

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 4999 experiments for

(no ligands specified)

3 metals : Co++, Co+, 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 Arsenate CAS 7778-39-4 (1557)
Arsenate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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)₄NClO₄. DH(K1)=-2.7 kJ mol⁻¹;
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⁻¹, DS(K1)=1.9 J K⁻¹ mol⁻¹; DH(B2)=0.8, DH(B3)=0.7, DH(B4)=0.77

Co++ dis non-aq 25°C 100% U 1987GRa (1688) 18
K(CoS6+L=CoS5L+S)=3.23
K(CoS5L+L=CoS2L2+3S)=3.64
K(CoS2L2+L=CoSL3+S)=2.64

Solvent(S)=acetonitrile

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

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

Co++ cal KNO₃ 25°C 0.50M U H 1985BPb (1690) 20
B4=-7.8
DH(B4)=43.1 kJ mol⁻¹; TDS(B4)=-1.7 kJ mol⁻¹

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

Medium (S): DMF. A=N(CH₂CH₂NMe₂)₃

Co++ ISE non-aq 25°C 100% C 1983S0b (1692) 22
B(CoS6+2L=CoS2L2+4S)=9.2
K(CoS2L2+L=CoSL3)=5.30
K(CoSL3+L=CoL4+S)=1.89

Medium: acetone

Co++ sp non-aq 25°C 100% U M 1982SMb (1693) 23
K(CoA2L2+2A)=0.67
K(CoA2L2+XL=X(CoA2L3))=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(ClO₄)₂). 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(CoA2+LiL=CoLA+LiA)=2.93
K(CoA2+2LiL=CoL2+2LiA)=5.40
K(CoL2+LiL=LiCoL3)=2.83
K(LiCoL3+LiL=Li2CoL4)=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⁻¹, DS=14.6 J K⁻¹ mol⁻¹

Co++ sp non-aq 23°C 100% U I B₂=7.3 1974IHa (1697) 27
K₃=2.8
in acetone at 1000 kg/cm². 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⁻¹. 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⁻¹, DS=0.29(25 C) J K⁻¹ mol⁻¹

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

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.

Medium: CH₃CO₂H

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

Medium: HBr.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	kin	non-aq	180°C	100%	U		K1=1.65	1961DLa	(2406) 44
Medium:	liquid	(K,Na)NO3,	m	units					

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
Co++	ISE	NaCl04	25°C	1.00M	U					1987ABd	(2599) 45
									B3=13.7 B5=23.0		

Medium: LiClO4

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

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

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
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Co++	sp	oth/un	25°C	?	U		B2=8.1	1957BIa (3464)	62
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 C6N6Fe---- H4L (2191)
 Hexacyanoferrate (II); Fe(II)(CN)6----

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	con	oth/un	20°C		U T			1972BMe (3548)	63
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K(K2Co3L2(s)=2K+3Co+2L)=-27.8
 K's(K4Co4L3)=-45.7

30 C: Ks=-26.9; K's=-43.8

Co++	ISE	oth/un	25°C	0.0	U			1966MDa (3549)	64
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Kso(Co2L)=-37.32

Co++	vlt	oth/un	20°C	dil	U			1959BSc (3550)	65
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Kso(Co2L)=-15.97

Co++	con	oth/un	25°C	dil	U			1959BSd (3551)	66
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Kso(Co2L)=-16.18

Co++	sol	oth/un	25°C	var	U			1956TGb (3552)	67
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Kso(Co2L)=-14.74

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

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
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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 B3=1.4	1996KMb (4346)	69
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Medium: MeOH, 1.0 M LiClO4.

Co++	sp	non-aq	25°C	100%	U	I	K1=1.3 B3=4.1	B2=2.8	1993LKa	(4347)	70
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 B3=16.3 B4=18.3	B2=11.83	1993SKb	(4348)	71
Medium: N,N-dimethylacetamide 0.1 M R4NX; also by spectroscopy. DH(K1)=25 kJ mol ⁻¹ , DH(B2)=22, DH(B3)=9.2, DH(B4)=1.0											
Co++	sp	non-aq	25°C	100%	U	H	K1=1.6 B3=7.1 B4=8.3	B2=4.0	1990SIa	(4349)	72
Medium: DMSO, 0.4 M Et4NBF4. By calorimetry: DH(K1)=11 kJ mol ⁻¹ , DH(B2)=40, DH(B3)=47.7, DH(B4)=41.9											
Co++	sp	non-aq	25°C	100%	U	H	K1=6.7 K3=2.7 K4= 0.8 approx.	B2=10.90	1989A0a	(4350)	73
In hexamethylphosphoric triamide; 0.1 M (n-Bu)4NClO4. DH(K1)=-15.2 kJ mol ⁻¹ ; 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 B3=-1.71 B4=-4.51	B2= 0.02	1989PSb	(4351)	74
Data for 25-90 C. Values calc from data for LiCl media to 15.0 m. DH(K1)=2.1 kJ mol ⁻¹ , DS(K1)=18.7 J K ⁻¹ mol ⁻¹ ; DH(B2)=2.2, DH(B3)=2.33, DH(B4)=2.2											
Co++	sp	non-aq	25°C	100%	U	H	K1=3.43 B3=11.84 B4=14.13	B2=6.85	1988I0a	(4352)	75
In N,N-dimethylformamide. Bn values also by calorimetry. DH(K1)=8.5 kJ mol ⁻¹ DH(B2)=36.4; DH(B3)=33.9; DH(B4)=27.6											
Co++	sp	non-aq	25°C	100%	U		K1=9.0 K3=3.05 K4=-1.42	B2=15.50	1988PGa	(4353)	76
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				1988SSa	(4355)	78
K4=10.15 Medium: 1,2-dichloroethane. K4: (NBu4)2(Co2Cl6)+2NBu4Cl=2(NBu4)2(CoCl4)											
Co++	sp	oth/un	23°C	6.00M	U		K1=-0.28 B3=-1.9 B4=-1.5		1987CCb	(4356)	79

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	1986GPb	(4358)	81
Medium: N,N-dimethylformamide										
Co++	sp	non-aq	25°C	100%	U		K1=3.50 B3=11.0	B2=1.50	1986GPb	(4359) 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 B3=8.8		1982LPa	(4363) 86
Medium: DMSO, 0.2 M M(ClO4)2										
Co++	sp	non-aq	25°C	100%	U		K1=2.78 K3=3.67	B2=5.26	1982LPb	(4364) 87
Medium: DMSO										
Co++	gl	NaClO4	25°C	3.00M	C	M	K1=2.73 B3=6.53 B4=7.45	B2=4.92	1981FGa	(4365) 88
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 B3=-4.89	B2=-3.25	1979BPb	(4367) 90
Co++	dis	oth/un	25°C	0.10M	U		K1=-1.19 B3=-5.64 B4=-7.38	B2=-3.26	1978BIa	(4368) 91
Co++	sp	KCl	25°C	10.0M	U		K1=1.34 B4=2.57		1978SBa	(4369) 92
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 ⁻¹ , DS=4 J K ⁻¹ mol ⁻¹		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 ⁻²		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⁻¹. 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 1969OKa (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
 $K(3\text{CoCl}_2(\text{MeCN})_2 + 2\text{MeCN}) = -1.8$
 Medium: MeCN. reaction products: $\text{Co}(\text{MeCN})_6 + 2\text{CoCl}_3(\text{MeCN})$

Co++ sp non-aq 80°C 100% U T HM 1968MSe (4398) 121
 $K(\text{CoCl}_2(\text{MeCN})_2 + \text{HgCl}_2) = 0.6$
 Medium: MeCN. 40-80 C. Reaction products: $\text{CoCl}(\text{MeCN})_5 + \text{HgCl}_3$. $K = -0.7(40\text{ C})$,
 $-0.3(50\text{ C})$, $0.0(60\text{ C})$, $0.3(70\text{ C})$. $\text{DH} = 71\text{ kJ mol}^{-1}$, $\text{DS} = 209\text{ J K}^{-1}\text{ mol}^{-1}$

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. $\text{DH}(K1) = 12.1\text{ kJ mol}^{-1}$, $\text{DS} = 25.1\text{ J K}^{-1}\text{ mol}^{-1}$;
 $\text{DH}(K2) = 8.78$, $\text{DS} = 25.1$; $\text{DH}(K3) = 47.2$, $\text{DS} = 108.9$; $\text{DH}(K4) = 3.3$, $\text{DS} = -28$

Co++ sp NaCl ? var U 1967BPd (4400) 123
 $K(\text{Co}(\text{DMG})_2 + \text{L}) = 0.2$
 $K(\text{Co}(\text{DMG})_2\text{L} + \text{L}) = 0.2$
 DMG=dimethylglyoxime. In LiCl, $K(\text{Co}(\text{DMG})_2 + 2\text{L}) = 0.9$, in RbCl: 0.12

Co++ sp NaCl04 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, $\text{DH}(\text{CoCl}_2(\text{H}_2\text{O})_4 + \text{Cl} = \text{CoCl}_3(\text{H}_2\text{O}) + 3\text{H}_2\text{O}) = 48.9\text{ kJ mol}^{-1}$. $\text{DH}(\text{CoCl}_2(\text{MeOH})_4 +$
 $\text{Cl} = \text{CoCl}_3(\text{MeOH}) + 3\text{MeOH}) = 56.8$ in MeOH

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

Co++ cal NaCl04 40°C 2.0M U T H K1=-0.12 1966KLb (4404) 127
 $K1 = -0.14(25\text{ C})$. $\text{DH}(K1) = 2.17(25\text{C})$, $2.09(40\text{C})\text{ kJ mol}^{-1}$. $\text{DS} = 4.64\text{ J K}^{-1}\text{ mol}^{-1}(25\text{C})$

Co++ sp non-aq 300°C 100% U M 19650Gb (4405) 128
 $K = -1.45$
 Medium: molten (K,Al)Cl. $K: \text{Co}(\text{Al}_2\text{Cl}_7)_2 + \text{AlCl}_4 = \text{Co}(\text{Al}_2\text{Cl}_7)\text{AlCl}_4 + \text{Al}_2\text{Cl}_7$

Co++ oth oth/un 0.0 U 1964VGa (4406) 129
 $K_2K_3 = -6.72$

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 1962LIa (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 NaCl04 20°C 0.69M U K1=0.69 B2=0.51 1962MSb (4412) 135

Co++ ix NaCl04 20°C 0.69M U K1=0.69 B2=0.51 1962MSe (4413) 136

Co++ vlt NaCl04 ? 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 NaCl04 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-1

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 NaCl04 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
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DH(K1)=-2.73 kJ mol⁻¹. DS = -5.1 J K⁻¹ mol⁻¹. Medium: 1.0 M NaClO3

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	sol	oth/un	25°C	0.0	U			1987KPb	(6138) 148
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Kout(Co(phen)3+ClO4)=2.58
 Kout(Co(phen)3+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
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Medium: DMSO; K1 in DMSO/benzene (mole fraction 0.3)=1.86

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

DH=4.2 kJ mol⁻¹, DS=-12 J K⁻¹ mol⁻¹ when T=25.

HClO4 from 0 to 17.3M.

Co++	sp	non-aq	25°C	100%	U		K1=1.3	1972MRa	(6141) 151
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Medium: DMSO, 1 M LiClO4(?)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	ISE	R4N.X	25°C	0.05M	U	I	K1=1.28	1983SBa	(6671) 152
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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
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Co++	ISE	NaClO4	25°C	3.00M	U		K1=0.64	1976KBa	(6673) 154
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Co++	cal	oth/un	25°C	0.50M	U	H	K1=0.37	1974ARc	(6674) 155
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DH(K1)=10.3 kJ mol⁻¹, DS=41 J K⁻¹ mol⁻¹

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

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

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

Co++ gl NaNO3 25°C 1.00M U K1=6.27 1984C0a (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⁻¹, 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 1954J0a (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

IO3- HL Iodate CAS 7782-68-5 (1257)

Iodate;

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

Co++ gl NaClO4 25°C 3.0M M I K1=-0.04 1995P0a (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)	
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Ammonia

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	R4N.X	25°C	0.10M	U	M			1995KBb (9074)	175
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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
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K(CoL4CO3+H=CoL4HCO3)=0.0

K(CoLOH2OCO2H+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
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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
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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
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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
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K(CoA+L) < 1.9

A=uridine-5'-triphosphate

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

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

B4=5.9

Solubility also used. $B(\text{Co}(\text{OH})_2\text{L}_2)=11.0$

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: NH_4NO_3 . Also values for many Co- NH_3 -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: NH_4NO_3

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: NH_4NO_3 . $B_6=5.11$. At $I=0$ corr. $K_1=1.99$, $K_2=1.51$, $K_3=0.93$, $K_4=0.64$, $K_5=0.18$, $K_6=-0.74$, $B_6=4.39$. $\text{DH}(B_6)=-54 \text{ kJ mol}^{-1}$

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

$\text{DH}(K_1)=-6.95 \text{ kJ mol}^{-1}$; $\text{DH}(K_2)+\text{DH}(K_3)=-15.1$.

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

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

Hydroxylamine; NH_2OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	EMF	KNO_3	25°C	1.0M	U			K1=4.46	B2=8.46	1974ISa (9257) 188
								K3=3.76		
								K4=3.62		

Co++	gl	NaNO_3	20°C	0.50M	U		K1=0.9		1963SZa	(9258)	189
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NO L Nitric oxide CAS 10102-43-9 (850)

Nitric oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	oth	oth/un	25°C	0.0	U				1961TAb	(9291) 190
								$\text{Kp}(\text{Co}+\text{NO}(\text{g}))=-1.5$		

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 ⁻¹ , DS=110 J K ⁻¹ mol ⁻¹									
Co++	cal	NaNO3	25°C	1.00M	U	H		1975ARa (9557)	194
DH(K1)=-4.86 kJ mol ⁻¹ . DS = -19.2 J K ⁻¹ mol ⁻¹ .									
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
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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
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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

K(CoA+OCN)=3.82
A=1,4,8,11-tetramethyl-1,4,8,11-tetraazacyclotetradecane. By kinetics K1=3.62

B4=2.67

K3=1.04
K4=0.90(0.84?)

$$\text{OH-Hydroxide; HL Hydroxide} \quad (57)$$

*K1=-8.23
*B2=-17.83

*K1=-10.21
*B2=-20.99
*K3=-11.9
K(Co(OH)+NH3)=Co(OH)NH3=1.84

*K1=-8.23
*B2=-17.83

*K1=-7.36
*B2=-15.51

*K1=-1.92

$$K(\text{CoA} + \text{OH}) = 5.28$$

*K1=-7.05

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

*K1=-8.21

*K1=-8.22

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

*K1=-7.36

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

*K1=-7.36

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

$$K(\text{CoO}(s) + \text{H}_2\text{O} = \text{Co} + 2\text{OH}) = -14.7$$

In 0.56 M NaClO₄, $K(\text{CoO}(\text{s}) + \text{H}_2\text{O} = \text{Co} + 2\text{OH}) = -15.1$

*K1=-9.82

$$K_{so}(\text{Co(OH)}_2(s) = \text{Co} + 2\text{OH}) = -14.5$$
$$*B(2,1)=-10.5$$

B3=9.9

*K1=-9.75

$$*B(2,1)=-9.44$$

Medium: 3 M BaClO₄. Alternative model: *K1=-10.20, *B(2,1)=-9.37, *B(4,4)=-29.3

*K1=-9.96

*K1=-9.85(35 C), -9.62(35 C), -9.50(40 C). DH=34.2 kJ mol⁻¹

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	NaCl04	28°C	1.00M	U		1963SSa (10840) 237
						*K1=-9.82	

Co++	gl	NaCl04	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	NaCl04	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	B2=9.2	1950GGa (10848) 245
						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
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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-1, DS=-174 J K-1mol-1.					
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-1, DS=-182 J K-1mol-1.					
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-1, DS=-189 J K-1mol-1.					
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-1, DS=-536 J K-1 mol-1.					
Co++	cal NaClO4	25°C 0.15M	U H	1999CCa (12569)	263
DH(2CoL+O2+OH)=-164 kJ mol-1. 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-1. 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-1, DS=-173 J K-1 mol-1. 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-1,					
DS=-140 J K-1 mol-1. H2A is HO.C6H4.CH:N.CH(COOH)(CH2)2S.CH3.					
Co++	kin non-aq	25°C 100%	U	1998RMa (12574)	268

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

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

$$K(\text{CoA} + \text{O}_2) = -1.64$$
$$K(\text{CoA}_2 + \text{L}) = 3.21$$

Data also for O₂ binding by other Co(II) Schiff base complexes.

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

Method: manometry.

$K(2\text{CoH}-1\text{A}+0\text{Z}=\text{Co}_2(\text{H}-1\text{A})_2\text{O}_2)=9.24$. Method: manometry.

$$K(2\text{CoA}_2 + \text{O}_2 = \text{Co}_2\text{A}_4\text{O}_2) = 5.35$$
$$K(2\text{CoA}_2 + \text{O}_2 + \text{OH} = \text{Co}_2\text{A}_4(\text{OH})\text{O}_2) = -1.87, \quad K(2\text{CoH-1A} + \text{O}_2 = \text{Co}_2(\text{H-1A})_2\text{O}_2) = 5.12.$$

Alternative model: $K(2Co(H-A1)_2+L+OH=Co_2(AH-1)_4(OH)_L)=5.21.$

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

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

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

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 KNO3 0°C 0.10M C M 1992KUa (12585) 279

Method: manometry. $K(2\text{Co}(\text{H}-1\text{A})_2 + \text{L} = \text{Co}_2(\text{H}-1\text{A})_4\text{L}) = 12.57$. HA is Val-phe.

Alternative model: $K(2\text{Co}(\text{H}-1\text{A})_2 + \text{L} + \text{OH} = \text{Co}_2(\text{H}-1\text{A})_4(\text{OH})\text{L}) = 4.08$.

Co++ sp non-aq -20°C 100% U I 1991SDa (12586) 280

$K(\text{CoA}(\text{py})_2 + \text{O}_2) = -4.45$

Medium: pyridine. A=4,4'-oxalyldinitrilodi(pent-2-one). In toluene:

$K(\text{CoAB}_2 + \text{O}_2) = -4.45$, B=1-methylimidazole

Co++ sp NaCl 25°C 0.10M U M 1991YBa (12587) 281

$K(\text{CoA} + \text{O}_2 = \text{CoAO}_2) = -1.12$

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

$K(\text{CoAB} + \text{L} = \text{CoABL}) = -2.74$

$K(\text{CoAC} + \text{L} = \text{CoACL}) = -1.60$

Medium: MeCN. A=BF₂-bridged bis-dimethylglyoximate; B=pyridine;

C=N-methylimidazole. For B=py, DH=-57.3 kJ mol⁻¹: DS=-257 J K⁻¹ mol⁻¹.

Co++ oth oth/un 20°C ? U M 1989CMA (12589) 283

$K(\text{CoA} + \text{O}_2) = 0.98$

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

$K(\text{FeAB} + \text{L}) = -2.58$

A=5,15-Diphenyl-10a,20a-bis(nonanediamidodi-o-phenylene)porphyrin

B=1,2-Dimethylimidazole. Medium: toluene. Data for other similar porphyrins

Co++ cal KNO₃ 25°C 0.10M U H 1988CCa (12591) 285

L=tris(2-aminoethyl)amine. DH(Co+L+OH=CoL(OH))=-56.9 kJ mol⁻¹. DH(CoL)=-41.8

DH(2Co+2L+OH+O₂=Co₂L₂(O₂)(OH))=-251.0

Co++ cal KNO₃ 25°C 0.10M U H 1988CCa (12592) 286

L=3,7-diazanonane-1,9-diamine. DH(Co+L=CoL)=-50.2 kJ mol⁻¹. DH(2Co+2L+O₂=

Co₂L₂(O₂))=-240.6. DH(2Co+2L+OH+O₂=Co₂L₂(OH)(O₂))=-260.2

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

B(Co₂A₂L)=33.08

Medium: 70% v/v dioxan/H₂O. 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

$K(\text{CoA} + \text{L} = \text{CoAL}) = -2.03$

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 CH₃CN

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

$K(\text{CoA} + \text{L}) = 2.3$

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
 $K(\text{CoP}+\text{L}=\text{CoPL})=-3.58$

In toluene. At -42 C, $K=-2.48$; at -54 C, $K=-1.28$. $\text{DH}=-42.2 \text{ kJ mol}^{-1}$;
 $\text{DS}=-205$. 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 $\text{DH}=-45.6$ (B=py); -48.5 (1-Me-imidazole); -18.5 (B=C₄H₈S)

Co++ sp non-aq 25°C 100% U 1986CHb (12598) 292
 $K(\text{Co}_2\text{PH}_2\text{O}+\text{O}_2=\text{Co}_2\text{P}(\text{O}_2)+\text{H}_2\text{O})=1.3$
 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
 $K(2\text{CoA}+\text{O}_2=\text{Co}_2(\text{O}_2)\text{A}_2)=8.30$
 Medium not stated. $K'(2\text{CoA}+2\text{OH}+\text{O}_2=\text{Co}_2(\text{OH})_2(\text{O}_2)\text{A}_2)=23.0$.
 A is cyclam. By calorimetry, $\text{DH}(K)=-86.1 \text{ kJ mol}^{-1}$, $\text{DH}(K')=-132.1$.

Co++ sol oth/un 25°C ? U 1984VGa (12600) 294
 $K(\text{Co}(\text{histamine})_2+\text{O}_2)=3.09$

Co++ vlt KCl 25°C 1.00M U H 1983CCa (12601) 295
 $K(2\text{Co}(\text{en})_2+\text{O}_2+\text{H}_2\text{O})=4.76$
 $B(2\text{Co}+4\text{en}+\text{O}_2+\text{H}_2\text{O})=26.08$
 Full equations are $K(2\text{Co}(\text{en})_2+\text{O}_2+\text{H}_2\text{O}=\text{Co}_2(\text{en})_4(\text{O}_2)(\text{H}_2\text{O})+\text{H})$ and
 $B(2\text{Co}+4\text{en}+\text{O}_2+\text{H}_2\text{O}=\text{Co}_2(\text{en})_4(\text{O}_2)(\text{H}_2\text{O})+\text{H})$. $\text{DH}(K)=-116.3$; $\text{DH}(B)=-233.0 \text{ kJ mol}^{-1}$.

Co++ vlt mixed 25°C 0.10M U M 1981PCa (12602) 296
 $K(\text{CoA}+\text{O}_2=\text{Co}(\text{O}_2)\text{A})=3.62$
 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
 $K(\text{CoA}+\text{L})=3.9$
 Medium: LiClO₄. A=1,4,8,11-tetraazacyclotetradecane

Co++ sp NaClO₄ 25°C 1.0M U M 1980WSa (12604) 298
 $K(\text{CoA}+\text{L})=3.6$
 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
 $K(\text{CoA}+\text{L})=4.6$
 $K(\text{CoA}+\text{CoAL})=4.3$
 Medium: LiClO₄. A=1,4,8,12-tetraazacyclopentadecane

Co++ sp non-aq 20°C 100% U HM 1977CGa (12606) 300
 $K(\text{CoA}+\text{O}_2)=2.81$
 Medium: dimethylformamide. $\text{DH}=-60$ (approx) kJ mol^{-1} . A=salicylidene compound

 Co++ vlt KNO3 25°C 0.10M C M 1976Bmd (12607) 301
 $K(2Co(bpy)_2+O_2)=4.2$
 $K(2Co(bpy)_2+O_2+H_2O=CoX+H)=-2.6$

Co++ cal oth/un 25°C 0.02M U HM 1972PNa (12608) 302
 $K(Co(His)_2+O_2)=6.63$

DH=-126 kJ mol⁻¹. In 1 M KCl, $K(Co(en)_2(H_2O)_2+O_2)=10.84$; DH=-123.

In 0.13 M KCl, $K(Co(histamine)_2(H_2O)_2+O_2)=8.47$. Polarography also used

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

Phosphate;

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

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 1995P0a (13053) 304
 In 3.0 M NaClO4: K1=0.51, B2=1.03

Co++ gl NaNO3 25°C 0.10M C 1981BKb (13054) 305
 $K(Co+HPO_4)=2.18$

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
 $K_{so}(Co_3L_2)=-34.7$

$K_s(CoHL=Co+HL)=-6.7$

PW11039----- H7L (2467)

alpha-Heteromonophospho-polytungstate;

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

Co++ gl NaNO3 25°C 1.00M U K1=4.58 1984C0a (13398) 308

P207---- H4L Pyrophosphate CAS 2466-09-3 (198)

Diphosphate; from (HO)2PO.O.PO(OH)2

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

Co++ gl R4N.X 25°C 0.50M C K1=1.75 B2= 4.17 1979DHa (13545) 309

$K(Co+HL=CoL+H)=-6.70$

$K(Co+2HL=CoL_2+2H)=-12.75$

$K(CoL+HL=CoL_2+H)=-6.05$

Medium: 0.50 M Me4NCl. $K_{so}(Co_2P_2O_7.6H_2O)=-15.3$.

 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⁻¹.

 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)
 Peroxodiphosphate, also cyclic metaposphates, 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)_n n-, K1=2.62(n=4), 3.65(n=6), 4.80(n=8)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	1.00M	U		K1=7.66 K1=5.57 (alpha2 isomer)	1984C0a (13706)	315

 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 K(Co+HL)=4.05	1973TRa (13815)	316

