridine. For 0.35 M LiCl, Kout=0.91.

-----  
Co+++ con none 25°C 0.0 U 1984TWa (18837) 532  
Kout(Co(en)3+L)=3.4

-----  
Co+++ con diox/w 25°C 0 U 1982MSg (18838) 533  
Kout(Co(NH3)6+L)=3.60  
Also for 10%mass dioxane K1out=3.75; for 20% K1out=3.85; for 30% K1out=4.00  
for 40% K1out=4.08; for 50% K1out=4.21

-----  
Co+++ con diox/w 25°C 0 U 1982MSg (18839) 534  
Kout(Co(NH3)5Cl+L)=2.85  
Also for 10%mass dioxane K1out=2.96; for 20% K1out=3.10; for 30% K1out=3.19  
for 40% K1out=3.32; for 50% K1out=3.49

-----  
Co+++ con diox/w 25°C 0 U 1982MSg (18840) 535  
Kout(Co(NH3)5(SO4)+L)=2.45  
Also for 10%mass dioxane K1out=2.64; for 20% K1out=2.74; for 30% K1out=2.82  
for 40% K1out=2.95;

-----  
Co+++ kin KNO3 50°C 1.0M U T M 1975EHa (18841) 536  
Kout(CoA+HL)=0.26  
Kout(CoA+L)=0.96  
CoA=Co(NH3)5(H2O). Temperature range 50-80 C

-----  
Co+++ con none 25°C 0.00 U M 1968KTa (18842) 537  
K(Co(NH3)6+L)=3.25

-----  
Co+++ vlt none 25°C 0.00 U I M 1968TKb (18843) 538  
K(CoL3+Al)=3.70  
K(CoL3+Ba)=2.95  
K(CoL3+Ca)=2.92

$$K(\text{CoL}_3+\text{Mg})=2.89$$

Data for other ternary complexes also available. Also in 0.1 NH<sub>4</sub>NO<sub>3</sub>.

-----  
 Co+++ sp NaClO<sub>4</sub> 25°C var U M 1961MTa (18844) 539  
 Medium: I KClO<sub>4</sub>.  $K(\text{Co}(\text{NH}_3)_4+\text{L})=62.24\text{I}-25.98(\text{SQRT}(\text{I}+9.69))$ . R.Tsuchita, Bull.  
 Chem.Soc.Japan, 1962,35,666:  $K(\text{Co}(\text{NH}_3)_5+\text{HL})=3.790\text{I}-3.954(\text{SQRT}(\text{I}+3.428))$   
 \*\*\*\*\*

C<sub>2</sub>H<sub>3</sub>N<sub>3</sub> HL 1,2,4-Triazole CAS 288-88-0 (381)  
 1,2,4-Triazole; cyclo(-NH.N:CH.N:CH-) C<sub>2</sub>H<sub>3</sub>N<sub>3</sub>

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co+++	sp	NaClO <sub>4</sub>	18°C	0.10M	C				2003HAa (19232)	540
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Medium: 0.1 M NaClO<sub>4</sub>, pH 6.0 (bis-tris buffer).  $K(\text{Co}(\text{en})_2(\text{CH}_3)_2\text{H}_2\text{O}+\text{L})=$   
 $\text{Co}(\text{en})_2(\text{CH}_3)_2\text{L})=1.14$ . For L=N-acetylimidazole, K=0.23.

-----  

Co+++	sp	oth/un	25°C	0.10M	U				1994HPa (19233)	541
-------	----	--------	------	-------	---	--	--	--	-----------------	-----

 $K(\text{CoA}(\text{H}_2\text{O})+\text{HL}=\text{CoAHL}+\text{H}_2\text{O})=2.35$   
 $K(\text{CoA}(\text{H}_2\text{O})+\text{L}=\text{CoAL})=5.7$

CoA(H<sub>2</sub>O): Co(III)aquacyanocobinamide. Medium: acetate (pH 4.5) or phosphate (pH 8.5) buffer.

-----  

C <sub>2</sub> H <sub>4</sub> N <sub>2</sub> S <sub>2</sub>	L	Rubeanic acid	CAS 79-40-3	(2782)
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 Dithiooxamide; H<sub>2</sub>N.CS.CS.NH<sub>2</sub>

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

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Co+++	sp	none	25°C	0.0	U			K <sub>1</sub> =9.66	1976AMc (19452)	542
-------	----	------	------	-----	---	--	--	----------------------	-----------------	-----

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C <sub>2</sub> H <sub>4</sub> N <sub>4</sub>	L		CAS 16682-77-9	(3539)
--	---	--	----------------	--------

 1-Methyltetrazole; CHN<sub>4</sub>-CH<sub>3</sub>

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

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Co+++	sp	NaClO <sub>4</sub>	25°C	1.00M	U T M				1983PUa (19460)	543
-------	----	--------------------	------	-------	-------	--	--	--	-----------------	-----

 $K(\text{Co}(\text{NH}_3)_5\text{L}+\text{H})=1.52$ 

-----  

C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>	HL	Acetic acid	CAS 64-19-7	(36)
--	----	-------------	-------------	------

 Ethanoic acid; CH<sub>3</sub>.COOH

-----  

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
-------	-----	--------	------	------	-----	-------	----	----------	-----------	--------

 -----

Co+++	sp	NaClO <sub>4</sub>	25°C	0.20M	U				1983BBe (19925)	544
-------	----	--------------------	------	-------	---	--	--	--	-----------------	-----

 $K(\text{CoA}+\text{L})=1.12$ 

CoA is diaquacobinamide.

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Co+++	EMF	NaClO <sub>4</sub>	25°C	3.00M	U	M			1971KMf (19926)	545
-------	-----	--------------------	------	-------	---	---	--	--	-----------------	-----

$$K(\text{Co}(\text{NH}_3)_5\text{F}+\text{L})=-0.20$$

$$K(\text{Co}(\text{NH}_3)_5\text{Cl}+\text{L})=-0.66$$

$$K(\text{Co}(\text{NH}_3)_5\text{F}+2\text{L})=-0.55$$





K(RCo(HA)2OH+L)=2.441

R is CH3. H2A is dimethylglyoxime.

\*\*\*\*\*

C2H7N L Ethylamine CAS 75-04-7 (156)

Ethylamine; CH3.CH2.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp KCl 25°C 1.0M C M 2004BSa (22267) 552

K(RCo(HA)2OH+L)=3.097

R is CH3. H2A is dimethylglyoxime.

-----  
Co+++ sol oth/un 25°C 3.0M C T 1984ISc (22268) 553

Kout(Co(bipy)3+L)=-0.20

Medium: LiClO4;

-----  
Co+++ vlt NaClO4 25°C 3.0M C 1976KMc (22269) 554

Kout(Co(en)3+L)=-0.75

By method solubility the same Kout=-0.85

\*\*\*\*\*

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  
-----

Co+++ vlt NaClO4 25°C 3.0M C 1976KMc (22399) 555

Kout(Co(en)3+L)=-1.10

-----  
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  
-----

Co+++ EMF oth/un 33°C 0.25M U K1=28.07 B2=42.68 1950DGa (22523) 556

K3=11.64

\*\*\*\*\*

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  
-----

Co+++ vlt NaClO4 25°C 3.0M C 1976KMc (23130) 557

Kout(Co(en)3+L)=0.38

-----  
Co+++ sp non-aq -75°C 100% U 1976MLa (23131) 558

K(CoL3+NH3=CoL3(NH3))=-0.6

K(CoL3(NH3)=CoH-1L3+NH4)=-6.3

Medium: liquid ammonia

-----  
Co+++ sp NaClO4 25°C 1.00M U M 1970LMa (23132) 559

K(CoL3+S2O3=CoL2S2O3+L)=0.88

-----  
Co+++ gl none 25°C 0.00 U M 1969BEc (23133) 560  
K(CoLA+H2O=CoLAOH+H)=-5.14

A=diethylenetriamine

-----  
Co+++ gl NaNO3 25°C 1.0M U 1952BRa (23134) 561

K3=13.99  
K(cis-CoL2(H2O)2+L)=13.28  
K(trans-CoCl2(H2O)2+L)=15.24

-----  
Co+++ EMF KCl 30°C 1.0M U 1941BJa (23135) 562

B3=48.69

\*\*\*\*\*  
C3H2N2 L Malononitrile CAS 109-77-3 (797)  
Malononitrile; NC.CH2.CN

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ sp none 25°C 0.0 U 1985BCa (23481) 563

K(CoA+H-1L=CoAH-1L)=7.4  
K(CoB+H-1L=CoBH-1L)=11.5

CoA = aquocobalamin. CoB = diaquocobinamide.

\*\*\*\*\*  
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

-----  
Co+++ sp NaClO4 18°C 0.10M C 2003HAa (23570) 564

Medium: 0.1 M NaClO4, pH 6.0 (bis-tris buffer).

K(Co(en)2(CH3)H2O+L=Co(en)2(CH3)L)=-0.155.

\*\*\*\*\*  
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

-----  
Co+++ sp KCl 25°C 1.0M C 2004RBA (23861) 565

K(RCo(AH)2OH+L)=4.92

R- is trifluoroethyl-. H2A is dimethylglyoxime.

-----  
Co+++ sp KCl 25°C 1.0M C I M 2001SSE (23862) 566

K(CoA(BH)2OH+L)=4.65

Medium buffered to pH 9.0. Data for pH 4.0-10. A is BrCH2-; H2B is dimethylglyoxime.

-----  
Co+++ sp NaNO3 25°C 0.50M U T H 1998HBb (23863) 567

K(CoA+L)=2.85  
K(CoB+L)=2.48

CoA: beta-trifluoromethylcobinamide, CoB: beta-cyanomethylcobinamide.  
 Data at 5, 15, 35 and 45 C. DH(CoA+L)=-13.7 kJ mol<sup>-1</sup>, DS=8.3 J K<sup>-1</sup> mol<sup>-1</sup>

-----  
 Co+++ sp oth/un 25°C 0.10M U 1994HPa (23864) 568  
 K(CoA(H2O)+L=CoAL+H2O)=4.15  
 K(CoA(H2O)+H-1L=CoAH-1L)=7.25

CoA(H2O): Co(III)aquacyanocobinamide. Medium: acetate (pH 4.5) or phosphate (pH 8.5) buffer. Also data for L=N-MeIm (K=4.30) and 5-Cl-N-MeIm (K=3.65).

-----  
 Co+++ sp alc/w 25°C 100% U M 1994NSa (23865) 569  
 K(CoA2B+L=CoA2L+B)=-1.62  
 K(CoA2C+L=CoA2L+C)=-2.32

Medium: MeOH. A=Benzoquinonediimine, B=Triphenylstibine, C=Triphenylarsine

-----  
 Co+++ kin KCl 25°C 1.00M U T HM 1992MBa (23866) 570  
 K(CoA+L)=-0.19

CoA=aquacobalamin. DH=-14 kJ mol<sup>-1</sup>, DS=-51 J K<sup>-1</sup> mol<sup>-1</sup>. Also K at 6C: -0.03  
 16C: -0.20, 45C: -0.38.