 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⁻¹

 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⁻¹, DS=216 J K⁻¹ mol⁻¹

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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: Me4NC1
-----
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
-----
Co++      ix  NaCl04 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
-----
Co++      ix  NaCl04 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
-----
Co++      ix  NaCl04 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
-----
Co++      vlt oth/un 25°C 0.72M C      K(Co+HL)=6.8 1999AVb (14292) 327
              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 NaCl04 24°C 0.50M C I      K1=5.52      1999CRb (14293) 328

```

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

Ligand is S_5^{--} . Method: polarography. Also data for 0.55 M NaCl.

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

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

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

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

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

$*K_s(\text{CoS}+\text{H}=\text{Co}+\text{HS})=-7.44 \text{ (LS)}$
 $*K_s(\text{CoS}+\text{H}=\text{Co}+\text{HS})=-11.07 \text{ (HS)}$

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

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

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

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

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

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

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

From thermodynamic data. alpha and beta ambiguous

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
 $K_{so}(CoL) = -26.72$
 $K(CoL(s) + 2H = Co + H_2S(g)) = -3.77$

Medium: H₂SO₄

 Co++ oth oth/un 18°C var U 1909BZa (14305) 340
 $K_{so}(CoL) = -25.5$

From thermodynamic data

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

Thiocyanate;

 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 1997BP_a (14748) 341
 IUPAC evaluation

 Co++ sp KNO₃ 25°C 0.50M U 1991BK_a (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 1990IO_a (14750) 343
 $K_3 = 2.4$
 $K_4 = 3.3$

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

 Co++ sp oth/un 25°C 0.50M U I K₁=5.3 1989WM_a (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 1988IS_b (14752) 345
 DH(K₁)=-8.10 kJ mol⁻¹, DH(B₂)=-22.5. DS(K₁)=-4 J K⁻¹ mol⁻¹, 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 1987PG_b (14753) 346
 $B_4 = 12.2$

Medium: N,N-dimethylformamide

 Co++ EMF non-aq 25°C 100% U K₁=5.01 B₂=9.81 1985CC_c (14754) 347
 $B_4 = 19.36$

Medium: propylene carbonate, 0.5 M NaClO₄

 Co++ sp non-aq 25°C 100% U 1985LD_a (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 1985VN_a (14756) 349
 $B_3 = 1.08$
 $B_4 = 0.11$

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 B4=14.5		1974SIb (14760)	353
Medium: acetone;(error in abstract(?))										
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										
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 B4=3.45	B2=2.51	1973SCa (14764)	357
Medium: DMSO, 0.5 M MClO4(M=Li,Na,Et4N)										
Co++	sp	non-aq	25°C	100%	U		K1=2.67 B4=6.76	B2=4.71	1972MRa (14765)	358
Medium: DMSO										
Co++	sp	non-aq	?	100%	U		K2=2.9 K3=2.7 K4=2.5 K6=2.4		1972PBa (14766)	359
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 ⁻¹ . 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 B3=4.0 B4=3.9	B2=1.8	1970SLa (14771)	364		

Co++	nmr	NaClO4	27°C	1.50M	U	H	T	K1=1.2 K3=-0.62 K4=-1.30	B2=1.65	1970ZMa (14772)	365
DH(K1)=16.7 kJ mol ⁻¹ , 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 ⁻¹ , DS=9.2 J K ⁻¹ mol ⁻¹											

Co++	sol	KN03		?	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	KN03	23°C	3.0M	U			K1=0.63 B3=-0.38		1964KUb (14778)	371

Co++	dis	NaClO4	25°C	3.0M	U			K1=-0.45 Kd(CoL2=CoL2(org A))=3.51	B2=-1.07	1963DCa (14779)	372
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 B3=1.8 B4=-0.3	B2=1.6	1962TZa (14784)	377
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 K3=2.15	B2=4.34 1987CPa (15433)	392

S04--	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 ⁻¹ , DS(K1)=58.2 J K ⁻¹ mol ⁻¹										

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 ⁻¹ ,DS=-200.6 J K ⁻¹ mol ⁻¹										

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 ⁻¹ , DS=70.2 J K ⁻¹ mol ⁻¹										

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 ⁻¹ , DS=70 J K ⁻¹ mol ⁻¹										

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 ⁻¹ .										

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-----
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                      1964BUe (16937) 425
                                   Kso=-31.2
*****
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                      1967BPd (16977) 428
                                   K(CoA2+L)=5.1
                                   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
-----

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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 1968RVa (17033) 432
 Kso=-6.93

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 1964SLa (17035) 434
 Kso=-7.08

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

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 1984COa (17232) 437
 K(beta1 isomer)=6.88
 K(beta2 isomer)=6.75
 K(beta3 isomer)=6.82

WO4-- 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.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	oth	NaClO4	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	NaNO3	30°C	0.40M	U		K1=0.68	1970BTa (17580)	442
Co++	EMF	NaClO4	25°C	2.00M	U		K1=0.73 B2=1.18	1970FMa (17581)	443
Co++	sp	NaClO4	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)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaNO3	25°C	0.10M	C		K1=5.31	1994SCa (17697)	445
							K(Co+HL)=2.41		
							K(CoL+H)=4.67		

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

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

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(CoL2Cl2=CoLCl2+L)=4.16		
							K(CoL2Br2=CoLBr2+L)=4.45		
							K(CoL4(NO3)2=CoL3(NO3)2+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 B2=1.16 1966IGa (17805) 449
 K3=0.33

Medium: LiNO3

 Co++ sp alc/w 20°C 95% U B2=1.7 1966SIc (17806) 450
 B6=4.5

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

CH403ClP 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 B2=2.86 1979LGa (18077) 454
 B3=4.17

CH503P 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

CH504P 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; CH₂(PO₃H₂)₂

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 NaNO₃ 25°C 0.10M M K1=3.73 1999SSa (18307) 468

C2H2O2Cl₂ HL CAS 79-43-6 (1282)
Dichloroethanoic acid; Cl₂CH.COOH

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

Co++ gl NaClO₄ 20°C 1.00M U K1=1.3 B2=2.6 1969PJc (18390) 469

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++ gl KNO₃ 35°C 0.10M C M K1=4.35 1997PSb (18730) 470
K(CoL+A)=6.07

H2A is thiamine orthophosphoric acid.

Co++ gl KNO₃ 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 KNO₃ 35°C 0.10M C M K1=4.97 1985RRc (18733) 473
B(CoL(cytidine))=9.17

Co++ gl KNO₃ 35°C 0.10M C K1=4.97 1985RRh (18734) 474

Co++ oth NaClO₄ 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 NaClO₄ 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⁻¹, DS=100 J K⁻¹ mol⁻¹

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 K3=8.13	B2=11.15	1956FSb (18752)	492
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		K(Co+HL)=1.32 K(Co+2HL)=2.74 K(Co+3HL)=3.07	1980LKb (19231)	500

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-Triazoline-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	KN03	25°C	0.50M	U		K1=0.69 B2=1.09 B3=1.21	1982GLa (19252)	503

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	NaCl04	18°C	2.00M	U		K1=0.38	1970FMa (19351)	505
Co++	sp	NaCl04	10°C	2.00M	U		K1=0.00	1970GFa (19352)	506
Co++	EMF	NaCl04	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	KN03	25°C	0.10M	C		K1=5.54	2002BMa (19475)	509
Co++	gl	KN03	25°C	0.10M	U	I	K(Co+HL)=1.37 K(Co+2HL)=2.52	1997DBa (19476)	510

Data also for I=0.5 and 1.0 M

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KN03	25°C	0.50M	U		K(Co+HL)=1.40 K(Co+2HL)=3.40 K(Co+3HL)=4.54	1980LKb (19477)	511

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
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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;
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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=2.77      2003AHa (19496) 513
*****
C2H4OS          HL      Thioacetic acid CAS 507-09-5 (4223)
Thiolethanoic acid; CH3.CO.SH
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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=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
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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      1981BP a (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      1970FMa (19856) 522
B3=0.87
-----
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
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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(CoBO2+2HL=CoBO2(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
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Co++	gl	NaNO3	25°C	0.10M	C	M	K1=4.90 B2= 8.69 K(CoA+L)=3.10	2000KAb (21421)	543
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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
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B(CoLC)=8.03. HA=MOPSO, HB=MOPS, HC=DIPSO.

Co++	gl	NaNO3	25°C	0.10M	U		K1=5.20	1997ISd (21423)	545
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Co++	gl	alc/w	25°C	50%	C		K1=6.19	1997MGb (21424)	546
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Co++	gl	KNO3	35°C	0.10M	C	M	K1=5.21 K(CoL+A)=4.20	1997PSb (21425)	547
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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
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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
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Data for 0-0.09 M and 5-45 C. DH(K1)=-11.2 kJ mol⁻¹, DH(B2)=-26.9,
 DH(B3)=-40.5

Co++	kin	NaClO4	25°C	1.00M	C			1994BCb (21428)	550
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K(CoLCO3+H=CoLHCO3)=0.14
 K(CoLOH2OCO2H+H=CoL(OH2)2+CO2)=0.14

Co++	gl	NaNO3	37°C	0.10M	U	M	K1=4.94	1994MGc (21429)	551
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Data for ternary complexes with 6-aminopenicillanic acid

Co++	gl	NaClO4	25°C	0.20M	C		K1=5.20	1993BAb (21430)	552
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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
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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 1979NL a (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⁻¹, DS=46 J K⁻¹ mol⁻¹; 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⁻¹, DS=53.5 J K⁻¹ mol⁻¹. 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⁻¹, DS=67.3 J K⁻¹ mol⁻¹. 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⁻¹, DS=62.7 J K⁻¹ mol⁻¹;
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
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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
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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

C2H8NO3P H2L CAS 2041-14-7 (1863)
2-Aminoethanephosphonic acid; H2N.CH2.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	C		K1=5.16 B2=8.82 B(CoHL)=13.14	1987KBb (22630)	625
Co++	gl	KNO3	25°C	0.10M	U		K1=4.67 B(CoHL)=12.74 K(Co+L=Co(OH)L+H)=-4.70	1979WNb (22631)	626
Co++	gl	KNO3	25°C	0.20M	C		K(Co+HL)=1.70	1978MAb (22632)	627

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	20°C	0.10M	U		K1=4.90 K(Co+HL)=2.72	1987BPb (22663)	628
Co++	gl	KNO3	25°C	0.20M	C		K(Co+HL)=1.69	1978MAb (22664)	629
Co++	gl	KNO3	25°C	0.20M	C		K(Co+HL)=1.69	1978MAc (22665)	630

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++	sp	non-aq	25°C	100%	C	H	K1=6.41 B2=12.20 B3=15.8	2002CMA (23100)	631
Medium: DMSO, 0.10 M Et4NClO4. By calorimetry: DH(K1)=-53.5 kJ mol ⁻¹ , DS(K1)=-57 mol ⁻¹ ; DH(B2)=-106.2, DS(B2)=-121; DH(B3)=-172.0, DS(B3)=-275.									
Co++	gl	alc/w	25°C	50%	C		K1=6.54	1997MGb (23101)	632
Co++	gl	KNO3	30°C	0.10M	U		K1=6.32	1994RSa (23102)	633
Co++	cal	oth/un	25°C	dil	C	H	K1=5.63 B2=10.44 B3=13.81	19890Fa (23103)	634
Medium: NH4Cl/NH3 buffer, pH 10. DH(K1)=-39.79 kJ mol ⁻¹ , DH(B2)=-66.15, DH(B3)=-97.61.									
Co++	gl	KNO3	35°C	0.10M	U	M	K1=5.64	1989RSb (23104)	635

K(Co(thiodipropanoate)+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-1; DS=-251 J K-1 mol-1									
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 1968H0a (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 1963KV a (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⁻¹

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

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						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						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						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						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	NaNO3	25°C	0.50M	M	K1=2.48	1998KSa (23833)	674	
Co++	gl	NaNO3	25°C	0.10M	U	M	K1=2.70	1998MSe (23834)	675
Co++	gl	NaNO3	37°C	0.10M	U		K1=2.29	1997MGa (23835)	676
Co++	gl	KNO3	35°C	0.10M	C	M	K1=2.54 K(CoL+A)=5.62	1997PSb (23836)	677

H2A is thiamine orthophosphoric acid.

Co++	gl	KCl	25°C	0.10M	C	IH	R	K1=2.47 K3=1.50 K4=1.0	B2=4.44	1997SJa (23837)	678
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IUPAC evaluation. I=0 M: K1=2.46, K2=1.96, K3=1.50, K4=1.0.

I=3.0: K1=2.70, K2=2.17, K3=1.59, K4=1.0

Co++	gl	NaClO4	25°C	0.10M	C	M	K1=2.44	1994MGb (23838)	679
							K(Co(succinate)+L)=3.30 K(Co(malate)+L)=3.28 K(Co(tartrate)+L)=3.08		

Co++	gl	NaNO3	37°C	0.10M	U		K1=2.29	1994MGc (23839)	680
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Data for ternary complexes with 6-aminopenicillanic acid

Co++	gl	NaNO3	25°C	0.10M	M	M	K1=2.43 K(CoA+L)=2.38	1993JCa (23840)	681
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HA=N,N-bis(2-hydroxyethyl)glycine (bicine)

Co++	gl	KNO3	37°C	0.15M	C		K1=2.324	B2= 4.27	1989KKd (23841)	682
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Co++	gl	NaNO3	37°C	0.15M	U		K1=3.027	B2=5.601	1983ERa (23842)	683
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Co++	gl	NaNO3	37°C	0.10M	U	M		1983ERa (23843)	684
							B(CoL(Gly))=7.889 B(CoL4(Gly))=15.514		

Co++	gl	KNO3	25°C	0.50M	U		K1=2.70 B3=6.13 B4=7.62 B5=7.70	B2=4.78	1983LWa (23844)	685
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Co++	gl	NaNO3	25°C	0.10M	A	M		1982SSa (23845)	686
							K(Co(ATP)+L)=1.85		

Co++	gl	NaNO3	25°C	0.10M	A	M	K1=2.40 K(Co(ATP)+L)=1.85 K(CoA+L)=2.04	1982SSa (23846)	687
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A=uridine-5'-triphosphate

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⁻¹, 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⁻¹, DS=21 J K⁻¹ mol⁻¹; 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⁻¹, DS=-10.7 J K⁻¹ mol⁻¹; 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⁻¹, DS=-12 J K⁻¹ mol⁻¹. 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;				

By calorimetry: $\Delta H(K1) = -9.66 \text{ kJ mol}^{-1}$, $\Delta S(K1) = 24 \text{ J K}^{-1} \text{ mol}^{-1}$;
 $\Delta H(B2) = -18.4$, $\Delta S(B2) = 19$; $\Delta H(B3) = -30$.

C3H4N2S L CAS 95-50-4 (821)
2-Aminothiazole; C3H2NS.NH2

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⁻¹, DS(K1)=-102 J K⁻¹ mol⁻¹.

C3H4N2S HL Imidazolethiol CAS 872-35-5 (1823)
2-Mercaptoimidazole; C3H3N2.SH

C3H4O3 HL Pyruvic acid CAS 127-17-3 (1152)
2-Oxopropanoic acid; CH₃.CO.CO₂H

C3H4O4 H2L Malonic acid CAS 141-82-2 (79)
Propanedioic acid; CH2(COOH)2

Co++ gl KN03 35°C 0.10M C M K1=3.08 1997PSb (24353) 703
K(CoL+A)=5.46

Co++	g1	KCl	25°C	0.10M	C	M	K1=2.92	B2=4.60	1992MMb (24354)	704
							K3=0.7			
							K(CoHA+L=CoHAL)=3.15			
							K(CoH2A+L=CoH2AL)=3.39			
							K(CoH2A+HL=CoH3AL)=4.7			

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 B(CoHL)=5.86	1989FRa (24355)	705
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 B(Co(bpy)2L)=14.05	1975DOc (24357)	707
Co++	vlt	NaClO4	25°C	1.00M	U		K(Co+HL)=0.54	1975TQa (24358)	708
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 K(Co+HL)=0.82	19680Va (24361)	711
Co++ At 7 C: K1=2.78	kin	NaClO4	12°C	0.10M	U	T	K1=2.80	1965CAB (24362)	712
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 K(Co+HL)=2.21	1963CAa (24365)	715
Co++ Medium: 0 corr. DH(K1)=12.1 kJ mol ⁻¹ , DS=112.4 J K ⁻¹ mol ⁻¹	cal	oth/un	25°C	0.0	U	H		1963MNd (24366)	716
Co++ K1=3.60(I=0), 3.135(I=0.02), 2.981(I=0.04), 2.820(I=0.08)	dis	NaCl	25°C	0.16M	U	I	K1=2.658	1961MMa (24367)	717
Co++ DH(K1)=10.4 kJ mol ⁻¹ , DS=106 J K ⁻¹ mol ⁻¹ . K1=3.71(15 C), 3.73(25 C), 3.85(35 C), 3.88(45 C)	gl	oth/un	0°C	->0	U	T H	K1=3.62	1961NNa (24368)	718
Co++ METHOD:spJ, TEMP.:18-25	oth	oth/un	18°C	0.40M	U		B2=3.14	1953BBb (24369)	719
Co++ ***** C3H4O5 H2L Tartronic acid CAS 80-69-3 (839) Hydroxypropanedioic acid; HO.CH(COOH)2	EMF	oth/un	25°C	0.04M	U		K1=3.72	1949SDa (24370)	720

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++ gl NaCl04 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 NaCl04 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 NaCl04 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 NaCl04 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	KN03	25°C	0.50M	U		K1=1.95 B2=3.39 B3=4.58 B4=5.51	1983Gwa (24792)	728

Co++	gl	KCl	25°C	0.10M	U		K1=1.86 K(Co+H-1L)=3.38 K(Co+2H-1L)=5.59	1981BDb (24793)	729
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Co++	gl	oth/un	25°C	0.01M	U		B2=5.7	1956NEb (24794)	730
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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	1958BP a (24800)	731

C3H6O5S2 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 B3=11.25	1970BPd (24872)	732

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
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Co++	vlt	NaClO4	25°C	1.00M	U T		K1=0.04 B2=0.40	1971TRd (24973)	735
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50 C: K1=0.34, K2=0.72

Co++	EMF	NaClO4	25°C	2.00M	U		K1=0.70 B2=0.62 B3=1.18	1970FMa (24974)	736
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Co++	sp	NaClO4	25°C	2.00M	U		K1=0.78 B2=0.11	1970GFa (24975)	737
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C3H6O2S H2L Thiolactic acid CAS 79-42-5 (366)

2-Mercaptopropanoic acid; CH3.CH(SH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl04	30°C	0.10M	U		K1=7.26 B2=12.34	1988NDa (25127)	738
Co++	gl	NaCl04	25°C	0.10M	U	M	K(CoL+dientriamine)=5.98	1985MSa (25128)	739
Co++	gl	NaCl04	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.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl04	25°C	2.00M	U		K1=0.86 B2=1.18 B3=1.23	1976KGa (25257)	741
Co++	sp	NaCl04	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; CH3.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl04	25°C	2.00M	U		K1=1.48 B2=2.42 B3=2.74	1976KGa (25376)	743
Co++	gl	NaCl04	20°C	2.00M	U		K1=1.39 B2=2.36 B3=2.74	1972LNa (25377)	744
Co++	oth	NaCl04	20°C	2.00M	U		K1=1.38 B2=2.30 B3=2.3	1972LNa (25378)	745

Method: polarimetry

Co++	sp	NaCl04	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	NaCl04	25°C	1.0M	U		K1=1.37 B2=2.32 K3=0.2	1967TGa (25381)	748
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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 B3=2.54	1975PGa (25628)	751

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 K(CoL+A)=4.01	1997PSb (26111)	753

H2A is thiamine orthophosphoric acid.

Co++	gl	KNO3	25°C	0.20M	U	T HM	K1=4.69 K(Co(bpy)+L)=4.31	1996JLd (26112)	754
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Data for 25-45 C. DH(K1)=-10.5 kJ mol⁻¹, DS(K1)=3.4 J K⁻¹ mol⁻¹;
 DH(Co(bpy)L)=-7.1, DS(Co(bpy)L)=60.2.

Co++	gl	alc/w	20°C	50%	M	M	K1=4.78 K(CoA+L)=4.64	1995AMb (26113)	755
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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 K3=2.46 B3=10.27	1994VKb (26115)	757

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 ⁻¹ , 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 K(CoA+L)=4.19 B(CoAL)=11.24	1989MAd (26119)	761

H2A is N-(2-acetamido)imino diethanoic acid.

Co++	gl	KNO3	35°C	0.20M	U	M	K1=4.35 B2=7.77 K(CoA+L)=3.89	1989RVa (26120)	762
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A=bis(imidazol-2-yl)methane

Co++	gl	KNO3	25°C	0.20M	U	M	K1=4.71 K(Co(bpy)+L)=4.39	1988BSc (26121)	763
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	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	1984KDb (26123)	765
Co++	gl	KCl	25°C	0.20M	C		K1=4.24 B2= 7.65 B3=9.91	1983KGb (26124)	766
Co++	gl	none	25°C	0.00	U T	T	K1=4.718 B2=8.41 K1(30 C)=4.669; K2(30 C)=3.640; K1(35 C)=4.667; K2(35 C)=3.654	1971GKa (26125)	767
Co++	gl	KCl	25°C	0.05M	U T H	T	K1=4.354 B2=7.86 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 ⁻¹ , DH(K2)=-9.6, DS(K1)=54 J K ⁻¹ mol ⁻¹ , DS(K2)=33 (at 25C)	1971GKa (26126)	768
Co++	gl	NaClO4	25°C	0.10M	U	T	K1=4.44	1970GPa (26127)	769
Co++	cal	KNO3	22°C	0.10M	U	H	DH(B2)=-24.7 kJ mol ⁻¹ , DS=83.6 J K ⁻¹ mol ⁻¹	1967SSl (26128)	770
Co++	gl	KCl	40°C	0.20M	U T H	T	K1=4.25 B2=7.33 K1=4.41(15 C),4.36(25 C); K2=3.27(15 C),3.20(25 C). DH(K1)=-10.9 kJ mol ⁻¹ , DS=46 J K ⁻¹ mol ⁻¹ ; DH(K2)=-13.0, DS=16.7	1965SMb (26129)	771
Co++	oth	KNO3	20°C	0.10M	U		K1=5.0 B2=8.20 K3=2.4	1964JOa (26130)	772
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 K3=1.75	1953TSa (26132)	774
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
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Co++	oth	NaNO ₃	35°C	0.10M	U	M			1985V _{Sa} (26440)	778
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K(Co(NTA)+L)=3.60

By electrophoresis

Co++	gl	NaNO ₃	20°C	0.10M	U			K ₁ =3.58 B ₂ =6.64	1978LE _b (26441)	779
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Co++	oth	oth/un	45°C	0.0	U	T H T		K ₁ =4.06	1967BB _d (26442)	780
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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		K ₁ =3.53 B ₂ =5.98	1965SM _b (26443)	781
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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	B ₂ =7	1950AL _a (26444)	782
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C₃H₇N₂O₂ 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
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Co++	gl	KNO ₃	37°C	0.15M	C	M		K ₁ =4.325 B ₂ = 7.76 B ₃ =10.161	1989KK _d (26538)	783
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B(CoH-2L)=-14.434
B(Co(imidazole)L)=6.419

C₃H₇N₂O₂ 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
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Co++	gl	KNO ₃	25°C	0.10M	U	M			1972IV _c (26597)	784
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K(CoA+L)=3.72

H₂A=methyliminodiethanoic acid

Co++	gl	oth/un	25°C	0.01M	U			K ₁ =4.34 B ₂ =7.82	1959DL _b (26598)	785
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C₃H₇N₂O₂S 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
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Co++	gl	KCl	25°C	0.50M	M	T H		K ₁ =11.20	1988MA _a (26745)	786
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Data for 25-40 C. DH(K₁)=48.12 kJ mol⁻¹, DS(K₁)=-54.1 J K⁻¹ mol⁻¹.

Co++	gl	NaClO ₄	25°C	0.10M	U	M			1984KP _b (26746)	787
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K=(total concentration of bound oxygen (measured by gasometry))/(CoL2)2(O2),
reaction: 2CoL+O2=CoL2.O2.CoL2

Co++ g1 NaCl 25°C 3.00M M K1=4.32 B2=7.90 1988BFa (27102) 798
B3=10.6

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-----
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

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D-, L- and DL-serine studied.

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-----
Co++      gl  NaCl04  25°C 3.00M U      K1=4.58   B2=8.57   1973WIa (27105) 801
                        B3=11.55
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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
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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

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A=histamine

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-----
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-1, DS=92.0 J K-1 mol-1
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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
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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
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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=2.43     1985WTa (27211) 807
*****
C3H7NO3          HL      iso-Serine      CAS 632-12-2 (351)
DL-3-Amino-2-hydroxypropanoic acid; H2N.CH2.CH(OH).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      M          1988ACa (27229) 808
                        B(CoHL)=10.4
                        B(Co2H-2L2)=-5.61
Also B(CoZnH-2L2)=-3.74; B(CoCdH-2L2)=-4.97.
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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)

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2-Amino-3-sulfonatopropanoic acid; H₃S.CH₂.CH(NH₂).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO ₃	25°C	0.50M	U			K1=5.76 B2=9.93	1979DZb (27253)	810

C ₃ H ₇ N ₅		L						(6903)		
5-(2-Aminoethyl)-1H-tetrazole; NH ₂ .CH ₂ .CH ₂ .CHN ₄										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO ₃	20°C	0.10M	U			K1=6.82 B2=11.07	1978LEb (27291)	811

C ₃ H ₇ O ₅ P		H ₃ L						CAS 5926-41-4	(3549)	
2-Phosphonopropanoic acid; CH ₃ .CH(P ₃ H ₂).COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	R ₄ N.X	25°C	0.25M	U			K1=2.54	1957WBa (27299)	812
Medium: 0.1-0.4 M (C ₃ H ₇) ₄ NI										

C ₃ H ₇ O ₆ P		H ₂ L						(6830)		
3-Hydroxy-2-oxopropylphosphoric acid; CH ₂ (OH).CO.CH ₂ .OP ₃ H ₂										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO ₃	25°C	0.10M	U			K1=1.84	1992LCb (27320)	813

C ₃ H ₇ O ₇ P		H ₃ L						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	R ₄ N.X	25°C	0.25M	U			K1=2.97	1957WBa (27329)	814
Medium: 0.1-0.4 M (C ₃ H ₇) ₄ NI										

C ₃ H ₈ N ₅ P		H ₃ L						3-Phosphono-Ala CAS 20263-06-3	(1509)	
2-Amino-3-phosphonatopropanoic acid; (H ₂ O ₃ P)CH ₂ .CH(NH ₂).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	KNO ₃	25°C	0.20M	C			K1=6.52 B2=10.81	1978MAb (27348)	816
K(Co+HL)=2.56										
K(CoL+HL)=2.24										

C ₃ H ₈ N ₅ P		H ₃ L						CAS 23052-80-4	(1508)	
3-Amino-3-phosphonatopropanoic acid; (H ₂ O ₃ P)(NH ₂)CH ₂ .CH ₂ .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
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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
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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
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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
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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
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 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
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 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(ClO4)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
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 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			1984JCa (27826)	834

K(CoA2+L)=0.86
 In toluene, A=N-Propylsalicylalimine, DH=-23.3 KJ mol-1, DS=-62.9 J K-1 m-1
 At 2 C, K=1.12; 43 C, K=0.54

Co++ sp non-aq 2°C 100% U M 1984JCa (27827) 835
 K(CoA2+L)=0.67
 In DMF, A=N-Propylsalicylalimine

Co++	ISE	R4N.X	25°C	2.00M	U		K1=2.12 B2=3.65 K3=1.24 K4=1.18	1969PMc (27828)	836
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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	KNO3	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

C3H11N06P2 H4L (6772)
(Dimethylamino)-N-methylenediphosphonic acid; (CH3)2N.CH(PO3H2)2

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

Co++ gl KCl 25°C 0.10M M K1=7.29 1978GMf (28409) 850
K(Co+HL)=6.09

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++ 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

B(CoHL)=15.94
B(CoH2L2)=30.71

C3H11N2O3P H2L CAS 23575-68-0 (4244)

Ethylenediamine-N-methylenephosphonic acid; H2N.CH2.CH2.NH.CH2.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	oth/un	25°C	0.10M	U		K1=8.0 B2=13.40 K(Co+HL)=3.15	1972AUa (28464)	854

C3H11N3 L CAS 21292-99-6 (2975)

Propane-1,2,3-triamine; H2N.CH2.CH(NH2).CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.15M	C		K1=7.18 B(CoHL)=14.024	1997CSa (28485)	855

Co++	gl	KCl	20°C	0.10M	U		K1=6.8 K(Co+HL)=4.1	1950PSa (28486)	856
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C3H12NO9P3 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++	gl	KNO3	25°C	0.10M	C		K1=14.0 K(CoL+H)=6.18 K(CoHL+H)=5.09 K(CoH2L+H)=3.6	1989SAa (28545)	857

Co++	gl	KCl	25°C	0.1M	M		K1=14.37 K(Co+HL)=8.53 K(Co+H2L)=6.39 K(Co+H3L)=4.79	1975MNa (28546)	858
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C4H2O4 H2L Squaric acid CAS 2892-51-5 (439)

3,4-Dihydroxy-3-cyclobutene-1,2-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	oth	NaClO4	25°C	0.50M	U		K1=1.62	1969TWa (28634)	859

Method: paper chromatography

C4H3N2O2Br H2L 5-Bromouracil CAS 51-20-7 (8651)

5-Bromo-2,4-dihydroxypyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Also data for ternary complexes. $K(\text{CoLOH}+\text{OH})=4.25$.

C4H3N2O2F HL 5-Fluorouracil CAS 51-21-8 (4277)
5-Fluoro-2,4(1H,3H)-pyrimidinedione;

Co++ gl NaNO₃ 25°C 0.10M U M K₁=5.00 1996SGa (28692) 861
K(CoA+L)=5.17

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

Co++	gl	NaNO3	25°C	0.10M	C	M	K1=9.60	2000SSd (28700)	862
							K(Co+HL)=5.91		
							K(Co+HL+OH)=12.90		
							K(CoHL+OH)=6.25		
							K(Co+L+20H)=18.52		

Also data for ternary complexes. $K(\text{CoLOH}+\text{OH})=4.20$.

C4H3N3O3S	H3L	Thiovioluric	CAS 23036-77-3	(2000)
2-Thio-4,5,6(H)-pyrimidinetetrone 5-oxime				

Co++ g1 NaNO3 25°C 0.50M C K1=2.58 B2= 4.77 1984HNb (28716) 863

$$K(\text{Co}+\text{H}_2\text{L})=2.61$$
$$K(\text{Co}+2\text{H}_2\text{L})=4.77$$

C4H3N3O4 H3L Violuric acid CAS 26351-19-9 (1208)
2,4,5,6-(1H,3H)Pyrimidinetetrone-5-oxime, 5-isotonitrosobarbituric acid;

Co++ gl NaNO3 25°C 0.50M C K1=2.00 B2= 5.00 1984HNb (28743) 865

Co++ g1 NaNO3 25°C 0.50M U K1=2.4 B2= 4.70 1978DDa (28744) 866

C4H3N3O4 H3L Oxonic acid CAS 937-13-3 (1296)
4,6-Dihydroxy-1,3,5-triazine-2-carboxylic acid; C3N3(OH)2.COOH

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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  Dilituric 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 2002MGb (28763) 868
*****
C4H4N2      L    Pyridazine    CAS 289-80-5 (1484)
1,2-Diazine, Pyridazine; cyclo(-N:N.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 1982SOa (28789) 870
Medium: CHCl3. HA=O,O'-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)
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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;									

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;									

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									

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

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++	gl	NaCl04	25°C	0.10M	M		K(Co+HL)=1.12 K(Co(atp)+HL)=1.54	1995LWa (29399)	891

Co++	gl	NaNO3	37°C	0.10M	U	M	K1=1.60 B(CoAL)=5.04 *K(CoAL)=-7.53	1994MGd (29400)	892
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HA is 6-aminopenicillanic acid.

Co++	gl	KNO3	35°C	0.10M	U	M	K1=2.31 B(CoHLAsp)=8.19 B(CoLAsp)=6.41 K(CoL+Gly)=5.07	1989SRe (29401)	893
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Co++	gl	KNO3	35°C	0.10M	U	M	K(Co+HL+HA)=8.53 K(Co(HL)A+H)=5.23 K(Co+HL+D)=9.15 K(Co+HL+C)=11.13	1986RRe (29402)	894
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HA is glycine; H2D is oxalic acid; C is histamine.

Co++	gl	KNO3	35°C	0.10M	U	T H	K(Co+HL)=2.31 K(Co+2HL)=3.05	1983KSa (29403)	895
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Co++	gl	KNO3	30°C	0.10M	U		K1=5.2	1983SKa (29404)	896
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Co++	gl	KNO3	45°C	0.10M	U		K(Co+HL)=2.8	1974KKa (29405)	897
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C4H5N3O2 HL (1327)
 4-Oximino-3-methyl-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=3.57 B2=5.65	1981SSc (29428)	898

At 30 C: K1=3.53, B2=5.53

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	non-aq	20°C	100%	C	H	K(CoP+L)=2.34	1997SZa (29472)	899

Medium: CH₂Cl₂. Data for 15-30 C. H₂P is 5,10,15,20-tetra(4-methylphenyl)-porphyrin. DH= -13.2 kJ mol⁻¹, DS=-9.7 J K⁻¹ mol⁻¹.

 Co++ gl NaClO₄ 25°C 0.10M C M 1994MGB (29473) 900
 K(Co(malate)+L)=2.72

Co++ gl KNO₃ 25°C 0.50M U K1=1.73 B2=3.05 1974LKa (29474) 901
 B3=3.84
 B4=6.16

 C₄H₆N₂ L Methylpyrazole CAS 453-58-3 (368)
 3-Methyl-1,2-diazole; C₃H₃N₂.CH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO ₃	25°C	0.50M	U		K1=1.43 B2=2.51 B3=3.30	1975LWc (29502)	902

 C₄H₆N₂ L CAS 7554-65-6 (2052)
 4-Methyl-1,2-diazole; C₃H₃N₂.CH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO ₃	25°C	0.50M	U		K1=1.54 B2=2.75 B3=3.63 B4=4.19 B5=4.43	1978LKc (29511)	903

 C₄H₆N₂ L 4-Me-Imidazole CAS 822-36-6 (353)
 4-Methyl-1,3-diazole; C₃H₃N₂.CH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO ₃	25°C	0.50M	U		K1=2.34 B2=4.09 B3=5.33 B4=6.67	1977LOa (29526)	904

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	non-aq	19°C	100%	U T			2000WJa (29561)	905

K(CoA₂+L)=3.58
 K(CoA₂L+L)=0.71

Medium: acetonitrile. Also data at 0 and 35 C. HA: (difluoroboryl)-dimethylgloxime. DH(CoA₂+L)=-26.0, DH(CoA₂L+L)=-18.7 k J mol⁻¹.

 Co++ gl NaNO₃ 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: CH₂Cl₂. Data for 15-30 C. H₂P is 5,10,15,20-tetra(4-methylphenyl)-porphyrin. DH= -29.8 kJ mol⁻¹, DS=-42.3 J K⁻¹ mol⁻¹.

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⁻¹.

Co++ cal NaNO₃ 25°C 1.0M C 1983ARa (29565) 909

DH(K₁)=-16.94 kJ mol⁻¹, DS(K₁)=-10.9 J K⁻¹ mol⁻¹.

Co++ sp non-aq 23°C 100% U TIHM 1982RWb (29566) 910

K(CoA+L)=2.16

Medium: CH₃Cl. A=Tetra(4-methoxyphenyl)porphyrin. In ClCH₂.CH₂Cl: 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⁻¹.

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+O₂)=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 O₂ adduct. At 30 C: K(CoA+L)=3.53; 39 C: 3.33; 49 C: 3.13

Co++ gl KNO₃ 25°C 0.16M M K₁=2.29 B₂=4.25 1977ASe (29572) 916

B₃=5.32

B₄=6.70

Co++ gl KNO₃ 25°C 0.50M M K₁=2.40 B₂= 4.40 1977LBb (29573) 917

B₃=5.85

B₄=6.95

C₄H₆N₂O

L

CAS 13148-65-7 (2050)

2,5-Dimethyl-1,3,4-oxadiazole; C2N2O(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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; H00C.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 K(CoL+gly)=4.80 K(CoL+ala)=4.75 K(CoL+leu)=4.35 K(CoL+asp)=6.86	1997ISd (29915)	929

Co++	gl	NaCl	25°C	0.50M	C		K1=1.26 B(CoHL)=5.57	1989FRa (29916)	930
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Co++	cal	KCl	25°C	0.10M	U	H		1967MNC (29917)	931
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DH(K1)=13.4 kJ mol⁻¹, DS=87.8 J K⁻¹ mol⁻¹

Co++	gl	oth/un	25°C	0.0	U		K1=2.37	1965MOb (29918)	932
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Co++	ix	oth/un	25°C	0.0	U		K1=2.41	1965SMf (29919)	933
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Co++	gl	NaClO4	20°C	0.10M	U		K1=1.70 K(Co+HL)=0.99	1963CAa (29920)	934
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Co++	dis	oth/un	25°C	0.16M	U	I	K1=1.916	1961MMA (29921)	935
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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
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DH(K1)=10.0 kJ mol⁻¹ 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
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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; HOOCH(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; HOOCH2SCH2.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; HOOCH(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 1977CAd (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; H00C.CH2.S.S.CH2.C00H

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; H00C.CH2.Se.CH2.C00H

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; H00C.CH2.CH(OH).C00H

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=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)
K(Co+H2L)=1.64
K(Co+HL)=2.86

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl04	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	NaCl04	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; H00C.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; H00C.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: isotachophoresis. 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; H00C.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									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaNO3	30°C	0.40M	U		K1=0.54	1970BTa (31497)	978

C4H7NO4		H2L					CAS 56-84-8	(21)	
Aminobutanedioic acid; H2N.CH(CH2.COOH).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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 K(CoA+L)=7.69	1995AMb (31794)	989
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 K3=11.35 K(Co+HL)=0.97	1992SZb (31796)	991
Co++	gl	KNO3	30°C	0.10M	U		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	1990APa (31797)	992
Co++	gl	KNO3	25°C	0.10M	U	M	K1=6.30 K(CoA+L)=8.50	1989MAc (31798)	993
H4A is adenosine-5'-triphosphoric acid.									
Co++	gl	KNO3	25°C	0.10M	C	M	K1=6.20 K(CoA+L)=9.28 B(CoAL)=16.33	1989MAd (31799)	994
H2A is N-(2-acetamido)imino diethanoic acid.									
Co++	gl	KNO3	35°C	0.20M	U	M	K1=5.78 B2=10.50 K(CoA+L)=5.10	1989RVa (31800)	995
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		K1eff=7.60	1977HDa (31802)	997
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
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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										

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										

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 B3=0.99	1982GLa (32451)	1016

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	NaClO4	25°C	0.30M	U	I			1982PNa (32520)	1017
K(Co+2HL)=9.98										
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
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Co++ sp NaClO4 ? 6.0M U I 1968BP a (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 1958BP a (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 2001BT a (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 1999BI a (32668)1027

Co++ gl KNO3 25°C 0.10M M M K1=4.38 1996AE a (32669)1028
Data for ternary complexes with dipicolinic acid.

Co++ gl NaCl 25°C 1.00M C K1=4.88 B2=8.77 1996BF b (32670)1029

Co++ gl KNO3 0°C 0.10M U M K1=4.79 B2=8.78 1994VK b (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 1993BA b (32672)1031

Co++ gl KNO3 25°C 0.15M U K1=4.51 B2=8.01 1987FZ a (32673)1032

Co++ gl KNO3 25°C 0.10M U T H K1=4.48 B2=8.12 1980ZY b (32674)1033

Co++ gl NaClO4 25°C 3.00M C K1=4.903 B2=9.029 1974BW a (32675)1034
B3=11.855

Co++ gl KNO3 25°C 0.10M U K1=4.51 B2=8.01 1965RW a (32676)1035

Co++ gl KNO3 25°C 0.15M U K1=4.55 B2=8.13 1953TS a (32677)1036
K3=1.83

Co++ gl oth/un 20°C 0.01M U B2=8.40 1950AL a (32678)1037

C4H8N2O3 HL Gly-Gly CAS 556-50-3 (54)

Glycyl-glycine; $\text{H}_2\text{N}.\text{CH}_2.\text{CO}.\text{NH}.\text{CH}_2.\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.1M	U			K(Co+HL)=3.49 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	NaNO3	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.	1987MOB (32998)	1040
Co++	oth	NaCl04	35°C	0.10M	C	M		K1=3.30 B2= 5.50 K(Co(anta)+L)=2.69 Method: paper electrophoresis. Medium pH 8.5.	1986SYa (32999)	1041
Co++	gl	NaNO3	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	NaNO3	30°C	0.10M	U			B(CoH-1L)=-5.68	1979EHa (33002)	1044
Co++	gl	KNO3	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

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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
0 C: B2=6.96
-----
Co++      gl  oth/un 25°C 0.02M U T    K1=3.23  B2=5.79  1956DRb (33010)1052
40 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 ->0 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
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	oth	NaCl04	25°C	2.0M	U		K1=0.62	1990FTa (33320)	1060
Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.									
Co++	sp	NaCl04	25°C	2.00M	U	I	K1=0.59 B2=0.76	1974GMb (33321)	1061
Co++	EMF	NaCl04	25°C	2.00M	U		K1=0.66 B2=0.88	1970FMa (33322)	1062
Co++	sp	NaCl04	25°C	2.00M	U		K1=0.61	1970GFa (33323)	1063

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
Co++	gl	KCl	30°C	0.10M	U		K(Co+HL)=2.15	1964PCa (33361)	1064

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
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	NaCl04	25°C	1.0M	U		K1=1.45 B2=2.43 K3=0.3	1967TGa (33441)	1067
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	NaCl04	25°C	2.0M	U		K1=1.46	1990FTa (33574)	1068
Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.									
Co++	EMF	NaCl04	25°C	2.00M	U		K1=1.49 B2=2.38 B3=3.04	1978MMg (33575)	1069

Co++ sp NaCl04 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 NaCl04 25°C 2.0M U K1=0.83 1990FTa (33616)1072

Methods: averaged results from potentiometric, polarographic and spectrophotometric measurements.

Co++ EMF NaCl04 25°C 2.00M U K1=0.91 B2=1.08 1978MMg (33617)1073

B3=1.26

Co++ sp NaCl04 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 NaCl04 25°C 2.00M U K1=0.45 1978MMg (33653)1075

Co++ sp NaCl04 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⁻¹.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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 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⁻¹, DS=45 J K⁻¹ mol⁻¹; 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⁻¹, DS=92 J K⁻¹ mol⁻¹

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⁻¹, DS(B2)=219 J K⁻¹ mol⁻¹.

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-methylenepropene;

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
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	1976GPb	(34566)1116

 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 B(Co2L)=8.807 B(CoH-1L2)=1.429	1989LEc	(34601)1119

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	KN03	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++ g1 KN03 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		K(CoA2+L)=0.68	1984JCa (34728)	1124

In toluene, A=N-(2-Methylpropyl)salicylaldimine, DH=-18.6KJ mol⁻¹, DS=-49.9 J K⁻¹ mol⁻¹. 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⁻¹, 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⁻¹, DS=-67.5 J K⁻¹ mol⁻¹

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⁻¹, DS=-58.7 J K⁻¹ mol⁻¹

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 NaCl04 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); H00C.CH2.N(CH2.P03H2)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

C4H11N2O3P HL (7917)
(Glycylamino)methyl(methylphosphinic acid);

Co++ g1 KN03 25°C 0.10M C K1=3.20 B2= 5.79 2001LKa (35199)1140
B(ZnHL)=9.61

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

Co++ g1 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			

Co++ g1 KN03 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
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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⁻¹

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
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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⁻¹,
DS(K1)=-53 J K⁻¹mol⁻¹; 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⁻¹, DS(K1)=-23 J K⁻¹ mol⁻¹
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 Et4NClO4. 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
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Co++	gl	KCl	25°C	1.0M	U		K1=6.58	B2=11.83	1950EDa (35547)	1154
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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
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Co++	gl	KNO3	30°C	1.0M	U T H		K1=5.09	B2=9.01	1954GFa (35566)	1155
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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
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Co++	gl	NaNO3	25°C	0.10M	M		K1=3.89		1999SSa (35583)	1156
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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
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Co++	gl	KCl	25°C	0.20M	C		K1=7.95		2000KKa (35603)	1157
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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
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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
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Co++	gl	KNO3	20°C	0.10M	U		K1=6.25		1962ANb (35632)	1159
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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
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 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⁻¹, 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⁻¹, 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⁻¹, 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
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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
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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-Bromoorotic CAS 15018-62-9 (3629)
1,2,3,6-Tetrahydro-2,6-dioxo-5-bromo-4-pyrimidinecarboxylic acid;

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

Co++ gl R4N.X 25°C 0.10M U K1=3.27 1964TTa (35960)1179
Medium: Me4NBr

C5H3N2O4I H2L 5-Iodoorotic CAS 17687-22-8 (3630)
1,2,3,6-Tetrahydro-2,6-dioxo-5-iodo-4-pyrimidinecarboxylic acid;

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

Co++ gl R4N.X 25°C 0.10M U K1=3.78 1964TTa (35967)1180
Medium: Me4NBr

C5H3N3O6 H2L 5-Nitroorotic CAS 17687-24-0 (3615)
1,2,3,6-Tetrahydro-2,6-dioxo-5-nitro-4-pyrimidinecarboxylic acid;

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

Co++ ix NaCl04 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 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⁻¹, DS(K1)=-71 J K⁻¹ mol⁻¹; 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.COOH

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.COOH

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⁻¹, DS(K1)=13.6 J K⁻¹ mol⁻¹.

Co++ cal NaNO3 25°C 1.0M C 1982ARb (36292)1205

DH(K1)=1.17 kJ mol⁻¹, DS(K1)=13.6 J K⁻¹ mol⁻¹.

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	B2= 6.59	2000KKb (36556)	1209
1.94											
1.25											
Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-32.4 kJ mol-1, DS=-39 J K-1 mol-1; 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				1997EPa (36557)	1210
K(CoCl2+L)=4.63											
K(CoCl2L+L)=3.76											
Medium: cyclohexane. In CH3CN: K(CoCl2+L)=3.59, K(CoCl2L+L)=2.80.											
Calorimetry: cyclohexane DH(CoCl2+2L)=-51.6 kJ m-1. In CH3CN DH=-49.0.											
Co++	vlt	non-aq	25°C	100%	U	M				1997ERa (36558)	1211
K(CoA2B2+L=CoA2BL+B)=1.76											
K(CoA2BL+L=CoA2L2+B)=-0.07											
Medium: DMF; 0.1 M (CH2(CH2)3)4NPF6. A=salicylideneethylenediamine, B=DMF											
Co++	sp	non-aq	25°C	100%	U	M				1993BEa (36559)	1212
K(CoA+L)=-0.824											
K(CoB+L)=0.223											
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				1993SSc (36560)	1213
K(CoA+L)=2.691											
K(CoB+L)=2.998											
Medium: Toluene. T: 15-65 C. H2A:Octaethylporphyrin. DH=-40.4 kJ mol-1; DS=-84.5. H2B=t-Octaethylchlorin; DH=-42.7 kJ mol-1, 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-1, DS(K1)=-31.5 J K-1 mol-1; DH(B2)=-79.8, DS(B2)=-106.7. Reaction is CoCl2+nL.											
Co++	nmr	none	19°C	0.0	U	T H				1987LDa (36562)	1215
K(CoA+L=CoAL)=2.20											
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-1.											
Co++	sp	non-aq	20°C	100%	U	M				1984KIa (36563)	1216
K(CoA2+L)=1.25											
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

$B(\text{CoCl}_2\text{L}_2)=2.18$
 Medium: 25-100% v/v $\text{HCON}(\text{CH}_3)_2$. In 100%, $B(\text{CoCl}_2\text{L})=0.41$

 Co++ sp non-aq 25°C 100% U I M 1972MAe (36577)1230
 $B(\text{CoCl}_2\text{L})=0.85$
 $B(\text{CoCl}_2\text{L}_2)=2.03$
 Medium: 50% v/v $\text{HCON}(\text{CH}_3)_2$, 50% benzene. In 0% benzene, $B(\text{CoCl}_2\text{L})=0.41$

 Co++ sp non-aq ? 100% U I M 1971AMc (36578)1231
 $K(\text{CoCl}_2+\text{L})=2.05$
 $K(\text{CoCl}_2+2\text{L})=4.41$
 Medium: 50% benzene, 50% 3-methylbutanol. In 25% benzene, $K(\text{CoCl}_2+\text{L})=1.91$,
 $K(\text{CoCl}_2+2\text{L})=4.33$. In 75% benzene, 2.45 and 4.70

 Co++ sp non-aq ? 100% U I M 1971AMc (36579)1232
 $K(\text{CoCl}_2+\text{L})=2.20$
 $K(\text{CoCl}_2+2\text{L})=4.60$
 Medium: 50% CCl_4 , 50% 3-methylbutanol. With 0% CCl_4 , $K(\text{CoCl}_2+\text{L})=1.85$,
 $K(\text{CoCl}_2+2\text{L})=4.01$; 25% CCl_4 , K values: 2.06, 4.30; 75% CCl_4 : 2.29, 4.88

 Co++ nmr non-aq 38°C 100% U M 1970HMB (36580)1233
 $K(\text{CoL}_4\text{Cl}_2=\text{CoL}_2\text{Cl}_2+2\text{L})=0.36$

 Co++ sp non-aq ? 100% U M 1970LDA (36581)1234
 $K(\text{CoCl}_2+\text{L})=3.2$
 $K(\text{CoCl}_2+2\text{L})=5.77$
 $K(\text{CoBr}_2+\text{L})=3.44$
 $K(\text{CoBr}_2+2\text{L})=5.81$
 Medium: cyclohexanone. Data also for CH_3CN , 2-chloroethanol, $\text{HO.CH}_2.\text{CH}_2.\text{OH}$

 Co++ ISE alc/w 25°C 50% U I $K_1=1.66$ $B_2=2.46$ 1970NBa (36582)1235
 Medium: 0-96% EtOH, 0.5 M LiNO_3 . Data also for 25-90% propanol, 25-90% acetone

 Co++ EMF oth/un 25°C 0.50M U $K_1=1.23$ $B_2=1.70$ 1969NSb (36583)1236
 $K_3=0.24$
 $K_4=-0.16$
 Medium: LiNO_3

 Co++ dis R4N.X 20°C 1.0M U M $K_1=1.35$ $B_2=1.95$ 1966FLc (36584)1237
 $B_3=2.25$
 $B_4=2.35$
 $B(\text{Co}(\text{NH}_3)\text{L})=3.22$
 $B(\text{Co}(\text{NH}_3)\text{L}_2)=3.50$
 Medium: NH_4NO_3 . $B(\text{Co}(\text{NH}_3)\text{L}_3)=3.85$; $B(\text{Co}(\text{NH}_3)2\text{L})=4.2$; $B(\text{Co}(\text{NH}_3)2\text{L}_2)=4.50$;
 $B(\text{Co}(\text{NH}_3)2\text{L}_3)=5.40$; $B(\text{Co}(\text{NH}_3)2\text{L}_4)=5.35$ plus others and ternary with EDTA

 Co++ sp non-aq 20°C 100% U H 1965NSb (36585)1238
 $K(\text{CoL}_2\text{I}_2+2\text{L})=0.37$
 Medium: CH_3Cl_3 . By calorimetry: $\text{DH}=-69.4$ kJ mol⁻¹, $\text{DS}=-230$ J K⁻¹ mol⁻¹

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⁻¹, DS=-195.6 J K⁻¹ mol⁻¹
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

C5H5N02 HL CAS 35940-93-3 (3618)
3-Furancarboxaldehyde oxime (3-Furfuraldoxime); C4H3O.CH(:N.OH)

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

Co++ gl diox/w 20°C 60% U I K1=5.68 B2=11.78 1979GBd (36811)1249
B(CoHL2)=22.76

C5H5N02 HL CAS 634-97-9 (2877)
Pyrrole-2-carboxylic acid; C4H4N.CO0H

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-1; 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

C5H5N304 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

C5H5N304 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 K(Co+HL)=3.05 K(Co+HL+OH)=12.02 K(CoHL+OH)=8.03	2000SSd (36956)	1256

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	1995LWa (36958)	1258

Co++	gl	NaNO3	37°C	0.10M	U	M	K1=8.26 B(CoAL)=11.72 *K(CoAL)=-7.55 *K(Co(OH)AL)=-8.96	1994MGd (36959)	1259
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HA is 6-aminopenicillanic acid.

Co++	gl	KNO3	35°C	0.10M	U	M	K1=1.90 B(CoHLAsp)=8.02 B(CoLAsp)=6.45 K(CoL+Gly)=5.15	1989SRe (36960)	1260
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Co++	gl	KNO3	35°C	0.10M	U	T H	K(Co+HL)=1.90 K(Co+2HL)=3.15	1983KSa (36961)	1261
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Co++	gl	KNO3	30°C	0.10M	U		K1=6.8	1983SKa (36962)	1262
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Co++	gl	NaCl	37°C	0.15M	C		K(Co+HL)=1.38	1974MWa (36963)	1263
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Co++	gl	KNO3	45°C	0.10M	U		K1=8.14	1971TKc (36964)	1264
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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 B(CoAL)=11.98 *K(CoAL)=-7.45 *K(Co(OH)AL)=-8.82	1994MGd (36996)	1265

HA is 6-aminopenicillanic acid.

C5H5N5O L CAS 700-02-7 (3033)
Adenine N-Oxide;

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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-mercaptopurine;
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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;
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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
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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-octylphosphine
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;
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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=2.25   B2= 4.00  1989LKc (37086)1273

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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		1980MAb (37175)	1277

K(CoA(ClO4)+L)=3.8

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⁻¹, DS(B2)=-2.3 J K⁻¹ mol⁻¹.

C5H6N2O HL (3035)
2-Aminopyridine 1-oxide; C5H4N(-O)(NH2)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	NaClO4	25°C	0.50M	U			1963SBd (37201)	1279

K(Co+HL)=0.93

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	1980BBb (37210)	1281

C5H6N2O2 HL Thymine CAS 65-71-4 (413)
2,4-Dihydroxy-5-methylpyrimidine; C4HN2(CH3)(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaNO3	37°C	0.10M	U	M	K1=3.79 B(CoAL)=7.22 *K(CoAL)=-7.49	1994MGd (37268)	1282

HA is 6-aminopenicillanic acid.

Co++	gl	KNO3	35°C	0.10M	U	M	K1=4.10 K(Co(thiamine)+L)=3.17	1989SRc (37269)	1283
Co++	gl	KNO3	25°C	0.10M	U	T H	K1=4.30	1983KSa (37270)	1284
Co++	gl	KNO3	35°C	0.10M	U		K1=4.17 B2=7.87	1982TSa (37271)	1285
Co++	gl	KNO3	45°C	0.10M	U		K1=3.7	1974KKa (37272)	1286

C5H6N2O2 HL CAS 3326-71-4 (2607)
2-Furanecarboxylic acid hydrazide; C4H3O.CONH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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.									
Co++	gl	KNO3	25°C	0.10M	U	M	K1=3.92 B2=7.63 KCo(Oxine)+L)=4.18	1990NAa (37302)	1288

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

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 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	1965AZa (37317)	1290

C5H6N2O2S HL CAS 15112-09-1 (8298)
N-Methyl-2-thiobarbituric acid;

$$K(COI+H)=2.81$$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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
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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=1.36  B2=4.28  1985CFa (37521)1298
*****
C5H7NS          L                      CAS 541-58-2 (1421)
2,4-Dimethylthiazole; C3HNS(CH3)2
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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=0.72  1982GKa (37569)1299
*****
C5H7N3          L                      CAS 42166-50-7 (4291)
2-Pyridylhydrazine; C5H4N.NH.NH2
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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
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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=6.35  B2=12.00 1979PDa (37596)1301
*****
C5H8N2          L                      CAS 1759-84-0 (173)
1,2-Dimethylimidazole; C3H2N2(CH3)2
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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=1.17      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.
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Co++      sp  non-aq 23°C 100% U M      K(CoA+L)=1.93  1980ELa (37617)1304
Medium: toluene. A= "Homologous capped" porphyrin.
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Co++      sp  non-aq 25°C 100% U M      K(CoA+L)=1.93  1980ELa (37618)1305
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Co++	g1	KN03	25°C	0.50M U	K1=1.13	B2=2.39	1980LBa (37619)1306
					B3=3.81		
					B4=4.32		

Medium: toluene. CoA=a substituted porphyrinato-Co(II)

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	KN03	25°C	0.50M	U			K1=2.32 B3=5.42 B4=7.02 B5=7.42	B2=4.17	1979LBa (37638)1309

C5H8N2 L CAS 1072-62-4 (929)
2-Ethylimidazole; C3H3N2.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
Co++	g1	KN03	25°C	0.50M	U			K1=1.48 B3=3.30	B2=1.78	1982LKb	(37661)1310

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++	g1	KN03	25°C	0.50M	U			K1=0.62 B3=1.10	B2=0.99	1977LGb (37676)1311

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	KN03	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		1990SBa (37887)	1316

Keff=4.74

In NH₄ acetate, pH 7.24 using HPLC. Data also given for 20% MeOH/water

Co++	dis	NaClO ₄	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	NaClO ₄	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	NaClO ₄	25°C	1.0M	C	M		1977SMe (37892)	1321
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K(CoL₂(org)+A(org))=1.46

Method: distribution from 1.0 M NaClO₄ into CCl₄/HL/tri-octylphosphine oxide (A).

Co++	dis	NaClO ₄	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
------	----	--------	------	-----	---	---	--------------------	-----------------	------

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⁻¹, 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
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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=4.21  B2=7.65  1975IPb (38467)1337
*****
C5H9NO2           HL                      CAS 14401-90-2 (6205)
Pent-2,4-dione monoxime; CH3.CO.CH2.C(:NOH).CH3
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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
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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=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.
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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
-----
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)
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	vlt	NaCl04	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	1983HSa (38783)	1347
							B3=9.47		
							B(CoH-1L)=-5.3		
							B(CoH-1L2)=-2.11		
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	2003AHa (39031)	1349
							K(CoL+A)=3.54		
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	2000KAb (39033)	1351
							K(CoA+L)=5.19		
H2A=Dipicolinic acid.									
Co++	gl	KNO3	25°C	0.10M	C	M	K1=4.30	1999AAa (39034)	1352
							K(CoL+A)=3.84		
							B(CoLA)=8.14		
							K(CoL+B)=3.65		
							B(CoLB)=7.95		
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	1998ABa (39036)	1354
							K(CoL+oxine)=7.98		
Medium: 20% w/w EtOH/H2O, 0.1 M KNO3.									

Co++	gl	alc/w	20°C	50%	M	M	K1=4.96 K(CoA+L)=6.85	1995AMb (39037)	1355
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 K(Co+2HL)=1.25	1991MKa (39039)	1357
Co++	gl	KNO3	25°C	0.10M	U	M	K1=4.72 K(CoA+L)=7.30	1989MAc (39040)	1358
H4A is adenosine-5'-triphosphoric acid.									
Co++	gl	KNO3	25°C	0.10M	C	M	K1=4.65 K(CoA+L)=8.42 B(CoAL)=15.47	1989MAd (39041)	1359
H2A is N-(2-acetamido)imino diethanoic acid.									
Co++	gl	NaClO4	25°C	0.10M	U	M	K(CoL+uracil)=3.68 K(CoL+thymine)=4.12	1985NSd (39042)	1360
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		K1eff=5.27	1977HDa (39044)	1362
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

C5H9NO4 H2L CAS 1948-48-7 (3038)									
3-Carboxymethylaminopropanoic acid; HOOC.CH2.NH.CH2.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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 1990DAb (39224)1372
K(CoL+A)=4.54
B(CoLA)=12.14

H2A: salicylaldehyde

Co++ gl KNO3 25°C 0.10M C M K1=7.60 1990DAc (39225)1373
K(CoL+A)=3.57
B(CoAL)=11.17

HL: benzohydroxamic acid

Co++ gl KNO3 25°C 0.10M U K1=7.62 1977TIa (39226)1374

Co++ gl KNO3 25°C 0.10M U T M 1973IVa (39227)1375
K(CoL+Pro)=4.26
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 1972IVa (39228)1376
K(CoL+A)=3.60
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⁻¹, DS=119.5 J K⁻¹ mol⁻¹, 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

C5H9NS2 HL CAS 25769-03-3 (3623)
Pyrrolidine-N-carboxydithioic acid; C4H8N-CSSH

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

Co++ sp alc/w 25°C 75% U 1970PNa (39331)1381
B3=15.90

Medium: 75% MeOH, 0.3 M NaClO4

C5H9N3 L Isohistamine CAS 19225-96-8 (4294)
2-(2'-Aminoethyl)imidazole;

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 B3=12.3	1969EHc	(39342)1382

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	NaCl04	25°C	0.10M	C	M	K1=5.08 B2=8.83 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	1997GHa	(39514)1383

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
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IUPAC evaluation

Co++	gl	NaNO3	25°C	0.10M	U		K1=5.55 B2=10.35	1993GAa	(39516)1385
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Co++	gl	KNO3	35°C	0.10M	C	M	K1=5.98 B(CoL(cytidine))=11.87	1985RRc	(39517)1386
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Co++	gl	KCl	25°C	0.10M	U	M	K1=5.07 B2=9.34 B(CoL(ATP))=7.37 B(CoL(AMP))=6.41	1984DMc	(39518)1387
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Co++	gl	KNO3	25°C	0.50M	U		K1=5.30	1983LWa	(39519)1388
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Co++	gl	KNO3	25°C	0.20M	U T		K1=5.16 B2=8.80	1971Rmd	(39520)1389
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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
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Co++	gl	KNO3	37°C	0.15M	U		K1=4.89 B2=8.43	1969PSb	(39522)1391
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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
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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⁻¹, 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 K3=1.88	1956HFb	(39525)1394
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DH(K1)=20.9 kJ mol⁻¹, 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

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⁻¹, DS=138 J K⁻¹ mol⁻¹

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⁻¹, 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

C5H10N07P H4L PMIDa CAS 5994-61-6 (2433)

N-(Phosphonomethyl)iminodiethanoic acid; H2O3P.CH2.N(CH2.COOH)2

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

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

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

$$K(2\text{Co}(\text{H}-1\text{L})_2 + \text{O}_2 = \text{Co}_2(\text{H}-1\text{L})_4\text{O}_2) = 13.4$$

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
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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
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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 1955G0a (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
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Co++ g1 KNO3 25°C 0.1M U 2003PGa (40001)1418

$$\begin{aligned} K(\text{Co}+\text{HL}) &= 3.23 \\ K(\text{CoL}+\text{H}) &= 11.39 \\ K(\text{CoHL}+\text{HL}) &= 2.13 \\ K(\text{CoHL}_2+\text{H}) &= 10.78 \end{aligned}$$
$$K(\text{CoL}_2 + \text{H}) = 11.03; \quad K(\text{CoL} + \text{HL}) = 2.74$$

Co++ gl NaClO4 20°C 0.10M U M K1=3.35 B2= 5.36 1991KUb (40002)1419

$$\begin{aligned} K(\text{CoH}-1\text{L}+\text{H}) &= 9 \\ K(\text{CoH}-1\text{L}^2+\text{H}) &= 8 \end{aligned}$$
$$K(2\text{Co}(\text{H}-1\text{L})_2 + \text{O}_2 = \text{Co}_2(\text{H}-1\text{L})_4\text{O}_2) = 7.6$$

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.CO.OH				

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ gl oth/un 25°C 0.02M U K1=3.91 B2=7.41 1956DRb (40027)1422

C5H10N2O3 HL Sar-Gly (2332)
Sarcosyl-glycine; CH3.NH.CH2.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	oth/un	25°C	0.02M	U		K1=2.93 B2=5.30	1956DRb (40038)	1423

C5H10N2O3S H2L Cys-Gly CAS 19246-18-5 (2006)
CysteinyI-glycine; H2N.CH(CH2.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=6.65 B2=13.29	1988SKc (40062)	1424

C5H10N2O3S H2L Gly-Cys CAS 57281-78-4 (2550)
Glycyl-cysteine; H2N.CH2.CO.NH.CH(CH2.SH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	C		B2=10.03 B(CoHL2)=18.47 B(CoH2L2)=25.78	1988SKc (40067)	1425

C5H10N2O4 HL Gly-Ser CAS 7361-43-5 (281)
Glycyl-serine; H2N.CH2.CO.NH.CH(CH2.OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C		K1=3.08 K[Co(H-1L)+H]=8.77	1977Hmd (40100)	1426

C5H10N4O5 HL (2817)
Biacetylmonoxime-thiosemicarbazone; CH3.C(:N.NH.CS.NH2).C(:N.OH).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	alc/w	30°C	50%	U T H		K1=8.45	1992HRa (40130)	1427

Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.
DH(K1)=-32.5 kJ mol⁻¹, DS(K1)=-53.6 J K⁻¹ mol⁻¹.

C5H10N4O3 L CAS 54376-69-1 (8335)
N,N'-Carbonylbis(2-aminoacetamide);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	U TIH		K1=9.90 B2=16.05	1980SAc (40136)	1428

Data for 0.075-0.15 M. At I=0, K1=10.30, K2=6.40. Also data for 30 C.
DH and DS values.

C5H10O2S HL CAS 7244-82-8 (3042)

3-Ethylthiopropionic acid; CH₃.CH₂.S.CH₂.CH₂.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	50%	U		K1=2.8 B2=4.8	1956IFa (40241)	1429

C5H10O6		HL						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	NaNO ₃	20°C	0.10M	C		K1=3.07 B(CoH-1L)=-1.72	1994ESa (40378)	1430

C5H11N		L						CAS 1003-03-8 (304)	
Cyclopentylamine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO ₄	37°C	0.15M	C		K1=5.7	1974MWb (40392)	1431

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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: CH ₃ Cl. A=Tetra(4-Methoxyphenyl)porphyrin, In ClCH ₂ .CH ₂ Cl: K=3.42;									
in CH ₂ Cl ₂ : 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									
O ₂ 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(CoBr ₂ +L)=2.00		
							K(CoBr ₂ +2L)=4.52		
							K(CoBr ₂ +3L)=7.02		
Medium: 5% HCON(CH ₃) ₂ , 95% dioxan, 0.005 M CoBr ₂ . Conductivity also used									
In 100% HCON(CH ₃) 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⁻¹, DS(K₁)=214 J K⁻¹ mol⁻¹;

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⁻¹, DS(K1)=275 J K⁻¹ mol⁻¹;
 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.

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-----
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

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-----
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-1, DS(K1)=-392 J K-1 mol-1.
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 K3=1.9	B2=7.60	1964JOa (41074)	1460

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
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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
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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
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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
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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
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Co++	gl	KCl	30°C	0.16M	U	I	K1=5.89 B2= 8.70 B(CoHL)=14.07 B(CoH2L2)=27.55	1997BSb (41564)	1476
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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 B(CoHL)=14.17 B(CoH2L2)=27.78 B(CoHL2)=18.65	1976BPb (41565)	1477
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Co++	gl	NaCl	25°C	0.02M	C		K(Co+HL)=3.48 K(CoHL+HL)=2.96 K(CoHL+L)=3.42	1975KPa (41566)	1478
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K(2CoHL2+O2 = (CoHL2)2O2) = 7.17.

Co++	gl	KNO3	25°C	0.10M	U	I	K(Co+HL)=3.54 K(CoHL+HL)=3.33	1970CMc (41567)	1479
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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 K(CoL+H)=9.0	1970CMc (41568)	1480
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Co++	gl	oth/un	25°C	0.02M	U		K(Co+HL)=4.02 K(Co+2HL)=6.92	1954REa (41569)	1481
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Co++	gl	oth/un	20°C	0.01M	U		K(Co+2HL)=6.3	1952ALa (41570)	1482
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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
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Co++	gl	KCl	25°C	0.50M	C		K1=6.185 B2=10.59 B(CoH-1L2)=1.266	1986LEb (41590)	1483
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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(P03H2)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
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Co++	cal	alc/w	25°C	100%	U	H	K1=2.49	1985BUd (41863)	1490
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Medium: MeOH, 0.05 M Et4N.NO3. DH=-25.7 kJ mol-1

C5H14N2		L					CAS 7328-91-8	(3029)	
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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
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Co++	gl	KNO3	0°C	1.0M	U	T	K1=5.41 B2=8.93	1956HFb (41874)	1491
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30 C: K1=4.88, K2=3.07; 50 C: K1=4.38. DH(K1)=-29 kJ mol-1, DS=0; DH(K2)=-25

Co++	gl	KNO3	0°C	1.0M	U	T	K1=5.41 B2=8.93	1952HAa (41875)	1492
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50 C: K1=5.41. In 1 M KCl, 30 C: K1=4.88, K2=3.07

C5H14N2							(4303)		
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N,N,N'-Trimethyl-1,2-diaminoethane; L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	sp	non-aq	25°C	100%	C	H	K1=4.28	2002CMA (41889)	1493
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Medium: DMSO, 0.10 M Et4NClO4. By calorimetry: DH(K1)=-45.7 kJ mol-1, DS(K1)=-71.5 J K-1mol-1.

C5H14N2O		L					CAS 52319-87-1	(3628)	
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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
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Co++	EMF	KNO3	25°C	0.50M	U		K1=5.21 B2=9.56	1971KPa (41908)	1494
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Co++	gl	KNO3	25°C	0.50M	U		K1=4.76 B2=7.98 K3=1.93	1970MLb (41909)	1495
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C5H14N2O		L					CAS 36753-44-3	(3050)	
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N-(2-Hydroxypropyl)ethylenediamine; H2N.CH2.CH2.NH.CH2.CH(OH).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KCl	25°C	1.0M	U		K1=6.11 B2=10.84	1950EDa (41914)	1496
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C5H14N2O		L					CAS 36753-45-4	(3051)	
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N-(3-Hydroxypropyl)ethylenediamine; H2N.CH2.CH2.NH.CH2.CH2.CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KCl	25°C	1.0M	U		K1=7.15 B2=12.42 B3=15.13	1953EDa (41917)	1497
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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 K(Co+HL)=7.89 K(Co+H2L)=4.74	1978KMa	(41953)1498

C5H15N07P2 H4L (1348)
1-Hydroxy-3-N-ethylaminopropyllydenediphosphonic 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 K(Co+HL)=8.88 K(Co+H2L)=5.23	1978KMa	(41962)1499

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 K(CoL+H)=7.8 K(CoHL+H)=5.5	1968ZBa	(42013)1501

C5H17N013P4 H5L ADOPPH CAS 82372-37-0 (228)
1-Hydroxy-3-(N,N-bis(methylenephosphonic)-aminopropyllydene-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 K(Co+HL)=10.7 K(Co+H2L)=7.6 K(Co+H3L)=5.7 K(Co+H4L)=4.9	1982SBa	(42018)1502

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.									

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
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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.CO0H

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 B2=12.51 K(CoA+L)=6.10 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 B2=11.27 K(CoA+L)=5.81	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 B2=15.40	1986NDa	(42907)1530
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I=0.1, 40 C: K1=7.53, B2=13.38; 50 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

Co++	gl	KCl	25°C	0.10M	M		K1=7.48 B2=12.72	1984HAc	(42908)1531
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Co++	gl	KNO3	30°C	0.10M	U		K1=7.48 B2=12.79 K3=3.14	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 B2=14.01 K3=4.23	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. Extrapolation 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

C6H6O3 H3L Pyrogallol CAS 87-66-1 (696)

1,2,3-Trihydroxybenzene; C6H3(OH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	30°C	0.10M	M	TIH	K(Co+HL)=8.10 K(Co+2HL)=13.86	1986DNa (43945)	1572

Data for 0.05-0.20 M NaClO4. Extrap. 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⁻¹.

C6H6O3 H3L Phloroglucinol CAS 6099-90-7 (2525)

1,3,5-Trihydroxybenzene; C6H3(OH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	none	25°C	0.0	C		K(Co+H2L)=6.67	1983EEa (44011)	1573

Medium pH 6.5. Extrapolated from data for I=0.15-0.25 M. K(H2L+H)=8.45.

C6H6O3 HL Maltol CAS 118-71-8 (2442)

3-Hydroxy-2-methyl-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	2.00M	U	H	K1=5.12 B2=9.19 K3=2.40	1978GHa (44071)	1574

DH(K1)=-14.51 kJ mol⁻¹, 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)

5-Hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	25°C	40%	C		K1=4.51 B2= 8.02	1990SHb (44185)	1576

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⁻¹; DS(K1)=47.7 J K⁻¹ mol⁻¹; 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

Co++ gl diox/w 30°C 50% U K1=6.8 B2=12.0 1954BFa (44190)1581

C6H6O5S H2L (8129)

2,3-Dihydroxybenzenesulfonic acid;

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

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.

C6H6O5S H3L CAS 7134-09-0 (3687)

3,4-Dihydroxybenzenesulfonic acid; (HO)2.C6H3.SO3H

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

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

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

$$K(\text{Co}+\text{HL})=3.08$$

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

$$K(\text{CoL}+\text{H})=3.20$$

C6H6S HL Thiophenol CAS 108-98-5 (883)

Phenyl mercaptan, thiophenol; C6H5.SH

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

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

Co++ gl NaNO3 25°C 0.50M C K1=0.05 2002KSb (44594)1591

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⁻¹, DS=-125 J K⁻¹ mol⁻¹.

Co++ sp non-aq 25°C 100% U M 1993SSc (44596)1593

$$K(\text{CoA}+\text{L})=0.289$$

$$K(\text{CoB}+\text{L})=0.702$$

Medium:Toluene. H2A:Octaethylporphyrin. H2B:t-Octaethylchlorin. Data for other porphyrin ligands

Co++ sp non-aq 25°C 100% U M 1980MAb (44597)1594

$$K(\text{CoA}(\text{ClO4})+\text{L})=0.96$$

Medium: CH2Cl2. A= 1,19-Dimethyl-AD-didehydrocorrin.

Co++ sp non-aq ? 100% U I M 1972ADc (44598)1595

$$K(\text{CoCl2}+2\text{L})=4.83$$

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

$$K(\text{CoCl2}+\text{L})=1.57$$

$$K(\text{CoCl2}+2\text{L})=3.75$$

Medium: n-butanol. In t-butanol: K(CoCl2+L)=1.76, K(CoCl2+2L)=3.80

Medium: cyclohexanone: $K(\text{CoCl}_2+\text{L})=2.53$, $K(\text{CoCl}_2+2\text{L})=5.13$

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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. $\text{DH}(\text{K}_1)=-33.1$ kJ mol⁻¹, $\text{DS}=-37$ J K⁻¹ mol⁻¹;
 $\text{DH}(\text{K}_2)=-29.6$, $\text{DS}=-42$; $\text{DH}(\text{K}_3)=-27$, $\text{DS}=-49$; $\text{DH}(\text{K}_4)=-22$; $\text{DS}=-49$.

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	1972ADc (44686)	1600
K(CoCl2+2L)=4.90									

Medium: acetone. In acetonitrile: $K(\text{CoCl}_2+2\text{L})=4.62$; In HCON(CH)₂
 $K(\text{CoCl}_2+2\text{L})=4.06$; In cyclohexanone: $K(\text{CoCl}_2+2\text{L})=5.14$

Co++	sp	non-aq	?	100%	U	I	M		1971ADb (44687)	1601
K(CoCl2+L)=2.14										

Medium: s n-butanol. In t-butanol: $K(\text{CoCl}_2+\text{L})=2.24$, $K(\text{CoCl}_2+2\text{L})=4.47$;
In cyclohexanone: $K(\text{CoCl}_2+\text{L})=3.00$, $K(\text{CoCl}_2+2\text{L})=5.60$

Co++	sp	non-aq	20°C	100%	U	HM	1966CKb (44688)	1602
K(CoL2Cl2+2L)=0.35								
K'(CoL2(NCO)2+2L)=0.79								
K''(CoL2(NCS)2+2L)=4.20								

Medium: CHCl₃. $\text{DH}(\text{K})=-56.0$ kJ mol⁻¹, $\text{DS}=-184$ J K⁻¹ mol⁻¹
 $\text{DH}(\text{K}')=-43.5$, $\text{DS}=-133$; $\text{DH}(\text{K}'')=-63.5$, $\text{DS}=-138$

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	NaClO4	25°C	1.0M	C	M		K(CoA+L)=0.26	2001LHa (44800)	1603
Medium pH 7.9 (0.05 M Tris). A is tris(2-(dimethylamino)ethylamine).										
Co++	cal	non-aq	25°C	100%	C	H		K1=3.96 2.39 1.65	B2= 7.24 2000KKb (44801)	1604

Medium: MeCN, 0.10 M Et4NClO4. $\text{DH}(\text{K}_1)=-34.4$ kJ mol⁻¹, $\text{DS}=-40$ J K⁻¹ mol⁻¹;
 $\text{DH}(\text{K}_2)=-29$, $\text{DS}=-36$, $\text{DH}(\text{K}_3)=-29$, $\text{DS}=-51$; $\text{DH}(\text{K}_4)=-27$, $\text{DS}=-60$.

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(ClO4)+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⁻¹, DS=-202 J K⁻¹ mol⁻¹;

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
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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
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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
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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
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Co++	gl	KNO3	25°C	0.50M	U			K1=1.25 B2=1.93	1981LRa (44983)	1622
								B3=2.03		

C6H7NO L CAS 586-95-8 (1476)
4-(Hydroxymethyl)pyridine; C5H4N.CH2OH

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

Co++ gl KNO3 25°C 0.50M U K1=1.41 B2=2.42 1987KLb (45008)1623

C6H7NO2 HL (4362)
3-Cyanoacetylacetone; CH3.CO.CH(CN).CO.CH3

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

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

Co++ gl oth/un 20°C 0.01M U K1=9.6 B2=17.4 1956ARd (45099)1627

C6H7N3O L CAS 553-53-7 (4361)
Pyridine-3-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

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

Co++ gl oth/un 20°C 0.01M U K1=5.4 1956ARd (45106)1628

C6H7N3O L Isonicotinic hy CAS 54-85-3 (1267)
Pyridine-4-carboxylic acid hydrazide; C5H4N.CO.NH.NH2

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

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Co++      gl  oth/un 20°C 0.01M U      K1=4.8      1956ARd (45123)1629
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C6H7N3O2I2      HL      (7181)
2,5-Diiodo-histidine;
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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=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;
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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      1993FJa (45148)1631
                        B(Co(phen)L)=9.91
                        B(Co(phen)L2)=13.65
                        B(Co(phen)2L)=17.10
-----

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-----
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
-----

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-----
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)
-----

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-----
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
-----

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-----
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
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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 1980Ma (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

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

Co++ gl KNO3 20°C 0.10M C T H K1=3.11 1980Ma (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

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

Co++ gl KNO3 20°C 0.10M C T H K1=3.22 1980Ma (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;

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

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

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

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

Co++ sp none 25°C 0.0 C K1=5.62 B2=10.64 1979SSd (45342)1642
K3=4.26

Co++ EMF NaNO3 20°C 0.10M U K1=5.68 B2=10.38 1971ANa (45343)1643
K3=3.60

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;

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⁻¹, DS(K1)=20.5 J K⁻¹ mol⁻¹. 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

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 1966OCb (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

K(Co+HL)=1.60
K(Co+H2L)=0.95

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	30°C	0.10M	C	M			1984BPc (45618)	1661

K(Co(phen)+L)=5.30
K(Co(bpy)+L)=6.10
K(Co(en)+L)=5.70
K(Co(baea)+L)=5.68

K(Co(dipropylenetriamine)+L) = 5.56; baea=bis(aminoethyl)amine

Co++	EMF	NaClO4	20°C	1.00M	U		K1=3.42	B2=6.53	1981MOc (45619)	1662
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Ascorbic acid treated as HL. Antimony electrode used

Co++	gl	mixed	25°C	80%	U				1980KKd (45620)	1663
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K(Ni+HL)=2.0

Medium: 80% DMF

C6H8O6S H3L CAS 99-68-3 (3692)
(Carboxymethylthio)butanedioic acid; HOOCH(S.CH2.COOH).CH2.COOH

Co++	gl	KNO3	20°C	0.10M	U		K1=3.45		1977CAd (45685)	1664
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K(Co+HL)=2.63

Co++	gl	KNO3	25°C	0.05M	M		K1=3.55		1975DPb (45686)	1665
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C6H8O7 H3L Isocitric acid CAS 1637-73-6 (2527)
2-Hydroxy-3-carboxypentanedioic acid; HOOCH(OH).CH(COOH).CH2.COOH

Co++	gl	NaClO4	25°C	1.0M	U				1976PCb (45728)	1666
------	----	--------	------	------	---	--	--	--	-----------------	------

K(Co+H-1L)=7.25
K(Co+H-1L+H)=14.915
K(Co+H-1L+2H)=18.27
K(Co+H-1L-H)=-2.25

Data are for DL isomeric mixture. K(Co+2H-1L+2H)=29.08.

C6H8O7 H3L Citric acid CAS 77-92-9 (95)
2-Hydroxypropane-1,2,3-tricarboxylic acid; HOOCH2.CH(OH)(COOH).CH2COOH

Co++	dis	NaCl	25°C	0.30M	C	I			2000BCc (45980)	1667
------	-----	------	------	-------	---	---	--	--	-----------------	------

Medium: 0.3 M NaCl, pH=6.0. Also data for 1.0-5.0 M NaCl.

Co++ oth KNO3 ? 0.70M U 1970BCa (45982)1669
 $K(\text{Co}+\text{H3L}=\text{CoH2L}+\text{H})=-1.44$
 $K(\text{CoH2L}=\text{CoH}-1\text{L}+3\text{H})=-12.9$

Co++ g1 KN03 25°C 1.0M U K1=8.21 B2=11.54 2004GKc (46372)1679
B(CoHL)=12.76

$$K(\text{Co}(\text{OH})+\text{L})=8.98$$

For 0.5 mol/L KNO_3 $K_1=8.34$; $B_2=11.66$; $B(\text{CoHL})=13.03$; $K(\text{Co}(\text{OH})+\text{L})=9.17$

For 0.1 mol/L KNO_3 $K_1=8.70$; $B_2=12.34$; $B(\text{CoHL})=13.45$; $K(\text{Co}(\text{OH})+\text{L})=9.60$

$\text{C}_6\text{H}_9\text{NO}_6$ H3L NTA CAS 139-13-9 (191)

Nitrilotriethanoic acid; $\text{N}(\text{CH}_2.\text{COOH})_3$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	oth	NaClO4	35°C	0.10M	U	M	$K_1=10.60$ $K(\text{CoL}+\text{A})=5.16$	1998GAc (46644)	1680
------	-----	--------	------	-------	---	---	--	-----------------	------

Method: electrophoresis. Medium: 0.10 M HClO_4 , 0.01 M H_2L

H2A: penicillamine.

Co++	gl	NaNO_3	25°C	0.10M	M		$K_1=7.91$	1996KSc (46645)	1681
------	----	-----------------	------	-------	---	--	------------	-----------------	------

Co++	kin	NaClO4	25°C	1.00M	C			1994BCb (46646)	1682
------	-----	--------	------	-------	---	--	--	-----------------	------

$$K(\text{CoLCO}_3+\text{H}=\text{CoLHC}_3)=0.07$$

$$K(\text{CoLOH}_2\text{CO}_2\text{H}+\text{H}=\text{CoL}(\text{OH}_2)_2+\text{CO}_2)=0.08$$

Co++	gl	KNO_3	25°C	1.0M	C	T M		1994CBa (46647)	1683
------	----	----------------	------	------	---	-----	--	-----------------	------

$$K(\text{CoL}+\text{H})=3.49$$

$$K(\text{CoL}+\text{bpy})=2.28$$

$$K(\text{CoL}+\text{phen})=2.54$$

Data for 20-35 C.

Co++	cal	KNO_3	25°C	0.50M	U	H		1991VOa (46648)	1684
------	-----	----------------	------	-------	---	---	--	-----------------	------

$$\text{DH}(K_1)=-2.3 \text{ kJ mol}^{-1}, \text{DS}=181 \text{ J K}^{-1} \text{ mol}^{-1}; \text{DH}(B_2)=-18.9, \text{DS}=206$$

Co++	gl	KNO_3	25°C	0.10M	C	M	$K_1=10.38$	1990DAb (46649)	1685
------	----	----------------	------	-------	---	---	-------------	-----------------	------

$$K(\text{CoL}+\text{A})=4.24$$

$$B(\text{CoLA})=14.62$$

H2A: salicylaldehyde

Co++	gl	KNO_3	25°C	0.10M	C	M	$K_1=10.38$	1990DAc (46650)	1686
------	----	----------------	------	-------	---	---	-------------	-----------------	------

$$K(\text{CoL}+\text{A})=3.40$$

$$B(\text{CoAL})=13.78$$

HL: benzohydroxamic acid

Co++	oth	NaClO4	35°C	0.10M	C		$K_1=10.38$	1986SYa (46651)	1687
------	-----	--------	------	-------	---	--	-------------	-----------------	------

Method: paper electrophoresis. Medium pH 8.5.

Co++	oth	NaClO4	35°C	0.10M	C	M	$K_1=10.38$	1985SGc (46652)	1688
------	-----	--------	------	-------	---	---	-------------	-----------------	------

$$K(\text{CoL}+\text{his})=3.77$$

Method: paper electrophoresis. Medium pH 8.5.

Co++	oth	NaClO4	35°C	0.10M	U		$K_1=10.38$	1984SYa (46653)	1689
------	-----	--------	------	-------	---	--	-------------	-----------------	------

Method: paper electrophoresis

Co++	gl	NaNO_3	25°C	0.10M	C	M		1981BKb (46654)	1690
------	----	-----------------	------	-------	---	---	--	-----------------	------

$K(\text{CoL+py})=1.29$
 $K(\text{CoL+A})=2.41$
 $K(\text{CoL+NH}_3)=1.82$
 $K(\text{CoL+CH}_3\text{COO}) < 0.3$

A=1,3-diazole. $K(\text{CoL+HB})=<0.4$, $\text{H}_3\text{B}=\text{H}_3\text{PO}_4$

Co++ gl KNO₃ 25°C 0.10M U T M 1981SVa (46655)1691

$K(\text{CoL+Gly})=3.55$

At 20 C: $K(\text{CoL+Gly})=3.61$; 30 C: 3.49; 40 C: 3.37

Co++ sp KCl 25°C 0.10M U K₁=10.05 B₂=14.32 1978KVa (46656)1692

Co++ vlt KNO₃ 25°C 1.00M U 1977HDa (46657)1693

$K_{\text{eff}}=11.68$

K_{eff} at pH 7

Co++ gl KNO₃ 25°C 0.10M U T M 1971ICa (46658)1694

$K(\text{CoL+Pro})=3.85$

$K(\text{CoL+Gly})=3.38$

15 C, $K(\text{CoL+Pro})=3.95$; 70 C, $K=3.23$

Co++ gl KNO₃ 25°C 0.10M U T M 1971ICb (46659)1695

$K(\text{CoL+A})=3.30$

HA=piperidine-2-carboxylic acid. 15 C, $K(\text{CoL+A})=3.09$; 70 C, $K=2.69$

Co++ gl KNO₃ 25°C 0.10M U T M 1971ICc (46660)1696

$K(\text{Co(OH)L+H})=10.80$

$K(\text{CoL+A})=3.10$

HA=1-aminocyclopentanecarboxylic acid. 70 C, $K(\text{Co(OH)L+H})=9.80$, $K(\text{CoL+A})=2.68$

Co++ gl KNO₃ 25°C 0.10M U T M 1971IVb (46661)1697

$K(\text{CoL+Sar})=3.13$

$K(\text{CoL+A})=3.30$

HA=dimethylglycine. 15 C, $K(\text{CoL+Sar})=3.26$, $K(\text{CoL+A})=3.42$.

70 C, $K(\text{CoL+Sar})=2.74$, $K(\text{CoK+A})=2.83$

Co++ gl NaClO₄ 25°C 0.10M U M 1969AIa (46662)1698

$K(\text{CoL+Trp})=3.08$

Co++ gl NaClO₄ 25°C 0.10M U M 1969BIa (46663)1699

$K(\text{CoL+histamine})=3.76$

$K(\text{CoL(histamine)+H})=7.93$

Co++ gl KNO₃ 25°C 0.05M U M 1968HAa (46664)1700

$K(\text{CoL+Gly})=3.65$

$K(\text{CoL+A})=1.88$

A=ethyl valinate

Co++ gl KNO₃ 25°C 0.08M U M 1968HAa (46665)1701

$K(\text{CoL+A})=1.88$

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
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Co++	cal	KN03	20°C	0.10M	U	H		1964HDa (46670)1706
							DH(K1)=-0.6 kJ mol ⁻¹ , DS=196.9 J K ⁻¹ mol ⁻¹	

Co++	oth	KN03	20°C	0.10M	U		K1=10.0 B2=13.90	1964J0a (46671)1707
							Method: paper electrophoresis	

Co++	dis	NaCl04	20°C	0.10M	U		K1=10.81 B2=14.28	1963STc (46672)1708
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Co++	vlt	KN03	20°C	0.10M	U	T	K1=10.4	1956SGa (46673)1709
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Co++	vlt	KN03	20°C	0.10M	U	T	K1=10.38	1955SAa (46674)1710
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Co++	gl	KCl	20°C	0.10M	U		K1=10.6	1951SFa (46675)1711
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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
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Co++	gl	KN03	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	KN03	25°C	0.10M	C		K1=7.06	1999BIa (47488)1714
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Co++	gl	KNO3	25°C	0.10M	U		B2=11.96 K(Co+2HL)=2.78 K(Co+HL+L)=8.95	1997POa (47489)	1715
Co++	gl	NaNO3	25°C	0.50M	C	I	K1=6.73 B2=12.05 B(CoH-1L2)=0.61	1994WCa (47490)	1716
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 B3=13.59 K(Co+HL)=2.50 K(CoL+HL)=9.14	1992SZb (47492)	1718
Co++	gl	KNO3	35°C	0.10M	U	M	K1=6.93 B(CoL(thiodipropionate))=17.89 K(Co(TDPA)+L)=6.75	1989RSb (47493)	1719
Co++	gl	KNO3	35°C	0.20M	U	M	K1=8.11 K(CoA+L)=7.32	1989RVa (47494)	1720
A=bis(imidazol-2-yl)methane									
Co++	oth	none	25°C	0.0	U	M	K(CoL2+N2)=1.51	1987VZb (47495)	1721
Method: gas pressure measurements under gaseous N2.									
Co++	gl	KNO3	35°C	0.10M	C	M	K1=7.00 B(CoL(cytidine))=12.69	1985RRc (47496)	1722
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	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	1984KDb (47499)	1725
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 ⁻¹ 37 C and 0.15 mol dm ⁻³ : K1(tentative)=6.71, B2=12.06									
Co++	gl	KCl	25°C	0.20M	C	M	K1=6.76 B2=12.18 B(CoHL)=10.98	1983HSa (47501)	1727

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⁻¹

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⁻¹

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⁻¹, 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⁻¹, TDS=45.1 kJ mol⁻¹. 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 Thiolhistidine CAS 13552-61-9 (5659)
1-Amino-2-(2-Mercaptoimidazole)-propionic acid;

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

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

C6H10N2 L CAS 931-36-2 (1419)
2-Ethyl-4-methyl-1,3-diazole; C3H2N2(CH3)(C2H5)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.50M	U		K1=0.54 B3=2.07 B4=4.60	1982LKb (47684)	1755

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++	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)	1968BPb (47702)	1757

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;

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

C6H10N2O4 H2L (3104)
Piperazine-2,6-dicarboxylic acid;

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

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									

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.									

Co++	gl	NaNO3	25°C	0.10M	C		K1=6.90	2000KHb (47827)	1765
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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									

Co++	gl	NaNO3	25°C	0.10M	M		K1=9.26	1996KSc (47830)	1768
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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.

Co++	gl	KNO3	25°C	0.10M	C		K1=7.05	1989MAd (47832)	1770
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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(P(O3H2)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

C6H10N4OS L (2622)
4,5-Dimethyl-2,4,6,8-tetraazabicyclo[3,3,0]-octane-3-one-7-thione;

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

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

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Co++      gl  NaNO3  20°C  0.1M U      K1=5.5      1979ESa (47915)1779
*****
C6H10N8S          L                      (8206)
Bis(5-tetrazolyethane)sulphide;
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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
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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=9.35      1962MMb (47945)1781
*****
C6H10O3          HL                      CAS 16841-19-3 (3649)
1-Hydroxycyclopentanecarboxylic acid; HO.C5H8.COOH
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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
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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=9.32      1973AAa (48009)1783
*****
C6H10O4          H2L  Adipic acid      CAS 124-04-9 (401)
1,6-Hexanedioic acid; HOOC.(CH2)4.COOH
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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.
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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-1
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Co++      gl  oth/un 25°C  0.0 U      K1=2.15      1965MOb (48060)1786
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Co++      ix  oth/un 25°C  0.0 U      K1=2.23      1965SMf (48061)1787
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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)
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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
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Co++	gl	KN03	25°C	0.05M	M		K1=3.17	1975DPb (48177)	1792
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Co++	gl	KN03	25°C	0.10M	C		K1=2.25 K(Co+HL)=1.87	1975LPa (48178)	1793
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Co++	gl	NaCl04	25°C	0.10M	U		K1=1.6	1968SKd (48179)	1794
------	----	--------	------	-------	---	--	--------	-----------------	------

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(thiopropoic 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⁻¹, DS(B2)=-110 J K⁻¹ mol⁻¹.

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'-Selenodipropanoic acid; HOOC.CH2.CH2.Se.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KNO3	25°C	0.10M	C		K1=1.82 K(Co+HL)=1.43	1975LPa (48293)	1798
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C6H1004Te H2L CAS 2168-91-4 (983)
3,3'-Tellurodipropanoic acid; HOOC.CH2.CH2.Te.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KNO3	25°C	0.10M	C		K1=2.36 K(Co+HL)=1.9	1975LPa (48304)	1799
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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
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Co++	gl	KNO3	25°C	0.10M	C		K1=1.69	1975LPa (48313)	1800
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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
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Co++	gl	KNO3	25°C	0.10M	U		K1=1.69	1975MTc (48328)	1801
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C6H1007 HL Galacturonic CAS 685-73-4 (290)
D-Galacturonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaNO3	20°C	0.10M	C		B(CoH-2L)=-15.1	1994ESa (48386)	1802
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C6H1007 HL Glucuronic acid CAS 6556-12-3 (599)