-----  
 Co+++ sp NaCl04 25°C 0.20M U 1983BBE (23867) 571  
 K(CoA(H2O)+L)=3.43

CoA(H2O)=ethynylaquocobinamide

-----  
 Co+++ gl NaCl04 25°C 0.10M M 1982HBc (23868) 572  
 K(Co(NH3)5L+H)=10.02

-----  
 Co+++ gl NaCl04 37°C 0.15M C K1=2.303 B2= 4.04 1979KBF (23869) 573  
 B3=5.305  
 B4=6.091

-----  
 Co+++ cal oth/un 25°C 0.10M U 1976DSa (23870) 574  
 K(Co2(O2CCH3)4+L)=4.02  
 K(Co2(O2CCH3)4L+L)=2.48

-----  
 Co+++ sp KNO3 25°C 0.10M C HM 1976EWa (23871) 575  
 K(CoB+L)=4.61

CoB=vitamin B12. By calorimetry: DH=-29.34 kJ mol<sup>-1</sup>, DS=-10.22

\*\*\*\*\*  
 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

-----  
 Co+++ gl oth/un 25°C 0.0 U T M 1965AEa (24418) 576  
 K(CoCl(NH3)5+L)=2.27

Medium:0 corr. K=2.31(35C). By solubility: K=2.32(25 C), 2.30(35 C)

\*\*\*\*\*  
 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
Co+++	sp	NaClO4	-5°C	1.20M	U				1976BCb (26152)	577

K(Co(H2O)6+3HL=CoL3+3H)=8.15

Measured at pH 2.4

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C3H7NO2	L	Methylglycinate	CAS 616-34-3	(1738)
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Glycine methyl ester; NH2.CH2.COOCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	kin	KCl	24°C	1.00M	U T HM				1992MBa (26555)	578

K(CoA+L)=0.23

CoA=aquacobalamin. DH=10 kJ mol<sup>-1</sup>, DS=40 J K<sup>-1</sup> mol<sup>-1</sup>. Also K at 20C: 0.30  
35C: 0.26, 50C: 0.46

\*\*\*\*\*

C3H7NO2S	H2L	Cysteine	CAS 52-90-4	(96)
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2-Amino-3-mercaptopropanoic acid; H2N.CH(CH2.SH)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	sp	oth/un	25°C	0.05M	U M				1982DPa (26760)	579

Keff(Co(HA)2+L)=4.81  
Keff(Co(HA)2L+L) < 3.3

Medium: 0.05 M phosphate buffer, pH 7.0 H2A=dimethylglyoxime

Co+++	sp	oth/un	25°C	0.05M	U M				1982DPa (26761)	580
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Keff(Co(HA)2(NO)+L)=1.91

Medium: 0.05 M phosphate buffer, pH 7.0 H2A=dimethylglyoxime

Co+++	gl	oth/un	20°C	0.01M	U			K1=16.2 B2=32.9	1952ALa (26762)	581
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C3H9N	L	n-Propylamine	CAS 107-10-8	(2356)
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1-Aminopropane; H2N.CH2.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	sp	KCl	25°C	1.0M	C M				2004BSa (27829)	582

K(RCo(HA)2OH+L)=3.408

R is CH3. H2A is dimethylglyoxime.

Co+++	vlt	NaClO4	25°C	3.0M	C				1976KMc (27830)	583
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Kout(Co(en)3+L)=-0.57

\*\*\*\*\*

C3H9O3P	L		CAS 121-45-9	(1786)
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Trimethylphosphite; (CH3O)3.P

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	sp	non-aq	30°C	100%	C T				2001ASb (28000)	584

K(CoA(Bu3P)+L)=2.45  
K'(CoA(Me2PhP)+L)=3.03

Medium: acetonitrile. Data for 20-40 C. H2A is Salen. DH(K)=-14.8 kJ mol-1  
DS=-1.9 J K-1 mol-1. DH(K')=-28.8, DS=-37.3. Data for Salen derivatives.

\*\*\*\*\*

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  
-----

Co+++ sp oth/un 20°C ? U 1959DGb (28164) 585  
K(d-CoL3=l-CoL3)=0.76

\*\*\*\*\*

C3H10N2 L Propanediamine CAS 109-76-2 (123)  
1,3-Diaminopropane; H2N.CH2.CH2.CH2.NH2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ gl NaCl04 25°C 0.5M C 2001MDb (28298) 586  
\*K(cis-CoL2(H2O)2)=-4.99  
\*K(cis-CoL2(OH)H2O)=-7.68

K(cis-CoL2(OH)H2O+H3BO3=CoL2(H2BO4)+2H)=-5.88, K(cis-CoL2(OH)H2O+  
H3BO3=CoL2(BO4)+3H)=-2.73.

-----  
Co+++ gl NaCl04 25°C 1.00M C 1997DJa (28299) 587  
\*K(cis-CoL2(H2O)2)=-4.53  
\*K(cis-CoL2(OH)(H2O))=-9.2  
\*K(trans-CoL2(H2O)SO3)=-9.67

-----  
Co+++ vlt NaCl04 25°C 3.0M C 1976KMc (28300) 588  
Kout(Co(en)3+L)=-1.30

\*\*\*\*\*

C3H11N06P2 H4L (6735)  
N-Methylimino-N,N-bis(methylenephosphonic acid); CH3.N(CH2PO3H2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr KNO3 0°C 0.10M C 1996SIa (28447) 589  
K(CoA(OH)L+H=CoA(OH)HL)=12.7  
K(CoA(OH)HL+H=CoA(HL))=8.0  
K(CoA(HL)+H=Co(H2L))=4.3  
K(CoA(H2L)+H=CoA(H3L))=2.2

CoA: Co(en)2++. K(CoAL+H=CoA(HL))=10.7, K(CoA(HL)+H=CoA(H2L))=2.6.

Also data for protonation reactions of CoA(NH3)L++

\*\*\*\*\*

C3H12N09P3 H6L NTPA CAS 6419-19-8 (2920)  
Nitrilotris(methylenephosphonic acid); N(CH2PO3H2)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr KNO3 0°C 0.10M C 1996SIa (28554) 590  
 $K(\text{CoA}(\text{OH})\text{L}+\text{H}=\text{CoA}(\text{OH})\text{HL})=13.1$   
 $K(\text{CoA}(\text{OH})\text{HL}+\text{H}=\text{CoA}(\text{HL}))=7.5$   
 $K(\text{CoA}(\text{L})+\text{H}=\text{Co}(\text{HL}))=11.7$

CoA: Co(en)<sub>2</sub>++. Also data for protonation reactions of CoA(NH<sub>3</sub>)L++  
 \*\*\*\*\*

C4H4N2 L Pyrazine CAS 290-37-9 (620)  
 1,4-Diazine, Pyrazine;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co+++ sp oth/un 25°C 0.10M U 1994HPa (28791) 591  
 $K(\text{CoA}(\text{H}_2\text{O})+\text{L}=\text{CoAL}+\text{H}_2\text{O})=0.6$

CoA(H<sub>2</sub>O): Co(III)aquacyanocobinamide. Medium:phosphate buffer. Also data for  
 L=pyrimidine (K=0.7) and pyridazine (K=2.6)  
 \*\*\*\*\*

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  
 -----

Co+++ kin oth/un 25°C var U I 1978KNa (28963) 592  
 $K_{\text{eff}}(\text{CoB}+\text{L}=\text{CoBL})=5.19$  (pH 7.0)  
 CoB=aquocobalamin

\*\*\*\*\*  
 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  
 -----

Co+++ con none 25°C 0.0 U 1984TWa (29055) 593  
 $K_{\text{out}}(\text{Co}(\text{en})_3+\text{L})=3.60$

-----  
 Co+++ ix KCl 25°C 0.10M U I M 1982HIa (29056) 594  
 $K_{\text{out}}(\text{Co}(\text{en})_3+\text{L})=1.82$

I=0.125,K=1.69; I=0.150,K=1.58; I=0.175,K=1.49; I=0.200,K=1.41;  
 I=0.225,K=1.34; I=0.250,K=1.28

-----  
 Co+++ ix KCl 25°C 0.10M U I M 1982HIa (29057) 595  
 $K_{\text{out}}(\text{Co}(\text{NH}_3)_6+\text{L})=3.77$

I=0.125,K=1.85; I=0.150,K=1.73; I=0.175,K=1.62; I=0.200,K=1.53;  
 I=0.225,K=1.45; I=0.250,K=1.37

-----  
 Co+++ con oth/un 25°C 0.10M U I M 1971KTb (29058) 596  
 $K(\text{Co}(\text{en})_3+\text{L})=2.43$

$K(\text{I}=0.0)=3.60$ ;  $K(\text{I}=0.001)=3.31$ ;  $K(\text{I}=0.01)=3.32$

-----  
 Co+++ gl oth/un 25°C 0.0 U T M 1965AEa (29059) 597  
 $K(\text{CoCl}(\text{NH}_3)_5+\text{L})=2.52$

Medium: 0 corr. At 35 C: K=2.52. By solubility: K=2.47(25 C), 2.51(35 C)

\*\*\*\*\*

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  
-----  
Co+++ con none 25°C 0.0 U 1984TWa (29182) 598  
Kout(Co(en)3+L)=2.95  
-----

Co+++ ix KCl 25°C 0.10M U I M 1982HIa (29183) 599  
Kout(Co(en)3+L)=0.57  
I=0.125,K=0.53; I=0.150,K=0.49; I=0.175,K=0.45; I=0.200,K=0.42;  
I=0.225,K=0.39; I=0.250,K=0.35  
-----

Co+++ ix KCl 25°C 0.10M U I M 1982HIa (29184) 600  
Kout(Co(NH3)6+L)=0.88  
I=0.125,K=0.78; I=0.150,K=0.70; I=0.175,K=0.64; I=0.200,K=0.58;  
I=0.225,K=0.53; I=0.250,K=0.48  
-----

Co+++ con oth/un 25°C 0.10M U I 1971KTb (29185) 601  
K(Co(en)3+L)=2.21  
K(I=0.0)=2.95; K(I=0.001)=2.85; K(I=0.01)=2.61  
-----

\*\*\*\*\*  
C4H4O4Br2 H2L CAS 608-36-3 (2228)  
DL-Dibromosuccinic acid; HOOC.CH(Br).CH(Br).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ oth NaClO4 25°C 0.10M U M 1979TAa (29231) 602  
Kout(Delta-Co(en)3+L)=1.21  
-----

Method: circular dichroism

\*\*\*\*\*

C4H4O4Br2 H2L CAS 51624-82-5 (2229)  
L-Dibromosuccinic acid; HOOC.CH(Br).CH(Br).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ oth NaClO4 25°C 0.10M U M 1979TAa (29232) 603  
Kout(Delta-Co(en)3+L)=1.20  
Kout(Lambda-Co(en)3+L)=1.22  
-----

Method: circular dichroism

\*\*\*\*\*

C4H4O4Br2 H2L CAS 526-78-3 (2230)  
meso-Dibromosuccinic acid; HOOC.CH(Br).CH(Br).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ oth NaClO4 25°C 0.10M U M 1979TAa (29233) 604  
Kout(Delta-Co(en)3+L)=0.52  
-----

Method: circular dichroism

\*\*\*\*\*  
 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  
 -----  
 Co+++ nmr non-aq 33°C 100% U M 1977SEa (29345) 605  
 K(CoA+L)=1.4  
 Medium: DMSO-d6. A=Bis(acetylacetonato)(nitro)-.