D-Glucuronic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaNO3	20°C	0.10M	C		B(CoH-2L)=-15.0	1994ESa (48415)	1803
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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
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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=6.4 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									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	20°C	0.10M	U		K1=14.67 K(Co+HL)=7.42	1955SAa (48608)	1814

C6H11NO4S		H2L					CAS 104640-54-2 (2460)		
S-Carboxyethyl-L-cysteine; H2N.CH(CH.S.CH2.CH2.COOH).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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									
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									
Co++	gl	KCl	20°C	0.1M	U		K1=8.05 B2=12.13	1979KVa (48678)	1817
Co++	oth	KNO3	20°C	0.10M	U		K1=9.0 B2=13.40	1965JMa (48679)	1818
Method: electrophoresis									
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  NaCl04 25°C 0.10M U TIH    K1=2.68  B2= 5.21  1981RPb (48869)1823
Medium: KCl04. Also data for 35 C and for 0.05 M KCl04.
Also DH and DS values.
*****
C6H11N304  HL   Gly-Gly-Gly    CAS 556-33-2 (415)
Glycyl-glycyl-glycine; H2N.CH2.CO.NH.CH2.CO.NH.CH2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
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-Alany1-3-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	KN03	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 K(CoH-1L+H)=9 K(CoH-1L2+H)=7.9	1991KUb (49103)	1832
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-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							
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							
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	K(CoL+Gly)=3.35	1972IVb (49219)	1846
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Co++	gl	KNO3	25°C	0.10M	U	M	K1=11.25 K(CoL+en)=4.36	1970DNa (49220)	1847
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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

$$K(2\text{CoL} + \text{O}_2 = \text{Co}_2\text{L}_2(\text{O}_2)\text{OH} + \text{H}) = -5.3$$

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; $\text{HN}(\text{OH})\cdot\text{CO}\cdot(\text{CH}_2)_4\cdot\text{CO}\cdot\text{NH}(\text{OH})$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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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)
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DL-Dithio-bis(2-amino-3-propanoic acid); $(\text{HOOC}.\text{CH}(\text{NH}_2).\text{CH}_2.\text{S})_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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⁻¹, DS(K1)=-143 J K⁻¹ mol⁻¹.
DH(K2)=22.0, DS(K2)=-27.2.

C6H12N2S2 L CAS 35840-78-9 (2824)

Tetramethyl-dithiooxamide; $(\text{CH}_3)_2\text{N}.\text{CS}.\text{CS}.\text{N}(\text{CH}_3)_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ sp none 25°C 0.0 U K1=5.22 1976AMc (49375)1853

C6H12N4	L	Methenamine	CAS 100-97-0 (619)
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Hexamethylenetetramine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ sp non-aq 30°C 100% U M 1982SOa (49385)1854

$$K(\text{CoA}_2 + \text{L}) = 3.4$$

Medium: CCL4. HA=0,0'-diethyldithiophosphoric acid

C6H12N4O6 H3L (2677)

Nitrilotriacetohydroxamic acid; $N(CH_2CO.NH.OH)_3$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ gl KCl 25°C 0.10M M K1=13.01 B2=19.90 1979LSd (49400)1855

$$B(\text{CoH}_3\text{L})=30.79$$
$$B(\text{CoH}_2\text{L}) = 23.93$$
$$B(\text{CoHL}) = 19.21$$
$$B(\text{CoH}_2\text{L}_2) = 36.30$$

C6H1207	HL	Galactonic acid	(6942)
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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 1981FD b (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⁻¹, DS(K1)=16 J K⁻¹ mol⁻¹;
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⁻¹, DS(K1)=26 J K⁻¹ mol⁻¹; 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 K(Co(bpy)+L)=4.60	1996JLd (50049)	1865
Data for 25-45 C. DH(K1)=-29.7 kJ mol ⁻¹ , DS(K1)=2.5 J K ⁻¹ mol ⁻¹ ; 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 K(CoA+L)=4.40	1989MAc (50051)	1867
H4A is adenosine-5'-triphosphoric acid.									
Co++	gl	KNO3	35°C	0.20M	U M		K1=4.27 B2=7.93 K(CoA+L)=3.86	1989RVa (50052)	1868
A=bis(imidazol-2-yl)methane									
Co++	oth	KNO3	20°C	0.10M	U		K1=5.2 B2=8.40 K3=2.3	1964JOa (50053)	1869
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-Aminohexanoic 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-Aminooxy-4-methyl-pentanoic acid; CH3.CH(CH3).CH2.CH(O.NH2).COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

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
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B(CoH-2L2)=-12.20

Co++	gl	NaNO3	25°C	0.10M	U	I	K1=1.71 B2=4.76	1984GMa	(50460)1889
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 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⁻¹, DS=-22.2 J K⁻¹ mol⁻¹. Values for 0.02-0.15 M KNO3 and 60-75% v/v acetone, 75% EtOH and 75% dioxane/H2O

Co++	gl	KNO3	25°C	0.10M	C	M	K1=4.49	2003AHa	(50498)1892
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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
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K(Co(phen)+L)=4.65

Co++	gl	KNO3	30°C	0.10M	U	M	K1=4.71	1985TGA	(50500)1894
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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-ureidovaleric acid; H2N.CO.NH.CH2.CH2.CH2.CH(NH2).COOH

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=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	KN03	25°C	0.10M	U		K1=6.33 B2=11.63	1990CCa	(50711)1904

C6H14N2O		L					CAS 10466-61-2		(3116)
L-Leucine amide; H ₂ N.CH(CH ₂ .CH(CH ₃) ₂).CO.NH ₂									

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; H ₂ N.(CH ₂) ₄ .CH(NH ₂)COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KN03	25°C	0.10M	C		K1=4.80	1999BIa	(50811)1906
Co++	gl	NaCl04	25°C	0.10M	C		B2=8.45 B(CoHL)=14.53 B(CoH2L2)=28.38 B(CoH3L3)=40.84 B(CoHL2)=19.08	1987LMa	(50812)1907

Co++	gl	KN03	25°C	0.10M	C		B2=8.46 B(CoHL)=14.50 B(CoH2L2)=28.41 B(CoH3L3)=41.43 B(CoH2L3)=31.6	1976BPb	(50813)1908
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B(CoHL2)=18.50

Co++	gl	KN03	25°C	1.00M	U		K(Co+HL)=3.62 K(Co+2HL)=6.68	1971SLa	(50814)1909
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Co++	gl	oth/un	20°C	0.01M	U		B2=6.8	1952ALa	(50815)1910
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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 B(CoHL)=12.26 B(CoH-1L)=-1.71	1993LEb	(50844)1911

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 B(CoH-1L2)=1.77	1988LEa (50850)	1912

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 B(CoHL)=5.912	1993BKe (50904)	1916

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
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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

C6H15NO6P2 H4L (6891)
Piperidine-N-Methylenedi(phosphonic acid); C5H10N.CH(P03H2)2

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

Co++ gl KCl 25°C 0.10M M K1=7.64 1978GMF (51321)1930
K(Co+HL)=5.72

C6H15NO6S 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

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 2002ECa (51422)1938
B(CoHL)=15.38
B(CoH2L2)=29.83
B(CoHL2)=20.41
B(CoH-1L2)=-2.2

Protonation constants used : K1=10.72, B2=20.40 B3=23.60

1000

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 1980ELa (51509)1947
K(CoA+L)=1.25

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 Tetrameen CAS 110-18-9 (124)
N,N,N',N'-Tetramethyl-1,2-diaminoethane; (CH3)2N.CH2.CH2.N(CH3)2

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

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

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Co++      gl  oth/un 25°C 0.50M U      K1=5.13  B2=9.13  1960Hda (51687)1953
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C6H16N2O2      L      CAS 929-59-4 (915)
3,6-Dioxaoctane-1,8-diamine; H2N.CH2.CH2.O.CH2.CH2.O.CH2.CH2.NH2
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Co++ cal alc/w 25°C 100% U H K1=2.51 1985BUd (51700)1954
Medium: MeOH, 0.05 M Et4N.NO3, pH=-7.2 kJ mol-1

Co++ gl NaClO₄ 25°C 0.10M C K₁=1.72 1992LBa (51708)1955
B(CoH₂L₂)=15.9

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Co++      gl  KN03    30°C  1.0M  U          K1=4.89          1954GFa (51760)1957
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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	

Co++ gl KN03 25°C 1.00M M 1982BGB (51811)1959
K(Co+HL)=4.34

C6H17N2O3P H2L (7486)

N,N,N'-Trimethyldiaminoethane-N'-methylphosphonic acid;
(CH₃)₂N.CH₂CH₂.N(CH₃)CH₂PO₃H₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO ₃	25°C	0.10M	C		K ₁ =7.91 K(CoL+H)=4.2 K(CoL+OH)=3.4	2001DSa (51822)	1960
Co++	gl	KNO ₃	25°C	0.10M	C		K ₁ =7.91 K(CoL+H)=4.2 K(CoL+OH)=3.4	2001DSa (51823)	1961

C₆H₁₇N₃ L CAS 56-18-8 (968)
1,5,9-Triazanonane, 4-azaheptane-1,7-diamine; H₂N.CH₂.CH₂.CH₂.NH.CH₂.CH₂.CH₂.NH₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO ₃	25°C	0.10M	U		K ₁ =6.6 B ₂ =9.80	1973AHc (51895)	1962
Co++	cal	KCl	25°C	0.10M	U	H		1966PNa (51896)	1963
DH(K ₁)=-32.6 kJ mol ⁻¹ , DS=23.4 J K ⁻¹ mol ⁻¹									
Co++	gl	KCl	25°C	0.10M	U		K ₁ =6.92	1966VAa (51897)	1964
Co++	gl	KNO ₃	30°C	1.0M	U T H		K ₁ =6.63	1956HFb (51898)	1965
DH(K ₁)=-37.7 kJ mol ⁻¹ , DS=4 J K ⁻¹ mol ⁻¹ . K ₁ =7.51(0 C), 6.36(50 C)									

C₆H₁₇N₃ 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 ₁ =8.30 B ₂ =14.10	2001CGc (51905)	1966
Method: Cd ion selective electrode. Medium: DMSO, 0.10 M Et ₄ NC ₁₀ 4. By calorimetry: DH(K ₁)=-66.0 kJ mol ⁻¹ , DH(B ₂)=-127.									

C₆H₁₈N₂O₆P₂ H₄L (1363)
N,N'-Dimethyldiaminoethane-N,N'-dimethylphosphonic acid;
CH₃N(CH₂PO₃H₂).CH₂.CH₂.N(CH₂.PO₃H₂)CH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO ₃	25°C	0.10M	C		K ₁ =12.80 K(CoL+H)=5.60 K(CoL+OH)=2.1 K(CoHL+H)=4.7	2001DSa (51946)	1967
Co++	gl	KNO ₃	25°C	0.10M	C		K ₁ =12.80 K(CoL+H)=5.60	2001DSa (51947)	1968

$$K(\text{CoL}+\text{OH})=2.1$$

C6H18N2O6P2 H4L (7487)

$K(\text{CoLOH20CO2H}+\text{H}=\text{CoL}(\text{OH2})_2+\text{CO2})=-0.15$. Data for alpha isomer. Data also for beta isomer

Also values at 10, 30 and 40 C. Medium: phosphate-citrate buffer.

By calorimetry: $\Delta H_1 = -44.3 \text{ kJ mol}^{-1}$, $\Delta S_1 = 67.4$

$$\Delta H(K) = -201 \text{ kJ mol}^{-1}; \Delta S = -138 \text{ J K}^{-1} \text{ mol}^{-1}$$

Co++ oth NaClO4 25°C 0.10M U 1971PEh (52085)1977
K(Co+H3L)=3.1

$$K(\text{Co}+\text{H}_2\text{L})=3.6$$

 Co++ cal KCl 25°C 0.10M U H 1961SPb (52086)1978
 DG(K1)=-59.31 kJ mol⁻¹, DH=-44.56, DS=60.7 J K⁻¹ mol⁻¹

Co++ gl KNO3 40°C 1.0M U T H 1952JHa (52087)1979
 $B(\text{Co}_3\text{L}_2)=3.07$
 Medium: 1 M (KNO3+KCl). $B(\text{Co}_3\text{L}_2)=3.19(30\text{C})$, DH=-16.7 kJ mol⁻¹

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
 $K(\text{Co}+\text{HL})=6.8$

 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 K(Co+HL)=8.47	1994AGa (52181)	1982
Co++	kin	NaCl04	25°C	1.00M	C		K(CoLCO3+H=CoLHCO3)=-0.21	1994BCb (52182)	1983
Co++	gl	oth/un	20°C	????	M T H		K(CoL(H2O)+H=CoL(H3O))=3.70 K(CoHL(H2O)+H=CoHL(H3O))=2.23	1993GEa (52183)	1984
Co++	gl	KNO3	25°C	0.50M	U		K1=12.42 B(CoHL)=18.80 *B(CoL(H2O))=2.10	1990ASd (52184)	1985
Co++	oth	KCl	25°C	0.10M	U M		K(2CoL+O2=CoL(OH)(O2)CoL+H)=4.4. Method: amperometric O2 electrode.	1985BMd (52185)	1986
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 K(CoLOH+H)=9.9	1982MMb (52187)	1988
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

DH(K1)=-72.11 kJ mol⁻¹, DH=-44.6, DS=92 J K⁻¹ mol⁻¹

Co++ gl KCl 20°C 0.10M U K1=12.8 1950PSa (52191)1992

C6H19N2O9P3 H6L (8063)
N-Methylethylenediamine-N,N',N'-trimethylenetris(phosphonic acid);

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

Co++ gl KNO3 25°C 0.10M C K1=16.27 2001DSa (52237)1993
K(CoL+H)=6.02
K(CoH2L+H)=3.90
K(CoHL+H)=5.30
K(CoH3L+H)=3.7

K(CoL+OH)=2.0

Co++ gl KNO3 25°C 0.10M C K1=16.27 2001DSa (52238)1994
K(CoL+H)=6.02
K(CoHL+H)=5.30
K(CoH2L+H)=3.90
K(CoH3L+H)=3.7

K(CoL+OH)=2.0

C6H20N2O8P4 H4L CAS 938-16-3 (4402)
Ethylenediaminetetra(methylenephosphonous acid);

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

Co++ gl KNO3 25°C 0.10M U K1=7.29 1971MMh (52246)1995

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++ gl KNO3 25°C 0.10M C K1=17.27 2001DSa (52307)1996
K(CoL+H)=8.28
K(CoH2L+H)=5.23
K(CoHL+H)=6.45
K(CoH3L+H)=4.3

K(CoL+OH)=1.5

Co++ gl KNO3 25°C 0.10M C K1=17.27 2001DSa (52308)1997
K(CoL+H)=8.28
K(CoHL+H)=6.45
K(CoH2L+H)=5.23
K(CoH3L+H)=4.3

K(CoL+OH)=1.5

Co++ gl NaCl 37°C 0.15M C K1=13.95 1995JWa (52309)1998

K(CoL+H)=8.18
K(CoH2L+H)=5.29
K(CoHL+H)=6.20
K(CoH3L+H)=3.97

Co++ gl KNO3 25°C 0.10M C K1=17.11 1976MMa (52310)1999
K(CoL+H)=8.31
K(CoHL+H)=6.49
K(CoH2L+H)=5.29
K(CoH3L+H)=4.30

Co++ gl oth/un 25°C 0.10M U 1971MMb (52311)2000
K(CoL+H)=8.48
K(CoHL+H)=6.61
K(CoH2L+H)=5.27
K(CoH3L+H)=4.86

Co++ gl KCl 25°C 0.10M U K1=15.49 1967KDa (52312)2001
K(Co+HL)=11.79
K(Co+H2L)=8.51
K(Co+H3L)=6.09
K(Co+H4L)=4.75

K(Co+H5L)=1.92

C7H4N2O7 H2L CAS 609-99-4 (400)
3,5-Dinitrosalicylic acid; (O2N)2.C6H2(OH).COOH

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

Co++ gl KCl 25°C 0.20M U M K1=3.40 1992ASa (52452)2002
K(CoL+ser)=4.30
K(CoL+thr)=4.20
K(CoL+asp)=8.60
K(CoL+A)=4.50

K(CoL+gln)=4.30, K(CoL+HB)=4.70. HA is asparagine, HB is lysine.

Co++ sp none 25°C 0.0 C K1=3.82 1983SGd (52453)2003

Co++ sp NaCl04 25°C 0.10M C K1=3.82 1975CTb (52454)2004

Co++ gl KCl 25°C 0.0 C T H K1=4.89 1975DNd (52455)2005
DH(K1)=-15.85 kJ mol⁻¹, DS=146.8 J mol⁻¹ K⁻¹. Calculated from 0.1 M KCl by
the Davies equation. Values also at 35 and 45 C

Co++ gl NaCl04 30°C 0.10M U K1=3.63 1975JKa (52456)2006

Co++ EMF NaCl04 30°C 0.10M U K1=3.63 1972JKa (52457)2007

Co++ gl KNO3 35°C 0.10M U K1=3.88 1970DDa (52458)2008

C7H4N4O4 L CAS 50365-37-2 (7762)
5,6-Dinitrobenzimidazole;

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

C7H5NO4 H2L Dipicolinic aci CAS 449-83-2 (418)
2,6-Pyridinedicarboxylic acid; C5H3N.(COOH)2

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

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

C7H5NO4S2 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

C7H5NO5 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

C7H5NO5 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

C7H5NO5 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
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 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	1994HWa (53029)	2026
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 DH(K1)=-19.9 kJ mol ⁻¹ and DS(K1)=189.6 J mol ⁻¹ K ⁻¹ . Values also available at 35 and 45 C	1975DNb (53031)	2028
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
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

C7H5NS		L					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
Co++	gl	NaNO3	25°C	0.50M	M		K1=1.25	1999KSa (53099)	2034

K(Co+H-1L)=3.67

*K(CoL)=-8.16

C7H5O2Cl HL (3747)
2-Hydroxy-6-chlorobenzaldehyde (6-chlorosalicylaldehyde)

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;

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

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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
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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  C      K1=6.43      1983SGd (53334)2042
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Co++      gl  NaCl04 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)
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Co++      gl  diox/w 20°C 75% U      K1=6.3      B2=13.30 1965BEb (53386)2044
Medium: 75% dioxan, 0.1 M NaCl04
*****
C7H6NO3Br      H2L      CAS 87353-69-3 (207)
4-Bromosalicylhydroxamic acid; Br.C6H3(OH).CO.NH.OH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Co++      EMF diox/w 30°C 50% U      K1=4.05      1977DJa (53394)2045
Medium: 50% dioxan, 0.1 M NaCl04
*****
C7H6NO3Br      H2L      CAS 5798-94-7 (206)
5-Bromosalicylhydroxamic acid; Br.C6H3(OH).CO.NH.OH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Co++      EMF diox/w 30°C 50% U      K1=3.98      1977DJa (53405)2046
Medium: 50% dioxan, 0.1 M NaCl04
*****
C7H6NO3Cl      H2L      (205)
3-Chlorosalicylhydroxamic acid; Cl.C6H3(OH).CO.NH.OH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Co++      EMF diox/w 30°C 50% U      K1=3.54      1977DJa (53414)2047
Medium: 50% dioxan, 0.1 M NaCl04
*****
C7H6N2      L      Benzimidazole CAS 51-17-2 (52)
Benzimidazole; C7H6N2
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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 0.10M C      M      K1=2.98      2000MSa (53465)2048
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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

 C7H6OS 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

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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
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 C7H6O2 HL Tropolone CAS 533-75-5 (3129)
 2-Hydroxycyclohepta-2,4,6-trien-1-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	30°C	50%	U	M	K1=11.30 B2=17.60 B(Co(bpy)+L)=6.27	1980KSa (53660)	2062
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 k3=3.8	1953BFa (53662)	2064

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	1.00M	U	T H	K1=0.54	1991BAa (53815)	2065

K1 also at 30, 35 and 40°C. DH=14.2 kJ mol⁻¹, DS=58 J K⁻¹ mol⁻¹.

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
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Co++	gl	alc/w	25°C	50%	M T H		K1=5.81 B(Co(en)L)=11.09	1992MSf (53899)	2068
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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
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Co++	gl	alc/w	50°C	45%	U T H		K1=6.35 B2=11.05	1968RSh (53901)	2070
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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
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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
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Co++	gl	diox/w	25°C	0.10M	U		K1=9.22 B2=16.70	1977WVa (53929)	2072
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C7H6O3 H2L CAS 95-01-2 (4407)
2,4-Dihydroxybenzaldehyde; (OH)2.C6H3.CHO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	diox/w	30°C	75%	U		K1=10.47 B2=18.94	1978RJa (53939)	2073
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Co++	gl	diox/w	30°C	50%	U			1969VMa (53940)	2074
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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
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Co++	gl	diox/w	30°C	50%	U			1969VMa (53947)	2075
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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
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Co++	gl	alc/w	24°C	20%	C	M			1996MIa (54122)	2076
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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
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Medium: MeOH. DG(K1)=-26.9 kJ mol⁻¹, DH=21.8; DG(B2)=-41.7; DH=29.9

Co++	gl	alc/w	25°C	100%	M				1988LTa (54124)	2078
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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
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K(CoL+CMP)=0.84

H2CMP=cytidine-5'-monophosphoric acid

Co++	sp	none	25°C	0.0	C		K1=8.09		1983SGd (54126)	2080
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Co++	gl	NaCl04	25°C	0.10M	U	T	K1=6.15		1980MSa (54127)	2081
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Co++	gl	NaCl04	30°C	0.10M	U		K1=8.68		1975JKa (54128)	2082
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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
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Co++	gl	alc/w	30°C	10%	C		K1=8.12	B2=14.65	1986IGc (54445)	2085
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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	NaCl04	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

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-----
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  NaCl04  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
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*****
C7H7N          L          CAS 100-69-6 (299)
2-Vinylpyridine; C5H4N.CH:CH2
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-----
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
-----
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-----
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
-----
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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=0.86   B2=1.51    1986BLa (55139)2103
*****
C7H7NO         L          CAS 1122-54-9 (494)
4-Acetylpyridine; C5H4N.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=0.97   B2=1.38    1983LRa (55148)2104
*****
C7H7NO2        HL   Anthranilic      CAS 118-92-3 (1589)
2-Aminobenzoic acid, Anthranilic acid; H2N.C6H4.CO0H
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-----
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.
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-----
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

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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
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-----
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
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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=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
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-----
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.
-----

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-----
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
-----

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A: 2,2'-dipyridylamine; B: 5-nitro-1,10-phenanthroline;
C: 5-methyl-1,10-phenanthroline.

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-----
Co++       gl  NaClO4 35°C 0.10M U                K1=4.35   B2=8.30  1983ABa (55492)2127
*****

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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
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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++ g1 NaNO3 25°C 0.10M C K1=6.62 2000KHa (55583)2129

Co++	g1	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			

$$K(\text{Co(ada)}+\text{L})=4.74, \quad K(\text{Co(ada)}+\text{H}+\text{L})=12.39$$

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 NaCl04

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
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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 KN03 25°C 1.0M U K1=4.2 B2=7.90 1961GKa (55635)2133

C7H7N03 HL CAS 1197-10-0 (3759)
6-(Hydroxymethyl)pyridine-2-carboxylic acid; HO.CH2.C5H3N.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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
Medium: 45% v/v dioxan/H2O, 0.01 M KN03									

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
Data also by spectrophotometry: B1=1.97									

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									

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									
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 B3=2.46	1981LRa (55810)	2143

C7H8N2O		HL					CAS 88-68-6	(4438)	
Benzamide oxime; C6H5.C(:N.OH)NH2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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									
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;									
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									
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 B(CoHL)=10.382	1987RRa (55847)	2147
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									

C7H8N2O2		HL					Salicylic hydra CAS 936-02-7	(2646)	
2-Hydroxybenzoic acid hydrazide; HO.C6H4.CO.NH.NH2									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

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')-Bisimidazolylmethane; 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
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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
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Co++ sol oth/un 20°C ? U B2=7.7 1986YAa (56118)2162

 C7H8O8P2 H4L (6892)

1,2-((Phenylenedioxy)methylene)diphosphonic acid); C₆H₄O₂C(P₃H₂)₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	R4N.X	25°C	0.50M	U			K1=6.93 K(Co+HL)=3.70	1985GMb (56164)	2163
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Medium: 0.5 M Me₄NCI

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
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Co++	sp	none	25°C	0.0	U			K1=5.23 B2=9.88 B3=14.13 B4=18.44	1988KDb (56175)	2164
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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
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Co++	sp	non-aq	25°C	100%	U	M		K(CoA+L)=0.841 K(CoB+L)=1.097 K(CoC+L)=1.409	1993SSc (56197)	2165
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Medium:Toluene. H₂A:Octaethylporphyrin. H₂B:t-Octaethylchlorin.
H₂C:a mixture of tct- and ttt-Octaethylisobacteriochlorin.

Co++	oth	KNO ₃	?	0.50M	U			K1=3.19	1971LWb (56198)	2166
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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
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Co++	sp	non-aq	?	100%	U	I M		K(CoCl ₂ +L)=1.70 K(CoCl ₂ +2L)=4.99	1971ADb (56218)	2167
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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		K(CoCl ₂ +2L)=4.73	1970DAa (56219)	2168
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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
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Medium: CHCl3. By calorimetry: DH=-70.2 kJ mol⁻¹, DS=-158.8 J K⁻¹ mol⁻¹

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
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Medium: CHCl3. By calorimetry: DH=-61.0 kJ mol⁻¹, DS=-137.9 J K⁻¹ mol⁻¹

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⁻¹, DS=-180 J K⁻¹ mol⁻¹; 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
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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	KN03	25°C	1.00M	U		K1=1.22 B2=2.02	1971LWa (56324)	2178
Co++	EMF	KN03	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⁻¹, DS=-209 J K⁻¹ mol⁻¹; 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-Benzylsalicylalimine, DH=-30.2 kJ mol⁻¹, DS=-76.7 J K⁻¹ m⁻¹
 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-Benzylsalicylalimine, DH=-24.9 kJ mol⁻¹, DS=-75.0 J K⁻¹ mol⁻¹
 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

 C7H10N02P HL (7267)
 Aminomethyl(phenylphosphinic acid); H2NCH2PO(OH)C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KNO3	25°C	0.10M	C		K1=2.39 B(CoH-1L)=-6.5	1996RLa (56538)	2192
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 C7H10N06ClP2 H4L (6895)
 N-(4-Chlorophenyl)aminomethylenedi(phosphonic acid); ClC6H4.NH.CH(P(O3H)2)

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=9.4 K(Co+HL)=5.1	1990GKa (56554)	2193
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 C7H10N2 L CAS 13173-22-3 (8012)
 1-Allyl-2-methylimidazole ;

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=1.20 B2= 2.30 B3=3.80 B4=4.30	2001KGa (56562)	2194
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 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
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Co++	gl	oth/un	25°C	.015M	U		K1=3.8	1960HJa (56591)	2195
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 C7H10N2 L CAS 42088-91-5 (3134)
 2-(Methylaminomethyl)pyridine (2-Picolylmethylamine)

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=5.22 B2=9.20	1971GEa (56608)	2196
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Co++	cal	diox/w	25°C	50%	U	H		1966WRb (56609)	2197
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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 K3=2.53	1959GFa (56610)	2198
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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 B3=3.03	1999BKa (56661)	2206

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 K(Co2A+L)=4.76 K(Co2A(OH)+L)=1.86 K(Co2A(OH)2+L)=3.83	2003AZa (56669)	2207

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		K(Co2A+L)=13.72 *K(Co2AL)=-7.66 *K(Co2(OH)AL)=-8.88	1999RNa (56670)	2208
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A: 1,4,7,13,16,19-Hexaaza-10,22-dioxacyclotetracosane

C7H10N2O2S HL (560)

2-(Methanesulfonyl)methylpyridine; 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 K1=7.49, B2=14.10	1982MYb (56683)	2209

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		B(CoHL)=18.46	1985HWa (56716)	2211

$$B(\text{Co2L2})=22.97$$

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

$$B(\text{CoHL})=6.32$$

$$B(\text{CoH2L})=9.98$$

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

$$K(\text{CoL+H})=2.42$$

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
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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
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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 K(Co+HL)=4.13 K(Co+H2L)=2.07	1988KPa (56928)	2225

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 K(Co+HL)=7.36 B(Co2L)=15.72	1969DMd (56936)	2226

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	1965AZa	(57001)2228
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K3=2.67
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⁻¹. 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)₂)=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)₂

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⁻¹, DS=431 J K⁻¹ mol⁻¹

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

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.COOH).COOH

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

K(Co+HL)=0.5
K(CoL+H)=5.15

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

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 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	1997GHa	(57212)2241

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(02)s

Co++	gl	NaCl04	25°C	0.10M	C		K1=3.13 B2=5.65 B(CoHL)=10.10 B(CoH-1L)=-5.18 B(CoH-2L)=-15.41 B(CoH-1L2)=-2.26	1995GHa	(57213)2242
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C7H12O2 HL CAS 7424-54-6 (4421)
Heptane-3,5-dione; CH3.CH2.CO.CH2.CO.CH2.CH3

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
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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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KN03	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); <chem>HOOC.C(C2H5)2.COOH</chem>										

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; <chem>H2N.C6H10.COOH</chem>										

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; <chem>CH2:CH.CH2.CH2.CH2.CH(NH2).COOH</chem>										

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; <chem>CH3.C5H9N.COOH</chem>										

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 ⁻¹ , DS= 5 J K ⁻¹ mol ⁻¹										

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 ⁻¹ , DS(K1)=10.5 J K ⁻¹ mol ⁻¹ ; DH(K2)=-12.4, DS(K2)=1.4.										

C7H13NO3			HL					(7175)		
3,3'-Dimethylglutaramide; <chem>HOOCCH2C(CH3)2CH2CONH2</chem>										

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
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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
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Co++	gl	diox/w	25°C	50%	U	T H	K1=8.20	19760Ma (57535)	2258
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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	1973BD b (57638)	2264

C7H13N3O4		HL			Ala-Asn			CAS 1999-41-3	(5934)	
Alanyl-asparagine; NH2.CH(CH3.CO.NH.CH(CH2.CO.NH2).COOH										

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										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.1M	U				2003PGa (57718)	2266
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				2003PGa (57750)	2267
K(Co+HL)=3.32										
K(CoL+H)=11.14										
K(CoHL+HL)=2.49										
K(CoHL2+H)=10.84										

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	KN03	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	NaN03	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	NaN03	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

C7H15N04S		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 K(Co(Ser)+2L)=6.30 K(Co(Asp)+2L)=6.69 K(Co(Glu)+2L)=6.47 K(Co(His)+2L)=6.54	1999AAa (57961)	2279

C7H15N05		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 B(CoH-1L2)=-1.945 B(CoH-2L2)=-10.77	1987PDa (57967)	2280

C7H15N05S		HL		MOPSO			CAS 68399-77-9	(1967)	
3-(N-Morpholino)-2-hydroxypropane sulfonic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	C	M	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.	1999AAa (57991)	2281

C7H15N07		HL					(6519)		
2-Amino-2-deoxy-D-glycero-D-gulo-heptonic acid; H00C.CH(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 B(CoH2L2)=21.70	1992DGa (58003)	2282

C7H15N07		HL					(7135)		
2-Amino-2-deoxy-D-glycero-L-glucoheptonic acid; H00CCH(NH2)(CHOH)4CH2OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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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 B(CoHL)=15.42 B(CoH2L)=19.98 B(CoH-1L)=-3.02	2000KKa (58270)	2298

C7H19NO7P2 H4L CAS 63161-30-8 (1349)
 1-Hydroxy-3-N,N-diethylaminopropylphosphonic 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 K(Co+HL)=6.94 K(Co+H2L)=4.20	1978KMa (58278)	2299

C7H19N3 L CAS 1985-81-5 (969)
 4-Aza-4-methylheptane-1,7-diamine; H2N.(CH2)3.N(CH3).(CH2)3.NH2

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	NaClO4	35°C	0.20M	U	M	K1=13.51	1983MKb (58353)	2301

Ternary complex with dioxygen: B(Co2L2(O2))=31.04

Co++	gl	oth/un	25°C	?	U		K1=12.36 B2=15.70	1976NGa (58354)	2302
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Co++	gl	NaClO4	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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C		K1=12.15 B(CoH-1L)=1.14	2003KDa (58367)	2304

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
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);
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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-1, DS=116 J K-1 mol-1;
DH(K2)=-25.5, DS=-1
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Co++      sp  KNO3      25°C 0.10M U      K1=5.81      1984OWa (58483)2313
B(CoHL)=11.81
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-----
Co++      sp  KNO3      12°C 0.10M U      K(Co+H2L)=2.46      1965GEa (58484)2314
*****
C8H5O2F3S      HL      TTA      CAS 326-91-0 (165)
4,4,4-Trifluoro-1-(2-thienyl)butane-1,3-dione; F3C.CO.CH2.CO.C4H3S
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-----
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
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-----
Co++      dis non-aq 25°C 100% U      M      K(CoL2+bpy)=5.34      1972KKd (58594)2316
Medium: benzene
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Co++      EMF oth/un 25°C 1.0M U      K(Co+HL=CoL+H)=-2.85      1971JFa (58595)2317
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-----
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
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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      B2=7.95      1977Cwa (58783)2319
*****
C8H6N2O2      HL      (6681)
9-Hydroxy-pyrido(1,2-a)pyrimidin-4-one;
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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=6.54      B2=12.75      1993YDa (58788)2320
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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		K ₁ =5.00 B ₂ =9.35 B ₃ =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		K ₁ =2.29	1989SCa (58934)	2323
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In 60% v/v EtOH/H₂O: K₁ = 3.20

Co++	gl	NaCl04	25°C	0.50M	C	TIH	K ₁ =1.492	1975LKB (58935)	2324
------	----	--------	------	-------	---	-----	-----------------------	-----------------	------

Co++	gl	oth/un	25°C	0.0	U		K ₁ =2.86	1965MOb (58936)	2325
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Co++	ix	oth/un	25°C	0.0	U		K ₁ =2.76 B ₂ =3.66	1965SMF (58937)	2326
------	----	--------	------	-----	---	--	---	-----------------	------

Co++	EMF	oth/un	25°C	0.0	U	T H	K ₁ =2.831	1962DNa (58938)	2327
------	-----	--------	------	-----	---	-----	-----------------------	-----------------	------

Method: H electrode. 0-45 C. DH(K₁)=7.8 kJ mol⁻¹, DS=80.3 J K⁻¹ mol⁻¹

K₁=5.690-0.02374T+0.00004752T²

Co++	sp	oth/un	20°C	0.40M	U		K ₁ =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
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Co++	sp	alc/w	?	100%	U	M		1973SKc (59090)	2329
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K(Co(NO₃)₂+2L)=2.23

K(CoCl₂+2L)=2.70

K(Co(CNS)₂+2L)=1.61

Medium: MeOH

C₈H₇N₂O₂Cl₂ 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
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Co++	sp	diox/w	40°C	50%	U		K1=3.31	1975PSa (59141)	2331
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C8H7NS L CAS 120-75-2 (4501)
 2-Methylbenzothiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	sp	alc/w	?	100%	U	M		1973ASb (59168)	2332
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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
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Co++	gl	KNO3	25°C	0.10M	C		K1=5.43 B2=10.27 B3=14.55 B4=16.40	1992RKa (59181)	2333
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Co++	EMF	KNO3	25°C	0.10M	U		K1=5.263 B2=10.048 B3=13.871	1967EHc (59182)	2334
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C8H7N3 L CAS 16576-78-6 (3793)
 4-(2'-Pyridyl)imidazole;

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=5.811 B2=11.321 B3=15.71	1967EHb (59189)	2335
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C8H7O2Cl HL CAS 1450-74-4 (6325)
 2-Hydroxy-5-chloro-acetophenone; Cl(HO)C6H3.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	diox/w	40°C	50%	U		K1=5.25	1975PPa (59212)	2336
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C8H8NO2Cl HL CAS 5465-90-7 (632)
 N-(4-Chlorophenyl)aminoethanoic acid; Cl.C6H4.NHCH2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	U	M	K(Co(phen)+L)=3.39	1984Cma (59275)	2337

C8H8N2		L					CAS 615-15-6	(5668)	
1-Methylbenzimidazole;									
C8H8N2		L					CAS 615-15-6	(5668)	

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									
C8H8N2O2		HL					Phenylglyoxime	(3222)	

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									
C8H8N2O6S		H2L					CAS 15054-42-9	(3843)	

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;									
C8H8N2S		HL					CAS 7152-24-1	(6200)	

Co++	gl	NaClO4	30°C	0.10M	M	M	K(Co(bpy)+L)=8.64	1995Rma (59391)	2342
K(Co(phen)+L)=8.44									
K(CoA+L)=6.72									
A is 1,2-diaminobenzene.									
Co++	gl	NaClO4	30°C	0.10M	M		K1=10.31	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
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Co++	sp	non-aq	?	100%	U	M			1973ASb (59394)	2344
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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)
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1-Hydrazinophthalazine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	oth/un	22°C	0.10M	U			K1=5.8 B2=10.8	1957FEa (59401)	2345
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B3=15.0

C8H8O2	HL	2-Acetylphenol	CAS 118-93-4	(1888)
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2-Hydroxyacetophenone; HO.C₆H₄.CO.CH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	diox/w	40°C	50%	U			K1=5.25	1975PPa (59453)	2346
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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)
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5-Methylsalicylaldehyde (5-Methyl-2-hydroxybenzaldehyde)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	diox/w	30°C	75%	U			K1=8.46 B2=14.70	1978RJa (59508)	2348
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C8H8O2	HL	Phenylacetic	CAS 103-82-2	(1361)
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Phenylethanoic acid; C₆H₅.CH₂.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	EMF	NaClO ₄	25°C	2.00M	U			K1=0.623 B2=0.522	1979NTa (59538)	2349
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C8H8O2	HL		CAS 1004-72-4	(3190)
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alpha-Methyltropolone;

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=8.0 B2=14.3	1954BFb (59579)	2350
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C8H8O2	HL		CAS 583-80-2	(3191)
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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					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	KN03	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	KN03	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					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	KN03	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 1958KV a (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

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 ⁻¹ , DS(K1)=28 J K ⁻¹ mol ⁻¹ . 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	KN03	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 ⁻¹ , DS(K1)=28 J K ⁻¹ mol ⁻¹ ; 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	KN03	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 ⁻¹ , DS(K1)=42.5 J K ⁻¹ mol ⁻¹ ; 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-sulfo benzeneethanoic acid; NH2.CH(C6H4HSO3)COOH									

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

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

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-(Trifluoromethylsulfonylaminomethyl)-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

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 1985BAb (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⁻¹,
DS=23 J K⁻¹ mol⁻¹

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;

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⁻¹, DS=167 K J mol⁻¹

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			1971MOb (60735)	2407

B3=26.77

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

$$K(\text{CoL2}(\text{NCS})_2+2\text{L})=4.90$$

Medium: CHCl_3 . $\text{DH}(\text{CoL2Cl}_2+2\text{L})=-66.0 \text{ kJ mol}^{-1}$, $\text{DS}=-205 \text{ J K}^{-1} \text{ mol}^{-1}$

$\text{DH}(\text{CoL2}(\text{CNS})_2+2\text{L})=-68.6$, $\text{DS}=-142$

C8H11N L CAS 104-90-5 (4480)

5-Ethyl-2-methylpyridine; $\text{CH}_3.\text{C}_5\text{H}_3\text{N}.\text{CH}_2.\text{CH}_3$

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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$$K(\text{CoCl}_2+\text{L})=1.76$$

$$K(\text{CoCl}_2+2\text{L})=3.91$$

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; $\text{C}_6\text{H}_5.\text{N}(\text{CH}_3)_2$

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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$$K(\text{CoCl}_2+\text{L})=2.30$$

$$K(\text{CoCl}_2+2\text{L})=3.52$$

Medium: t-butanol

C8H11NO L CAS 20609-07-8 (298)

2-(2'-Hydroxypropyl)pyridine; $\text{C}_5\text{H}_4\text{N}.\text{CH}_2.\text{CH}(\text{OH}).\text{CH}_3$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KNO_3	25°C	0.10M	U		$K_1=1.55$	1974ILa (60997)	2421
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C8H11NO L (5433)

2-(2-Pyridyl)-2-propanol; $\text{CH}_3.\text{C}(\text{OH})(\text{C}_5\text{H}_4\text{N}).\text{CH}_3$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	diox/w	25°C	50%	U		$K_1=1.99$	1981CBa (61002)	2422
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C8H11NO HL CAS 6623-41-2 (3229)

2-Amino-4,5-dimethylphenol; $\text{H}_2\text{N}.\text{C}_6\text{H}_2(\text{CH}_3)_2.\text{OH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	none	20°C	0.0	U		$K_1=5.3$	1959SIb (61018)	2423
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C8H11NO L CAS 2859-67-8 (2037)

3-(3-Pyridyl)-1-propanol; $\text{C}_5\text{H}_4\text{N}.\text{CH}_2.\text{CH}_2.\text{CH}_2\text{OH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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 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 K(Co+HL)=4.35	1998VKa (61198)	2433

 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 K(Co+HL)=4.48	1990GKa (61227)	2434

 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⁻¹, DS(Co+HL)=-50 J K⁻¹ mol⁻¹.

 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; H0.C6H4.CH2.CH(NH2)P03H2

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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 0.20M C          B2=8.09      1987KBb (61343)2439
                               B(CoHL)=14.44
                               B(CoH2L2)=27.83
                               B(CoHL2)=18.3

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C8H12N2          L                      CAS 3171-45-7 (7601)
4,5-Dimethyl-1,2-diaminobenzene;

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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          K(Co2A+L)=16.39
                               *K(Co2AL)=-7.36
                               *K(Co2(OH)AL)=-8.66

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A: 1,4,7,13,16,19-Hexaaza-10,22-dioxacyclotetracosane
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C8H12N2          H2L                    CAS 6971-57-9 (1099)
6-Methyl-2-(methylaminomethyl)pyridine; (CH3.NH.CH2)(CH3)C5H3N

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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=3.57      B2=4.98      1971GEa (61368)2441
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Co++       gl  diox/w 35°C 50% U T H      K1=3.84      B2=7.27      1966WRb (61369)2442
Medium: 50% dioxan, 0.1 M KNO3. K1=4.39(15 C),4.10(25 C); K2=4.09(15 C)
3.87(25 C). By calorimetry: DH(B2)=-47.7 kJ mol-1, DS=10 J K-1 mol-1(25 C)

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-----
Co++       gl  oth/un 10°C 0.0 U T H      K1=3.77      B2=6.78      1961RFa (61370)2443
K1=3.41(30 C),3.36(40 C); DH(K1)=-16.2 kJ mol-1, DS=13 J K-1 mol-1. I=0 corr
*****
C8H12N2O          L                      (3231)
2-Aminomethyl-N-2'-hydroxyethylpyridine; C5H4N.CH2.NH.CH2.CH2.OH

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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=5.3       1964LMb (61378)2444
*****
C8H12N2O2          HL      Pyridoxamine      CAS 85-87-0 (1175)
4-(Aminomethyl)-5-hydroxy-6-methyl-3-pyridinemethanol;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  NaNO3   37°C 0.15M U      M          1983ERa (61412)2445
                               B(CoL(Gly))=9.309
                               B(CoHL(Gly))=17.746
                               B(CoL(Gly)2)=13.787