\*\*\*\*\*  
 C4H5N3O HL Cytosine CAS 71-30-7 (1096)  
 2-Oxy-6-aminopyrimidine;

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co+++ nmr non-aq 33°C 100% U M 1977SEa (29410) 606  
 K(CoA+L)=0.8  
 Medium: DMSO-d6. A=Bis(acetylacetonato)(nitro)-.

\*\*\*\*\*  
 C4H5O4Br H2L CAS 923-06-8 (2231)  
 Bromosuccinic acid; HOOC.CH(Br).CH2.COOH

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co+++ oth NaCl04 25°C 0.10M U M 1979TAa (29431) 607  
 Kout(Delta-Co(en)3+L)=1.10  
 Kout(Lambda-Co(en)3+L)=1.11

Method: circular dichroism

\*\*\*\*\*  
 C4H5O4Cl H2L CAS 16045-92-4 (2232)  
 Chlorosuccinic acid; HOOC.CH(Cl).CH2.COOH

-----  
 Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----  
 Co+++ oth NaCl04 25°C 0.10M U M 1979TAa (29435) 608  
 Kout(Delta-Co(en)3+L)=1.00  
 Kout(Lambda-Co(en)3+L)=0.978

Method: circular dichroism

\*\*\*\*\*  
 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  
 -----  
 Co+++ sp KCl 25°C 1.0M C 2004RBA (29475) 609  
 K(RCo(AH)2OH+L)=2.99

R- is trifluoroethyl-. H2A is dimethylglyoxime.  
 For L=2-ethylimidazole, K=2.25. For L=1,2-dimethylimidazole, K=2.84.

-----  
 Co+++ sp KCl 25°C 1.0M C I M 2001SSE (29476) 610



$$K(\text{CoA}(\text{BH})2\text{OH}+\text{L})=2.43$$

Medium buffered to pH 9.0. Data for pH 4.0-10. A is BrCH<sub>2</sub>-; H<sub>2</sub>B is dimethylglyoxime.

-----  
Co+++ sp non-aq 25°C 100% U I M 1994NSa (29477) 611

$$K(\text{CoA}2\text{B}+\text{L}=\text{CoA}2\text{L}+\text{B})=1.20$$

$$K(\text{CoA}2\text{C}+\text{L}=\text{CoA}2\text{L}+\text{C})=0.58$$

Medium: CH<sub>2</sub>Cl<sub>2</sub>. A=Benzoquinonediimine, B=Triphenylstibine, C=Triphenylarsine  
In CH<sub>3</sub>OH: K(CoA<sub>2</sub>B+L=CoA<sub>2</sub>L+B)=-0.5, K(CoA<sub>2</sub>C+L=CoA<sub>2</sub>L+C)=-1.2

\*\*\*\*\*

C<sub>4</sub>H<sub>6</sub>N<sub>2</sub> L N-Me-Imidazole CAS 616-47-7 (354)

N-Methyl-1,3-diazole; C<sub>3</sub>H<sub>3</sub>N<sub>2</sub>.CH<sub>3</sub>

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ sp KCl 25°C 1.0M C 2004RBA (29577) 612

$$K(\text{RCo}(\text{AH})2\text{OH}+\text{L})=5.11$$

R- is trifluoroethyl-. H<sub>2</sub>A is dimethylglyoxime.

-----  
Co+++ sp oth/un 25°C 0.05M C TIHM 2002DMA (29578) 613

$$K(\text{MeCoP}+\text{L})=0.69$$

Medium: 0.05 M phosphate buffer, pH 7.2. MeCoP is methylcobinamide. DH=-13  
kJ mol<sup>-1</sup>, DS=-31 J K<sup>-1</sup> mol<sup>-1</sup>. In ethyleneglycol, K=0.84, DH=-27.5, DS=-76.2

-----  
Co+++ sp NaClO<sub>4</sub> 25°C 1.5M C 2001CBA (29579) 614

$$K(\text{CoA}(\text{H}2\text{O})+\text{L})=5.17$$

$$K(\text{CoAL}+\text{L})=0.98$$

$$*K(\text{CoA}(\text{H}2\text{O}))=-8.13$$

K(CoAL+L) by <sup>1</sup>H nmr.

-----  
Co+++ sp KCl 25°C 1.0M C I M 2001SSE (29580) 615

$$K(\text{CoA}(\text{BH})2\text{OH}+\text{L})=4.840$$

Medium buffered to pH 9.0. Data for pH 4.0-10. A is BrCH<sub>2</sub>-; H<sub>2</sub>B is dimethylglyoxime.

-----  
Co+++ sp non-aq 25°C 100% U M 1988UMA (29581) 616

$$K(\text{CoA}+\text{L}=\text{CoAL})=4.46$$

Medium: toluene. A=5a,15a-Bis(2-(2,2-dimethylpropanamido)phenyl)-10a,20a-(nonadiamidodi-o-phenylene)porphyrin. Data also for other similar porphyrins

-----  
Co+++ sp KNO<sub>3</sub> 25°C 0.10M C HM 1976EWA (29582) 617

$$K(\text{CoA}+\text{L})=4.40$$

CoA=Vitamin B<sub>12</sub>. By calorimetry: DH=-23.08 kJ mol<sup>-1</sup>, DS=6.85

\*\*\*\*\*

C<sub>4</sub>H<sub>6</sub>O<sub>4</sub> H<sub>2</sub>L Succinic acid CAS 110-15-6 (112)

1,4-Butanedioic acid; HOOC.CH<sub>2</sub>.CH<sub>2</sub>.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ oth NaClO<sub>4</sub> 25°C 0.10M U M 1979TAa (29956) 618

Kout(Delta-Co(en)3+L)=1.14

Method: circular dichroism

-----  
Co+++ gl oth/un 25°C 0.0 U T M 1965AEa (29957) 619

K(CoCl(NH3)5+L)=2.00

Medium: 0 corr. At 23 C: K=2.05. By solubility: K1=1.94(25 C), 1.92(35 C)

\*\*\*\*\*

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

-----  
Co+++ sp oth/un 30°C ? U B2=7.7? 1965NKc (30325) 620

Medium: ammonia buffer

\*\*\*\*\*

C4H6O5 H2L Malic acid CAS 617-48-1 (393)

2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; HOOC.CH2.CH(OH).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
Co+++ gl oth/un 25°C 0.0 U T M 1965AEa (30608) 621

K(CoCl(NH3)5+L)=2.01

Medium: 0 corr. By solubility: K=1.99(25 C),1.98(35 C)

\*\*\*\*\*

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

-----  
Co+++ oth NaCl04 25°C 0.10M U M 1979TAa (30973) 622

Kout(Lambda-Co(en)3+L)=1.11

Kout(Delta-Co(en)3+L)=1.02

Method: circular dichroism

\*\*\*\*\*

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

-----  
Co+++ oth NaCl04 25°C 0.10M U M 1979TAa (31016) 623

Kout(Delta-Co(en)3+L)=1.10

Method: circular dichroism

\*\*\*\*\*

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

-----  
Co+++ oth NaCl04 25°C 0.10M U M 1978TTa (31221) 624

Kout(Lambda-CoGly(en)2+L)=4.3

Kout(Delta-CoGly(en)2+L)=3.9  
Kout(Lambda-CoPhe(en)2+L)=4.3  
Kout(Delta-CoPhe(en)2+L)=1.2

-----  
Co+++ sp NaClO4 25°C 0.10M U M 19690Gb (31222) 625

K(d-CoA3+L)=1.41  
K(l-CoA3+L)=1.32  
K(d-CoB3+L)=1.47  
K(l-CoB3+L)=0.85

A=ethane-1,2-diamine; B=propane-1,2-diamine  
-----

Co+++ gl oth/un 25°C 0.0 U T M 1965AEa (31223) 626

K(CoCl(NH3)5+L)=2.00

Medium: 0 corr. K=1.98(35 C). By solubility: K=2.12(25 C), 2.09(35 C)

\*\*\*\*\*

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  
-----

Co+++ oth NaClO4 25°C 0.10M U M 1979TAa (31427) 627

Kout(Delta-Co(en)3+L)=1.61  
Kout(Lambda-Co(en)3+L)=1.60

Method: circular dichroism

\*\*\*\*\*

C4H7NO4 H2L Aspartic acid CAS 56-84-8 (21)

Aminobutanedioic acid; H2N.CH(CH2.COOH).COOH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ oth NaClO4 25°C 0.10M U M 1979TAa (31837) 628

Kout(Delta-Co(en)3+L)=1.08  
Kout(Lambda-Co(en)3+L)=1.04

Method: circular dichroism

\*\*\*\*\*

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  
-----

Co+++ sp NaClO4 -5°C 1.20M U 1976BCb (32212) 629

B2eff=6.53 (pH 2.0)

Co+++ EMF KNO3 25°C 0.10M U K1=29.6 1969BHb (32213) 630

\*\*\*\*\*

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  
-----

Co+++ gl mixed 27°C 1% U 1992DVa (32531) 631

\*K(Co(HL)2(py)Cl)=-2.29  
\*K(Co(HL)2(py)Br)=-2.66  
\*K(Co(HL)2(py)I)=-2.80  
\*K(Co(HL)2ACl)=-2.24

Medium 1% DMSO/H2O, 0.25M LiClO4. \*K(Co(HL)2ABr)=-2.62, \*K(Co(HL)2AI)=-2.80;  
A=nicotinamide. For Co(HL)2BX, \*K= -2.17(X=Cl), -2.60(Br), -2.80(I), B=isoA

-----  
Co+++ ISE none 20°C 0.00 U M 1971BZa (32532) 632

K(CoL2+I)=3.74  
K(CoL2+2I)=5.48

-----  
Co+++ sp non-aq 20°C 100% U I M 1971BZa (32533) 633

K(CoL2+I)=1.23  
K(CoL2I+I)=0.63

Medium: (CH3)2SO. K=3.30 and 2.70 (Methanol), 4.35 and 2.35 (CH3CN),  
3.72 and 5.12 (acetone). K(CoL2+2I)=8.76 in ethyl acetate

-----  
Co+++ sp oth/un 25°C ? U M 1969MSc (32534) 634

K(CoH-1L2(CN)2+H)=12.6  
K(CoH-1L2(NH3)2+H)=10.5  
K(CoH-1L2(NH3)Cl+H)=12.0  
K(CoH-1L2(NO2)2+H)=12.6

K(CoH-1L2A2+H)=10.5 (A=aniline), 10.9 (A=4-methoxyaniline), 7.7 (A=py),  
9.9 (A=imidazole), 8.0 (A=4-methylpyridine).