```

B(CoHLA)=16.947
B(CoLA3)=14.502
B(CoL2A2)=16.517
B(CoH2L2A2)=33.93

B(CoL(Gly)A)=13.174
B(CoHL(Gly)A)=21.958
B(CoH2L(Gly)A)=29.321
B(CoHL(Gly)A2)=24.644

$$\begin{aligned} B(\text{CoHL}) &= 13.330 \\ B(\text{CoH}_2\text{L}_2) &= 27.435 \end{aligned}$$

$B(\text{CoHL}) = 14.09$
 $B(\text{CoH-1L}) = 5.06$
 $B(\text{CoH}_2\text{L}_2) = 26.94$
 $B(\text{Co(en)L}) = 11.23$

$$B(\text{CoHL}) = 14.09$$

$$B(\text{CoH}_2\text{L}_2) = 26.94$$

$B(\text{Co}(\text{gly})\text{L})=8.57$
 $*K(\text{Co}(\text{gly})\text{L})=-7.62$
 $*K(\text{Co}(\text{OH})(\text{gly})\text{L})=-10.52$
 $B(\text{Co}(\text{bpy})\text{L})=9.45$

$$*K(\text{CoL}(\text{H}_2\text{O})_2) = -9.93$$

C8H12N2O7 H3L CAS 43101-36-6 (669)
Glycylglycine-N,N-diethanoic acid; (H₂OC.CH₂)₂N.CH₂.CO.NH.CH₂.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO ₃	25°C	0.10M	C		K ₁ =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; (H₂OC)₂.CH.NH.CH₂.CH₂.NH.CH(COOH)₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	vlt	KNO ₃	25°C	0.10M	U		K ₁ =11.90	1973SGa (61487)	2456
Co++	EMF	KNO ₃	25°C	0.10M	U		K ₁ =12.32	1973SGa (61488)	2457
Co++	ISE	KNO ₃	25°C	0.10M	U		K ₁ =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.C₃H₃N₂(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=CoL ₂ (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	KNO ₃	0°C	0.10M	C		K ₁ =3.71 B(CoH-1L)=-4.56	1993KSa (61589)	2460
Co++	gl	KCl	25°C	0.20M	C	M	K ₁ =3.44 B ₂ =6.57 B(CoHL)=10.61 B(CoH-1L)=-3.96 B(CoH-1L ₂)=-1.49 B(CoH-2L)=-15.45 B(CoHL(His))=16.95; B(CoL(His))=9.63; B(CoH-1L(His))=0.90	1983FSc (61590)	2461
Co++	gl	KNO ₃	25°C	0.10M	C		K ₁ =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
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Co++	gl	KNO3	0°C	0.10M	C		K1=5.82 B(CoH-1L)=-0.17	1993KSa (61624)	2464
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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 K[Co(H-1L)+H]=7.15	1977Hmd (61626)	2466
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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 K(Co+HL)=2.17	1975APb (61627)	2467
------	----	------	------	-------	---	--	----------------------------------	-----------------	------

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
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Co++	gl	NaNO3	25°C	0.10M	M	M	K1=1.61 K(PtLA+Co)=1.61	2000KLb (61647)	2469
------	----	-------	------	-------	---	---	----------------------------	-----------------	------

A=diethylenetriamine

Co++	gl	NaNO3	25°C	0.10M	M		K1=2.37 B(CoHL)=7.49 K(Co+HL)=0.59	1992SCa (61648)	2470
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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
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Co++	gl	NaClO4	25°C	0.10M	U		K1=1.96	1972RVh (61702)	2471
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C8H12O4 H2L CAS 6018-58-3 (960)
 Hex-1-ene-6-dioic acid; CH2:CH.CH2.CH2.CH2.CH(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KNO3	25°C	0.10M	C		K1=2.54	1975IPa (61727)	2472
------	----	------	------	-------	---	--	---------	-----------------	------

C8H13NO3 H3L (4539)
(1-Acetyl)ethylideneiminopropanoic acid;

C8H13N06 H3L (3835)
2-Amino-2-carboxypropane-N,N-diethanoic acid; $\text{HOOCC}(\text{CH}_3)_2\text{N}(\text{CH}_2\text{COOH})_2$

C8H13NO6 H3L (5681)
2-Aminobutanoic-N,N-diethanoic acid; CH3CH2CH(COOH)N(CH2COOH)2

C8H13N06 H3L (3232)
N-(Carboxymethyl)iminodipropionic acid; $\text{HOOC.CH}_2\text{.N(CH}_2\text{.CH}_2\text{.COOH)}_2$

C8H13NO6S H3L (5675)
2-Mercapto-1-aminoethane-N,N,S-triethanoic acid; $\text{HOOC} \cdot \text{CH}_2 \cdot \text{S} \cdot \text{CH}_2 \cdot \text{CH}_2 \cdot \text{N}(\text{CH}_2\text{COOH})_2$

C8H13N3 L CAS 20947-95-7 (3205)
N-2'-Pyridylmethylethylenediamine; C5H4N.CH2.NH.CH2.CH2.NH2

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++ gl 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++ gl 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++ gl 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++ gl 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++ gl diox/w 20°C 75% U K1=12.80 B2=24.03 1981HFa (61896)2484

Co++ gl 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

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 B(CoH-1L)=-6.02	1994JBa (61904)	2486

C8H14N2O3 HL (6601)
2,3-Dehydro-N-valyl-alanine; NH2.CH(CH3)2CO.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=1.84 B(CoH-1L)=-5.54 B(CoH-1L2)=-3.34 B(CoH-2L2)=-12.13	1994JBa (61909)	2487

C8H14N2O6P2 HL (7465)
N-(3-Pyridylmethyl)imino-bis(methylphosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.20M	C		K1=7.75 B(CoHL)=13.78 B(CoH2L)=18.73 B(CoH3L)=22.86 B(CoH-1L)=-3.22	2000KKa (61966)	2488

C8H14N4O L Carcinine (260)
B-Alanyl-histamine; NH2.CH2.CH2.CO.NH.CH2CH2.C3H3N2

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 B(CoHL)=11.06	1992GHb (61976)	2489

C8H14N4O L (6726)
Sarcosyl-histamine

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 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	1997GHa (61983)	2490

Co++	gl	NaCl04	25°C	0.10M	C		K1=2.84 B2=4.78 B(CoHL)=10.17	1995GHa (61984)	2491
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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++	gl	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++	gl	diox/w	30°C	75%	U			K1=9.04 B2=17.57	1972UDa (62042)	2493

Medium: 75% v/v dioxan, 0.01 M Me4NC104

C8H14O4S3 H2L (2526)
3,6,9-Trithiaundecanedioic acid; HOOCH2.S.C2H4.S.C2H4.S.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.10M	U			K1=2.28 K(Co+HL)=1.58	1971PPc (62120)	2494

C8H14O5S2 H2L CAS 4408-66-6 (8332)
Oxybis(ethylenethio)diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KNO3	20°C	0.10M	U			K1=2.60	1977CAc (62134)	2495

C8H14O7 H2L (241)
Di(carboxymethoxy)ethyl ether; (HOOCH2.O.CH2.CH2)2O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	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++	gl	KCl	20°C	0.10M	U			K1=4.17 B2=7.9	1963IPa (62157)	2497

C8H15NO2 HL CAS 6051-21-4 (8043)
Cyclohexylacetohydroxamic acid;

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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
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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=7.71  B2=13.78  1975IPa (62189)2499
*****
C8H15N05           H2L                      (3234)
N-(2-Hydroxyethyl)iminodipropanoic acid; HO.CH2.CH2.N(CH2.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=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
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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;
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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=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
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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
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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=2.66  B2=4.68  1977PNa (62302)2504
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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); (H00CCH2CH2NHCH2.)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); (H00C.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
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Co++	gl	KNO3	25°C	0.10M	C		K1=9.46	1982BTb (62567)	2523
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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
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Co++		EMF	oth/un	20°C	0.10M	U	K1=10.02	1972DKa (62580)	2524
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Co++	gl	KNO3	20°C	0.10M	U		K1=10.12	1970DKa (62581)	2525
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C8H16N10 L (7005)
 N,N'-Di(2-(5-tetraazolyl)ethyl)-1,2-diaminoethane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaNO3	20°C	0.10M	U		K1=14.39	1981ESa (62613)	2526
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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
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Co++		nmr	non-aq	27°C	100%	C	K1=2.64	2000SMg (62656)	2527
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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
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Co++	gl		oth/un	30°C	0.10M	U	K1=5.16 B2=8.51	1957FCa (62782)	2528
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C8H18N2O L (6585)
 4,7-Dimethyl-1-oxa-4,7-diazacyclononane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaClO4	25°C	1.0M	C		K1=5.48	1999UGa (62819)	2529
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Co++	gl	KNO3	25°C	0.10M	U		K1=5.76	1990CCa (62820)	2530
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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 B(CoH-1L)=-4.3	1985NSb (62841)	2531

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	2001AOa (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	B(CoCuL)=24.3 B(CoCu2L2)=47.8 B(CoCu3L3)=70.7	1992LJb (62966)	2537

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 K3=1.23	1966SKe (63032)	2538

Medium: CH₂OHCH₂NH₂.HNO₃

C8H₁₉N₅ 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

C8H₁₉N₆P₂ 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

C8H₁₉N₂O₄P H₂L (1577)
1-(N-L-Leucylamino)ethanephosphonic acid; H₂NCH(CH₂CH(CH₃)₂)CONHCH(CH₃)PO₃H₂

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

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

C8H₁₉N₃O 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-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaCl04	35°C	0.20M	C	M	K1=11.11	1984KKa (63143)	2545
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K(2CoL+O2)=(CoL)2O2) = 5.7

C8H19O2PS2	HL	CAS 2253-44-3	(2060)
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O,O'-Dibutyl dithiophosphoric acid; (C4H9O)2P(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	ISE alc/w	25°C	90%	U			K1=2.18 B2=3.73	1972TCa (63154)	2546
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Medium: 90% EtOH, 0.3 M NaCl04

C8H19O2PS2	HL	CAS 2253-52-3	(4584)
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O,O-Di-isobutyl phosphorodithioic acid; ((CH3)2.CH.CH2O)2P(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	ISE alc/w	25°C	90%	U			K1=1.94 B2=3.45	1972TCa (63166)	2547
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Medium: 90% EtOH, 0.3 M NaCl04

C8H19PS2	HL	CAS 32435-51-5	(4552)
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Di-n-butyl phosphinedithioic acid; (C4H9)2PSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	ISE alc/w	25°C	90%	U			K1=2.62 B2=4.88	1972TCa (63206)	2548
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Medium: 90% EtOH, 0.3 M NaCl04

C8H20N2	L	CAS 373-44-4	(5746)
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1,8-Diaminooctane; NH2.(CH2)8.NH2

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=2.47	1985BUd (63213)	2549
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Medium: MeOH, 0.05 M Et4N.NO3. DH=-26.4 kJ mol-1

C8H20N2O2	L	CAS 82502-45-2	(3239)
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N,N'-Di-(2-Hydroxypropyl)ethylenediamine; (CH3.CH(OH).CH2.NH.CH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	oth/un	25°C	0.50M	U		K1=5.02 B2=9.5	1960HDA (63225)	2550
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C8H20N2O3	L	(5747)
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1,11-Diamino-3,6,9-trioxaundecane; NH2.C2H4.0.C2H4.0.C2H4.0.C2H4.NH2

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 NaCl04 25°C 0.15M U H 1999CCa (63281)2552
By calorimetry, DH(Co+L=CoL)=-46.3 kJ mol-1.

Co++ kin NaCl04 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 NaCl04 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 K(CoL+H)=6.20	1982BTb (63409)	2559

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 K(CoL+H)=4.29	1982BTb (63414)	2560

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 ⁻¹ ; DH(Co2L2O2)=-290.3 kJ mol ⁻¹									
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 K(Co+HL)=8.93 B(Co2L2(O2))=38.7	1972NMB (63462)	2564
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[O2] is in atmospheres

Co++	cal	KCl	25°C	0.10M	U	H		1964PVa (63463)	2565
DH(K1)=-57.9 kJ mol ⁻¹ , DS=60.6 J K ⁻¹ mol ⁻¹									
Co++	gl	KCl	25°C	0.10M	U		K1=13.30 K(Co+H2L)=4.9	1963PVa (63464)	2566

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;

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;									

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;									

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;									

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
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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 1977MOb (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 1977MOb (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 1977MOb (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 NaClO4 ? 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 NaClO4 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⁻¹, DS(K1)=-19.9 J K⁻¹ mol⁻¹;
 DH(B2)=-41.5, DS(B2)=24.8. Reaction is CoCl₂+nL.

Co++ sp oth/un ? 100% U I M 1971AMc (64052)2593
 K(CoCl₂+L)=1.18
 K(CoCl₂+2L)=3.93

Medium: 3-methylbutanol. Data also in mixed solvents with benzene and CHCl₃

Co++ sp non-aq ? 100% U I M 1971MAe (64053)2594
 K(CoCl₂+L)=0.92
 K(CoCl₂+L)=1.00, x=25
 K(CoCl₂+L)=1.15, x=50
 K(CoCl₂+2L)=1.89, x=50

K(CoCl₂+L)=1.35, K(CoCl₂+2L)=3.0 at x=75.
 Medium : dimethylformamide with x% benzene.

Co++ sp mixed ? 75% U 1971TMb (64054)2595
 K(Co(CNS)₃+2HL)=2.10
 K(Co(CNS)₄+2HL)=1.90

Medium: 75% acetone

Co++ sp oth/un ? 100% U I M 1970Lda (64055)2596
 K(CoCl₂+L)=2.64
 K(CoCl₂+2L)=4.60

Medium: cyclohexanone. In 2-chloroethanol, K(CoCl₂+L)=0.90, K(CoCl₂+2L)=2.28
 In CH₃CN, K(CoCl₂+L)=2.38, K(CoCl₂+2L)=4.1

Co++ sp oth/un ? 100% U 1970Lda (64056)2597
 K(CoBr₂+L)=2.72
 K(CoBr₂+2L)=4.60

Medium: cyclohexanone. In 2-chloroethanol, K(CoBr₂+L)=0.90, K(CoBr₂+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 K(CoL+furoic acid)=4.18	1990NAa (64204)	2600
Co++	kin	alc/w	20°C	100%	U		K1=10.4 B2=21.0 K(Co+HL=CoL+H)=-3.6 K(Co+2HL=CoL2+2H)=-7.0	1988BTb (64205)	2601
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		K1eff=2.87 at pH 3.01 B2eff=4.83 at pH 3.01 B(2,2)eff=6.72 at pH 3.01	1975BUb (64210)	2606
Co++	dis	oth/un	20°C	0.10M	U		K1=9.06 B2=17.52 B3=24.35	19700Ka (64211)	2607
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 ⁻¹ , DS=83.6 J K ⁻¹ mol ⁻¹ 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 ⁻¹ , DS=217 J K ⁻¹ mol ⁻¹ . 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

C9H7NO2		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

C9H7NO2		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
Medium: 50% dioxan, 0.3 M NaClO4									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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 ⁻¹ (?), DS=92 J K ⁻¹ mol ⁻¹ (?); 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
Co++	gl	KNO3	25°C	0.10M	U		K1=8.11 B2=15.06 K3=5.36	1959RGa (64516)	2621
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
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 NaCl04. DH(K1)=-64.4 kJ mol⁻¹, DS=-63 J K⁻¹ mol⁻¹

Co++ gl diox/w 25°C 50% U K1=7.9 1966KFb (64645)2626

Medium: 50% dioxan, 0.1 M NaCl04

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 NaCl04 ? 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 NaCl04 25°C 0.30M C T H K1=2.09 1998DAa (64845)2634
Data for 25-40 C. DH(K1)=14.4 kJ mol⁻¹, DS(K1)=88 J K⁻¹ mol⁻¹.
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⁻¹, DS(K1)=
-254 J K⁻¹ mol⁻¹; 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 NaCl04 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
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Co++	sp	NaClO4	?	0.20M	U		K1=6.07	1967GDb (64931)	2639
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By glass electrode: K1=6.30,K2=4.82,K3=2.82

C9H8O4		H2L					CAS 4316-23-8	(4593)	
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4-Methylphthalic acid; CH3.C6H3(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	oth/un	25°C	0.04M	U		K1=2.88	1971NPc (64969)	2640
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C9H8O5		H2L					CAS 635-53-0	(3246)	
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2-(Carboxymethoxy)benzoic acid; H00C.CH2.O.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	diox/w	35°C	50%	U		K1=5.8	1958YSa (65020)	2641
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C9H9NO2		HL					CAS 25355-34-4	(6206)	
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1-Phenyl-prop-1,2-dione monoxime; C6H5.CO.C(:NOH).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	alc/w	25°C	75%	U		K1=6.7 B2=10.80	1986BTa (65034)	2642
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Medium: 75% MeOH/H2O, 0.1 M NaClO4

C9H9NO3		HL					CAS 495-69-2	(1184)	
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Benzoylaminoethanoic acid, N-benzoylglycine; C6H5.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	EMF	diox/w	?	32%	U I		K1=3.08	1970STg (65054)	2643
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In 43% dioxan, K1=3.21; 48% K1=3.30; 60% K1=3.45

C9H9NO4		HL					CAS 55805-95-3	(6322)	
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2-Hydroxy-5-nitropropiofenone; (HO)(NO2)C6H3.CO.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	sp	diox/w	40°C	50%	U		K1=3.57	1975PSb (65076)	2644
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C9H9NO4		H2L					CAS 487-54-7	(3869)	
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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
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Co++	gl	alc/w	25°C	50%	U		K1=3.13 B2= 7.11	1989MSi (65093)	2645
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B(CoH-1L)=-4.19

K(Co+OH+L)=9.81

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

C9H9NO4 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-thiazolyl-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 K(CoL+A)=6.33	1997PSb (65194)	2651

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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	1994AAb (65302)	2661
							B(Co2L)=17.5		

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)	
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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)	
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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)	
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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)	
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2-Hydroxy-5-methylacetophenone; HO(CH3).C6H3.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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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 NaCl04

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 NaCl04

C9H1002S HL CAS 21101-79-1 (3267)
2-Ethylthiobenzoic acid; CH3.CH2.S.C6H4.CO0H

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 1973KDc (65428)2668
K(Co+HL)=7.85

Medium: 75% dioxan, 0.1 M NaCl04

C9H1003 HL Phenyllactic CAS 828-01-3 (1190)
2-Hydroxy-3-phenylpropanoic acid, b-Phenyllactic acid; C6H5.CH2.CH(OH).CO0H

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.CO0H

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.CO0H

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

C9H10O3Se 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

C9H10O8 H4L CAS 3724-52-5 (1264)
cis-1,2,3,4-Cyclopentanetetra-carboxylic acid; C5H6.(COOH)4

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

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⁻¹, DS(K1)=61.0 J K⁻¹ mol⁻¹;

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⁻¹; 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 B(CoHL)=13.89 B(CoH2L2)=27.2 B(CoHL2)=18.2	1984KGa (66074)	2691

DH(CoHL)=-28 kJ mol⁻¹; DH(CoH2L2)=-57; DH(CoHL2)=-33; DH(CoL2)=4 kJ mol⁻¹

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	K(Co+HL)=4.05 K(CoHL+A)=3.78	1997PSb (66201)	2692

H2A is thiamine orthophosphoric acid.

Co++	gl	KCl	25°C	0.20M	U	H	B2=9.1 B(CoHL)=14.18 B(CoH2L2)=28.1 B(CoHL2)=19.1	1984KGa (66202)	2693
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DH(CoHL)=-27 kJ mol⁻¹; 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 B3=11.0, B(CoHL)=14.17 B(CoHL2)=18.10 B(CoH2L2)=29.52 K(Co+3HL)=10.4	1982PSa (66205)	2696
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Co++	gl	KNO3	25°C	0.10M	U	T		1973BBe (66206)	2697
							K(Co+HL)=4.05 K(CoHL+HL)=3.78		

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
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Co++	sp	NaClO4	25°C	0.30M	C T H			K1=2.65	1998DAa (66468)	2711
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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)		
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2-Hydroxy-acetophenone semicarbazone; HOC6H4C(CH3):NNHCONH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	sp	non-aq	?	100%	U			K1=7.13 B2=10.84	1991SKc (66486)	2712
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Medium: EtOH

Co++	sp	alc/w	?	100%	U			K1=7.13 B2=10.84	1991SKd (66487)	2713
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Medium: EtOH

C9H11N3O2		L						(6246)		
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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
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Co++	sp	alc/w	27°C	50%	U			K1=5.12 B2=9.67	1980BRc (66490)	2714
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C9H11N3O2S		HL						(1273)		
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1-Ethoxycarbonyl-3-pyridin-2-ylthiourea; C5H4N.NH.CS.NH.CO.OC2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	alc/w	25°C	75%	U			K1=5.52 B2=10.96	1980SMb (66495)	2715
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C9H11N3O2S		HL						CAS 51146-75-9 (6170)		
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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
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Co++	gl	diox/w	35°C	50%	U I			K1=7.94 B2=14.22	1993GJa (66503)	2716
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Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.

Also data for 50% dioxane/H2O, 0.0200.2 M NaClO4. At I=0, K1=8.73.

C9H12N2O2		HL						CAS 19254-08-1 (5893)		
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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
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Co++	gl	KCl	25°C	0.20M	C			K1=5.05 B2=9.75	1991FKa (66579)	2717
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B(CoHL)=14.41

C9H12N2O2 HL CAS 66315-20-6 (3272)
N-2'-Aminoethylanthranilic acid; HOOCC6H4.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; H0.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)2CO.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⁻¹, DS(Co(ala)L)=81 J K⁻¹ mol⁻¹; 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

$$K(CoC+L)=2.04$$

Co++	gl	KN03	35°C	0.10M U	M	K ₁ =2.13	1990RSc (66686)2724
						K(CoL+Ala)=1.87	
						K(CoL+Phe)=1.84	
						K(CoL+Trp)=1.83	

Co++ gl KN03 35°C 0.10M U M K1=3.43 1986RRa (66688)2726
Ternary complexes with glycine, oxalate and histidine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ kin oth/un 40°C 0.20M C K1=0.57 1980LOa (66757)2727
Medium: 0.20 M Mg(ClO4)2.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	KN03	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
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Co++ gl KN03 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
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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⁻¹, DS=288 J K⁻¹ mol⁻¹

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 B(CoHL)=18.60 B(CoH2L2)=35.07 B(CoHL2)=25.25	1981GKb (66851)	2731

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)									

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

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=9.64	1968KTd (66878)	2735
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C9H13N2O3P	HL	(7918)
(Glycylamino)methyl(phenylphosphinic acid);		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KNO3	25°C	0.10M	C		K1=3.28 B2= 5.43 B(CoHL)=9.94 B(CoH-1L2)=-3.64	2001LKa (66917)	2736
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C9H13N2O9P	H3L	UMP-5	CAS 58-97-9	(2948)
Uridine-5'-monophosphoric acid;				

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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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
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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
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K(Co+HL)=2.29

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;

Co++ gl KN03 25°C 0.10M U T HM 1995RSb (67041)2741

$$K(\text{CoL+phe})=4.75$$
$$K(\text{CoL}+\text{trp})=5.35$$

Data for 35 and 45 C. $\Delta H(\text{Co(ala)L}) = -16.3 \text{ kJ mol}^{-1}$, $\Delta S(\text{Co(ala)L}) = 32 \text{ J K}^{-1} \text{ mol}^{-1}$; $\Delta H(\text{Co(phe)L}) = 18.2$, $\Delta S(\text{Co(phe)L}) = 30$; $\Delta H(\text{Co(trp)L}) = -21.7$, $\Delta S = 30$.

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

$$B(\text{CoL}(\text{Ala})) = 5.52$$
$$B(\text{CoL}(\text{Phe})) = 5.05$$
$$B(\text{CoL}(\text{Trp})) = 5.62$$

Co++ g/l KNO3 35°C 0.10M C M K1=2.74 1985RRc (67044)2744

$$B(\text{CoHL}(\text{Gly})) = 13.13$$
$$B(\text{CoL}(\text{oxalate})) = 9.17$$
$$B(\text{CoL}(\text{His})) = 12.69$$
$$B(\text{CoL}(\text{histamine})) = 11.87$$

Co++ gl KNO3 45°C 0.10M U K1=2.69 1981TKa (67045)2745

C9H14N2 L CAS 14088-79-0 (3252)

N-Benzylethylenediamine; $\text{C}_6\text{H}_5\cdot\text{CH}_2\cdot\text{NH}\cdot\text{CH}_2\cdot\text{CH}_2\cdot\text{NH}_2$

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=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
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Co++ gl NaNO3 25°C 0.10M M K1=3.68 1999SSa (67153)2747

$$K(Co+H_2L)=2.0$$
$$K(\text{CoHL} + \text{H}) = 4.7$$

Co++ g1 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-1, DS=70 J K-1 mol-1.									
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
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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 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	1983FSc (67310)	2757
Co++	gl	KNO3	37°C	0.15M	U		K1=3.22 K(Co+HL)=1.98	1975APb (67311)	2758

Co++	gl	KN03	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	NaN03	25°C	0.10M	M			K1=2.31	2000GKa (67355)2761
									K(Co+HL)=0.7
									*K(CoHL)=-6.1

C9H15N06		H3L						(7177)	
2-Aminopentanoic-N,N-diethanoic acid; C3H7C(COOH)N(CH2COOH)2									

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

Co++	gl	KN03	20°C	0.10M	U			K1=10.33	1974RMf (67401)2762

C9H15N06		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

C9H15N06		H3L						CAS 95482-53-4	(3270)
N-(2-Carboxyethyl)-3,3-iminodipropoic 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

C9H15N06P2		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

C9H15N06P2		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

[illegible]

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Additional methods: conductivity, spectrophotometry

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

Co++ gl KN03 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⁻¹, DS(K1)=66 J K⁻¹ mol⁻¹.

Co++ gl NaClO₄ 25°C 0.1M C M 1978FMa (67517)2772
K(Co+HL)=4.53
B(Co(HL)(bpy))=10.69

[illegible]

Co++ ix NaCl 23°C 0.10M U K(Co+HL)=4.55 1958WAa (67519)2774

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

$$K(\text{CoL}+\text{H})=4.72$$

DH(K1)=-20.1 kJ mol⁻¹; DH(Co+HL)=-18.4, DS=30

2,6-Dimethyl-3,5-heptanedione; $(\text{CH}_3)_2\text{CH}.\text{CO}.\text{CH}_2.\text{CO}.\text{CH}(\text{CH}_3)_2$

Dipropylpropanedioic acid (Di-n-propylmalonic acid);

N-(2,4-Dihydroxy-3,3-dimethylbutyryl)-3-aminopropanoic acid;

$$(\text{HO} \cdot \text{CH}_2)_2\text{C}(\text{CH}_2 \cdot \text{CH}_3) \cdot \text{N}(\text{CH}_2 \cdot \text{COOH})_2$$

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
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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	2001AOa (68052)	2799

C9H20O6Cl2P2 L CAS 19928-93-7 (2633)
Dichloromethylenedi(phosphonic acid diethyl ester); Cl2C(P(O)(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(P(O.(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
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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⁻¹, 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
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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 ⁻¹ ; TdS(K1)=3.4		

Co++	gl	oth/un	25°C	?	U		K1=7.42	B2=10.16	1976NGa (68362)	2819
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Co++	gl	NaClO4	25°C	?	U		K1=7.42	B2=10.16	1976NGe (68363)	2820
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 C9H24N4 L CAS 4963-47-7 (546)
 Tris-(3-aminopropyl)amine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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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
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 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
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Co++	gl	KCl	25°C	0.10M	U		K1=15.73 K(Co+HL)=12.07 K(Co+H2L)=9.17 K(Co+H3L)=7.35 K(Co+H4L)=5.74	1967KDa (68403)	2823
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K(Co+H5L)=4.30, K(Co+H6L)=3.10

C10H6O3		HL					CAS 83-72-7	(3294)	
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2-Hydroxy-1,4-naphthoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	diox/w	30°C	75%	U		K1=5.71 B2=10.78	1960KFc (68458)	2824
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C10H6O3		HL					CAS 481-39-0	(3295)	
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5-Hydroxy-1,4-naphthoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	diox/w	30°C	75%	U		K1=8.66 B2=16.21	1960KFc (68472)	2825
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C10H7NO2		HL					CAS 131-91-9	(2668)	
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1-Nitroso-2-naphthol, alpha-Nitroso-beta-naphthol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	alc/w	RT	40%	M		K1=7.88 B2=15.34	1993RAb (68567)	2826
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Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

Co++	sol	oth/un	20°C	var	U			1964ASb (68568)	2827
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B3=46.9

Co++	gl	diox/w	30°C	75%	U		K1=10.67 B2=22.81	1957CFa (68569)	2828
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C10H7NO2		HL					CAS 132-53-6	(2524)	
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2-Nitroso-1-naphthol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	alc/w	RT	40%	M		K1=7.61 B2=14.44	1993RAb (68636)	2829
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Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

Co++	sp	non-aq	25°C	100%	U			1971CBd (68637)	2830
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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
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Co++	gl	diox/w	25°C	50%	U		K1=3.3 B2=6.20 K(Co(OH)L+H)=7.3 K(Co(OH)2L+H)=9.0	1964BFa (68786)	2843
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 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
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Co++	gl	diox/w	25°C	50%	U		K1=6.7 B2=12.30 K(Co(OH)L+H)=9.9 K(Co(OH)2L+H)=11.7	1964BFa (68793)	2844
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 C10H7NO5S H2L CAS 3682-32-4 (1812)
 2-Nitroso-1-hydroxynaphthalene-4-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	oth/un	RT	0.10M	M		K1=4.04 B2= 8.19	1993RAb (68877)	2845
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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		B3=34.1	1958TPa (68879)	2847
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 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
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Co++	ISE	oth/un	25°C	0.10M	C		K1=6.87 B2=12.26	1981LCa (68996)	2848
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Method: heterogeneous Co ion selective electrode.

Co++	oth	oth/un	30°C	0.0	U		K1=6.65 B2=12.43	1973GBa (68997)	2849
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Co++	ix	NaNO3	30°C	1.0M	U		K1=6.92 B2=13.36	1973MDa (68998)	2850
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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)hydrazinecarbothioamide;

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

C10H8N04BrS 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	K1=5.92 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 19920Sa (69502)2869
 K3=4.6

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 1990DAc (69504)2871

K(CoL+A)=4.85

B(CoAL)=10.65

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⁻¹, DS=10.5 J K⁻¹ mol⁻¹; 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⁻¹, DS=-1.46 J K⁻¹ mol⁻¹; 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⁻¹, DS(K1)=-162 J K⁻¹ mol⁻¹
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⁻¹, DS=87 J K⁻¹ mol⁻¹; 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	NaCl04	25°C	.005M	U		K1=5.50 K3 < 3.5	1963FFa	(69713)2891

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	KN03	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	KN03	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	NaN03	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	KN03	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 ⁻¹ , DS=104.5 J K ⁻¹ mol ⁻¹ ; 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 ⁻¹ ; DH(B2)=-48.5, DS=188 J K ⁻¹ mol ⁻¹										

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⁻¹, DS=209 J K⁻¹ mol⁻¹

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; HOOCH: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⁻¹, DS=66 J K⁻¹ mol⁻¹; DH(K2)=-13.2, DS=65

C10H9NO3S H2L CAS 49608-51-7 (8280)
4,5-Dihydro-2-(2-hydroxyphenyl)-4-thiazolecarboxylic acid,
Deazademethyldesferrithiocin;

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
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Co++ dis NaClO₄ 25°C 0.10M C 1987YSb (70260)2920
Method: extraction from 0.10 M NaClO₄ solution into CHCl₃/HL.
 $K(\text{Zn}+2\text{HL}(\text{org})=\text{ZnL}_2(\text{org})+2\text{H})=0.41.$

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

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
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Medium: 50% dioxan, 0.1 M NaClO₄

C10H9N3 L Dipyrldylamine CAS 1202-34-2 (2428)
(2,2'-Dipyrldyl)amine; C5H4N.NH.C5H4N

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=4.98 B2= 8.90 1991DAc (70334)2924
Data for ternary complexes with acetohydroxamic acid

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

$$B(\text{CoL}(\text{pyrocatecholate}))=14.02$$
$$K(\text{CoL+pyrocatecholate})=9.30$$
$$K(\text{Co}(\text{pyrocatecholate})+\text{L})=5.41$$

Co++ g1 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

C10H9N3OS HL CAS 54723-30-7 (3924)
3-(2'-Thiazolylazo)-4-methylphenol; CH3.C6H3(OH).N:N.C3H2N2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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
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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 B(CoHL)=12.77	1987STc (70411)	2931

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

C10H10NO4P HL (1932)
 8-Quinolyl-methyl-phosphoric acid; (C9H7N)CH2PO4H

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

Desferri-ferrithiocin,
2-(3-Hydroxypyridin-2-yl)-4-methyl-4,5-dihydrothiazole-4-carboxylic acid;

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

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; H00C.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.CO0H)2

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=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⁻¹,
 DS(K1)=26.9 J K⁻¹ mol⁻¹; 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⁻¹

 Co++ cal KNO3 25°C 0.10M U K1=2.96 1991Aa (70994)2957
 DH(K1)=20.92 kJ mol⁻¹, DS(K1)=125.52 J K⁻¹ mol⁻¹

 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.

 C10H11NO5 H3L CAS 100844-86-8 (2108)
 N-(2-Hydroxyphenyl)iminodiethanoic acid; HO.C6H4.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	EMF	oth/un	?	?	U		K1=11.0 K(Co+HL)=4.60	1968TRc (71035)	2961

 C10H11NO5 H3L CAS 6386-78-3 (2834)
 N-(4-Hydroxyphenyl)-iminodiethanoic acid; HO.C6H4.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U		K1=7.66 K(Co+HL)=6.63	1980TAa (71053)	2962

 C10H11NO5S H2L (3929)
 N-(2-Thenoylmethyl)iminodiethanoic acid; C4H3S.CO.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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 B3=13.0	1957FEa (71078)	2964

 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 B(Co(phen)L)=2.31	1995SKa (71084)	2965

 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
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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-pyranyl)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

HA=2-aminobutanoic acid

HA=2-aminobutanoic acid

$K(\text{Co}+\text{HL}+\text{B})=9.33$. 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⁻¹. 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

C10H12O2 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.

C10H12O4 HL CAS 90-24-4 (4704)
2-Hydroxy-4,6-dimethoxyacetophenone; (HO)(CH3O)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

$$K(\text{Co}+\text{HL}=\text{CoL}+\text{H})=6.07$$

$$K(\text{Co}+2\text{HL}=\text{CoL}_2+2\text{H})=12.37$$

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	NaNO ₃	25°C	0.10M	M		K ₁ =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	KNO ₃	25°C	0.10M	C	M	K ₁ =2.65	2001AAa (71849)	3010

Also data for ternary complexes with MOPSO, TAPSO and ACES.

Co++	gl	KNO ₃	25°C	0.10M	C	TIHM	K(Co+HL)=2.85 K(CoL+H)=3.92 K(CoHL+HA=CoLA+2H)=7.38 K(CoHL+HC=CoLC+2H)=7.45	2000RNb (71850)	3011
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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	K ₁ =2.55 K(Co+HL)=1.08	1998HTa (71851)	3012
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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	KNO ₃	35°C	0.10M	U	M	K(Co+H ₂ L=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
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HA is alanine, HC is phenylalanine, HD is tryptophan.

Co++	gl	NaNO ₃	25°C	0.10M	M		K(Co+HL)=2.59 *K(CoHL)=-7.69	1994SMb (71853)	3014
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C10H13N4O9P H3L (3930)
Inosine-5'-monophosphoric acid N(1)-oxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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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 1988KR a (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	KN03	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-1,DS=35 ?								
Co++	ix	NaClO4	25°C	0.10M	U		K1=2.08	1966DTa (72228)3034
Co++	gl	KN03	25°C	0.10M	U I		K1=2.10	1966DTa (72229)3035
In 0.1 M Me4NBr: K1=2.19								
Co++	gl	KN03	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 K(CoL+H)=4.79 K(Co+HL)=0.88	2003BSa (72388)3037
Co++	gl	KN03	20°C	0.10M	C		B(CoHL)=11.87 B(CoH2L)=17.14	2002GLc (72389)3038
Co++	gl	KN03	25°C	0.10M	C	M	K1=2.53 K(CoL+A)=2.61 B(CoLA)=5.14 K(CoL+B)=3.84 B(CoLB)=6.37	2001A0a (72390)3039
HA=POPSO, HB=HEPPSO.								
Co++	gl	KN03	25°C	0.10M	C	M	K1=2.53 K(CoL+A)=6.11 B(CoLA)=8.64 K(CoL+B)=3.93 B(CoLB)=6.46	2000ADa (72391)3040
HA=ACES, HB=MOPSO. Also data for CHES, TAPSO and DIPSO.								
Co++	gl	NaNO3	25°C	0.10M	C	M	K1=2.57 K(CoL+A)=2.64 B(CoLA)=5.21	2000KHa (72392)3041
H2A=salicylhydroxamic acid.								
Co++	gl	NaNO3	25°C	0.10M	C	M	K1=2.57 K(CoA+L)=2.82 B(CoAL)=9.72	2000KHb (72393)3042
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 K(Co+HL)=0.78	1998HTa (72395)3044
Medium: 0.10 M Me4NBr. By calorimetry: DH(K1)=-3.6 kJ mol ⁻¹ , DS=31 J K ⁻¹ mol ⁻¹ . 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 K(CuL+BES)=3.19 K(Co+L+BES)=5.80 K(CoL+Bicine)=3.86 K(Co+L+Bicine)=6.47	1995AEb (72397)3046
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 ⁻¹ (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 ⁻¹ , DS(K1)=34.3 J K ⁻¹ mol ⁻¹ .								
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 B(CuL(Dien))=12.40	1986BMa (72402)3051
K(2CoL(Dien)+02=Co2L2(Dien)202)=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 ⁻¹ 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 K(Co+HL)=1.322	1977PDa (72408)3057
Co++	ix	NaClO4	20°C	0.05M	U		K1=3.86 B2=6.60	1975KOb (72409)3058

Medium: 10% dioxan, 0.1 M NaClO₄

Co++ g1 KNO3 25°C 0.10M U K1=2.57 1966DTa (72412)3061

Co++ gl NaCl04 25°C 0.10M U K1=2.19 1964SBa (72413)3062

Co++ g1 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
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Co++ gl NaCl04 25°C 0.10M U 1964SBa (72520)3065

$$K(\text{Co}+\text{HL})=2.11$$
$$K(\text{CoL}+\text{H})=7.77$$

By spectrophotometry: $K_1=6.8$

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
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Co++ gl KN03 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

$$K(Co+HL)=3.04$$
$$K(\text{CoL}+\text{H})=4.08$$
$$K(\text{CoHL} + \text{HA} = \text{CoLA} + 2\text{H}) = 7.50$$
$$K(\text{CoHL} + \text{HC} = \text{CoLC} + 2\text{H}) = 7.68$$

Data for 35 and 45 C. HA is DL-ala-ala, HC is DL-ala-phe. DH(CoLA)=-17.5

kJ mol^{-1} , $\text{DS}(\text{CoLA})=85 \text{ J K}^{-1} \text{ mol}^{-1}$; $\text{DH}(\text{CoLB})=-17.2$, $\text{DS}(\text{CoLC})=89$.

Co++ gl R4N.X 25°C 0.1M U H K1=2.68 1998HTa (72576)3068

$$K(\text{Co}+\text{HL})=1.26$$

Medium: 0.10 M Me₄NBr. By calorimetry: DH(K1)=-14 kJ mol⁻¹.

DS=4 J K⁻¹ mol⁻¹. DH(K2)=-6.1, DS=20.

Co++ gl KNO3 35°C 0.10M U M 1998RVb (72577)3069

$$K(\text{Co} + \text{H}_2\text{L} = \text{CoHL} + \text{H}) = 2.65$$
$$K(\text{CoHL} + \text{HA} = \text{CoLA} + 2\text{H}) = 8.50$$

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

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)

Phenylalanylaminoethylphosphonic 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

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

H2A=N-(2-acetamido)iminodiacetic acid.

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

[illegible]

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

[illegible]

Co++ gl R4N.X 25°C 0.20M U T H K1=3.90 1980Mgb (72939)3099
Medium: Me4NBr. At 5 C: K1=3.84; 15 C: 3.84; 37 C: 4.00

Co++	ix	NaCl04 20°C 0.05M U	B2=4.52 B3=6.79	1975K0b (72940)3100
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Co++ gl KN03 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⁻¹, DS=54 J K⁻¹ mol⁻¹; DH(Co+HL)=-7.9, DS=13

[illegible]

Co++ ix NaCl 23°C 0.10M U K1=3.68 1958WAa (72943)3103

C10H16N2O6 H2L CAS 23873-27-0 (9120)

N,N'-Bis-(3-carboxy-1-oxopropanyl)-1,2-diaminoethane;

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

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
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Co++	gl	KNO3	25°C	0.50M	U	T H	K1=13.54	1993VKa (73101)	3106
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Co++	EMF	KNO3	25°C	0.10M	U		K1=13.70 K(Co+HL)=7.30	1991VZa (73102)	3107
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Co++	ISE	KNO3	25°C	0.10M	U		K1=13.55	1973SGa (73103)	3108
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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
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Co++	gl	KNO3	20°C	0.10M	U		K1=14.11	1968MJa (73105)	3110
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By paper electrophoresis: K1=13.8

Co++	sp	KNO3	20°C	0.10M	U		K1=14.02	1966MSg (73106)	3111
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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
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Co++	cal	NaNO3	25°C	0.50M	U	HM		1998KKb (73518)	3112
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K(CoL+OH)=0.95
 K(CoL+NH3)=0.87
 K(CoL+en)=1.49

DH(CoL+OH)=-23.9 kJ mol⁻¹, DH(CoL+NH3)=-25.6, DH(CoL+en)=-43.6

Co++	cal	NaNO3	25°C	0.5M	C			1998KNa (73519)	3113
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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
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DH(K1)=-20.1 kJ mol⁻¹, DH(CoL+OH)=-12.1

Co++	sp	none	25°C	0.0	U	M	K1=16.3	1983KPa (73521)	3115
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K(CoL+CN)=3.30

Co++	EMF	KCl	20°C	0.10M	C		K1=16.1	1981SFa (73522)	3116
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Method: Pt/H2 electrode.

Co++	sol	KNO3	25°C	1.00M	U			1979JPb (73523)	3117
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Co++	gl	KCl	20°C	0.10M	C	R	K1=16.49 K(CoL+H)=3.0	1978ANa (73524)	3118
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 DH1=-21.0 kJ/mol	1976VBb (73528)	3122
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 K(CoL+N3)=-0.39 K(CoL+SCN)=0.13 K(CoL+py)=0.29	1970HSc (73530)	3124
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 K(CoL+H)=3.0 K(Co+HL)=9.15	1969BNa (73531)	3125
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 K(CoL+B)=1.56 K(CoL+en)=1.68 K(CoL+py)=1.64	1965BRe (73534)	3128
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⁻¹, DS=251 J K⁻¹ mol⁻¹

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⁻¹ mol⁻¹

Co++ cal oth/un 25°C 0.05M U H 1954CHa (73542)3136
Medium: Co(NO3)2. DH(K1)=-17.1 kJ mol⁻¹, DS=242 J K⁻¹ mol⁻¹

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 2001AOa (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⁻¹, DS(K1)=-49.4 J K⁻¹ mol⁻¹.

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⁻¹. 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	NaCl04	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	1978GFb (74632)3159
15 C: K1=5.74; 26 C: 5.92; 30 C: 6.104, 36 C: 6.248. DH(K1)=5.9 kJ mol ⁻¹							
Co++	gl	NaCl	25°C	0.12M	U	K1=4.54	1978RMc (74633)3160
Co++	sp	NaCl04	25°C	0.10M	U	M K(Co(bpy)+L)=4.93	1977CSa (74634)3161
Co++	gl	NaCl04	25°C	0.10M	U	M K1=4.86 K(Co(bpy)+L)=4.79	1977CSa (74635)3162
Co++	ix	NaCl04	20°C	0.05M	U	B2=2.17 B3=4.60 B4=6.53	1975KOb (74636)3163
Co++	gl	NaCl04	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⁻¹, DS=59 J K⁻¹ mol⁻¹; 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'-tetraethanoic acid;

(HOOC.CH2)2P.CH2.CH2.P(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaCl04	25°C	0.10M	C		B2=22.54 B(CoH2L2)=32.71 B(CoH4L2)=40.15 B(CoH6L2)=45.72	1992PPb (74943)	3176
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Co++	gl	NaCl04	25°C	0.10M	C		B(CoH2L2)=32.71	1982PPc (74944)	3177
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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
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Co++	gl	NaCl04	25°C	0.50M	U		K1=7.19 B2=12.87	1967FMb (74972)	3178
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C10H17N05 H2L (3917)
N-(Tetrahydropyran-2-ylmethyl)iminodiethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KNO3	20°C	0.10M	U		K1=8.51 B2=13.01 K(Co+HL)=2.60	1963IFa (74998)	3179
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C10H17N08S HL (1735)
2-(5-Carboxy-1,2,3,4-tetrahydroxypentyl)4-carboxythiazolidine,
Galactocarboxythiazolidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaCl04	25°C	0.10M	C		K1=4.10 B2=6.65 B(CoHL)=7.12	1992GNa (75012)	3180
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C10H17N2014P3 H3L TTP CAS 365-08-2 (402)
Thymidine-5'-triphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaCl	25°C	0.10M	C	T	K1=4.91 K(Co+HL)=4.91	1991SMa (75048)	3181
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IUPAC evaluation

Co++	gl	NaN03	25°C	0.10M	C			1987STb (75049)	3182
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C10H17N306S H3L Glutathione CAS 70-18-8 (333)

Glutamyl-cysteinyglycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaClO4	25°C	0.10M	U	TIH	K1=6.910	2001SGd (75107)	3183
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Data for 0.05-0.2 M NaClO4 and 15-45 C. DH(K1)=-29.4 kJ mol⁻¹, DS(K1)=-38 J K⁻¹ mol⁻¹. At I=0, K1=7.150. Also data for MeOH/H2O, EtOH/H2O, DMF/H2O.

Co++	gl	KNO3	30°C	0.10M	U	T M	K(CoA+L)=6.05 K(CoB+L)=6.48 K(CoC+L)=5.98 K(CoD+L)=7.60	1995SSc (75108)	3184
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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 B(CoHL)=13.20 B(CoHL2)=18.52 B(Co2L3)=18.93 B(Co2HL3)=26.97	1983HSa (75109)	3185
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B(Co2L2)=14.05. Alternative method: Spectrophotometry

Co++	gl	KNO3	37°C	0.15M	C		K1=6.3 B(CoHL)=13.4 B(CoH2L2)=25.85 B(Co2L)=9.3	1981AEa (75110)	3186
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Co++	gl	KNO3	25°C	0.16M	U		K1=4.2	1959MEa (75111)	3187
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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
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Co++	gl	R4N.X	20°C	0.10M	M		K1=5.63 K(Co+HL)=3.15	1976PSe (75168)	3188
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C10H18N2O4 H2L CAS 17423-86-4 (8122)
1,4-Piperazine-N,N'-dipropionic 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	TIH	K1=4.27 B2= 6.55	1991KEa (75188)	3189
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DH(K1)=-22.1 kJ mol⁻¹, DS(K1)=9.8 J K⁻¹ mol⁻¹; 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;

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 K(CoL(OH)+H)=10.55	1975CKa (75201)3191

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			1985KLb (75316)3194
							K(CoL+H)=2.2 K(CoH-1L+H)=2.14	
Co++	gl	KCl	25°C	0.10M	U		K1=14.4 K1=16.2 by spectrophotometry	1975AZa (75317)3195
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

C10H18N4O6 H2L (4504)
Hexanoic acid bis(3-hydroxycarbamoyl-methyl)amide; HONHCOCH2NHCOC(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

C10H19NO4 H2L (3328)
N-(3,3-Dimethylbutyl)iminodiethanoic acid; (CH3)3C.CH2.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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
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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
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DH(K1)=-13.54 kJ mol⁻¹, DS(K1)=36.6 J K⁻¹ mol⁻¹.
 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
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Co++	gl	KN03	25°C	0.10M	U			1977TIa (75774)	3215
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K(Co+HL)=7.43

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
C10H20N2O4 H2L CAS 5578-84-7 (5914) N,N-Dihydroxydecanediamide; HN(OH).CO.(CH2)8.CO.NH(OH)									
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);									
Co++	gl	KCl	25°C	0.20M	C		B(CoHL)=11.85 B(Co2L2)=12.29	1988VSb (75825)	3217

C10H20N2O6 H2L (7208) 1,2-Diaminoethane-N,N'-bis(3-hydroxy-2-butanoic acid)); (CH2NHCH(COOH)CH(OH)CH3)2									
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);									
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									
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;									
Co++	gl	NaClO4	35°C	0.20M	U	M	B(CoH-2L)=-11.11	1983MKb (75887)	3221
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-)									

C10H20O5 L 15-Crown-5 CAS 33100-27-5 (576) 1,4,7,10,13-Pentaoxacyclopentadecane; cyclo(-(O.CH2.CH2)5-)									

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⁻¹.

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: dmsol, 0.1 M Et4NClO4. 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 Me4NClO4

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 1983MKb (76403)3241
B(CoH-1L)=1.49

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

C10H24N2O5 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-Ethandyl-diimino)-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		

$$B(\text{CoAH4L})=46.04$$

H2A is adenosine-5'-monophosphoric acid.

C10H26N4S4 L CAS 55677-43-5 (1178)

1,1,2,2-Tetramercaptoethylamine-ethane; $(\text{CH}(\text{S.CH}_2.\text{CH}_2.\text{NH}_2)_2)_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaClO4	25°C	0.10M	U			1976CJa (76816)	3260
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$$K(\text{Co+H2L})=3.90$$

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
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Co++	gl	NaClO4	25°C	0.15M	C		K1=16.26	2002AGa (76828)	3261
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C10H28N2O12P4 H8L CAS 23605-74-5 (435)

(Hexamethylenedinitrilo)tetra(methylenephosphonic acid);

$(\text{CH}_2.\text{CH}_2.\text{CH}_2.\text{N}(\text{CH}_2.\text{PO}_3\text{H}_2)_2)_2$

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=5.90	1980ZRB (76837)	3262
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$$K(\text{CoL+H})=10.18$$

$$K(\text{CoHL+H})=7.26$$

$$K(\text{CoH2L+H})=6.28$$

$$K(\text{CoH3L+H})=5.59$$

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
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Co++	gl	NaNO3	25°C	1.0M	C		K1=15.79	2001GLb (76867)	3263
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$$B(\text{CoHL})=23.22$$

$$B(\text{CoH2L})=29.07$$

Co++	cal	KNO3	25°C	0.10M	U	H	K1=15.55	1971PWA (76868)	3264
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DH(K1)=-61.7 kJ mol⁻¹, DS=89.9 J K⁻¹ mol⁻¹

Co++	cal	KCl	25°C	0.10M	U	H	K1=11.55?	1964SPb (76869)	3265
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$$B(\text{CoHL})=12.40$$

K calculated. By calorimetry:DH(K1)=-61.6 kJ mol⁻¹, DS=89.9 J K⁻¹ mol⁻¹;

DH(CoHL)=-58.5, DS=41.8

Co++	gl	KCl	20°C	0.10M	U		K1=15.75	1953SMA (76870)	3266
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$$K(\text{Co+HL})=12.50$$

$$K(\text{CoL+H})=6.95$$

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

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Co++      sp  NaClO4  ?  0.10M U      B2=22.54      1969BNb (76920)3273
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C11H802S2      HL      CAS 1138-14-3 (3352)
Di-2-thenoylmethane; C4H3S.CO.CH2.CO.C4H3S
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Co++      sp  mixed  25°C  30%  U      B2=11.1      1965CAa (76984)3274
Medium: 30% THF, 1 M NaClO4
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C11H803      H2L      CAS 86-48-6 (1129)
1-Hydroxy-2-naphthoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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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.
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Co++      gl  alc/w  25°C  50%  U      M  K1=6.86  B2=12.24  1980DCa (77005)3276
K(Co(phen)+L)=6.48
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C11H803      H2L      CAS 2083-08-1 (1131)
2-Hydroxy-1-naphthoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Co++      gl  alc/w  25°C  50%  U      M  K1=6.77      1980DCa (77058)3277
K(Co(phen)+L)=5.99
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C11H803      H2L      CAS 92-70-6 (1130)
2-Hydroxy-3-naphthoic acid (3-Hydroxy-2-naphthoic acid);
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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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.
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Co++      gl  diox/w 25°C  50%  C      K1=7.9      1987CFb (77109)3279
In 50% dioxan/H2O; 0.2 M KNO3.
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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.
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C11H803      HL      Plumbagin      CAS 81402-06-4 (882)
6-Hydroxy-2-methyl-1,4-naphthoquinone;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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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-thenoylmethane; 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.C9H3O(: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
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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
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Co++	gl	diox/w	25°C	50%	U	I	K1=14.8 B2=23.00	1962GNa (77525)	3302
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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-Methoxymaleanilic 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 ⁻¹ , DS=62 J K ⁻¹ mol ⁻¹ ; DH(K2)= -9.9, DS=88										

C11H11NO6 H3L CAS 1147-65-5 (425)										
N-(2'-Carboxyphenyl)iminodiethanoic acid; <chem>HOOC.C6H4.N(CH2.COOH)2</chem>										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KN03	25°C	0.10M	C	M		K1=8.42 K(CoL+A)=4.13 B(CoLA)=12.55	1990DAb (77815)	3319

H2A: salicylaldehyde

Co++	gl	KN03	25°C	0.10M	C	M		K1=8.42 K(CoL+A)=3.30 B(CoAL)=11.72	1990DAc (77816)	3320
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HL: benzohydroxamic acid

Co++	gl	KN03	25°C	0.10M	U			K1=8.42	1967UKa (77817)	3321
Co++	sp	NaN03	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
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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.

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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(thiodipropoate)+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

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A is adenine; HB is cytosine.

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Co++      vlt NaCl04 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
-----
Co++      gl  NaCl04 25°C 3.0M U      T  K1=4.58      B2=8.90      B3=12.25      1970WIa (78184)3348
-----
Co++      gl  oth/un 20°C 0.01M U      K2=8.5        1950ALa (78185)3349
*****
C11H12N2O2      HL      (9226)
3-[Diphenylazo]penta-2,4-dione;
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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
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Co++	gl	NaClO4	25°C	0.10M	C	T			1978MSh (78426)	3358
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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
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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
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Co++	gl	alc/w	25°C	70%	U			K1=8.39	1992CGd (78437)	3360
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Medium: 70% EtOH/H2O

Co++	gl	diox/w	30°C	50%	U			K1=9.08 B2=15.76	1961MJa (78438)	3361
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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
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Co++	gl	diox/w	25°C	50%	U			K1=4.20	1969HSc (78461)	3362
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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
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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
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Co++	gl	KCl	30°C	0.10M	U			K1=2.0	1957TBb (78546)	3364
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C11H13NO4 H2L CAS 300042-63-8 (7950)

N-4-Tolyliminodiethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ cal NaCl04 25°C 0.10M C H 1997ZLa (78550)3365
DH(K1)=17.3, DH(K2)=5.00 kJ mol⁻¹. 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 K(CoL+H)=5.81 K(Co+HL)=6.97	1975HMb (78613)	3370

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 K(Co+H2L)=7.7	1975DTa (78658)	3372

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 K(Co+H2L)=7.6	1970TTb (78673)	3373

C11H13NO6 H4L CAS 31477-66-7 (4853)
2,6-Dihydroxybenzyliminodiethanoic acid; (HO)2.C6H3.CH2.N(CH2.COOH)2

Co++	EMF oth/un	?	?	U	1975DTa (78689)3374
				K(Co+HL)=10.3	
				K(Co+H2L)=7.8	

C11H13N3O L Ampyrone CAS 83-07-8 (2027)
4-Amino-2,3-dimethyl-1-phenyl-3-pyrazolin-5-one, 4-Aminoantipyrine;

Co++ g1 KN03 25°C 0.50M U K1=1.17 B2=2.06 1980Lwa (78706)3375

C11H13N3OS L CAS 7420-45-3 (4869)
1-Benzoyl-4-allylthiosemicarbazide;

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

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;			

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

Co++	g1	KN03	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⁻¹, DS=156.1 J K⁻¹ mol⁻¹
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⁻¹, DS(K1)=-29.8 J K⁻¹ mol⁻¹.

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	NaN03	25°C	0.50M	C		K1=0.13	2002KSb (78954)	3387

Co++	gl	NaN03	25°C	0.50M	M		K1=0.22	1991JCa (78955)	3388
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Also by spectrophotometry in 0.5 M NaCl04: 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	NaCl04	25°C	1.0M	U			1981LVa (78972)	3389

K(Co+HL=CoHL)=0.4

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 Me4NC104

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 Me4NC104

C11H15N03 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

C11H15N04 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

C11H15N04S2 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

$K(\text{Co}+\text{HL}=\text{CoL}+\text{H})=4.08$

$K(\text{Co}+2\text{HL}=\text{CoL}_2+2\text{H})=12.37$

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

$K(\text{Co}+\text{HL})=0.96$

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 1982GSg (79107)3397

$K(\text{Co}+\text{HL})=12.40$

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 1981LVa (79135)3399

$K(\text{Co}+\text{HL}=\text{CoL}+\text{H})=-5.7$

C11H17NO8S 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

$K(\text{Co}+\text{HL})=8.36$

*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 B(CoH-1L)=-5.832 B(CoHL)=9.26	1995HLA (79181)	3401

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	KN03	20°C	0.10M	U		K1=15.70	1981NSc (79251)	3402
Co++	vlt	KN03	20°C	0.10M	U		K1=17.59	1978NLb (79252)	3403
Co++	vlt	KN03	25°C	1.00M	U		K1eff=13.31	1977HDA (79253)	3404

Keff at pH 7

Co++	cal	KN03	25°C	0.20M	C	H		1975CGf (79254)	3405
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DH(K1)=-20.4 kJ mol⁻¹.

Co++	sp	NaClO4	25°C	1.0M	U	M		1970HSc (79255)	3406
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K(CoL+H)=2.46

K(CoL+SCN)=-0.42; K(CoHL+SCN)=0.51

Co++	vlt	KN03	25°C	0.20M	U		K1=17.07	19650Ga (79256)	3407
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C11H18N2O8 H4L CAS 4408-81-5 (923)
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOCH₂)₂NCH₂)₂CH₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	vlt	KN03	25°C	0.20M	U		K1=14.48	19650Ga (79414)	3408
Co++	gl	KN03	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	KN03	20°C	0.10M	U		K1=15.54	1964LAa (79416)	3410
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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
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Co++	gl	NaCl	25°C	0.1M	C	I	K1=14.48 K(CoL+H)=3.03	2002GKb (79528)	3411
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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
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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
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Method: H electrode

Co++	gl	KNO3	25°C	0.10M	U		K1=13.92 K(CoL+H)=3.33	1966TKa (79532)	3415
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Co++	oth	KNO3	20°C	0.10M	U		K1=14.5	1965JMb (79533)	3416
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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
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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
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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
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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
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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 Me4NC104

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⁻¹,
DS=-209 J K⁻¹ mol⁻¹. 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⁻¹, DS=79.8 J K⁻¹ mol⁻¹

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 NaCl04									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaNO3	35°C	0.10M	U	M	K1=6.75 K(CoL+CMF)=3.74	1985KSc (80399)	3446

H2CMP=cytidine-5'-monophosphoric acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	diox/w	25°C	50%	U	M	K1=8.31 B2=16.03 B(CoL(PFHA))=14.23	1984ABb (80400)	3447

PFHA=N-phenyl-2-furylhydroxamate, PTHA=N-phenyl-2-thenohydroxamate

NSA = 5-nitrosalicylic acid

Co++ cal NaNO3 20°C 0.10M U H 1963ANb (80403)3450
DH(K1)=-38.0 kJ mol⁻¹, DS=8.8 J K⁻¹ mol⁻¹, DH(B2)=-66.0, DS=41.4;
DH(B3)=-99.5, DS=41.4

Co++ dis KCl 25°C 0.10M U K1=7.02 B2=13.72 1962IMa (80405)3452
K3=6.38

1,5-Phenanthroline;

4,6-Phenanthroline;

Fentichlor; $\text{Cl.C}_6\text{H}_3(\text{OH}).\text{S}.\text{C}_6\text{H}_3(\text{OH}).\text{Cl}$

Medium: 75% EtOH, 1.0 M NaClO₄

2-(N-2'-Furfuralideneimino)benzoic acid; C₄H₃O.CH:N.C₆H₄.COOH

Co++ gl NaCl04 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
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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		K(Co+HL)=9.18 K(Co+H2L)=3.24	1967UKa (80850)	3465

Co++	gl	KCl	22°C	0.10M	U		K(Co+HL)=9.0 K(Co+H2L)=3.2	1961UHa (80851)	3466
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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
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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		K(?)=12.59	1963DPa (80938)	3471

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	NaCl04	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 K(Co+HL)=1.0	1970BAa (80991)	3473

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 K3=5.25	1985SCa (81007)	3475

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
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C12H12N2O3 HL Nalidixic acid CAS 389-08-2 (1401)
1-Ethyl-1,4-dihydro-7-methyl-4-oxo-1,8-naphthyridine-3-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	mixed	25°C	75%	U		K1=4.65	1998Sjb (81063)	3478

Medium: 75% DMSO/H2O, 0.10 M NaCl04.

Co++	sp	KCl	25°C	0.10M	U		K1=4.4	1978TSb (81064)	3479
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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 K(Co+HL)=3.0 K(Co+H2L)=2.05 B(Co2L)=8.30	1973UWb (81109)	3482

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⁻¹,
 DS(K1)=169 J K⁻¹ mol⁻¹; DH(K2)=47.9 kJ mol⁻¹, DS(K2)=261 J K⁻¹mol⁻¹.

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
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Co++ gl alc/w 25°C 70% C 1985HWa (81154)3486

$$B(\text{CoHL}) = 16.35$$
$$B(\text{Co}_2\text{L}_2) = 18.14$$

Medium: 70% v/v MeOH/H₂O

Co++ gl diox/w 30°C 75% U K1=9.37 B2=17.25 1960KFc (81155)3487

C12H1203 HL (6844)

3-Benzoylpenta-2,4-dione; $\text{CH}_3\text{COCH}(\text{CO}\cdot\text{C}_6\text{H}_5)\text{CO}\cdot\text{CH}_3$

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

C₁₂H₁₃N₀S L (6236)

Diacetophenylthioamide; $(\text{CH}_3.\text{CO})_2\text{CH}.\text{CS}.\text{NH}.\text{C}_6\text{H}_5$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ sp alc/w 25°C 60% U 1984FNa (81183)3490

B3=12.46

Data also for 4-Cl-, 4-Br- and 3-Me- analogues

C12H13N03 HL (1054)

4-Dimethylamino-benzylidenepyruvic acid; $(\text{CH}_3)_2\text{N}.\text{C}_6\text{H}_4.\text{CH}:\text{CH}.\text{CO}.\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ sp NaCl04 25°C 0.50M C K1=1.082 1984MTa (81190)3491

C₁₂H₁₃N₃ H₂L (5384)

Acetylacetone-anthranilic acid Schiff base

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=5.92 B2=9.87 1971MGa (81217)3492

C12H13NO3 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

C12H13NO5 H2L CAS 90274-75-2 (3979)
N-(2'-Acetylphenyl)iminodiethanoic acid; CH3.CO.C6H4.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.10M	U		K1=6.99 B2=11.84	1965AUa (81232)	3494

C12H13NO8 H5L (7001)
3-Bis-(carboxymethyl)iminomethyl-2,4-dihydroxybenzoic acid;
HOOC.C6H2(OH)2CH2.N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	U		K(Co+H2L)=7.7	1977RTb (81249)	3495

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
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Co++	gl	KNO3	25°C	0.10M	U		K1=7.74 B2=13.05	1968RBA (81283)	3498
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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

C12H15N50 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

C12H15N5010P2 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.

C12H16N202 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⁻¹, DS=220 J K⁻¹ mol⁻¹

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'-diglutaric 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: $K\{2\text{CoL}+\text{O}_2=[\text{Co}_2(\text{H}-1\text{L})_2(\text{O}_2)(\text{OH})]+3\text{H}\} = -8.2$

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⁻¹, DS(K1)=-47.6 J K⁻¹ mol⁻¹.

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 K(CoL+H)=3.47 K(CoH-1L+H)=9.14 K(CoH-2L+H)=9.79	1974MMb (81950)	3544

C12H19NOS2 L (5424)
2-(2-Pyridyl)-1,3-dithioethyl-2-propanol; C2H5.S.CH2.C(OH)(C5H4N).CH2.S.C2H5

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

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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-1, DS=177 J K-1 mol-1

Co++	gl	KNO3	20°C	0.10M	U		K1=15.69	1964LAa (82208)	3553
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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
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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
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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 K(Co+HL)=8.37	1964ANa (82445)	3560

By calorimetry: $\text{DH}(\text{K1}) = -19.4 \text{ kJ mol}^{-1}$, $\text{DS} = 202 \text{ J K}^{-1} \text{ mol}^{-1}$

C12H20N2O9 H4L EEDTA CAS 923-73-9 (2112)

Oxa-bis(ethyleneimino)diethanoic acid; $((\text{HOOC.CH}_2)_2\text{N.CH}_2.\text{CH}_2)_2\text{O}$

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

Co++ cal KNO3 25°C 0.10M U H 1965WHa (82517)3561

$\text{DH}(\text{K1}) = -27.5 \text{ kJ mol}^{-1}$, $\text{DS} = 188 \text{ J K}^{-1} \text{ mol}^{-1}$

Co++ gl KNO3 20°C 0.10M U H K1=15.27 1964ANa (82518)3562

K(Co+HL)=8.55

By calorimetry: $\text{DH}(\text{K1}) = -26.5 \text{ kJ mol}^{-1}$, $\text{DS} = 201.5 \text{ J K}^{-1} \text{ mol}^{-1}$

Co++ EMF KNO3 25°C 0.10M U K1=14.7 1960HRa (82519)3563

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 1967LDa (82582)3564

B(Co2L)=21.15

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 1995IOb (82623)3565

K(CoL+H)=2.15

K(CoL=CoH-1L+H)=-9.52

K(CoH-1L=CoH-2L+H)=-12.23

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'-tetraethanoic acid;

$(\text{HOOC.CH}_2)_2\text{N.CH}_2.\text{C}(\text{CH}_3)_2.\text{N}(\text{CH}_2.\text{COOH})_2$

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 K(Co+HL)=8.34	1971Z0a (82757)	3570

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⁻¹

Co++	cal	KNO3	25°C	0.10M	C		DH1=-55.2 kJ/mol	1982TMd (82777)	3572
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Co++	gl	KNO3	25°C	1.00M	U	M	K1=13.84 K(2CoL+O2=CoL.O2.CoL)=12.6	1979HTa (82778)	3573
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Co++	gl	KNO3	25°C	0.10M	C		K1=13.84 K(CoL+H)=3.3 K(2CoL+O2=CoL.O2.CoL)=12.6	1978THb (82779)	3574
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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
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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
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Co++ gl NaNO3 20°C 0.10M C 1997Feb (82926)3577
B(CoH-2L)=-15.64

C12H23N3O5 H2L (6393)
1-0xa-4,7,10-triazacyclododecan-4,10-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ gl R4N.X 25°C 0.10M C K1=16.80 1992ADa (82970)3578
Medium: 0.1 M Me4NN03

C12H24N2 L CAS 67483-65-2 (3962)
1,1'-Diaminobicyclohexyl;

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

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
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Co++ g1 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
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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
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Co++	gl	NaClO4	35°C	0.20M	U	M		1983MKb (83067)	3582
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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
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Co++	con	mixed	25°C	90%	C		K1=1.83	2003ISa (83246)	3583
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Medium: 90% v/v DMSO/H2O.

Co++	con	alc/w	25°C	40%	C		K1=1.42	2002ISa (83247)	3584
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Medium: 40% EtOH/H2O.

Co++	con	alc/w	25°C	40%	C		K1=1.80	2001ISa (83248)	3585
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Medium: 40% v/v EtOH/H2O.

Co++	nmr	non-aq	27°C	100%	U	I	K1=2.15	2000SMd (83249)	3586
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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
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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
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Co++	gl	R4N.X	25°C	0.10M	C		K1=3.26	1983LCa (83729)	3588
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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
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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
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Medium: 0.05 M Me4NClO4

Co++	cal	alc/w	25°C	100%	U	H	K1=3.56	1985BUd (83805)	3591
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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)
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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
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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)
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4,7,10,13-Tetraazahexadecane-1,16-diamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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)
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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
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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)
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4-(6-Bromo-2-benzothiazolylazo)-1,3-dihydroxybenzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	sp	NaClO4	?	0.10M	U				1969IBb (84479)	3617
								K(Co+2HL)=21.57		

C13H8O3	HL	CAS 719-41-5 (3397)
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1-Hydroxyxanthone (1-Hydroxy-9-xanthenone)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	KCl	25°C	0.10M	U			K1=5.26	B2=8.81	1986DDa (84491)	3618
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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;

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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

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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

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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=5.83      B2=12.91  1969CBa (84539)3622
Medium: 50% dioxan, 0.1 M NaClO4
*****
C13H9NOS          HL                      CAS 3411-95-8 (1683)
2-(2-Hydroxyphenyl)benzothiazole;

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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=9.76      B2=18.15  1954CFa (84548)3623
*****
C13H9NO2BrCl      HL                      CAS 104614-71-3 (9109)
4-Bromo-N-(3-chlorophenyl)-N-hydroxybenzamide;

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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;

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

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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

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									
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									
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									
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									
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									
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	1985HWa (84990)	3652
Medium: 70% v/v MeOH/H2O									

C13H10O3 HL CAS 5910-23-6 (3399)									

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										

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.										
Co++	gl	diox/w	27°C	50%	U			K1=4.70 B2=8.51	1972SDb	(85032)3655
Medium: 50% dioxan, 0.1 M NaClO4										

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

C13H11N02			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										

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

C13H11N03			H3L					CAS 3147-44-2	(1388)	
2,4-Dihydroxy-benzophenone oxime; (HO)2C6H3.C(:NOH)C6H5										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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)C ₆ H ₃ .N:N.C ₆ H ₅										

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 NaClO ₄										

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 ⁻¹ , 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; C ₆ H ₅ .N:N.C ₆ H ₃ (CH ₃).OH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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; HO3S.C6H3(OH).CH:N.SO2.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
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Co++	sp	mixed	?	75%	U				1971TMb (85501)	3677
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K(Co(CNS)₃+2HL)=8.13

K(Co(CNS)₄+2HL)=1.35

Medium: 75% acetone

C13H13N5OS	HL	CAS 220035-45-0	(8639)
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alpha-Pyridoin thiosemicarbazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	diox/w	30°C	50%	U	TIH	K1=9.16	B2=17.45	19980Fa (85528)	3678
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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)
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3-Benzoyl-5-bromohexa-5-ene-2-one; CH₂=CBr.CH₂.CH(CO.CH₃)CO.C₆H₅

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	KCl	25°C	0.20M	U		K1=4.52		1992CMd (85535)	3679
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C13H13O2Cl	HL	(6842)
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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
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Co++	gl	KCl	25°C	0.20M	U		K1=4.55		1992CMd (85543)	3680
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C13H14NO3P	H2L	CAS 19316-85-7	(1466)
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2-Hydroxyphenyl-N-phenylaminomethylphosphinic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	NaClO ₄	20°C	0.10M	U		K1=6.00		1985SIb (85560)	3681
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C13H14N2	L	CAS 104986-55-2	(4972)
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1,3-Bis(2'-pyridyl)-propane; C₅H₄N.CH₂.CH₂.CH₂.C₅H₄N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	KNO ₃	20°C	0.10M	U		K1=1.3		1970BAa (85573)	3682
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K(Co+HL)=1.0

C13H14N2O2S	HL	CAS 4384-37-1	(4032)
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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	1985SIb	(85637)3686
							K(Co+HL)=3.00		

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	1985SIb	(85650)3687
							K(Co+HL)=3.10		

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.									

Co++	kin	NaNO3	25°C	0.30M	U	M	K1=3.32	1971CHd	(85678)3689
							K(CoA+L)=3.61		

K(CoB+L)=2.86
K(CoC+L)=3.03
H2A=iminodiethanoic acid; H3B=nitrilotriethanoic 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=nitrilotriethanoic 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

C13H15NO4 HL CAS 35104-87-2 (4997)
2-Nitrobenzoyl pivaloyl methane; O2N.C6H4.CO.CH2.CO.C(CH3)3

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

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

C13H15NO4 HL CAS 18362-53-3 (4998)
4-Nitrobenzoyl pivaloyl methane; O2N.C6H4.CO.CH2.CO.C(CH3)3

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

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

C13H15NO6 H3L (4999)
2-Benzyl nitrilotriethanoic 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

C13H15N2O3P H2L CAS 80767-72-2 (1460)
2-Hydroxyphenyl-(N-2-pyridylmethylamino)methylphosphinic acid;

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

Co++ gl NaClO4 20°C 0.10M U K1=6.70 1985SIa (85777)3696

C13H15N2O3P 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 NaCl04 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 NaCl04 20°C 0.10M U K1=6.90 1985SIa (85803)3698

C13H15N2O4P H3L CAS 80767-78-8 (1463)
2-Hydroxyphenyl-(N-2-pyridylmethylamino)methylphosphonic acid;
C6H4(OH)CH(PO3H2).NH.CH2.C5H4N

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

Co++ gl NaCl04 20°C 0.10M U K1=9.60 1985SIa (85816)3699

C13H15N2O4P H3L CAS 85946-85-6 (1464)
2-Hydroxyphenyl-(N-3-pyridylmethylamino)methylphosphonic acid;
C6H4(OH)CH(PO3H2).NH.CH2.C5H4N

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

Co++ gl NaCl04 20°C 0.10M U K1=9.80 1985SIa (85829)3700

C13H15N2O4P H3L 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 NaCl04 20°C 0.10M U K1=10.00 1985SIa (85842)3701

C13H15N3 L (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 1988MMd (85851)3702
B(CoA2L)=14.12
K(2CoA2L+O2)=(CoA2L)2O2=8.30

Medium: 70% v/v dioxan/H2O, 0.1 M KCl. A=Salicylaldehyde

C13H15N3O5 HL 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

C13H15N3OS 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 Me4NClO4									

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 Me4NClO4									

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 B(rac-CoL2)=13.45 B(meso-CoL2)=14.31 B(Co(OH)L)=18.87	1993BGb (86068)	3719

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 K(Co+HL)=4.40	1985SIb (86087)	3721

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 K3=5.90 K4=5.80	1961GKa (86096)	3722

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 *K(CoL)=-10.02	2001CDb (86165)	3724

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 K(Co+HL)=7.94	1964ANa (86186)	3725

By calorimetry: DH(K1)=-12.9 kJ mol⁻¹, DS=212 J K⁻¹ mol⁻¹

C13H22N2O8 H4L CAS 1198-14-7 (5004)
1,2-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)2NCH2CH(C3H7)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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 K(CoL+H)=2.52	1995IOb (86347)	3729

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
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Co++	gl	diox/w	30°C	75%	U		K1=9.92	1972UDa (86373)	3730
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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
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Co++	gl	diox/w	25°C	70%	U		K1=9.03	1984MMe (86386)	3731
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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
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Co++	gl	R4N.X	25°C	0.10M	C		K1=9.94	1998CCd (86407)	3732
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*K(CoL)=ca.-9.7

Medium: 0.10 M Me4NN03.

C13H25N5 L (2943)

2,6-Bis-(5-(1,4-diazaheptyl)pyridine; (H2N.C2H4.NH.CH(CH3))2.C5H3N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	cal	KN03	25°C	0.1M	C	H	K1=13.99	1982TMc (86446)	3733
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DH(K1)=-50.2 kJ mol-1

Co++	cal	KN03	25°C	0.10M	C			1982Tmd (86447)	3734
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DH1=-50.6 kJ/mol

Co++	gl	KN03	25°C	0.10M	C		K1=13.99	1978HMa (86448)	3735
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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
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Co++	gl	NaCl04	35°C	0.20M	U	M		1983MKb (86455)	3736
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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⁻¹,
DS=-234.2 J K⁻¹ mol⁻¹; 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
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Co++	gl	NaCl04	35°C	0.20M	U	M	K1=11.54	1983MKb (86572)	3742
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Ternary complex with dioxygen: B(Co2L2(O2))=30.43

C14H8N3OCl	HL	CAS	25732-23-4	(5079)
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7-Chloro-10-hydroxyindolo(2,3-b)quinoxaline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	sp	alc/w	?	50%	U		K1=5.98	1970KMc (86601)	3743
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C14H8N3O8S2F3	HL	(9231)
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1-(2-Thenoyl),4-trifluoro,2-[2-hydroxy-2-sulpho-5-nitrophenylazo]butadi-1,3-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KCl	25°C	0.1M	U		K1=7.55 B2=14.11	2004ACa (86608)	3744
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C14H8O4	H2L	CAS	117-10-8	(3425)
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1,8-Dihydroxyanthraquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	diox/w	30°C	75%	U		K1=8.52 B2=16.38	1960KFc (86674)	3745
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C14H8O7S	H3L	DASA	CAS	83-61-4 (950)
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1,2-Dihydroxyanthraquinone-3-sulfonic acid, Alizarin Red S;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	sp	oth/un	25°C	0.50M	U			1973VCa (86708)	3746
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K1eff=5.85

K2eff=4.45

Medium: Borax buffers, pH 9 to 11.5

C14H9NO2	HL	CAS	641-63-4	(4038)
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2-(2'-Pyridyl)indan-1,3-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	diox/w	30°C	75%	U		K1=9.8 B2=19.4	1964Cmb (86786)	3747
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C14H9NO4	H2L	Alizarin Maroon	CAS	3963-78-8 (1052)
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3-Amino-1,2-dihydroxyanthraquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaCl04	25°C	0.10M	U	M	K1=5.95	1982ISc (86811)	3748
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K(Co+H3L=CoH2L+H)=5.95

$$K(\text{Co}+2\text{H3L}=\text{Co}(\text{H2L})_2+2\text{H})=6.80$$

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
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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
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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

$$B(\text{CoHL})=16.32$$

$$B(\text{CoH-2L})=-5.00$$

Medium: 60% v/v EtOH/H2O, 0.20 M KN03.