-----  
Co+++ gl none 25°C 0.00 U M 1969ZFa (32535) 635

K(CoCl2L2+H)=2.17  
K(CoBr2L2+H)=2.10  
K(CoI2L2+H)=2.35  
K(Co(SCN)2L2+H)=2.32

K(Co(SeCN)2L2+H)=2.57; K(Co(NO2)2L2+H)=2.64; K(Co(CN)2L2+H)=2.10

\*\*\*\*\*  
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

-----  
Co+++ nmr oth/un 25°C ? U 1971RAa (33020) 636

K(CoH-2L2+H=C0H-1L2)=1.46  
K(CoH-1L2+H=CoL2)=0.10

\*\*\*\*\*  
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

-----  
Co+++ sp none 25°C 0.0 U K1=10.83 1976AMc (33168) 637

\*\*\*\*\*  
C4H9N L Pyrrolidine CAS 123-75-1 (2997)

Pyrrolidine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp alc/w 25°C 100% U M 1994NSa (33755) 638  
K(CoA2B+L=CoA2L+B)=-0.54  
K(CoA2C+L=CoA2L+C)=-1.28

Medium: MeOH. A=Benzoquinonediimine, B=Triphenylstibine, C=Triphenylarsine  
\*\*\*\*\*  
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  
-----  
Co+++ sp KCl 25°C 1.0M C M 2004BSa (34760) 639  
K(RCo(HA)2OH+L)=3.491

R is CH3. H2A is dimethylglyoxime.

-----  
Co+++ vlt NaClO4 25°C 3.0M C 1976KMc (34761) 640  
Kout(Co(en)3+L)=-0.16

\*\*\*\*\*  
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  
-----  
Co+++ sp KCl 25°C 1.0M C M 2004BSa (34817) 641  
K(RCo(HA)2OH+L)=1.390

R is CH3. H2A is dimethylglyoxime.

-----  
Co+++ vlt NaClO4 25°C 3.0M C 1976KMc (34818) 642  
Kout(Co(en)3+L)=-0.24

\*\*\*\*\*  
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  
-----  
Co+++ vlt NaClO4 25°C 3.0M C 1976KMc (34955) 643  
Kout(Co(en)3+L)=-0.70

\*\*\*\*\*  
C5H2O2F6 HL HFA CAS 1522-22-1 (195)  
1,1,1,5,5,5-Hexafluoropentane-2,4-dione; F3C.CO.CH2.CO.CF3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ gl NaClO4 25°C 1.0M U M 2002MAa (35922) 644  
K(Co(NH3)4L+OH)=6.35  
K(CoA4L+OH)=6.28  
K(CoB4L+OH)=6.81

K(CoC4L+OH)=6.52

A is propylenediamine, B is tris(2-aminoethylamine), C is tris(3-amino-propyl)amine. K(CoC4L+OH) determined at I=0.1 M NaClO4.

-----  
Co+++ nmr non-aq 25°C 100% U H 1964PCa (35923) 645  
Method:NMR, medium:CHCl3. DG(trans-CoL3=cis-CoL3)=3.7 kJ mol<sup>-1</sup>, DH=0, DS=-8  
\*\*\*\*\*  
C5H3NC12 L CAS 2457-47-8 (7702)  
3,5-Dichloropyridine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp non-aq 20°C 100% U 2000SSa (35954) 646  
K(Co(CH3)P+L)=1.53  
Medium: toluene. P is octaethylporphyrin. For P: t-octaethylchlorin,  
K=2.06; for P: ttt-octaethylisobacteriochlorin, K=2.47 (by 1H nmr).  
\*\*\*\*\*  
C5H4N4 HL Purine CAS 120-73-0 (2149)  
Purine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ nmr non-aq 33°C 100% U M 1977SEa (36145) 647  
K(CoA+L)=2.52  
Medium: DMSO-d6. A=Bis(acetylacetonato)(nitro)-.  
\*\*\*\*\*  
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  
-----  
Co+++ kin oth/un 25°C var U I 1978KNa (36226) 648  
Keff(CoB+L=CoBL)=3.56 (pH=7.0)  
CoB=aquocobalamin  
\*\*\*\*\*  
C5H5N L Pyridine CAS 110-86-1 (31)  
Pyridine, Azine;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp oth/un 25°C 0.05M C TIHM 2002DMa (36599) 649  
K(MeCoP+L)=0.84  
Medium: 0.05 M phosphate buffer, pH 7.2. MeCoP is methylcobinamide. DH=-12  
kJ mol<sup>-1</sup>, DS=-29 J K<sup>-1</sup> mol<sup>-1</sup>. In ethyleneglycol, K=0.79, DH=-25.9, DS=-71.  
-----

-----  
Co+++ sp non-aq 20°C 100% U 2000SSa (36600) 650  
K(Co(CH3)P+L)=1.76  
Medium: toluene. P is octaethylporphyrin. For P: t-octaethylchlorin,  
K=2.33; for P: ttt-octaethylisobacteriochlorin, K=2.76 (by 1H nmr).  
-----

Co+++ sp NaNO3 25°C 0.50M U T H 1998HBb (36601) 651

$$K(\text{CoA}+\text{L})=2.03$$

$$K(\text{CoB}+\text{L})=1.72$$

CoA: beta-trifluoromethylcobinamide, CoB: beta cyanomethylcobinamide.

Data at 5, 15, 35 and 45 C.  $\text{DH}(\text{CoA}+\text{L})=-16.6 \text{ kJ mol}^{-1}$ ,  $\text{DS}=17.6 \text{ J K}^{-1} \text{ mol}^{-1}$

-----  
Co+++ vlt non-aq 25°C 100% U M 1997ERa (36602) 652

$$K(\text{CoA2B2}+\text{L}=\text{CoA2BL}+\text{B})=4.60$$

$$K(\text{CoA2BL}+\text{L}=\text{CoA2L2}+\text{B})=4.08$$

Medium: DMF; 0.1 M  $(\text{CH}_2(\text{CH}_2)_3)_4\text{NPF}_6$ . A=salicylideneethylenediamine,  
B=DMF

-----  
Co+++ sp oth/un 25°C 0.10M U I M 1996HPb (36603) 653

$$K(\text{CoA}+\text{L})=1.56$$

CoA: sulfitocobyric acid heptamethyl ester. Also data in MeOH ( $K=0.74$ ),  
PrOH (0.38), MeCN (0.3),  $\text{CH}_2\text{Cl}_2$  (-0.1), toluene (-0.4).

-----  
Co+++ sp oth/un 25°C 0.10M U 1994HPa (36604) 654

$$K(\text{CoA}(\text{H}_2\text{O})+\text{L}=\text{CoAL}+\text{H}_2\text{O})=2.3$$

CoA(H<sub>2</sub>O): Co(III)aquacyanocobinamide. Medium:phosphate buffer. Also data for  
L=4-Methyl-pyr ( $K=3.1$ ), 4-amino (4.6), 4-CN (0.9) and 4-dimethylamino (4.75)

-----  
Co+++ sp non-aq 25°C 100% U I M 1994NSa (36605) 655

$$K(\text{CoA2B}+\text{L}=\text{CoA2L}+\text{B})=-0.15$$

$$K(\text{CoA2C}+\text{L}=\text{CoA2L}+\text{C})=-0.77$$

Medium:  $\text{CH}_2\text{Cl}_2$ . A=Benzoquinonediimine, B=Triphenylstibine, C=Triphenylarsine  
In MeOH:  $K(\text{CoA2B}+\text{L}=\text{CoA2L}+\text{B})=-1.57$ ,  $K(\text{CoA2C}+\text{L}=\text{CoA2L}+\text{C})=-2.1$

-----  
Co+++ kin KCl 25°C 1.00M U T HM 1992MBa (36606) 656

$$K(\text{CoA}+\text{L})=0.38$$

CoA=aquacobalamin.  $\text{DH}=7 \text{ kJ mol}^{-1}$ ,  $\text{DS}=33 \text{ J K}^{-1} \text{ mol}^{-1}$ . Also K at 5C: 0.40,  
15C: 0.36, 35C: 0.54.

-----  
Co+++ sp non-aq 25°C 100% U M 1988UMa (36607) 657

$$K(\text{CoA}+\text{L})=3.54$$

Medium: toluene. A=5a,15a-Bis(2-(2,2-dimethylpropanamido)phenyl)-10a,20a-  
(nonadiamidodi-o-phenylene)porphyrin. Data also for other similar porphyrins

-----  
Co+++ oth non-aq 25°C 100% U M 1982DPa (36608) 658

$$K_{\text{eff}}(\text{Co}(\text{HA})_2(\text{NO})+\text{L})=1.4$$

Medium: acetone. H<sub>2</sub>A=dimethylglyoxime

-----  
Co+++ sp NaNO3 25°C 0.50M U 1976PPa (36609) 659

$$K(\text{CoTCPP}(\text{H}_2\text{O})_2+\text{L})=4.98$$

TCPP=tetracarboxyphenylporphine

-----  
Co+++ kin NaNO3 25°C 0.50M U 1975PCb (36610) 660

$$K(\text{CoTMpyP}+\text{L})=6.00$$

$$K(\text{CoTMpyPL}+\text{L})=4.68$$

CoTMpyP=tetrakis(4-N-methylpyridyl)porphinecobalt(III)

Both NaNO3 and NaClO4 were used as the ionic medium

\*\*\*\*\*

C5H5NO2 HL CAS 35940-93-3 (3618)  
3-Furancarboxaldehyde oxime (3-Furfuraldoxime); C4H3O.CH(:N.OH)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ gl diox/w 35°C 75% U T K1=7.62? 1963ASa (36812) 661  
Medium: 75% dioxan, 0.104 M NaClO4. K1=7.33(15 C), 7.32(25 C)

\*\*\*\*\*

C5H5N5 L Adenine CAS 73-24-5 (237)  
6-Aminopurine; H2N.C5H3N4

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr non-aq 33°C 100% U M K(CoA+L)=2.50 1977SEa (36969) 662

Medium: DMSO-d6. A=Bis(acetylacetonato)(nitro)-.

\*\*\*\*\*

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  
-----

Co+++ sp KCl 25°C 1.0M C I M K(CoA(BH)2OH+L)=2.31 2001SSe (37622) 663

Medium buffered to pH 9.0. Data for pH 4.0-10. A is BrCH2-; H2B is dimethylglyoxime.