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 B(Co(gly)L)=14.66	2001AMc (87060)	3762

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; (H0)(CH0)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; (H0)(CH0)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; H0.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; (H0)(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; H0OC.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	1968YTb (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	1980BHa (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					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;									

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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=4.15      1986SBa (87356)3784
*****
C14H13NO          HL                      CAS 3246-73-9 (5056)
N-(Salicylidene)-2-methylaniline; CH3.C6H4.N:CH.C6H4.OH
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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
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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
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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
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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.
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Co++       gl  alc/w  20°C  50%  U TIH    K1=5.68  B2=10.17  1979RSb (87402)3789
DH(K1)=-12.5 kJ mol-1, DS=59.7 J K-1 mol-1, 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
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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
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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⁻¹, DS=15 J K⁻¹ mol⁻¹; 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/H₂O, 0.10 M KNO₃.

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 KNO₃

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
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Co++	gl	alc/w	25°C	50%	U		K1=4.68	1988BDa (87460)3794	
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Medium: 50% v/v EtOH/H₂O, 0.10 M NaNO₃.

C14H13NO2 HL CAS 889-29-2 (6259)
N-Salicylidene-3-methoxyaniline; HO.C6H4.CH:N.C6H4.OCH₃

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	alc/w	25°C	50%	U		K1=3.90 B2=7.15	1977DWa (87524)3795	
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C14H13NO3 H2L (1386)
2-Hydroxy-5-methoxybenzophenone oxime; HO(CH₃)C6H3.C(:NOH)C6H₅

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=6.97	1982UVa (87537)3796	
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C14H13NO3 HL CAS 676256-94-3 (9135)
N-(2-Furanylmethylene)phenylalanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	KCl	25°C	1.0M	U		K1=3.70	2003SGa (87546)3797	
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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
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Co++	oth	NaClO ₄	30°C	0.10M	U		K1=5.60	1972MSe (87551)3798	
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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
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Co++	gl	NaClO4	25°C	0.10M	U	T H	K1=4.121 B2=7.74	1977SMd (87572)	3799
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C14H13N08S		H4L					CAS 22531-44-8	(5091)	
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2-Hydroxy-4-sulfonaphthalene-1-iminodiethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	EMF	oth/un	?	?	U		K1=12.4	1971TTb (87585)	3800
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K(Co+HL)=9.3

C14H13N30S		L					CAS 14938-70-6	(5090)	
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1-Benzoyl-4-phenylthiosemicarbazide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	sp	mixed	25°C	50%	U		B2=5.50	1969CFb (87586)	3801
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Medium: 50% acetone

Co++	sp	alc/w	25°C	100%	U		B2=7.31	1968CFb (87587)	3802
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C14H13N302S		HL					CAS 40788-59-8	(6178)	
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2-Benzenesufonamidomethylbenzimidazole; C6H5SO2NHCH2C7H5N2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	mixed	20°C	50%	M		K1=6.57 B2=12.12	1988NRA (87605)	3803
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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
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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)		
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1-(2-Pyridylmethylideneamino)-3-(salicylideneamino)thiourea;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	sp	mixed	25°C	40%	U			1985RGa (87612)	3805
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K1eff=5.23

Medium: 40% DMF, pH 4.5

C14H13N502		HL					(5393)		
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1-(2-Pyridylmethylideneamino)-3-(salicylideneamino)urea;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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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 NaCl04 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

Co++	gl	KCl	25°C 0.10M C	K1=12.75	1988BMe (87743)3812
				K(Co+HL)=9.57	
				K(CoL+H)=2.72	

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	sp	oth/un	rt	?	U				1968GKc (87763)	3813

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	KN03	25°C	0.20M	U			K1=5.2 B2=9.70	1980BHa	(87777

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)

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)

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

C14H16NO4P 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-Ethanediylobis(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	1987MNa (87937)	3823

DH(K1)=-3.9 kJ mol⁻¹; DS(K1)=265 J K⁻¹ mol⁻¹

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
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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

Co++	gl	KCl	25°C	0.10M U	K1=5.18 K(Co+H2L)=1.5 K(Co+HL)=3.26 B(Co2L)=6.29	1968UHa (87982)3826
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Co++	gl	KCl	25°C 0.10M U	K1=6.70 K(Co+H2L)=2.27 K(Co+HL)=4.27 K(Co2L)=8.84	1968UHa (88004)3829
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	g1	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
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Co++	sol	oth/un	?	?	U		K(?)=7.48 pH 6	1968GKc (88016)	3831
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C14H17N2O4P H3L (1472)
2-Hydroxyphenyl-N-(2-(2'-pyridyl)ethylamino)methylphosphonic
acid;C6H4(OH)CH(PO3H2)NHCH2CH2C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	NaCl04	20°C	0.10M	U		K1=8.95 K(Co+HL)=4.40	1985SIb (88039)	3832
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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
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Co++	gl	alc/w	25°C	0.2M	U		K1=5.32	1999MTc (88063)	3833
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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
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Co++	gl	KNO3	25°C	0.10M	C	M	K1=12.51 K(Co(H-1)L+H)=10.61	1988BMf (88107)	3834
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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
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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
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DH(K1)=-59.4 kJ mol⁻¹, DS=29.3 J K⁻¹ mol⁻¹

Co++	gl	KCl	25°C	0.10M	U		K1=12.0	1968GRa (88110)	3837
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Co++	gl	oth/un	25°C	0.10M	U		K1=12.8	1964PCa (88111)	3838
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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
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Co++	gl	diox/w	30°C	75%	U		K1=9.73 B2=19.06	1972UDa (88124)	3839
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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

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

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

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.

C14H21N07 HL CAS 85906-10-1 (6635)
2-(Benzylamino)-2-deoxy-D-glycero-D-gulo-heptonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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
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Co++	sp	oth/un	25°C	0.10M	U		K(CoL+CN)=1.59	1969JMb (88556)	3854
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Co++	sp	NaCl04	25°C	0.20M	U		K1=18.78	1967BDb (88557)	3855
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 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⁻¹, DS=284 J K⁻¹ mol⁻¹

Co++ cal KNO3 20°C 0.10M U T H 1963ANb (88560)3858
 DH(K1)=-11.7 kJ mol⁻¹, DS=334 J K⁻¹ mol⁻¹

Co++ gl KNO3 20°C 0.10M U H K1=19.57 1963ANf (88561)3859
 By calorimetry, DH(K1)=-11.7 kJ mol⁻¹, DS=335 J K⁻¹ mol⁻¹

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
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Co++	gl	KNO3	25°C	0.10M	U		K1=14.39 K(Co+H2L)=3.87 K(Co+HL)=10.44 B(Co2L)=19.04 B(Co2L2)=31.60	1988TGe (88897)	3863
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*K(CoH2L)=-3.20, *K(CoHL)=-5.30.

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
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Co++	gl	KCl	25°C	0.30M	C		K1=15.76 B(CoHL)=25.39 B(CoH2L)=34.01 B(CoH3L)=40.46 B(CoH-1L)=5.49	1999ABb (88905)	3864
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B(CoH-2L)=-4.86. Also data for related tetra(macrocylic)-substituted
 phthalocyanine.

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
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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

 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; HOOCH2.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;

 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; (HOOCH2)NCH2CH(C4H9)N(CH2COOH)2

 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

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	NaCl04	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⁻¹, DS=184 J K⁻¹ mol⁻¹

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	NaCl04	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	NaCl04	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 NaCl04

Co++	gl	NaCl04	25°C	0.10M	U		K1=12.3 K(CoL+H)=4.9 K(CoHL+H)=3.3	1970FTa (89821)	3890
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Co++	sp	NaCl04	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)
1-0xa-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 ⁻¹ ; 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 B(CoHL)=14.43 B(Co2L3)=21.91	1999FEa (90262)3906	

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 B(CoHL)=15.7	1992CDa (90286)3907	

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 1983MKb (90500)3910

B(CoH-2L)=-12.32

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 1976KPa (90671)3913

K(Co+H2L=CoHL+H)=-0.58

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

Co++ gl oth/un 25°C 0.50M U K1=6.33 1960HDa (90740)3916

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⁻¹, 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

Co++	g1	KN03	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	

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.15M	C		K1=10.30 K(CoL+H)=9.58 K(CoHL+H)=8.00 B(Co2H-2L)=-3.43	1994ABd (90896)	3926

Co++	g1	KN03	25°C	0.50M	M	K1=10.96	1986GMa	(90897)3927
						B(CoHL)=20.29		
						B(CoH2L)=27.95		
						B(CoH3L)=35.61		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.15M	C		K1=14.69 B(CoHL)=19.96 K(CoL+H)=5.27	1989BBd (90910)	3928

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO4	25°C	0.15M	C		K1=13.99 B(CoHL)=22.39 B(CoH2L)=27.60	1993BBe (90924)	3929

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									

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

Co++	cal	KNO3	25°C	0.10M	C H			1977KNa (91147)	3943
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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
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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
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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
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C15H11N3O 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
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Co++	gl	diox/w	25°C	50%	U		K1=8.8 B2=16.74	1965TFa (91265)3951
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Medium: 50% dioxan, 0.1 M NaCl04

C15H11N3O2 H2L (5110)

1,3-Dihydroxy-4-(8'-quinolinylazo)benzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	sp	NaCl04	?	0.10M	U		1969IBb (91274)3952
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K(Co+2H2L=Co(HL)2+2H)(?)-2.10

C15H11N3O2 H2L (4062)

8-Hydroxy-5-(2'-hydroxyphenylazo)quinoline;

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=8.3 B2=16.12	1965TFa (91279)3953
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Medium: 50% dioxan, 0.1 M NaCl04

C15H11N3O2 H2L CAS 4563-87-5 (4063)

8-Hydroxy-5-(3'-hydroxyphenylazo)quinoline;

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=8.8 B2=16.98	1965TFa (91286)3954
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Medium: 50% dioxan, 0.1 M NaCl04

C15H11N3O2 H2L CAS 5087-35-4 (4064)

8-Hydroxy-5-(4'-hydroxyphenylazo)quinoline;

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=9.1 B2=17.19	1965TFa (91293)3955
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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.

C15H12O5 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
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C15H13NO5 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
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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 NaCl04. 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 B(Co(gly)L)=15.10	2001AMc (91703)	3971

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
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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.OCCH3

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-Benzenesulfonamido)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; C₆H₅SO₂NHCH₂CH₂C₇H₅N₂

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 ₄ 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
Medium: 50% v/v dioxane/H ₂ O, 0.2 M NaNO ₃ .									

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 ₅ H ₄ N.(CH ₂) ₅ .C ₅ H ₄ N									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO ₃	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 ₂ O; 0.10 M KNO ₃ . 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 B(CoHL)=24.28 B(CoH2L)=26.56	1995MMa (92166)	3994

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⁻¹, DS=29.3 J K⁻¹ mol⁻¹

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: Me4NN03

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
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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

K(Co+HL)=8.57
K(CoHL+HL)=7.02

Medium: 75% acetone, 0.1 M KNO₃

C16H12N2O4S H2L CAS 13964-82-4 (3475)
1-(4-Sulfophenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	NaNO ₃	20°C	0.1M	C				1998IEa (92993)	4024
								K(Co+HL=CoL+H)=-5.08 K(Co+HL=CoH-1L+2H)=-13.75		

Additional method: spectrophotometry.

Co++	gl	mixed	25°C	75%	U		K1=4.73	B2=8.72	1972MCb (92994)	4025
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Medium: 75% acetone, 0.1 M KNO₃

C16H12N2O7S2 H3L CAS 14245-98-8 (3477)
6-Hydroxy-5-phenylazonaphthalene-1,3-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	oth/un	20°C	0.01M	U		K1=5.38	B2=9.93	1952SNa (93035)	4026
C16H12N2O8S2		H4L		Chromotrope 2R			CAS 4197-07-3		(2604)	
2-(Benzeneazo)-chromotropic acid, Acid Red 29										
Co++	sp	oth/un	25°C	?	U				1967PMB (93056)	4027
							K(?)=9.2			

C16H12O2 HL CAS 56461-08-6 (3453)
2-Benzoylindan-1-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co++	gl	diox/w	30°C	75%	U		K1=9.46	B2=17.26	1959MFa (93143)	4028
C16H13N2OCl		HL					CAS 36458-49-8		(5181)	
2-(4-Chlorophenylaminomethyl)-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 (93166)	4029

Medium: 50% v/v dioxan, 0.1 M KCl

C16H13N2O10AsS2 H5L Thorin I CAS 3688-92-4 (2609)
1-((2-Arsonophenyl)azo)-2-hydroxy-3,6-naphthalylidylsulfonic acid;

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-quinolyl-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	1959SKc	(93362)4042
K3=5.3									

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	1957SFa	(93367)4043
K3=5.3									

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 NaCl04										

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-sulfofophenylazo)-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-sulfofophenylazo)-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-sulfofophenylazo)-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-sulfofophenylazo)-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-)2

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⁻¹. Data also for several substituted Salicylidine-imines

C16H16N2O2S2 H2L (5188)

N,N'-Ethylene-bis(2-mercaptobenzamide); (HS.C6H4.CO.NH.CH2.)2

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 ac.

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Co++       gl  NaCl04 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 KN03   22°C 0.20M C           K1=3.09      1990KSb (93758)4074
Method: differential pulse polarography. Medium: 0.2 M KN03, 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)
 Phenoxymethylpenicillinic 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)
 Prolineamido-bis(pyridin-2-yl)methane; C4H8NCONHCH(C5H4N)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	gl	KCl	25°C 0.20M C	K1=3.48	1998V Sa (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 NaCl04 ? 0.10M U 1970BSa (93855)4080

$$B(\text{CoH}_2\text{L}_2) = 22.20$$
$$B(CoH_4L_2) = 26.53$$

C16H18O8S4 H4L CAS 51865-21-5 (239)

1,2-Dimethylbenzene-tetrathioethanoic acid; $C_6H_4(CH(S.CH_2.COOH)_2)_2$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ gl NaCl04 25°C 0.10M U K1=6 1974JBa (93885)4081

C16H19NO HL (6251)

4-(2-Methyl-2'-hydroxy-5'-methylbenzalamino)toluene;

$$\text{CH}_3 \cdot \text{C}_6\text{H}_4 \cdot \text{NH} \cdot \text{CH}(\text{CH}_3) \cdot \text{C}_6\text{H}_3(\text{OH}) \cdot \text{CH}_3$$

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 1979PJ a (93908)4082

C16H19N3O4S	HL	Cephradine	CAS 38821-53-3 (8402)
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7-[D-a-Amino-(1,4-cyclohexadienyl)acetamide]-3-desacetoxycephalosporanic acid;

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

Co++ g1 NaNO3 25°C 0.10M M M K1=2.55 1995SSb (93922)4083

$$K(\text{Co}(\text{bpy})+\text{L})=2.89$$

C16H19N3O4S	HL	Ampicillin	CAS 69-53-4 (6637)
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D-alpha-Aminobenzylpenicillin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ g1 NaNO3 37°C 0.10M U M K1=3.12 1997Mga (93940)4084

$$B(\text{Co}(\text{bpy})\text{L}) = 9.39$$
$$B(\text{CoAL}) = 5.69$$
$$*K(\text{Co}(\text{bpy})\text{L}) = -9.63$$

*K(Co(bpy)H-1L)=-10.74

A is imidazole.

Co++ gl NaN03 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 NaN03 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

C16H190P 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

C16H20N202 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

C16H20N202 L (2476)

2,2'-(1,4-Butanediylbis(oxy))bisaminobenzene; H2N.C6H4.O(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 ⁻¹ , DS=226 J K ⁻¹ mol ⁻¹										

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	NaCl04	25°C	0.50M	U			K1=10.5 K(Co+HL)=5.6 K(Co+H2L)=3.1	1972GTa (94140)	4101

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	NaCl04	25°C	0.50M	U			K1=10.5 K(Co+HL)=5.6 K(Co+H2L)=3.1	1972GTa (94150)	4102

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 ⁻¹ DS=35.1 J K ⁻¹ mol ⁻¹									

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
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Co++	gl	KNO3	25°C	0.10M	C		K1=9.84 K(CoL+H)=3.80	1982BTb (94188)	4106
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C16H22N4O L (3471)

2-(N-(2-Dimethylaminoethyl)-N-(4-methoxybenzyl)amino)pyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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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 ⁻¹ , DS=59 J K ⁻¹ mol ⁻¹									

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
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Co++	gl	KNO3	25°C	0.10M	C	M	K1=11.75 K(CoL+H)=2.92	1982BTb (94211)	4109
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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
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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
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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	KNO ₃	25°C	0.1M	C	H	K ₁ =14.73	1982TMc (94290)	4112
DH(K ₁)=-58.7 kJ mol ⁻¹									
Co++	cal	KNO ₃	25°C	0.10M	C			1982TMD (94291)	4113
							DH ₁ =-64.4 kJ/mol		
Co++	gl	KNO ₃	25°C	0.10M	C		K ₁ =14.73	1978HMa (94292)	4114
							K(CoL+H)=2.28		
Co++	gl	KNO ₃	25°C	0.20M	U		K ₁ =14.84	1977EMa (94293)	4115
							*K(CoL)=-11.51		

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	NaClO ₄	30°C	0.10M	M		K ₁ =5.66	1994LZa (94298)	4116
							B(CoH-1L)=-4.08		
							B(CuH-2L)=-11.90		

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		B ₂ =15.90	1978MGd (94551)	4117
Medium: 0.1 M KNO ₃ in 70% (v/v) dioxane in H ₂ O									

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	KNO ₃	25°C	0.10M	C		K ₁ =8.58	1985SMc (94619)	4118
							K(CoL+H)=5.42		
							K(CoL+Co)=5.17		

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		K ₁ =12.3	1996IOb (94662)	4119
							B(CoHL)=16.8		
							B(CoH ₂ L)=18.6		

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;
(HOOCCCH2)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; ((HOOCCCH2)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⁻¹, DS=179 J K⁻¹ mol⁻¹

C16H28N4O4S HL d-Biocytyl CAS 576-19-2 (5195)
N(6)-d-Biotinylyl-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 1970GPd (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

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 K(CoL+H)=3.99 K(CoL+Co)=3.30 K(Co2L+H)=3.95	2000CDd (94960)	4132

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 K(CoL+H)=3.73 B(Co2L)=18.11 K(Co(OH)L+H)=11.20	1993DSa	(94971)4133

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 B(Co2L)=10.28	1989DSa (95024)	4134

By calorimetry: DH(K1)=10.9 kJ mol⁻¹; 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
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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
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Medium: 95% MeOH, 0.1 M Me4NCl

Co++	gl	R4N.X	25°C	0.10M	C		K1=5.40	1977ASc (95173)	4138
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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 B(CoHL)=18.32 B(CoH2L)=26.93 B(CoH-1L)=-1.09 B(Co2L)=15.28	2002FGc (95342)	4139

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 B(Co2L)=14.58	1979Cma (95348)	4140

Ternary complexes with ethylenediamine or glycine and dioxygen

Co++	gl	KNO3	25°C	0.10M	C	M	B(CoHL)=18.88 B(CoH2L)=26.6	1979NMa (95349)	4141
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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 ₂ (pyridine) ₂ +LC1)=4.10		
							K(LCoCl ₃ (pyridine)+LC1)=0.48		
							K(LCoCl ₃ (2-Me-Py)+LC1)=1.18		
							K(CoCl ₂ (3-Me-Py) ₂ +LC1)=3.70		
							K(LCoCl ₃ (3-Me-Py)+LC1)=0.27, K(CoCl ₂ (4-Me-Py) ₂ +LC1)=3.48,		
							K(LCoCl ₃ (4-Me-Py)+LC1)=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+O2)=2.75		
							K(CoSCNL+O2) > 4.18		
							K(CoL+Cl)=0.58		
							K(CoL+SCN)=2.24		
							Electrolytes: K(CoClL+O2) in 1.0M NaCl, K(CoL+SCN) and K(CoLSCN+O2) in		
							0.1M (LiClO4+LiSCN), K(CoL+Cl) in 0.50M (LiClO4+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	NaCl04	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 B(CoHL)=6.09 B(Co2HLA)=23.00 B(Co2LA)=15.39 B(CoHLA)=20.33	1994MMa (95619)	4153

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 *K(Co2L)=-4.50 K(CoL+H)=7.37 K(CoHL+H)=6.27	1992MMb (95620)	4154
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Data also for mixed complexes with malonic acid, phosphoric acid, glycine and acetohydroxamic acid.

Co++	gl	KCl	25°C	0.10M	C	M	B(CoLA)=15.01 B(CoHLA)=23.76 B(CoH2LA)=29.79 B(CoH3LA)=35.08	1991MMa (95621)	4155
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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 K(Co+HL)=8.74 K(Co+H2L)=5.28 K(Co+H3L)=4.74 B(Co2L)=13.45	1990SMb (95622)	4156
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B(Co2LA)=25.75, B(Co2LB)=26.42. H2A=1,2-Dihydroxybenzene, H4B=1,2-dihydroxybenzene-3,5-disulfonic acid. Other constants and O2 binding data also

Co++	gl	KCl	25°C	0.10M	C	M	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	1988MMf (95623)	4157
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K(CoHL+oxalate)=4.36; K(CoH2L+oxalate)=6.50; K(Co2L+oxalate)=9.06

 C16H40N4O12P4 H8L CAS 41007-47-0 (2070)
 1,4,7,10-Tetraethylphosphonic acid-1,4,7,10-tetraazacyclododecane;
 C8H16N4(CH2CH2.PO(OH)2)4

Co++	gl	KN03	25°C	1.00M	U	K1=14.8	1989PBb (95636)4159
						K(Co+HL)=10.7	
						K(Co+H2L)=7.41	
						K(Co+H3L)=5.6	

Co++ gl NaClO4 25°C 0.15M C M 1992ABa (95656)4160

K(CoA+4H+L)=38.56
K(CoA+5H+L)=43.66
K(CoA+6H+L)=47.45
K(CoA+H4L)=2.9

K(CoA+H5L)=3.5, K(CoA+H6L)=3.9, K(CoA+H7L)=4.1, B(CoA+7H+L)=50.41,
CoA=Co(CN)₆----

Co++	gl	NaCl04	25°C	0.15M	C	K1=13.20	1989BBd (95657)4161
						B(CoHL)=21.53	
						B(CoH2L)=28.93	
						K(CoL+H)=8.33	
						K(CoHL+H)=5.40	

Co++	gl	NaClO4	25°C	0.15M	C	K1=14.05	1993BBe (95676)4162
						B(CoHL)=23.84	
						B(CoH2L)=30.45	
						B(CoH3L)=35.92	

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++ gl NaCl04 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⁻¹, 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
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Co++	gl	mixed	25°C	75%	U		K1=9.32 B2=17.09	1972MCb (95841)	4170
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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
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Co++	dis	non-aq	25°C	100%	U	M		1973AAb (95869)	4171
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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
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K(CoL2+A)=2.77
K(CoL2+2A)=4.46
K(CoL2+B)=2.23
K(CoL2+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
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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
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Co++	sp	NaClO4	25°C	0.30M	U		K1=21.03	1969KMb (95927)	4174
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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
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Co++	gl	KNO3	25°C	0.10M	U		K1=5.15 B(Co2H-2L2)=-3.61	2004GLb (95954)	4175
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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 1985HWa (95975)4178
B(CoHL)=16.29

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

C17H15N3O5 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

C17H16N4O5 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

C17H16N4O5 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

C17H16N4O5 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 K3=3.6	1959SKb (96104)	4191

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		B2eff=11.06	1998FZa (96108)	4192

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		K(Co+HL)=5.30 K(CoHL+HL)=5.00	1996SNa (96125)	4193

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
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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
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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 1955H0a (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
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Co++	gl	diox/w	30°C	75%	U		K1=9.71 B2=19.03	1972UDa (96234)	4203
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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
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Co++	gl	diox/w	30°C	75%	U		K1=9.95 B2=19.33	1972UDa (96239)	4204
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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
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Co++	gl	KCl	25°C	0.06M	U T H		K1=3.96 B2=7.65	1962ALa (96262)	4205
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At 0 C: K1=3.69, K2=3.41. DH(B2)=46 kJ mol⁻¹, DS=301 J K⁻¹ mol⁻¹

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
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Co++	gl	diox/w	30°C	50%	C M		K1=5.10	1987MSd (96275)	4206
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*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
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30 C: K1= 6.05, K2=5.10; 40 C:K1=6.00, K2=5.12
DH(K1)=2.2 kJ mol⁻¹, DS=150 J K⁻¹ mol⁻¹; 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
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Co++	gl	diox/w	25°C	50%	U		K1=5.26 B2=10.09	1996SKb (96302)	4208
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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 ⁻¹ , DS=100 J K ⁻¹ mol ⁻¹									

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

$$B(\text{CoH}_2\text{L}) = 27.02$$

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⁻¹, DS(K1)=268 J K⁻¹ mol⁻¹.

Co++	gl	KN03	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
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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
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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
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Co++ gl R4N.X 25°C 0.10M C K1=16.9 1997Wta (96809)4232
B(CoHL)=21.9

Medium: NEt4ClO4

 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		

 C18H11N02 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		

 C18H13N03 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 NaCl04									

 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⁻¹, DS(K1)=-69.9 J K⁻¹ mol⁻¹; 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
 $K(\text{CoCl}_2+\text{L})=4.15$
 $K(\text{CoCl}_2+2\text{L})=6.83$
 $K(\text{CoCl}_2+3\text{L})=9.25$

Medium: acetone

Co++ oth non-aq 25°C 100% U M 1973RHa (97092)4253
 $K(\text{CoI}_2\text{A}_2+\text{L}=\text{CoI}_2\text{AL}+\text{A})=1.57$
 $K(\text{CoI}_2\text{AL}+\text{L}=\text{CoI}_2\text{L}_2+\text{A})=0.16$

Medium: benzene. A=triphenylphosphine

Co++ sp non-aq 20°C 100% U 1969SSi (97093)4254
 $K(\text{CoCl}_2+\text{L})=2.64$
 $K(\text{CoCl}_2+2\text{L})=4.25$

Medium: acetone. In THF, $K(\text{CoCl}_2+\text{L})=2.69$, $K(\text{CoCl}_2+2\text{L})=4.66$

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
 $K(\text{CoA}_2+\text{L})=1.6$

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	KN03	20°C	0.10M	C	H	K1=11.38 K(CoL(OH)+H)=8.54	1977AHc (97251)	4261

DH1=-46.8 kJ mol⁻¹, DS1=58.2

Co++	gl	KN03	20°C	0.10M	U	H	K1=11.4	1970WAa (97252)	4262
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By calorimetry, DH(K1)=-46.8 kJ mol⁻¹, DS=58.1 J K⁻¹ mol⁻¹

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-Ethanediy]bis(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	NaNO ₃	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	NaNO ₃	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		K ₁ =20.11 K(CoL+H)=6.23 K(CoHL+H)=4.18	1993MMa (97388)	4269

Co++	gl	KNO ₃	25°C	0.10M	C		K ₁ =19.9 K(Co+HL)=15.7 K(Co+H ₂ L)=10.0 *K(CoH ₂ L)=-5.8 *K(CoHL)=-9.4	1992GVa (97389)	4270
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Co++	EMF	oth/un	?	?	U		K ₁ =11.0 K(Co+HL)=7.48 K(Co+H ₂ L)=4.83	1968TRc (97390)	4271
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C18H₂₀N₂O₁₂S₂ H₆L (5478)
1,6-Bis(2,3-dihydroxy-5-sulfobenzoyl)-1,6-diazaheptane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO ₃	25°C	0.10M	C		K ₁ =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									

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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=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
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$$K(\text{CoH}_2\text{L}+\text{H})=5.09$$

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
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Co++	cal	KNO3	25°C	0.1M	C	H	K1=11.47	1982Tmc	(97764)4286
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DH(K1)=-54.7 kJ mol⁻¹

Co++	cal	KNO3	25°C	0.10M	C			1982Tmd	(97765)4287
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DH1=-54.8 kJ/mol

Co++	gl	KNO3	25°C	0.10M	C		K1=11.47	1978HMa	(97766)4288
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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
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Co++	gl	R4N.X	25°C	0.10M	C		K1=14.4	1997CDb	(97782)4289
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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
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Co++	gl	diox/w	24°C	50%	U		K1=9.7	1979ACa	(97828)4290
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C18H28O10 H2L (OE0AcAcOE)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
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Co++	gl	diox/w	24°C	50%	U		K1=9.9	1979ACa	(97866)4291
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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
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Co++	oth	KCl	20°C	0.10M	C	T HM		1991Cma	(97888)4292
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$$\text{Keff}(2\text{CoH}-2\text{L}+\text{O}_2)=0.60$$

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;((HOOCH2)2NCH2CH2N(CH2COOH)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 K(CoL+H)=8.12 K(CoL+Co)=11.7 K(Co2L+H)=3.0 K(Co2HL+H)=2.6	1970HAa (97999)	4294
By ion-selective electrode (Hg): B(Co2L)=28.8									

Co++	gl	KNO3	25°C	0.10M	U		K1=20.4	1968SCa (98000)	4295
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Co++	gl	KNO3	25°C	0.10M	U		K1=20.6 K(CoH3L+H)=1.57 K(CoH2L+H)=2.63 K(CoHL+H)=4.03 K(CoL+H)=7.97	1967BMd (98001)	4296
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Co++	gl	KNO3	25°C	0.10M	U		K(2Co+L)=28.0	1965BMf (98002)	4297
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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 B(CoHL)=17.3 B(CoH2L)=19.4 B(CoH-1L)=1.7 B(CoH-2L)=-11.8	1996IOb (98125)	4298

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 K(CoL+H)=4.2 K(CoHL+H)=2.84	2005AAa (98176)	4299

IUPAC recommended values.

Co++	gl	KNO3	25°C	0.10M	C		K1=16.38 B(CoHL)=20.42 B(Co2L)=19.25	1992CDd (98177)	4300
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$$B(\text{Co2HL})=23.07$$

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⁻¹, DS(K1)=255 J K⁻¹ mol⁻¹.

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.

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Co++      gl  KCl      20°C 0.10M U      K1=15.00      1976Sfb (98182)4305
*****
C18H32N4O8      H4L      (8192)
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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
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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
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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
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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	KN03	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 ⁻¹ .										

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 Et4NN03. DH=8.1 kJ mol ⁻¹										

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
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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	KN03	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 Et4NClO4.									

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
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Co++	sp	NaCl04	25°C	0.15M	C	M		2000BBb (98981)	4323
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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
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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
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Co++	sp	oth/un	25°C	?	U	I	B2=10.0	1985XZa (99009)	4325
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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
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Co++	gl	alc/w	25°C	50%	U		K1=10.5	1967AND (99028)	4326
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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
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Co++	sp	NaCl04	25°C	0.10M	U		K1=6.97 B2=14.82	1978MCC (99045)	4327
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C19H15N08 H4L Alizarin Comp. CAS 3952-78-1 (671)
(3,4-Dihydroxy-2-anthraquinonyl-methyl)iminodiethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	sp	NaNO3	20°C	0.10M	U			1982WIA (99127)	4328
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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
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Co++	gl	diox/w	25°C	75%	U			K1=5.93	1981MGB (99156)	4329
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Medium: 75% dioxane/H2O, 0.10 M NaClO4.

C19H16N2O2BrPS2 HL CAS 51040-14-3 (5286)
1-(4-Bromophenyl)-3-(diphenoxyphosphinothieryl)thiourea;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	sp	non-aq	20°C	100%	U				1973ADc (99159)	4330
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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-(diphenoxyphosphinothieryl)thiourea;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	sp	non-aq	20°C	100%	U				1973ADc (99161)	4331
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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
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Co++	gl	diox/w	30°C	75%	U			K1=8.83 B2=16.28	1973AAA (99176)	4332
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C19H17N2O2PS2 HL CAS 51040-09-6 (5285)
1-Phenyl-3-(diphenoxyphosphinothieryl)thiourea; PhNH.CS.NH.PS(OC6H5)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	sp	non-aq	20°C	100%	U				1973ADc (99180)	4333
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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
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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.

C19H17N5O5 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 Et4NC104.

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

Co++	gl	oth/un	20°C	0.01M	U			B2=8.1	1953ALa (99282)	4345
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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	NaN03	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 K(Co+HL)=10.32 K(Co+H2L)=4.57 K(Co+H3L)=3.86 B(Co2L)=20.69	1988DDa (99463)	4355

Medium: 0.10 M Me4NN03.

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	NaN03	25°C	0.10M	C		K1=4.2 K(Co+HL)=8.0 B(CoH-1L)=-4.6	1995TDa (99514)	4357

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 KN03									

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.COOH

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⁻¹, DS=113 J K⁻¹ mol⁻¹

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 B(CoHL)=20.75	1997HMc (99771)	4364

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 K(Co+H2L)=2.63 K(Co+HL)=5.11	1997HMb (99783)	4365

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 K(Co+HL)=4.74 K(Co+2HL)=10.55 K(Co+L+HL)=14.58	1985RSb (99828)	4369

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

C20H19N202PS2 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

C20H19N203PS2 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

C20H19N303S 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.

C20H19N303S 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.

C20H19N303S 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	KN03	25°C	0.10M	M		K1=2.50 B(CoH-1L)=-5.53 B(CoH-2L)=-14.13	1999JLa (99923)	4379

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 K(CoL+H)=8.00 K(CoHL+H)=5.72	1994MMe (99984)	4380
Co++	gl	KN03	25°C	0.10M	U		K1=19.89 K(Co+HL)=15.20 K(Co+H2L)=9.76	1967LMd (99985)	4381

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 K(CoL+H)=6.51 K(CoHL+H)=4.97	1984TMb (100025)	4382

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
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 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⁻¹,
 DS(K1)=94.0 J K⁻¹ mol⁻¹.

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 K(Co+HL=CoL+H)=-2.0	1988BTb (100403)	4390

$$K(\text{Co}+2\text{HL}=\text{CoL}_2+2\text{H})=-7.1$$

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO3	25°C	0.15M	C		K1=7.21 B2=10.17 B(Co2L)=10.03	1981AEa (100487)	4396

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 K(CoL+H)=4.95 K(CoHL+H)=10.2	2002WHa (100767)	4401

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			B(CoHL)=16.63 B(CoH2L)=23.12 B(Co2L)=12.74	1998KSe (100830)	4402

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			B(CoHL)=14.08 B(CoH2L)=21.00 B(Co2L)=11.07	1998KSe (100834)	4403

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 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	1989MMc (100899)	4406

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 K(CoL+Co)=3.40	1996MLa (100974)	4407

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
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Co++	sp	NaCl04	25°C	0.15M	C	M			2000BBb (101001)	4409
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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
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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
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Co++	gl	diox/w	30°C	75%	U	IH	K1=6.29	B2=11.81	1979SGd (101012)	4411
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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
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Co++	sp	alc/w	25°C	100%	U		K1=6.95		1986MHa (101053)	4412
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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
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Co++	sp	alc/w	25°C	100%	U		K1=6.96		1986MHa (101056)	4413
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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
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Co++	gl	alc/w	35°C	60%	U	H	K1=8.18	B2=14.42	1993ALb (101060)	4414
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Medium: 60% v/v MeOH/H2O, 0.1 M KNO3. DH(K1)=-109 kJ mol⁻¹, DS(K1)=-198 J K⁻¹ mol⁻¹; 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 K(Co+H2L)=3.10 K(Co+HL)=5.57 K(Co+2HL)=10.64 B(Co2L)=11.73	1997HMB (101103)	4415

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 K(Co+H2L)=2.38 K(Co+HL)=5.01 K(Co+2HL)=10.05 B(Co2L)=10.74	1997HMB (101108)	4416

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 B(CoHL)=21.53	1997HMa (101114)	4417

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	NaClO ₄	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-ylsulphonyl)-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	KN03	25°C	0.10M	M			K1=4.16 B(CoHL)=14.19 B(CoH2L)=23.77 B(CoH3L)=33.05 B(CoH4L)=41.02	2004GGa (101473)	4432

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			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	1998IEa (101533)	4435

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		K(CoP+L)=3.43	1997SZa (101561)	4436

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 ⁻¹ , DS(K1)=270 J K ⁻¹ mol ⁻¹ ; 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 K(CoHL+H)=3.59 K(CoL+H)=5.99 K(Co+H2L)=12.49 K(Co+HL)=19.0	1972HUa (101731)	4441

Medium: 50% v/v dioxan, 0.1 M KCl

C22H23NOS2			L				(5426)		
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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
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Co++       gl  NaCl04 25°C 0.10M C              B(CoHL)=6.56
                                           B(CoH2L)=10.01
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Co++       gl  NaNO3 25°C 0.10M C          K1=10.4          1992GAa (101801)4446
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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 K(CoL+H)=8.85 K(CoHL+H)=8.14 K(CoH2L+H)=1.93	1989MSc (101946)	4452
Co++	nmr	none	15°C	0.0	U		K1=16.82 K(CoL+H)=9.29 K(CoHL+H)=8.46	1985TMa (101947)	4453
Co++	gl	KCl	25°C	0.10M	C		K1=16.87 K(CoL+H)=9.29 K(CoHL+H)=8.46	1984TMb (101948)	4454
Co++	gl	KCl	25°C	0.10M	C		K1=16.87 K(CoL+H)=9.29 K(CoHL+H)=8.46	1984TMc (101949)	4455

C22H26N4O10 H4L BAPTA (7230)
 1,2-Bis(o-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;
 ((HOOCCH2)2NCH(OC6H4NH2)2

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

Medium: 95% MeOH/H₂O, 0.1 M Et₄NClO₄.
In 95% MeOH/H₂O, 0.1 M Me₄NCl, K₁=9.1.