\*\*\*\*\*

C5H8N2 L CAS 1072-62-4 (929)  
2-Ethylimidazole; C3H3N2.C2H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp KCl 25°C 1.0M C I M K(CoA(BH)2OH+L)=2.09 2001SSe (37662) 664

Medium buffered to pH 9.0. Data for pH 4.0-10. A is BrCH2-; H2B is dimethylglyoxime.

\*\*\*\*\*

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  
-----

Co+++ oth NaClO4 25°C 0.10M U M Kout(Delta-Co(en)3+L)=1.01 1979TAa (38257) 665

Method: circular dichroism

\*\*\*\*\*

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  
-----

Co+++ con none 25°C 0.0 U 1984TWa (38314) 666

Kout(Co(en)3+L)=3.16

\*\*\*\*\*

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  
-----

Co+++ kin KCl 24°C 1.00M U T HM 1992MBa (39532) 667

K(CoA+L)=-0.31

CoA=aquacobalamin. DH=-30 kJ mol<sup>-1</sup>, DS=-106 J K<sup>-1</sup> mol<sup>-1</sup>. Also K at 9C: 0.0,  
16C: -0.19, 20C: -0.23, 35C: -0.48.

\*\*\*\*\*

C5H11N L CAS 1003-03-8 (304)

Cyclopentylamine;  
-----

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp KCl 25°C 1.0M C M 2004BSa (40393) 668

K(RCo(HA)2OH+L)=2.419

R is CH3. H2A is dimethylglyoxime.

\*\*\*\*\*

C5H13N L 1-Pentylamine CAS 110-58-7 (3613)

1-Pentylamine; CH3.CH2.CH2.CH2.CH2.NH2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp KCl 25°C 1.0M C M 2004BSa (41712) 669

K(RCo(HA)2OH+L)=3.534

R is CH3. H2A is dimethylglyoxime.

\*\*\*\*\*

C6H4N2 L CAS 100-48-1 (321)

4-Cyanopyridine; C5H4N.CN  
-----

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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp non-aq 20°C 100% U 2000SSa (42197) 670

K(Co(CH3)P+L)=1.63

Medium: toluene. P is octaethylporphyrin.  
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-----  
Co+++ sp oth/un 25°C 0.10M U I M 1996HPb (42198) 671

K(CoA+L)=0.4

CoA: sulfitocobyrinic acid heptamethyl ester. Also data in MeOH (K=-0.4),  
PrOH, MeCN, CH2Cl2, and toluene.

\*\*\*\*\*

C6H5NO2 HL Picolinic acid CAS 98-98-6 (391)

2-Pyridine-carboxylic acid; C5H4N.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp NaCl04 -5°C 1.20M U 1975CCb (42509) 672  
K(2Co+2HL)=8.04  
K(2Co+4HL)=13.7

Glass electrode also used.

\*\*\*\*\*  
C6H6O3S HL CAS 98-11-3 (3087)  
Benzenesulfonic acid; C6H5.SO3H

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ con NaCl 25°C 0.01M C 1990IIa (44133) 673  
Kout(Co(NH3)6+L)=1.27  
Kout(Co(bpy)3+L)=1.60  
Kout(Co(phen)3+L)=1.70

\*\*\*\*\*  
C6H7N L Picoline CAS 109-06-8 (320)  
2-Methylpyridine; C5H4N.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp non-aq 25°C 100% C M 2002DMa (44604) 674  
K(MeCoP+L)=-1.2

Medium: ethyleneglycol. MeCoP is methylcobinamide.

\*\*\*\*\*  
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  
-----  
Co+++ sp non-aq 20°C 100% U 2000SSa (44814) 675  
K(Co(CH3)P+L)=2.06

Medium: toluene. P is octaethylporphyrin.

-----  
Co+++ kin KCl 25°C 1.00M U T HM 1992MBa (44815) 676  
K(CoA+L)=0.52

CoA=aquacobalamin. DH=6 kJ mol<sup>-1</sup>, DS=31 J K<sup>-1</sup> mol<sup>-1</sup>. Also K at 6C: 0.45, 15C: 0.46, 35C: 0.56.

\*\*\*\*\*  
C6H7N5 L Methyladenine CAS 5142-23-4 (2151)  
6-Amino-3-methylpurine, 3-Methyladenine

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ nmr non-aq 33°C 100% U M 1978SEa (45158) 677  
K(CoA2X+L)=3.9

Medium: DMSO-d6. A=Acetylacetone, X=Nitrite

-----

Co+++ nmr non-aq 33°C 100% U M 1977SEa (45159) 678

K(CoA+L)=2.16

Medium: DMSO-d6. A=Bis(acetylacetonato)(nitro)-.

\*\*\*\*\*

C6H9NO6 H3L NTA CAS 139-13-9 (191)

Nitrilotriethanoic acid; N(CH2.COOH)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp NaClO4 25°C 1.0M C 2002VPa (46751) 679

\*K(CoL(H2O)2)=-6.52

\*K(L(H2O)Co(OH)Co(H2O)L)=-3.09

K(CoL(H2O)2+NCS)=1.60

K(CoL(OH)(H2O)+NCS)=1.99

K(CoL(H2O)NCS+NCS)=0.95.

-----  
Co+++ gl NaClO4 25°C 1.0M U 1982BCb (46752) 680

\*K(CoL(H2O))=-9.00

-----  
Co+++ vlt KNO3 25°C 1.00M U 1977HDa (46753) 681

K1eff=7.01

Keff at pH 7

\*\*\*\*\*

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  
-----

Co+++ sp oth/un 25°C 0.05M U M 1982DPa (47538) 682

Keff(Co(HA)2+L)=4.61

Medium: 0.05 M phosphate buffer, pH 7.0 H2A=dimethylglyoxime

-----  
Co+++ sp oth/un 25°C 0.0 U HM 1966HIa (47539) 683

K(CoAL+H)=4.49

K'(CoAH-1L+H)=11.00

DH(K)=16.6 kJ mol<sup>-1</sup>, DS=-21 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K')=48.9, DS=-46.

CoA=cobalamin factor B

\*\*\*\*\*

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  
-----

Co+++ sp alc/w 25°C 100% U M 1974BGb (47704) 684

K(Co(nioxime)2+L)=5.42

K(Co(nioxime)2+2L)=8.84

Medium: EtOH. nioxime=cyclohexane-1,2-dionedioxime. In DMSO, K1=5.10, K2=6.2.

In MeOH, K1=5.70, K2=7.4. In acetone, K2=8.58. In methylacetate, K2=6.16

\*\*\*\*\*

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  
-----  
Co+++ sp none 25°C 0.0 U K1=11.14 1976AMc (49051) 685  
\*\*\*\*\*  
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  
-----  
Co+++ oth oth/un 38°C 0.50M U M 1973WNa (49227) 686  
K(a-cis-CoL+HA)=1.61  
K(a-cis-CoL+A)=1.86

H2A=oxalic acid

\*\*\*\*\*  
C6H12O6 L CAS 576-63-6 (2284)  
cis-Inositol, cyclohexane-1,2,3,4,5,6-hexol;  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ gl KNO3 25°C 0.10M C 1994HHa (49627) 687  
K(CoAL=CoAH-1L+H)=-1.69  
K(CoAH-1L=CoAH-2L+H)=-4.05  
K(CoAH-2L=CoAH-3L+H)=-6.67

A: cis-1,3,5-triaminocyclohexane.

\*\*\*\*\*  
C6H13N L CAS 108-91-8 (314)  
Cyclohexylamine; C6H11.NH2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp KCl 25°C 1.0M C M 2004BSa (49802) 688  
K(RCo(HA)2OH+L)=2.504

R is CH3. H2A is dimethylglyoxime.

\*\*\*\*\*  
C6H14N2O2 HL Lysine CAS 56-87-1 (41)  
2,6-Diaminohexanoic acid; H2N.(CH2)4.CH(NH2)COOH  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp oth/un 25°C 0.05M U M 1982DPa (50820) 689  
Keff(Co(HA)2+L)=5.41

Medium: 0.05 M phosphate buffer, pH 7.0 H2A=dimethylglyoxime

\*\*\*\*\*  
C6H15N L Hexylamine CAS 111-26-2 (4352)  
Hexylamine; CH3.CH2.CH2.CH2.CH2.CH2.NH2  
-----

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp KCl 25°C 1.0M C M 2004BSa (51158) 690  
K(RCo(HA)2OH+L)=3.578

R is CH3. H2A is dimethylglyoxime.

\*\*\*\*\*

C6H15N03 Triethanolamine CAS 102-71-6 (447)  
Tris-(2-hydroxyethyl)amine; L

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ vlt NaClO4 25°C 3.0M C 1976KMc (51286) 691  
Kout(Co(en)3+L)=-0.47

\*\*\*\*\*

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  
-----

Co+++ gl KNO3 20°C 0.10M U T H K1=13.65 B2=20.06 1997BAa (51403) 692  
At 32 C, K1=12.97. DH(K1)=-99.8 kJ mol-1. DS(K1)=328 J K-1 mol-1.

-----  
Co+++ sp oth/un 59°C 1.00M U M 1994LLc (51404) 693  
K(2(CoL(OH)3)=Co2L2(OH)3+3OH)=1.2. Medium: 1.0 M NaOH.

\*\*\*\*\*

C6H15O3P L CAS 122-52-1 (1723)  
Triethylphosphite; (C2H5O)3P

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp non-aq 30°C 100% C T 2001ASb (51510) 694  
K(CoA(Bu3P)+L)=3.05

K'(CoA(Me2PhP)+L)=3.60

Medium: acetonitrile. Data for 20-40 C. H2A is Salen. DH(K)=-25.6 kJ mol-1  
DS=-25.9 J K-1 mol-1. DH(K')=-34.3, DS=-44.2. Data for Salen derivatives.

\*\*\*\*\*

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  
-----

Co+++ gl NaClO4 25°C 0.5M C 2001MDb (52092) 695  
\*K(cis-CoL(H2O)2)=-5.5

\*K(cis-CoL(OH)H2O)=-7.9

K(cis-CoL(OH)H2O+H3BO3=CoL(H2BO4)+2H)=-5.7, K(cis-CoL(OH)H2O+  
H3BO3=CoL(BO4)+3H)=-2.7.

\*\*\*\*\*

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  
-----

Co+++ gl NaClO4 25°C 1.0M M 1998BBf (52192) 696

\*K(CoL(NH3)(H2O))=-5.82

\*K(CoL(H2O)2)=-5.89

\*K(CoL(OH)(H2O))=-8.17

\*K for dissociation at the p-site. For t-site, \*K(CoL(NH3)(H2O))=-6.33,

\*K(CoL(H2O)2)=-6.40, \*K(CoL(OH)(H2O))=-8.68. Additional method: 170 nmr.

\*\*\*\*\*

C6H20N2O12P4 H8L EDTPA CAS 1429-50-1 (434)

Ethane-1,2-bis(iminobis(methylenephosphonic acid)); ((H2O3PCH2)2NCH2.)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr KNO3 0°C 0.10M C 1997ISa (52327) 697

K(Co(en)2(NH3)L+H)=12.7

K(Co(en)2(NH3)HL+H)=8.9

K(Co(en)2(NH3)H2L+H)=6.9

K(Co(en)2(NH3)H3L+H)=3.3

Method: 31P nmr. K(Co(en)2(NH3)H4L+H)=1.8, K(Co(en)2(NH3)H5L+H)=0.3.

Complex is cis isomer. Also data for reactions cis-Co(en)2L+H.

\*\*\*\*\*

C7H5N04 H2L CAS 100-26-5 (2528)

2,5-Pyridinedicarboxylic acid, Isocinchomeric acid; C5H3N.(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp NaClO4 -5°C 1.20M U 1976BBc (52665) 698

B(Co2H-1L2)=4.9

K(Co2H-3L2+2H)=13.4

\*\*\*\*\*

C7H5N04 H2L Dipicolinic aci CAS 449-83-2 (418)

2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp NaClO4 -5°C 1.20M U 1976BBc (52760) 699

K(Co2H3L2+H)=3.0

K(Co2H-1L2+4H)=16.8

K(Co2H-3L2+2H)=9.8

\*\*\*\*\*

C7H6N2 L Benzimidazole CAS 51-17-2 (52)

Benzimidazole; C7H6N2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp alc/w 25°C 100% U M 1994NSa (53469) 700

K(CoA2B+L=CoA2L+B)=-1.60

K(CoA2C+L=CoA2L+C)=-2.31

Medium: MeOH. A=Benzoquinonediimine, B=Triphenylstibine, C=Triphenylarsine

-----  
Co+++ sp NaClO4 25°C 0.30M U 1977DMa (53470) 701

K(cis-CoCl(en)2L+H)=9.38

\*\*\*\*\*  
C7H6N4 L (6538)  
5-Phenyltetrazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp NaClO4 25°C 1.00M U HM 1990HPa (53539) 702

K(Co(NH3)5L+H)=0.80  
K(Co(NH3)5HL+H)=0.59

DH(Co(NH3)5L+H)=-1.25 kJ mol<sup>-1</sup>, DS(Co(NH3)5L+H)=7.1 J K<sup>-1</sup> mol<sup>-1</sup>  
Protonation data also for other phenyl substituted 5-phenyltetrazoles

\*\*\*\*\*  
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  
-----  
Co+++ sp NaClO4 29°C 1.00M U M 1976DDa (54181) 703

\*K(Co(NH3)(en)2HL)=-11.2

\*\*\*\*\*  
C7H6O6S H3L CAS 5965-83-3 (399)  
5-Sulfosalicylic acid, 2-Hydroxy-5-sulfobenzoic; H03S.C6H3(OH).COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp NaClO4 29°C 1.00M U M 1976DDa (54960) 704

\*K(Co(NH3)(en)2HL)=-10.14

\*\*\*\*\*  
C7H9N L 2,6-Lutidine CAS 108-44-1 (723)  
2,6-Dimethylpyridine; C5H3N.(CH3)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp non-aq 25°C 100% C M 2002DMa (56220) 705

K(MeCoP+L)=-1.2

Medium: ethyleneglycol. MeCoP is methylcobinamide.

\*\*\*\*\*  
C7H10N2 L CAS 1122-58-3 (492)  
4-(N,N-Dimethylamino)pyridine; C5H4N.N(CH3)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp non-aq 25°C 100% C HM 2002DMa (56630) 706

K(MeCoP+L)=1.26

Medium: ethyleneglycol. MeCoP is methylcobinamide. DH(MeCoP+L)=  
-31 kJ mol<sup>-1</sup>, DS=-126 J K<sup>-1</sup> mol<sup>-1</sup>.

-----  
Co+++ sp non-aq 20°C 100% U 2000SSa (56631) 707

K(Co(CH3)P+L)=2.40

Medium: toluene. P is octaethylporphyrin. For P: t-octaethylchlorin, K=2.96; for P: ttt-octaethylisobacteriochlorin, K=3.42 (by 1H nmr).

-----  
Co+++ sp oth/un 25°C 0.10M U I M 1996HPb (56632) 708  
K(CoA+L)=3.20

CoA: sulfitocobyrinic acid heptamethyl ester. Also data in MeOH (K=2.10), PrOH (1.54), MeCN (1.48), CH2Cl2 (1.0), toluene (0.7).

\*\*\*\*\*  
C7H15N L CAS 5452-35-7 (9123)  
Cycloheptylamine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp KCl 25°C 1.0M C M 2004BSa (57901) 709  
K(RCo(HA)2OH+L)=2.845

R is CH3. H2A is dimethylglyoxime.

\*\*\*\*\*  
C7H22N2O12P4 H8L CAS 28444-52-2 (7827)  
Trimethylenediamine-N,N,N',N'-tetramethylenetetraphosphonic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr KNO3 0°C 0.10M C 1997ISa (58378) 710  
K(Co(en)2(NH3)L+H)=13.1  
K(Co(en)2(NH3)HL+H)=9.7

Method: 31P nmr. Complex is cis isomer.  
Also data for reactions cis-Co(en)2L+H.

\*\*\*\*\*  
C8H6O4 H2L Phthalic acid CAS 88-99-3 (113)  
Benzene-1,2-dicarboxylic acid; C6H4(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ con none 25°C 0.0 U 1984TWa (58959) 711  
Kout(Co(en)3+L)=3.87

-----  
Co+++ gl oth/un 35°C 0.0 U T 1965AEa (58960) 712  
K(CoCl(NH3)5+L)=2.63

Medium:0 corr. K=2.54(25 C). By solubility: K=2.51(25 C), 2.52(35 C)

\*\*\*\*\*  
C8H11P L CAS 672-66-2 (2290)  
Dimethyl-phenyl-phosphine; (CH3)2.P.C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp alc/w 25°C 95% A M K2=4.88 1976SVa (61321) 713  
Metal: CoA, A=N,N'-Ethylenebis(salicylideneiminato). In MeCN: K2=5.18

\*\*\*\*\*  
C8H12O4 H2L CAS 1076-97-9 (2224)  
Cyclohexane-1,4-dicarboxylic acid; C6H10.(COOH)2



-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ oth NaCl04 25°C 0.10M U M 1979TAa (61705) 714  
Kout(Delta-Co(en)3+L)=0.93

Method: circular dichroism

\*\*\*\*\*

C8H12O4 H2L CAS 2305-32-0 (2226)  
DL-trans-Cyclohexane-1,2-dicarboxylic acid; C6H10.(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ oth NaCl04 25°C 0.10M U M 1979TAa (61720) 715  
Kout(Delta-Co(en)3+L)=1.65

Method: circular dichroism

\*\*\*\*\*

C8H12O4 H2L CAS 2305-32-0 (2225)  
L-trans-Cyclohexane-1,2-dicarboxylic acid; C6H10.(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ oth NaCl04 25°C 0.10M U M 1979TAa (61730) 716  
Kout(Lambda-Co(en)3+L)=1.66  
Kout(Delta-Co(en)3+L)=1.64

Method: circular dichroism

\*\*\*\*\*

C8H12O4 H2L CAS 610-09-3 (2227)  
cis-Cyclohexane-1,2-dicarboxylic acid; C6H10.(COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ oth NaCl04 25°C 0.10M U M 1979TAa (61731) 717  
Kout(Delta-Co(en)3+L)=1.83

Method: circular dichroism

\*\*\*\*\*

C8H13NO6S H3L (5675)  
2-Mercapto-1-aminoethane-N,N,S-triethanoic acid; HOOC.CH2.S.CH2.CH2.N(CH2COOH)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ con NaCl04 25°C 0.10M U K1=30.9 1975POa (61820) 718  
\*\*\*\*\*

C8H14O4 H2L Suberic acid CAS 505-48-6 (517)  
Octanedioic acid; HOOC.(CH2)6.COOH

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ con none 25°C 0.0 U 1984TWa (62095) 719  
Kout(Co(en)3+L)=3.03

\*\*\*\*\*

C8H20N4 L Cyclen CAS 294-90-6 (10)  
1,4,7,10-Tetraazacyclododecane; cyclo(-(NH.CH2.CH2.)4-)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ gl NaClO4 25°C 1.0M M 1998BBf (63287) 720

\*K(CoL(NH3)(H2O))=-6.02

\*K(CoL(H2O)2)=-5.82

\*K(CoL(OH)(H2O))=-8.20

\*K for dissociation at the p-site. Additional method: 170nmr.  
For L=N-Me-cyclen, \*K(CoL(H2O)2)=-5.28, \*K(CoL(OH)(H2O))=-8.03.

-----  
Co+++ sp NaClO4 25°C 1.0M C 1998BCb (63288) 721

K(CoLA+OH=CoH-1LA)=0.021

HA=alanine.

-----  
Co+++ kin oth/un 40°C 0.0 U M 1993KBa (63289) 722

K(CoLA2+B=CoLAB)=0.398

A:H2O. B:Acetonitrile.

-----  
Co+++ kin oth/un 40°C ? U M 1993KBa (63290) 723

\*K(CoL(H2O)2)=-7.2

\*K(CoL(OH)(H2O))=-5.5

Medium: D2O.

\*\*\*\*\*  
C9H10N2 L CAS 582-60-5 (8433)  
5,6-Dimethylbenzimidazole;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp none 25°C 0.0 C HM 1997CLc (65195) 724

Self medium, pH 7.0. CoA is 1-methyl-5-deoxy-beta-D-(-)ribofuranosyl-  
cobalamin. DH(CoA+L)=23.0 kJ mol-1, DS(CoA+L)=47.3 J K-1 mol-1.

-----  
Co+++ sp none 25°C 0.0 C HM 1997CLc (65196) 725

Self medium, pH 7.0. CoA is 1-methyl-5-deoxy-2,3-isopropylidene-beta-D  
-(-)ribofuranosylcobalamin. DH(CoA+L)=24.3 kJ mol-1, DS(CoA+L)=57.7.

\*\*\*\*\*  
C9H13N L CAS 3987-81-2 (493)  
4-t-Butylpyridine; C5H4N.(t-C4H9)

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr non-aq 33°C 100% U M 1978SEa (66783) 726

K(CoA2X+L)=3.45

Medium: DMSO-d6. A=Acetylacetone, X=Nitrite

\*\*\*\*\*  
C9H13N3O5 L Cytidine CAS 65-46-3 (2152)  
Cytidine, Cytosine-1-beta-D-ribofuranoside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	nmr	non-aq	33°C	100%	U	M			1977SEa (67050)	727
K(CoA+L)=0.0										
Medium: DMSO-d6. A=Bis(acetylacetonato)(nitro)-.										
*****										
C9H21O3P		L						CAS 116-17-6	(1726)	
Tri(isopropyl)phosphite; (CH3.CH(CH3)O)3P										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	sp	non-aq	30°C	100%	C	T			2001ASb (68217)	728
K(CoA(Bu3P)+L)=3.20										
K'(CoA(Me2PhP)+L)=3.94										
Medium: acetonitrile. Data for 20-40 C. H2A is Salen. DH(K)=-22.6 kJ mol-1										
DS=-13.7 J K-1 mol-1. DH(K')=-21.3, DS=-5.5. Data for Salen derivatives.										
*****										
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
Co+++	gl	KNO3	25°C	1.00M	U			K1=29.5	1990BSd (68315)	729
*****										
C10H6O8		H4L			Pyromellitic Ac			CAS 89-05-4	(519)	
Benzene-1,2,4,5-tetracarboxylic acid; C6H2.(COOH)4										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	con	none	25°C	0.0	U				1984TWa (68509)	730
Kout(Co(en)3+L)=6.21										
*****										
C10H7NO2		HL						CAS 14510-06-6	(4715)	
2-Formyl-8-hydroxyquinoline;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	gl	diox/w	25°C	50%	U			K1=7.12 B2=13.55	1972HUb (68609)	731
Medium: 50% v/v dioxan, 0.1 M KCl										
*****										
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
Co+++	gl	NaClO4	25°C	0.5M	C				2001MDb (69535)	732
*K(cis-CoL2(H2O)2)=-4.19										
*K(cis-CoL2(OH)H2O)=-6.77										
K(cis-CoL2(OH)H2O+H3BO3=CoL2(H2BO4)+2H)=-5.87, K(cis-CoL2(OH)H2O+H3BO3=CoL2(BO4)+3H)=-2.99.										

-----  
Co+++ gl KNO3 25°C 1.0M U 1969PAa (69536) 733  
K(Co(OH)(H2O)L2+H)=4.73  
K(Co(OH)2L+H)=5.10(cis isomer)  
\*\*\*\*\*

C10H9N5O HL Kinetin CAS 525-79-1 (2150)  
6-Furfurylaminopurine;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr non-aq 33°C 100% U M 1977SEa (70417) 734  
K(CoA+L)=2.38

Medium: DMSO-d6. A=Bis(acetylacetonato)(nitro)-.  
\*\*\*\*\*

C10H10O4 H2L CAS 635-51-8 (2233)  
Phenylsuccinic acid; HOOC.CH2.CH(C6H5).COOH  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ oth NaClO4 25°C 0.10M U M 1979TAa (70823) 735  
Kout(Delta-Co(en)3+L)=1.29

Method: circular dichroism  
\*\*\*\*\*

C10H11NOS L (2831)  
Acetothioacetanilide; CH3.CO.CH2.CS.NH.C6H5  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp alc/w 25°C 60% U 1984FNa (70878) 736  
B3=12.56

Medium: 60% v/v EtOH/H2O. Data also for 4-Cl-, 4-Br- and 3-Me- analogues  
\*\*\*\*\*

C10H12N4O4 L Nebularine CAS 550-33-4 (2172)  
Purine-9-beta-D-ribofuranoside;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr non-aq 33°C 100% U M 1977SEa (71330) 737  
K(CoA+L)=2.04

Medium: DMSO-d6. CoA= Bis(acetylacetonate)(nitro)deoxyadenosine-cobalt(III)  
\*\*\*\*\*

C10H12N5O4Br L CAS 2946-39-6 (2165)  
8-Bromoadenosine;  
-----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr non-aq 33°C 100% U M 1977SEa (71511) 738  
K(CoA+L)=0.30

Medium: DMSO-d6. MA=Bis(acetylacetonate)(nitro)-Cobalt (III).  
\*\*\*\*\*

C10H13N5O3 L Deoxyadenosine CAS 16373-93-6 (2153)  
2'-Deoxyadenosine, Adenine deoxyriboside;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr non-aq 33°C 100% U M 1977SEa (71888) 739

K(CoA+L)=1.9

Medium: DMSO-d6. A=Bis(acetylacetonato)(nitro)-.

\*\*\*\*\*

C10H13N5O4 L Adenosine CAS 58-61-7 (2154)  
Adenosine, Adenine-9-beta-D-ribofuranoside;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr non-aq 33°C 100% U M 1977SEa (71941) 740

K(CoA+L)=1.97

Medium: DMSO-d6. CoA=Bis(acetylacetonate)(nitro)cobalt(III)

\*\*\*\*\*

C10H13N5O5 L CAS 116-92-9 (2174)  
Adenosine-N'-oxide;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr non-aq 33°C 100% U M 1977SEa (72031) 741

K(CoA+L)=2.02

Medium: DMSO-d6. CoA= Bis(acetylacetonate)(nitro)deoxyadenosine-cobalt(III)

\*\*\*\*\*

C10H16N2O8 H4L EDTA CAS 60-00-4 (120)  
1,2-Diaminoethane-N,N,N',N'-tetraethanoic acid, Sequestric acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ vlt KNO3 25°C 1.00M U 1977HDa (73668) 742

K1eff=38.18

Keff at pH 7

-----  
Co+++ EMF KNO3 25°C 0.10M U T K1=41.1 1969BHb (73669) 743  
-----

Co+++ vlt KNO3 25°C 0.20M U K1=40.6 1965TOa (73670) 744  
-----

Co+++ EMF KCl 20°C 0.10M U K1=36 1951SHa (73671) 745  
-----

C10H18N2O7 H3L HEDTA CAS 150-39-0 (392)  
N-(Hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ EMF KNO3 25°C 0.10M U K1=43.2 1969BHb (75348) 746  
-----

C10H24N4 L CAS 90281-17-7 (722)

1,7-Dimethyl-1,4,7,10-tetraazacyclododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	kin	oth/un	40°C	? U	M				1993KBa (76695)	747

K(CoLA2+B=CoLAB)=0.362

A:H2O. B:Acetonitrile.

\*\*\*\*\*  
 C10H25N5 L 15-Ane-N5 CAS 295-64-7 (99)  
 1,4,7,10,13-Pentaazacyclopentadecane; cyclo(-(HN.CH2.CH2)5-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	gl	NaClO4	25°C	0.10M	M				1982HBc (76732)	748

K(Co(OH)L+H)=6.3

\*\*\*\*\*  
 C10H28N2O12P4 H8L CAS 23605-74-5 (435)  
 (Hexamethylenedinitrilo)tetra(methylenephosphonic acid);  
 (CH2.CH2.CH2.N(CH2.PO3H2)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	nmr	KNO3	0°C	0.10M	C				1997ISa (76838)	749

K(Co(en)2(NH3)L+H)=13.6  
 K(Co(en)2(NH3)HL+H)=11.0  
 K(Co(en)2(NH3)H2L+H)=6.8  
 K(Co(en)2(NH3)H3L+H)=4.8

Method: 31P nmr. Complex is cis isomer.

Also data for reactions cis-Co(en)2L+H and for dinuclear complexes.

\*\*\*\*\*  
 C10H28N6 L PENTEN CAS 4097-90-9 (3315)  
 N,N,N',N'-Tetra-(2-aminoethyl)diaminoethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	cal	KNO3	25°C	0.10M	U	H			1971PWa (76871)	750

DH(Co(OH)L+H)=-44.30 kJ mol-1, DS=-1.25 J K-1 mol-1  
 DH(Co(OH)HL+H)=-26.75, DS=0

\*\*\*\*\*  
 C11H11N3O3S L CAS 67665-24-1 (8341)  
 Furoin thiosemicarbazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	gl	alc/w	30°C	50%	U	T H		K1=9.67 B2=18.38	1991HRA (77949)	751

Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.  
 DH(K1)=-110 kJ mol-1, DS(K1)=179 J K-1 mol-1; DH(K2)=-115, DS(K2)=215.

\*\*\*\*\*  
 C11H13NOS L CAS 67077-39-8 (6233)  
 Aceto-4-methylphenylthioamide; CH3.CO.CH2.CS.NH.C6H4.CH3



\*\*\*\*\*  
C12H8N2 L Phenanthroline CAS 66-71-7 (144)  
1,10-Phenanthroline;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ gl NaCl 25°C 0.10M C H 2000KEa (80419) 759  
Kout(CoL3+L)=1.50

By calorimetry: DH(Kout)=-6.30 kJ mol<sup>-1</sup>, DS=11 J K<sup>-1</sup> mol<sup>-1</sup>.

\*\*\*\*\*  
C12H11N5 HL 3-Benzyladenine CAS 2280-81-1 (2188)  
3-Benzyladenine, 3-Benzylaminopurine;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr non-aq 33°C 100% U M 1978SEa (80945) 760  
K(CoA2X+L)=3.8

Medium: DMSO-d6. A=Acetylacetone, X=Nitrite

\*\*\*\*\*  
C12H27P L CAS 998-40-3 (170)  
Tri-n-butylphosphine; (CH3.(CH2)3)3P

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp alc/w 25°C 95% A M K2=3.43 1976SVa (84133) 761  
Metal: CoA, A=N,N'-Ethylenebis(salicylideneiminato). In MeCN: K2=4.11

\*\*\*\*\*  
C13H11N2O3F3 HL (5563)  
3-(2-Acetylphenylhydrazone)-1,1,1-trifluoropentane-2,4-dione;  
CF3.CO.C(CO.CH3):N.HN.C6H4.COCH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ gl diox/w 25°C 75% U K1=8.00 B2=15.10 1990ASb (85241) 762  
\*\*\*\*\*

C13H13P L CAS 1486-28-8 (1731)  
Diphenyl-methyl-phosphine; CH3(C6H5)2P

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp alc/w 25°C 95% A M K2=3.04 1976SVa (85549) 763  
Metal: CoA, A=N,N'-Ethylenebis(salicylideneiminato). In MeCN: K2=3.64

\*\*\*\*\*  
C13H15NO2S L (6235)  
Diaceto-4-methylphenylthioamide; (CH3.CO)2CH.CS.NH.C6H4.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp alc/w 25°C 60% U 1984FNa (85705) 764  
B3=12.64



\*\*\*\*\*

C13H15NO3S L (6234)  
Diaceto-4-methoxyphenylthioamide; (CH3.CO)2CH.CS.NH.C6H4.OCH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp alc/w 25°C 60% U 1984FNa (85708) 765  
B3=12.76

\*\*\*\*\*  
C14H12N4O2Br2 HL CAS 72833-87-5 (2533)  
2-(2-(3,5-Dibromopyridyl)azo)-5-dimethylaminobenzoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp diox/w 25°C 40% C B2=19.02 1986KHa (87317) 766

\*\*\*\*\*  
C14H23N3O10 H5L DTPA CAS 67-43-6 (238)  
Diethylenetriamine-pentaethanoic acid; HOOC.CH2.N(CH2.CH2.N(CH2.COOH)2)2

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ sp oth/un 25°C dil U K1=40.5 1972BCb (89197) 767

\*\*\*\*\*  
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  
-----  
Co+++ sp none 25°C 0.0 U K1=9.87 1976AMc (89983) 768

\*\*\*\*\*  
C14H36N6 L (5578)  
1,1,1-Tris(5-amino-2-azapentyl)ethane; CH3.C(CH2.NH.CH2.CH2.CH2.NH2)3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ oth NaClO4 25°C 0.10M U HM 1985STa (90879) 769  
K(CoL+S04)=2.16

K(CoL+D-tartrate)=1.61, K(CoL+L-tartrate)=1.34,  
K(CoL+Sb2(D-tartrate)2)=1.60; K(CoL+Sb2(L-tartrate)2)=1.48

\*\*\*\*\*  
C14H37N7 L CAS 298-85-5 (5606)  
1,4,7,10,13,16,19-Heptaazacycloheptacosane;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ gl NaClO4 25°C 0.15M C M 1992ABa (90911) 770  
K(CoA+3H+L)=30.39  
K(CoA+4H+L)=37.58  
K(CoA+5H+L)=41.51  
K(CoA+H3L)=2.7

K(CoA+H4L)=3.5, K(CoA+H5L)=3.7, K(CoA+H6L)=4.2, K(CoA+H7L)=4.8, K(CoA+6H+L)=44.14, K(CoA+7H+L)=46.7. CoA=Co(CN)6---.

\*\*\*\*\*

C14H37N7 L (6456)  
2,5,8,11,14,17,20-Heptaazaheneicosane; CH3.(NH.(CH2)2)6.NH.CH3

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ gl NaCl04 25°C 0.15M C M 1992ABa (90925) 771  
K(CoA+3H+L)=31.15  
K(CoA+4H+L)=39.97  
K(CoA+5H+L)=44.91  
K(CoA+H3L)=2.4

K(CoA+H4L)=3.0, K(CoA+H5L)=3.3, K(CoA+H6L)=3.6, K(CoA+H7L)=3.7, B(CoA+6H+L)=48.57, B(CoA+7H+L)=51.06. CoA=Co(CN)6---.

\*\*\*\*\*

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  
-----

Co+++ sp NaCl04 19°C 0.10M U B2=28.82 1972BEb (91208) 772

\*\*\*\*\*

C15H21N5O4 L CAS 7724-76-7 (2173)  
6-(3,3-Dimethylallylamino)purine-ribose;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ nmr non-aq 33°C 100% U M 1977SEa (92203) 773  
K(CoA+L)=1.74

Medium: DMSO-d6. CoA= Bis(acetylacetonate)(nitro)deoxyadenosine-cobalt(III)

\*\*\*\*\*

C16H14N4O2S HL CAS 83688-78-2 (2534)  
2-(2-Benzothiazolylazo)-5-dimethylaminobenzoic acid;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ sp diox/w 25°C 40% C B2=12.16 1986KHa (93482) 774

\*\*\*\*\*

C16H14O6 H2L Hematoxylin CAS 517-28-2 (1381)  
Hematoxylin

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----

Co+++ gl KCl 25°C 0.10M U K1=6.34 1982MHa (93599) 775

\*\*\*\*\*

C16H16N2S2 L CAS 122-65-6 (2823)  
N,N'-Dibenzyl-dithiooxamide; C6H5CH2.NH.CS.CS.NH.CH2C6H5

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

-----  
 Co+++ sp none 25°C 0.0 U K1=7.78 1976AMc (93714) 776  
 \*\*\*\*\*  
 C16H18N2O3 HL (5564)  
 2-(2-Acetylphenylhydrazone)-5,5-dimethyl-1,3-cyclohexanedione;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co+++ gl diox/w 25°C 75% U K1=8.80 B2=16.63 1990ASb (93772) 777  
 \*\*\*\*\*  
 C16H36N4 L CAS 3713-77-7 (5391)  
 1,6,11,16-Tetraazacycloeicosane;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co+++ cal NaClO4 25°C 0.15M C HM 1988BMg (95526) 778  
 Kout(Co(CN)6+H4L)=2.38  
 DH(Co(CN)6+H4L)=-10.7 kJ mol<sup>-1</sup>, DS(Co(CN)6+H4L)=9.6 J K<sup>-1</sup> mol<sup>-1</sup>.  
 \*\*\*\*\*  
 C16H42N8 L (6457)  
 2,5,8,11,14,17,20,23-Octaaza-tetracosane;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co+++ gl NaClO4 25°C 0.15M C M 1992ABa (95677) 779  
 K(CoA+4H+L)=40.01  
 K(CoA+5H+L)=47.27  
 K(CoA+6H+L)=52.19  
 K(CoA+H4L)=2.0  
 K(CoA+H5L)=2.5, K(CoA+H6L)=3.0, K(CoA+H7L)=3.3, B(CoA+7H+L)=55.80.  
 CoA=Co(CN)6---.  
 \*\*\*\*\*  
 C17H15N3O3S L CAS 141102-86-5 (8342)  
 Furoin-4-phenyl-3-thiosemicarbazide;  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co+++ gl alc/w 30°C 50% U T H K1=10.22 B2=19.08 1991HRa (96000) 780  
 Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.  
 DH(K1)=-159 kJ mol<sup>-1</sup>, DS(K1)=330 J K<sup>-1</sup> mol<sup>-1</sup>; DH(K2)=-115, DS(K2)=212.  
 \*\*\*\*\*  
 C18H15P L CAS 603-35-0 (621)  
 Triphenylphosphine; (C6H5)3P  
 -----

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
 -----

Co+++ sp alc/w 25°C 100% U M 1994NSa (97132) 781  
 K(CoA2B+L=CoA2L+B)=1.48  
 K(CoA2C+L=CoA2L+C)=0.71  
 Medium: MeOH. A=Benzoquinonediimine, B=Triphenylstibine, C=Triphenylarsine

-----  
 Co+++ sp alc/w 25°C 95% A M K2=1.22 1976SVa (97133) 782  
 Metal: CoA, A=N,N'-Ethylenebis(salicylideneiminato). In MeCN: K2=2.18  
 \*\*\*\*\*  
 C18H16N2O3 HL (5560)  
 2-(2-Acetylphenylhydrazone)-1-phenyl-but-1,3-dione;  
 C6H5.CO.C(CO.CH3):N.NH.C6H4.COCH3  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	gl	diox/w	25°C	75%	U			K1=9.58 B2=18.58	1990ASb (97166)	783
*****										
C18H22N4O		HL						(5243)		
N-Methylanabasine-alpha'-azo-4-cresol;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	sp	oth/un	?	?	U			B2=24.8	1972KTb (97529)	784
*****										
C18H30N4O12		H6L		TTHA				CAS 869-52-3 (694)		
Triethylenetetraaminehexaethanoic acid;((HOOC.CH2)2N.CH2.CH2.N(CH2.COOH).CH2)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	EMF	KNO3	25°C	0.10M	U			K1=49.5	1969BHb (98018)	785
*****										
C19H13N3O7S2		H3L		Quinolinazo	R			CAS 28415-92-1 (5282)		
2-Hydroxy-1-(8-quinolineazo)naphthalene-3,6-disulfonic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	sp	oth/un	20°C	0.10M	U			K((Co+3HL=CoL+3H)=11.34	1970BKc (99032)	786
*****										
C20H26N6		L						CAS 221350-58-9 (2790)		
2,5,8,11-Tetraaza[12]-[12](2,9)[1,10]-phenanthroline;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	gl	R4N.X	25°C	0.10M	C			K1=16.16 K(CoL+H)=3.28 K(CoL+OH)=3.42 B(CoHL)=19.44 B(CoH-1L)=5.75	2000BPa (100337)	787

Medium: 0.10 M Me4NCl.  
 \*\*\*\*\*  
 C23H18N2O3 HL (5561)  
 2-(2-Acetylphenylhydrazone)-1,3-diphenyl-prop-1,3-dione;  
 C6H5.CO.C(CO.C6H5):N.NH.C6H4.COCH3  
 -----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	gl	diox/w	25°C	75%	U			K1=9.50 B2=17.40	1990ASb (102589)	788
*****										
C24H60N12 L CAS 24904-24-3 (5837)										
1,4,7,10,13,16,19,22,25,28,31,34-Dodecaazacyclohexatriacontane;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	gl	NaCl04	25°C	0.15M	C	M			1992BBa (103586)	789
K(Co(CN)6+H4L)=3.22										
K(Co(CN)6+H5L)=3.61										
K(Co(CN)6+H6L)=3.83										
K(Co(CN)6+H7L)=3.92										
K(Co(CN)6+H8L)=4.20, K(Co(CN)6+H9L)=4.44, K(Co(CN)6+H10L)=4.44										
K(Co(CN)6+H11L)=5.10										
*****										
C34H52N6O H2L Hydroxy-8H-HDP (5950)										
1-Hydroxy-hexadecamethyl-octahydro-diazaporphine;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	vlt	alc/w	21°C	100%	U	I M			1984WRc (106087)	790
K(CoL+2pyridine)=10.5										
K(CoL+2Br)=6.6										
K(CoLBr+Br)=1.6 (spectroscopy)										
Medium: MeOH. In dimethylacetamide, K(CuL+Pyridine)=3.7, K(CuL+2Br)=8.0										
*****										
C36H60O3 L a-Cyclodextrin CAS 10016-20-3 (6946)										
alpha-Cyclodextrin, Cyclohexaamylose;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	nmr	none	RT	0	U				1996LCa (106458)	791
K(CoA+L)=2.69										
Medium: D2O; method: nmr. CoA: aquacobaloxime. Also data for alkyl-substituted cobaloximes. Host-guest complexes.										
*****										
Polymer DNA (4185)										
Deoxyribonucleic acid;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	sp	NaCl	25°C	0.05M	C				2003SEa (108143)	792
K(Co(phen)2A+L)=3.78										
L is calf thymus DNA. A is naphtho[2,3-a]dipyrido[3,2-h:2',3'-f]phenazine-5,18-dione. Medium: 5 mM Tris, pH7.1, 50 mM NaCl buffer.										

Co+++	sp	none	RT	0.0	C				2001SYa (108144)	793
K(CoA+L)=4.57										

Calf thymus DNA used.

A is tetrapyrido[3,2-a:2',3'-c:3'',2''-h:2''',3'''-j]phenazine

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Polymer L (8692)

Haptocorrin;

-----  
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo  
-----  
Co+++ oth none 25°C 0.0 C 1995MJa (108203) 794

K(CoA+L)=16.7

Method: equilibrium dialysis using 57Co. Ligand is chicken serum haptocorrin. CoA is cyanocobalamin (Vitamin B12).

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#### EXPLANATORY NOTES

DATA Flags are :-

T Data at other TEMPERATURES  
I Data with various BACKGROUNDS  
H Data for THERMOCHEMICAL quantities  
M Data for TERNARY Complexes

EVALUATION Flags are :-

T or IUP=T signifies EVALUATION RATING = Tentative by IUPAC

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END