C₂₂H₃₄N₂O₈P₂ H₄L CAS 92278-41-6 (8106)
N,N'-Bis(2-hydroxybenzyl)diaminoethane-N,N'-bis(methylenephosphonic acid monoethyl ester);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KCl	25°C	0.10M	C		K ₁ =19.05 K(CoL+H)=6.97 K(CoHL+H)=5.98 K(Co+H ₂ L)=8.22	1984Tmd (102215)	4460

C₂₂H₃₄N₄ L CAS 140840-10-4 (7654)
1,14-Diphenyl-2,6,9,13-tetraazatetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaCl	25°C	0.15M	C		K ₁ =6.09 K(CoL+H)=8.71 K(CoL+OH)=3.34	1998PGc (102223)	4461

C₂₂H₃₄N₆ [22]-Py₂N₄ (5952)
Di-(2,6-pyridyl)-1,4,9,12,15,20-hexaazacyclodocosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO ₄	25°C	0.01M	U		K ₁ =7.36 B(CoH-1L)=-0.74	1985NSc (102233)	4462

C₂₂H₃₄N₆O₂ L BISBAMP (5868)
3,9,17,23,29,30-Hexaaza-6,20-dioxatricyclo[23.3.1.1]triaconta-1(20),11,13,15(30),25,27-hexaene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	KNO ₃	25°C	0.10M	C T		K ₁ =9.05 K(CoL+H)=7.12 K(CoLOH+H)=9.97 K(CoL+M)=3.00 K(Co ₂ LOH+H)=7.90	1988BMc (102240)	4463

C₂₂H₃₅N₅ L CAS 185558-39-8 (7653)
1,15-Diphenyl-2,5,8,11,14-pentaazapentadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	NaClO ₄	25°C	0.15M	C		K ₁ =12.67 K(CoHL+H)=5.96	1998PGc (102257)	4464

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-tetraazacyclohexeicosane-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: Et4NC1O4

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

C23H27NO7 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 B(CoH-1L)=0.56 B(CoH-2L)=-8.82 B(CoH-3L)=-17.34	1998ADb (102711)	4475

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 K(CoL+H)=6.64 K(CoH-1L+H)=10.00	1984MMe (102741)	4477

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 B(CoHL)=16.06 B(CoH-1L)=-2.47 B(CoH-2L)=-12.56	2001CLa (102763)	4478

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-trioxacycloheicosan-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 Et4NC104.
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
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 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

C24H27N302 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

C24H30N206 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

C24H31N308 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

C24H3208 L DiBz-24-Crown-8 CAS 14174-09-5 (580)
 2,3:14,15-Dibenzo-1,4,7,10,13,16,19,22-octaioxacyclotetracos-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-diepthiodibenzo[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

C24H42N6O12 H6L (6546)
1,4,7,10,13,16-Hexaazacyclooctadecane-N,N',N'',N''',N''''-hexaethanoic acid;

C24H44N4O12 H4L (6530)
1,4,7,10-Tetraoxa-13,16,19,22-tetraazacyclotetracosane-13,16-19,22-tetraethanoic
acid;

C24H44O8 L Dicy-24-crown-8 CAS 17455-23-1 (2401)
2,3,14,15-Dicyclohexyl-1,4,7,10,13,16,19,22-octaoxacyclotetracosane;

C24H48N4O6 L CAS 56698-26-1 (1536)
4,10,16,22,27,32-Hexaoxa-1,7,13,19-tetraazatricyclo-tetratriacontane;

C24H48N6	L	CAS 450416-36-1	(8880)
1,3,5-Tri(n-2',5'-diazaoctane)benzene;			

$$B(\text{CoH}_3\text{L})=34.87, \quad B(\text{CoH}_2\text{L})=26.83, \quad B(\text{CoHL})=18.16.$$

C24H51OP L CAS 78-50-2 (4162)
 Trioctylphosphine oxide; (C8H17)3P:O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	dis	non-aq	25°C	100%	U		K(CoA2+L)=5.28 K(CoA2+2L)=7.23	1990UKa (103540)	4497
Medium: benzene. HA=1-phenyl-3-methyl-4-benzoyl-5-pyrazolone									
Co++	dis	non-aq	20°C	100%	U	M	K(CoA2+L)=4.18 K(CoA2+2L)=7.40	1974HHc (103541)	4498
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	B(Co2L)=16.8 (Co2L(O2)OH)(H)/(Co2L)pO2=-6.0	1988MMf (103570)	4499
Co++	gl	KCl	25°C	0.10M	C	M	K1=11.20 B(Co2L)=16.80 K(CoLOH+H)=9.13 K(Co2LOH+H)=7.20 K(Co2L(OH)2+H)=8.80	1988MMg (103571)	4500
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 B(Co2L)=16.80 B(CoH3L)=33.73 K(CoL+H)=8.52 K(CoHL+H)=7.16	1982MMb (103572)	4501

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 B(CoHL)=17.61 B(CoH2L)=25.87 B(Co2L)=16.24 K(Co2L+OH)=3.8	2004BBc (103577)	4502
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	NaClO4	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)

Tetraacetylriboflavine;

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]dioxatriazacyclodocosine ;

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 Et4NClO4. 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				1963AEa (103797)	4511
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)-pyridazinyl 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(diphenylphosphinyl)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	0		(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
DH=-71.89 kJ mol-1									

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 yclopentadecin									

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
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Co++	gl	KNO3	25°C	0.10M	U			K1=14.2	1988ALb (104054)	4521
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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
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Co++	gl	NaClO4	25°C	0.10M	M	H		K1=8.93	1998DTa (104084)	4522
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Medium: 0.10 M KClO4. By calorimetry, DH(K1)=-19.14 kJ mol⁻¹,

DS(K1)=106.8 J K⁻¹ mol⁻¹.

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
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Co++	cal	alc/w	25°C	100%	U	H			1996BBf (104154)	4523
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K(Cu+HL)=2.27

Medium: MeOH; 0.1 M Me4NCl. DH(K)=-14.4 kJ mol⁻¹. 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
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Co++	gl	NaNO3	25°C	0.10M	C			K1=8.52	1999SLa (104231)	4524
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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
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Co++	dis	non-aq	25°C	100%	U				1997HIb (104239)	4525
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K(M+3L+2ClO4=ML3.2ClO4)=16.79

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
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Co++	gl	KNO3	25°C	0.10M	C			K1=8.86	1989Mca (104268)	4526
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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-benzenetrimethanamine;

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 B(CoH3L)=34.54, B(CoH2L)=25.72, B(CoHL)=17.23.	2003GGa (104489)	4531

Co++	gl	KNO3	25°C	0.10M	C		B(Co2H2L)=31.25 B(Co3L)=16.97 B(Co3H-1L)=7.82	2002LWa (104490)	4532
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C27H30O16		H4L		Rutin			CAS 153-18-4	(4169)
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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)
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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)
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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)
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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)
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25-Hydroxycholecalciferol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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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 K(Co+HL)=8.42 K(Co+H2L)=4.76	1963AEa (104635)	4538

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 B(CoH4L)=41.18 B(Co2H2L)=35.64 B(Co3L)=25.59 B(Co3H-1L)=18.31	2003GGa (104648)	4539

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 B(CoHL)=11.00 B(CoH-1L=Co(OH)L)=-4.00	1995ABb (104732)	4541

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]dotriacont
-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
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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-Ethanediyibis(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 B(CoHL)=19.28 B(CoH2L)=22.24	1974YMb (105661)	4564
C32H38N4O6Cl2 H2L (7214) 7,16-Bis((5-chloro-8-hydroxy-7-quinolinyl)methyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane;									
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 lariat ligands with substituted oxine side chains									
Co++	gl	mixed	25°C	70%	C		K1=12.76 B(CoH-1L)=0.83 B(CoHL)=18.82 B(CoH3L2)=42.81 B(CoH4L2)=47.20	2001PMb (105701)	4566
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.									
Co++	gl	KCl	25°C	0.10M	M		K1=10.5 K(Co+HL)=6.7	1981MGa (105706)	4567
C32H40N4O4 L CAS 340963-90-8 (8926) 8,8'-[1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diylbis(methylene)]bisquinoline;									
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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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co++	cal	alc/w	25°C	100%	C	H			1999SBg (105721)	4569
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K(Co+H2L)=3.91

Medium: MeOH. DH(K)=-91.2 kJ mol⁻¹, DS(K)=-231 J K⁻¹ mol⁻¹.

C32H42N6O2S	H2L	CAS	226211-88-7	(7999)
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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
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Co++	gl	R4N.X	25°C	0.10M	C			K1=12.00	2001LIa (105740)	4570
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B(CoHL)=15.30

B(CoH-1L)=6.41

Medium: 0.10 M Me4NCl.

C32H42N6O3	H2L	CAS	226211-86-5	(7997)
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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
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Co++	gl	R4N.X	25°C	0.10M	C			K1=12.34 B2=20.19	2001LIa (105747)	4571
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B(CoH-1L)=6.44

Medium: 0.10 M Me4NCl.

C32H44N10O4	L	CAS	702699-42-1	(9126)
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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
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Co++	gl	KN03	25°C	0.10M	U				2004GLa (105772)	4572
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B(CoH3L)=25.88

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)
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1,10-Didecyl-1,10-diaza-4,7,13,16-tetraoxacyclooctadecane;

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=2.36	1985BUd (105859)	4573
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Medium: MeOH, 0.05 M Et4N.NO3. DH=+2.8 kJ mol⁻¹

C33H36N2O2	L	CAS	225918-78-5	(8554)
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6,7,8,9,10,11,17,18-Octahydro-6,10-bis(phenylmethyl)-5H-dibenzo[1,4,8,12]dioxadiazacyclopentadeci

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	gl	alc/w	25°C	95%	C		K1=<4	2002KAb (105885)	4574
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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
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Co++	dis	non-aq	25°C	100%	C		Kex=-12.97	2002HTa (105894)	4575
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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
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Co++	gl	alc/w	25°C	95%	C		K1=10.5	2001FLa (105905)	4576
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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
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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
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Co++	gl	R4N.X	25°C	0.10M	C		K1=9.68 B(CoHL)=15.32 B(CoH-1L)=2.16	2001LIa (105944)	4578
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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 B(CoH-1L)=3.68 B(CoH-2L)=-3.47	2001LIa (105951)	4579

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-nonaene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	gl	R4N.X	25°C	0.10M	C		K1=12.02 B(CoHL)=20.63 B(CoH2L)=27.89 B(CoH3L)=33.94 B(Co2L)=17.70	2000AFa (105991)	4580

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⁻¹, DS=5.7 J K⁻¹ mol⁻¹.

C34H38N2O3 L CAS 268727-13-5 (8555)
Decahydro-17,20-bis(phenylmethyl)dibenzo[h,p][1,4,7,11,14]trioxadiazacycloheptadecine;

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% MeOH/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-diazacyclooctadecane;

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⁻¹, DS(K)=-208 J K⁻¹ mol⁻¹.

C34H46N4O14 H2L CAS 226947-33-7 (8530)
N,N'-Bis[(benzo-15-crown-5)-o-ylmethyl]diaminoglyoxime;

Medium: 60% v/v acetone/H₂O, 0.20 M KNO₃.

C34H52N6O H2L Hydroxy-8H-HDP (5950)
1-Hydroxy-hexadecamethyl-octahydro-diazaporphine;

Medium: MeOH. In dimethylacetamide, $K(\text{CuL}+\text{Pyridine})=1.3$, $K(\text{CuL}+\text{Br})=1.9$

C34H54O8	H2L	Lasalocid	CAS 25999-20-6	(2335)
Lasalocid acid;				

C35H40N2O3 L CAS 268727-14-6 (8556)
Decahydro-17,21-bis(phenylmethyl)-16H-dibenzo[h,q][1,4,7,11,15]trioxadiazacyclooctadecine;

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 Et4NC104.

C36H46N4 L (9018)

2,3,6,7,11,12,17,18-Octaethylcorphycene;

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;

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-----
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;
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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=6.9          2000AFa (106405)4596
                                     B(CoHL)=15.8
                                     B(CoH2L)=24.1
                                     B(CoH3L)=31.60

```

Medium: 0.1 M Et4NClO4.

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*****
C36H54N8          L                      CAS 135469-17-9 (6574)
1,4,12,15,18,26,31,39-Octaazapentacyclo[13.13.13.1.1.1]tetratetraconta-nonaene;
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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=7.53          2000AFa (106415)4597
                                     B(CoHL)=16.41

```

Medium: 0.1 M Et4NClO4.

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-----
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

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*****
C36H56N8O8S2      L      L-Allothreonine CAS 108312-45-4 (4586)
Cyclo(-L-allothreonyl-2-[(1R)-1-amino-2-methylpropyl]-4-thiazolecarbonyl-L-isoleucyl-)-2;
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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

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*****
C36H60N8O8        L                      CAS 121925-84-6 (7152)
Cyclo(Gly-eLL-Gly)2 (eLL=N,N'-ethylene-bridged (S)-leucyl-(S)-leucine
-----

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-----
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	KN03	30°C	0.0	U	T H	K1=12.28	1978SSj (106577)	4602
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Extrapolated from data for I=0.1-1.0 M KN03. Data for 40 C.
DH(K1)=-24 kJ mol⁻¹, DS(K1)=154 J K⁻¹ mol⁻¹.

Co++	sp	KN03	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	KN03	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

$$K(\text{Co}+\text{H4L}=\text{CoH2L}+2\text{H})=-8.58$$

Method: solvent extraction from 0.05 M PIPES/NH3 buffer into CHCl3.

Reaction is: $\text{Co}+\text{H4L}(\text{org})=\text{CoH2L}(\text{org})+2\text{H}$.

C40H50O4S3 H4L CAS 56857-30-8 (9028)
2,2'-Thiobis[4-(1,1-dimethylethyl)-6-[[5-(1,1-dimethylethyl)-2-hydroxyphenyl]thio]-phenol ;

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

Co++ dis non-aq 20°C 100% M 2003IMa (106816)4607

$K(\text{Co}+\text{H4L}(\text{org})=\text{CoH2L}(\text{org})+2\text{H})=-8.78$. Method: extraction into CHCl3 from 0.05 M buffer solutions (pH 2.0-10.0).

C41H45N3O2 L CAS 129508-47-0 (8557)
Decahydro-6,9,12-tris(phenylmethyl)-5H-dibenzo[e,p][1,4,8,11,14]dioxatriazacycloheptadecine;

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

Co++ gl alc/w 25°C 95% C K1=<4 2002KAb (106880)4608

Medium: 95% MeHO/H2O, 0.10 M Et4NClO4.

C41H67N7O4 L CAS 357333-45-0 (8036)
9-Methyl-3,6,9,12,15,22,31-heptaaza-25,28,38,41-tetraoxahexacyclohepta-tetracontaxaene;

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

Co++ gl NaCl 25°C 0.15M C K1=2.9 2001BFa (106902)4609

C42H38N4O4S2 L CAS 114407-61-3 (8533)
N,N'-[1,2-Ethanediyibis[nitrilo(phenylmethylidyne)-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 2002HTa (106907)4610

$$\text{Kex}=-13.05$$

Method: extraction from 0.1 M KNO3 into CHCl3/H2L solution.

Kex: $\text{Co}+\text{H2L}(\text{o})=\text{CoL}(\text{o})+2\text{H}$

C43H40N4O4S2 L CAS 463304-28-1 (8535)
N,N'-[1,3-Propanediyibis[nitrilo(phenylmethylidyne)-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 2002HTa (106997)4611

$$\text{Kex}=-12.88$$

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-piperazinyl)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⁻¹, DS=-30.8

J K-1 mol⁻¹; 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

C44H₂₆N₄O₈ 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;									
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;									
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;									
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; (C13H15NO4)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(Co+HxL=CoHyL+(x-y)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(CoP+L)=5.0

Calf thymus DNA. Medium: 0.005 M NaCl. Data for 7-37 C. P is N,N',N'',
tetramethyltetra-3,4-pyridinoporphyrzine. DH(K)=39.6 kJ mol⁻¹, DS(K)=227.

Co++ sp none 20°C dil C 2003SYa (108135)4632

K(Co(H4A)2+L)=3.3

Ligand is calf thymus DNA. H5A is morin.

Co++ vlt NaCl 25°C 0.01M C M 2000AIa (108136)4633

K(Co(bipy)3+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

K1eff=4.74

Method: 23 Na nmr, using calf thymus Na-DNA. K1eff 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
Co++	gl	oth/un	25°C	0.0	U		K'=8.63	1968BHd (108333)	4642

Polymer Pectin (7149)
Polygalacturonic acid; (C6H8O6)n

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;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	vlt	KNO3	25°C	0.01M	U	I	K1eff=4.50	1996CAa (108372)	4644

Method: differential pulse polarography. Also K1eff=3.81 (I=0.02 M), 3.53 (I=0.03) and 3.26 (I=0.05).

Co++	gl	oth/un	25°C	0.05M	U		K1eff=1.1	1975AMb (108373)	4645
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Polarography also used

Co++	gl	NaNO3	20°C	0.05M	U		*K'=-5.7	1964MLa (108374)	4646
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See reference for definitions

Polymer H5L (6715)
ProTyrLysCysProGluCysGlyLysSerPheSerGlnLysSerAspLeuValLysHisGlnArgThrHisThr

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Co++	sp	NaCl	25°C	0.05M	U		Keff(Co+L)=7.20	1993KMa (108390)	4647

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)
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beta-Lactamase II, penicillinase;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co++	sp	NaCl	4°C	1.00M	U			1980BGa (108423)	4649
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K1eff=0.89 at pH 6

K2eff=-0.42 at pH 6

e-	HL	Electron	(442)
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Electron;

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)	4650
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K=-6.9(-400 mV)

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

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co+	kin	NaClO ₄	24°C	0.50M	U			1971LAb (2617)	4651
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K(Co((CN)₅H+OH=Co(CN)₅+H₂O)=-6

CO ₂	L	Carbon dioxide	CAS 124-38-9	(1759)
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Carbon dioxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Co+	vlt non-aq	25°C	100%	U	M			1991FCa (2829)	4652
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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

C ₂ H ₃ N	L	Cyanomethane	CAS 75-05-8	(1399)
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Acetonitrile; CH₃CN

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)	4653
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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

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

CoA(H₂O)=aquocobalamin

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

C4H7N L Butyronitrile CAS 109-74-0 (1992)
Butyronitrile; CH3.CH2.CH2.CN

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

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

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

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+	sp	oth/un	22°C	0.0	U	M		K(CoA+L)=1.1	1991AFa (47537)	4659

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

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+	dis	KCl	23°C	0.20M	C			K2=7.6 K3=6.9	1985SCa (69534)	4660

Method: spectrophotometry with partition into n-hexane

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	0.20M	C			K2=8.0 K3=7.0	1985SCa (81008)	4661

Method: spectrophotometry with partition into n-hexane

C16H32N4 L [14]-Dien-N4 CAS 81001-74-3 (2462)
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			K(N-meso-CoL=N-rac-CoL)=0.78 ?	1991FCa (95309)	4662

Medium: MeCN. By spectrophotometry K=ca.2

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		E(e + Co+++)=1.841 V	1986B0a (412)	4663

Medium: 6.5 molal HClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Co+++	EMF	none	25°C	0.00	U			K(Co+++ + e)=24.5(1.45V)	1974RBa (413)	4664

Co+++	EMF NaClO4	23°C	3.00M	U T	1970WAb	(414)4665
					K(Co+++ e)=31.7(1.86V)	
					K=33.4(1.83V, 3 C)	

Co+++	EMF none	25°C	0.00	U	1969KRa	(415)4666
					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)4667
					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)4668
					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)4669
					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)4670
					K(Co+e=Co(II))=22.0(1300 mV)	

Co+++	sol oth/un	?	var	U	1959KRe	(420)4671
					K=2	
					K: CoOOH(s)+2H=Co(II)+1.5H2O+0.25O2(g))	

Co+++	oth none	25°C	0.0	U	1952LAb	(421)4672
					K=2.9(170 mV)	
					K(Co(NH3)6+e)=1.8(100 mV)	
					K: CoOOH(s)+H2O+e=Co(OH)2(s)+OH. From thermodynamic data	

Co+++	EMF oth/un	25°C	4.0M	U TI	1937NDa	(422)4673
					K(Co+e=Co(II))=31.28(1850 mV)	
					Medium: HNO3. At 0 C: K=33.52(1816 mV). In 3 M, 25 C: K=31.15(1842 mV), 0 C: K=33.37(1808 mV). In 1 M, 0 C: K=33.23(1800 mV)	

Co+++	EMF oth/un	25°C	8.0M	U T	1920LLa	(423)4674
					K(Co+e=Co(II))=30.73(1817 mV)	
					Medium: H2SO4. At 0 C: K=32.76(1775 mV)	

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

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

Co+++	EMF NaClO4	22°C	1.0M	U	1973BLb	(1133)4675
					K(Co(NH3)5H2L+H)=0.5	
					K(Co(NH3)5HL+H)=3.30	

$$K(\text{Co}(\text{NH}_3)_5\text{L}+\text{H})=8.05$$

Co+++ EMF NaCl04 4.8°C 1.0M U 1971BLa (1134)4676

$$K(\text{Co}(\text{NH}_3)_5\text{HL}+\text{H})=3.90$$
$$K_a(\text{Co}(\text{NH}_3)_5\text{L}+\text{H})=8.20$$

Br- Bromide;	HL	Bromide	CAS 10035-10-6	(19)
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co+++ con alc/w 25°C 10% C TIH 2002PAa (1821)4677

$$K_{\text{out}}(\text{Co}(\text{NH}_3)_6 + \text{Br}) = 2.108$$

Medium: 10% w/w EtOH/H₂O. Also data for 30-70% w/w EtOH/H₂O and 10-50 °C. DH=3.7 kJ mol⁻¹, DS=51.7 J K⁻¹ mol⁻¹.

Co+++ con oth/un 25°C ? C T 1992Y0b (1822)4678

$$K_{out}(Co(en)_3^{3+}) = 1.76$$

K=1.78 (0 C), 1.78 (5 C), 1.77 (10 C), 1.77 (15 C), 1.76 (20 C)

1.76 (30 C), 1.77 (35 C), 1.77 (40 C), 1.78 (45 C), 1.78 (50 C)

Co+++ EMF none 25°C 0.0 U T H 1991YKa (1823)4679

$$K_{out}(\text{Co}(\text{NH}_3)_6 + \text{Br}) = 1.67$$

Data for T=0-50 C. At 25 C, $\Delta H=0.9 \text{ kJ mol}^{-1}$.

Co+++ sol oth/un 25°C 0.1M U 1986KPb (1824)4680

$$K_{out}(\text{Co}(\text{bpy})_3 + \text{Br}) = 1.06$$
$$K_{out}(\text{Co}(\text{bpy})_3 + 2\text{Br}) = 1.90$$

Medium: 0.1 M NaF.

Co+++ sol oth/un 25°C 0.50M U H 1985ISc (1825)4681

$$K_{out}(\text{Co}(\text{NH}_3)_3(\text{NO}_3)_3 + \text{Br}^-) = 1.9$$

Medium: 0.50 M NaF. $\Delta H(K_{out}) = -13.4 \text{ kJ mol}^{-1}$, $\Delta S(K_{out}) = -51 \text{ J K}^{-1} \text{ mol}^{-1}$.

Co+++ sol oth/un 25°C 0.1M C T 1984ISd (1826)4682

$$K_{out}(\text{Co}(\text{NH}_3)_3(\text{NO}_2)_3 + \text{L}) = -0.36$$

Medium: NaF; for $I=0.2\text{M}$ $K_{1\text{out}}=-0.37$; $I=0.3$ $K_{1\text{out}}=-0.35$; $I=0.4$ $K_{1\text{out}}=-0.36$

$I=0.5 \quad K1_{out}=-0.34$

Co+++ con oth/un 25°C ? U M 1978KWb (1827)4683

$$K_{out}(\text{Co(en)}_3\text{L}) = 1.45$$

Co+++ vlt NaClO4 25°C 0.16M U M 1977IGa (1828)4684

$$K_{out}(\text{Co}(\text{NH}_3)_6 + \text{Br}) = 1.43$$

Co+++ con non-aq 25°C 100% U I M 1976THa (1829)4685

$$K_{out}(Co(en)_3^{3+}) = 3.32$$

Medium: DMSO. In DMF: $K_{\text{out}}(\text{Co(en)}_3\text{L}) > 5$

Co+++ sp NaCl04 25°C 1.00M U M 1975ABc (1830)4686

$$K(\text{CoA}+\text{L}) = -0.85$$

A=Tetra(4-N-methylpyridyl)porphine

Co+++ kin NaClO4 25°C 2.0M U M 1974FSb (1831)4687

$$K=0.1$$

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)4688

$$K(\text{Co}(\text{NH}_3)_5+\text{L}) = -0.6 ?$$

Co+++ sol NaClO4 25°C 1.0M U I 1973J0a (1833)4689

$$K(\text{Co}(\text{NH}_3)_6+\text{L}) = -0.40$$

$$K(\text{Co}(\text{NH}_3)_6+2\text{L}) = -1.4$$

$$K_{\text{so}}(\text{Co}(\text{NH}_3)_6\text{L}_3) = -2.87$$

$$K_{\text{so}}(\text{Co}(\text{NH}_3)_6\text{L}(\text{ClO}_4)) = -3.88$$

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)4690

$$K(\text{Co}(\text{NH}_3)_5\text{F}+\text{L}) = 0.04$$

$$K(\text{Co}(\text{NH}_3)_5\text{F}+2\text{L}) = -0.26$$

$$K(\text{Co}(\text{NH}_3)_5\text{NO}_2+\text{L}) = 0.11$$

$$K(\text{Co}(\text{NH}_3)_5\text{NO}_2+2\text{L}) = -0.36$$

Data also in 3 M LiClO₄ and with many other Co(NH₃)₅x complexes

Co+++ vlt NaClO4 25°C 0.1M C 1973MSh (1835)4691

$$K_{\text{out}}(\text{Co}(\text{dipy})_3+\text{L}) = 0.30$$

Co+++ sp oth/un 25°C 0.01M U I 1972HEb (1836)4692

$$K(\text{Co}(\text{NH}_3)_6+\text{L}) = 1.55$$

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 1972P0a (1837)4693

$$\text{DH}(\text{Co}(\text{NH}_3)_5+\text{L}) = 5.0 \text{ kJ mol}^{-1}$$

Co+++ sp NaClO4 19°C 0.20M U 1971BBd (1838)4694

$$K = -0.46$$

Medium: HClO₄. K: cis-Co(en)₂(OH)₂Br=trans-Co(en)₂(OH)₂Br). 19.6 to 48.7 C

Co+++ con none 25°C 0.0 U 1971KUb (1839)4695

$$K(\text{Co}(\text{en})_2\text{C}_2\text{O}_4+\text{L}) = 0.5$$

Co+++ con non-aq 25°C 100% U 1971PWb (1840)4696

$$K(\text{cis-Co}(\text{NH}_3)_4(\text{NO}_2)_2+\text{L}) = 1$$

Medium: DMSO

Co+++ kin NaClO4 25°C 0.50M U M 1970GSc (1841)4697

$$K=1.58$$

K: (NH₃)₅CoO₂Co(NH₃)₅+L)

Co+++ sol NaClO4 25°C 0.20M U TI 1970MLc (1842)4698
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=-0.10$
 Medium: 0.2 M LiClO4. $K=0.04(35\text{ C})$, $1.34(45\text{ C})$; At I=0: $K=1.98(25\text{ C})$, $1.85(35\text{ C})$, $1.90(45\text{ C})$

Co+++ sp non-aq 30°C 100% U T 1968FWa (1843)4699
 $K(\text{cis-Co}(\text{en})2\text{L}_2+\text{L})=3.71$
 Medium:sulpholan(C4H8SO2). $K(\text{cis})=3.70(40\text{C})$
 By kinetics: $K(\text{Co}(\text{en})2\text{L}_2\text{cis-trans})=1.08$, $K(\text{Co}(\text{en})2\text{L}_2+\text{L})=3.3(\text{cis})$, $0.6(\text{trans})$

Co+++ con oth/un 25°C 0.0 U 1968KTa (1844)4700
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=1.65$

Co+++ sp NaClO4 15°C 5.0M U 1968WMb (1845)4701
 $B(\text{Co}_2\text{Br}_2)=2.46$

Co+++ oth oth/un 37°C 0.0 U 1967MAf (1846)4702
 $K(\text{Co}(\text{en})2\text{NCSCl}+\text{L})=0.44$

Co+++ oth oth/un 37°C 0.0 U 1967MMd (1847)4703
 $K(\text{cis-Co}(\text{en})2\text{NH}_3\text{NO}_2+\text{L})=1.36$
 $K(\text{trans})=1.26$

Co+++ con non-aq 25°C 100% U I 1967MWc (1848)4704
 $K(\text{cis-Co}(\text{en})2\text{Cl}_2+\text{L})=2.26$
 $K(\text{trans-Co}(\text{en})2\text{Cl}_2+\text{L})=1.34$
 $K(\text{cis-Co}(\text{en})2\text{L}_2+\text{L})=1.86$
 $K(\text{cis-Co}(\text{en})2\text{ClL}+\text{L})=2.10$
 Medium: DMSO. Also in DMF and Me2NCOMe

Co+++ sp NaClO4 25°C 0.07M U 1967TKb (1849)4705
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=0.34$

Co+++ kin non-aq var 100% U 1966FWa (1850)4706
 $K_{\text{out}}(\text{trans-Co}(\text{en})2\text{Cl}_2+\text{L})=1.70$
 $K_{\text{out}}(\text{cis-Co}(\text{en})2\text{Cl}_2+\text{L})=2.54$
 Medium: Me2SO. $K(\text{cis})$ at 45 C, $K(\text{trans})$ at 31 C

Co+++ sp non-aq 55°C 100% U 1966FWb (1851)4707
 $K(\text{Co}(\text{en})2\text{Cl}_2)\text{cis-trans}=0.13$
 $K_{\text{out}}(\text{cis-Co}(\text{en})2\text{Cl}_2+\text{L})=2.44$
 $K_{\text{out}}(\text{trans-Co}(\text{en})2\text{Cl}_2+\text{L})=1.53$
 Medium: Me2NCOMe

Co+++ sp non-aq 30°C 100% U H 1966LWa (1852)4708
 $K_{\text{out}}(\text{Co}(\text{en})2\text{Cl}+\text{L})=3.96$
 $K_{\text{out}}(\text{Co}(\text{en})2\text{ClL}+\text{L})=2.48$
 $\text{DH}(\text{Co}(\text{en})2\text{Cl}+\text{L})=30.1\text{ kJ mol}^{-1}$, $\text{DS}=175.6\text{ J K}^{-1}\text{ mol}^{-1}$
 $\text{DH}_{\text{out}}(\text{Co}(\text{en})2\text{ClL}+\text{L})=5.3$, $\text{DS}_{\text{out}}=36.8$. 1-21 C

Co+++ sp non-aq 30°C 100% U 1966Mwa (1853)4709
Kout(cis-Co(en)2Cl2+L)=3.00

Medium: DMF

Co+++ sp oth/un 0°C dil U T 1963CTa (1854)4710
K(Coen2BrH2O,cis=trans)=-0.52

K=-0.50(25,35C)

Co+++ sp oth/un 25°C 0.50M U 1963HTa (1855)4711
K(Co(NH3)5+L)=-0.41

Co+++ sp oth/un 45°C 1.0M U M 1962Yaa (1856)4712
K(Co(NH3)5+L)=-0.32

Co+++ sp oth/un 40°C 1.0M U M 1961GHa (1857)4713
K(Co(CN)5+L)=-0.06

K=-0.02 by kinetics

Co+++ oth oth/un 25°C 0.0 U M 1960MTb (1858)4714
K(Co(NH3)3+L)=-0.76

Method: from thermodynamic data. I=0 corr.

Co+++ sp NaCl04 35°C 0.90M U M 1959KEa (1859)4715
K(Co(NH3)6+L)<-0.7

Co+++ sp alc/w 25°C 100% U 1957PHa (1860)4716
K(cis-Co(en)2Cl2+L)=1.54

Medium:MeOH, I=0.02

Co+++ sp none 25°C 0.0 U HM 1955NAa (1861)4717
K(Cu(NH3)6+L)=2.38

I=0 corr. DH(K)=11.8 kJ mol-1, DS=84 J K-1 mol-1

Co+++ sp NaCl04 25°C .054M U TIHM 1953ENa (1862)4718
K(Co(NH3)6+L)=1.66

K=1.72(35 C); DH(K)=8.7 kJ mol-1, DS=63 J K-1 mol-1. At I=0.3 M:K(Co(en)3+L)
=1.32(25 C), 1.37(35 C); DH(K)=8.2, 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)4719
K(RCo(AH)2OH+L)=10.01

R- is trifluoroethyl-. H2A is dimethylglyoxime. Medium pH 10.0.

Co+++ sp NaCl04 25°C 0.50M C M 2001HZa (2619)4720
K(CoA+CN)=-0.42
K(CoB+CN)=2.09

CoA=methylcobalamin, CoB=trifluoromethylcobalamin. Data for other halo-cobalamin derivatives.

Co+++ sp non-aq RT 100% U 2000HSa (2620)4721
K(Co(CN)P+3CN=Co(CN)4P)=12.3

Medium: methanol. Reaction is: Co(CH3OH)(CN)P+3CN=Co(CN)4P+CH3OH.

P: 5,10,15,20-tetraphenylporphyrin.

Co+++ sp non-aq 25°C 100% U TIHM 1993GIa (2621)4722
K(MeCoA+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(50C). DH=-71 kJ mol⁻¹; DS=-67

Co+++ sp NaClO4 25°C 0.20M U 1983BBe (2622)4723
K(CoA(H2O)+L)=6.8

CoA(H2O)=ethynylaquocobinamide

Co+++ gl NaClO4 25°C 1.0M U 1982BCb (2623)4724
*K(CoL5(H2O))=-10.15

Co+++ kin NaClO4 40°C 1.0M U 1965HGa (2624)4725
K(CoL5OH+H)=9.7

Co+++ gl oth/un rt var U 1961Hwa (2625)4726
K(Co202L10+H)=10.5

Co+++ con oth/un 2°C var U 1950BJa (2626)4727
B6=64

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

Carbonate;

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

Co+++ kin NaClO4 25°C 2.0M C 2000KYb (3168)4728

*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.

Co+++ sp NaCl 25°C 1.00M U 1978TAa (3169)4729
K(CoL3+H)=9.34

Co+++ kin NaClO4 25°C 1.0M M 1976DHa (3170)4730
K(Co(CO3)3+H)=9.12

Co+++ vlt NaClO4 25°C 0.1M C 1975PKa (3171)4731
Kout(cisCo(en)2NH3Cl+L)=0.23

Also for I=0.5 M K1out=-0.03

Co+++ vlt NaCl04 25°C 0.1M C 1975PKa (3172)4732
Kout(transCo(en)2NH3Cl+L)=0.19

Also for I=0.5 M K1out=-0.01

Co+++ vlt NaCl04 25°C 0.1M C 1975PKa (3173)4733
Kout(Co(NH3)5Cl+L)=0.32

Also for I=0.5 M K1out=0.06

Co+++ EMF NaCl04 25°C 0.10M U I M K1=1.4 B2=2.6 1974KPe (3174)4734
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

Co+++ EMF none 25°C 0.0 U I M K1=1.8 B2=2.9 1974KPe (3175)4735
B3=2.6

Metal ion: Co(NH3)4CO3. Data also for I=0.2, 0.4, 3.0

Co+++ cal oth/un 25°C 3.00M U HM 1974MKh (3176)4736
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

Co+++ EMF oth/un 25°C 0.0 U I M K1=3.47 B2=3.3 1974PKb (3177)4737
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)

Co+++ EMF oth/un 25°C 0.0 U I M K1=3.27 B2=4.9 1974PKb (3178)4738
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)4739
K(Co(NH3)5CO3+H)=6.7

Co+++ EMF NaCl04 25°C 3.00M U M K1=0.46 B2=0.53 1973MKd (3180)4740
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)4741
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)4742
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)4743
Kout(Co(en)3+L)= 2.07

Medium: NaF;

Co+++ vlt oth/un 25°C 0.1M C 1973MKf (3184)4744
Kout(Co(pren)3+L)= 2.0

pren=propylenediamine

Medium: NaF;

Co+++ vlt NaCl04 25°C 0.1M C 1973MSh (3185)4745
Kout(Co(dipy)3+L)=1.38

For I=3.0 M Klout=-0.05

Co+++ kin NaCl04 20°C 0.50M U 1968DHa (3186)4746
K(H+Co(NH3)5L)=6.41

By glass electrode: K=6.7?

Co+++ kin NaCl04 25°C 1.0M U 1967FJa (3187)4747
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)4748
K((NH3)5CoL+H)=8.22

Co+++ kin oth/un 20°C dil U 1965SSb (3189)4749
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)4750
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)-

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

Co+++ EMF NaCl04 25°C 1.0M U T H 1971BJb (3471)4751
K(Co(NH3)5HL+H)=5.18

Medium: 1M LiCl04. 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)4752
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 NaCl04 20°C 2.0M U I 1967LAa (3561)4753
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 NaCl04 35°C 1.00M U 1994MPa (3636)4754
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)4755
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)4756
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-1, DS=57.2 J K-1 mol-1.

Co+++ kin NaCl04 25°C 1.00M U 1995PBa (4613)4757
K(CoA+L)=-0.08

Co+++ con oth/un 25°C ? C T 1992YOb (4614)4758
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)4759
Kout(Co(NH3)6+Cl)=1.70

Data for T=0-50 C. DH=2.7 kJ mol⁻¹ at 25 C.

Co+++ con NaCl 25°C 0.01M C 1990IIa (4616)4760
 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)4761
 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)4762
 Kout(Co(NH₃)₃(NO₃)₃+Cl)=3.1

Medium: 0.50 M NaF. DH(Kout)=-10.9 kJ mol⁻¹, DS(Kout)=-47 J K⁻¹ mol⁻¹.

Co+++ sol oth/un 25°C 0.1M C T 1984ISd (4619)4763
 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)4764
 Kout(Co(NH₃)₆+L)=1.85

Co+++ nmr non-aq 25°C 100% U M 1982NSc (4621)4765
 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)4766
 Kout(Co(en)₃+L)=1.45

Co+++ con non-aq 25°C 100% U 1976THa (4623)4767
 Kout(Co(en)₃+L)=5.22

Medium: DMSO

Co+++ sp NaClO₄ 25°C 1.00M U M 1975ABc (4624)4768
 K(CoA+L)=-1.10

A=Tetra(4-N-methylpyridyl)porphine

Co+++ kin NaClO₄ 25°C 1.0M U 1974BMD (4625)4769
 K((NH₃)₅Co(OH)Co(NH₃)₅+L)=0.46

Co+++ sp NaClO₄ 45°C 1.0M U 1973BRc (4626)4770
 K(Co(NH₃)₆+L)=0.41
 Kout(Co(NH₃)₆+L)=0.13

In 1 M Al(ClO₄)₃: K(Co(HN₃)₆+Cl)=0.39, Kout=0.09

Co+++ EMF NaClO4 25°C 3.0M U M 1973MKd (4627)4771
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)4772
Kout(Co(dipy)3+L)=0.34

Co+++ sp NaClO4 25°C 0.16M U 1973SPa (4629)4773
K(Co(CH3NH2)5(H2O)+L)=0.89

Co+++ sp mixed 50°C 2.5% U I M 1973SSk (4630)4774
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)4775
DH(Co(NH3)3+L)=6.7 kJ mol-1

Co+++ kin NaClO4 25°C 1.0M U 1971FKa (4632)4776
K(cis-Co(en)2L2+Hg)=2.7

Co+++ kin NaClO4 25°C 2.0M U T H 1971FMa (4633)4777
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)4778
K(trans-CoANO2+L)=2.57
K(trans-CoACN+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)4779
K(Co(en)3+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)4780
Klin(Co(NH3)6+L)=-0.18

Co+++ kin NaClO4 25°C 0.50M U M 1970GSc (4637)4781
K((NH3)5CoO2Co(NH3)5+L)=0.80

Co+++ sol NaClO4 25°C 0.20M U T M 1970MLc (4638)4782
K(Co(NH3)6+L)=0.08
Medium: LiClO4. K1=-0.17(15 C), 0.40(35 C), 0.62(45 C).
At I=0(corr): K1=2.18(15 C), 2.16(25 C), 2.21(35 C), 2.18(45 C)

Co+++ kin NaCl04 13°C 0.50M U T H K1=1.36 1970MMd (4639)4783
K1=1.24(2.5 C), 1.30(8 C), 1.5(25 C). DH=15.9 kJ mol⁻¹, DS=83.6 J K⁻¹ mol⁻¹

Co+++ sp none 35°C 0.0 U M 1969IBa (4640)4784
K(Co(NH3)6+L)=2.04

Co+++ kin NaCl04 25°C 2.0M U 1968DSd (4641)4785
K(A+L)=-0.03
Medium: LiCl04. A=doubly bridged (NH3)4Co(-NH2, -O2)Co(NH3)4

Co+++ sol non-aq 25°C 100% U TI 1968FPb (4642)4786
Kso(cis-Co(en)2L2)=-7.02
Kso(trans-Co(en)2L2)=-6.47
K(cis-trans)=-0.05
Medium: Me2NCOMe. In DMF: K(cis)=-5.92, K(trans)=-5.74. In DMSO: K(cis)=-4.1
K(trans)=-4.0. In MeOH: K(cis)=-5.40, K(trans)=-3.11. In H2O: -2.05, -0.52

Co+++ sp non-aq 50°C 100% U T H 1967FWa (4643)4787
Kout(cis-Co(en)2L2+L)=4.32
Medium:sulpholan. Kout=4.62(30 C), 4.46(40 C), 4.04(70 C). DH(Kout)=30 kJ
mol⁻¹, DS=-10 J K⁻¹ mol⁻¹. At 70 C: K(cis-trans)=1.56, DH=-10, DS=0

Co+++ sp NaCl04 45°C 1.0M U 1967LMc (4644)4788
Kout(Co(NH3)5+L)=0.5

Co+++ sp NaCl04 25°C 1.0M U T H 1967LMe (4645)4789
Kout(Co(NH3)3+L)=-0.05
Kout=0.08(35 C), 0.15(47 C), 0.20(57 C), 0.18(66 C), 0.11(86 C).
K(out-in)=0.18(25-57 C), 0.36(77-86 C). DH=1.5 kJ mol⁻¹

Co+++ oth oth/un 37°C 0.0 U M 1967MMd (4646)4790
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)4791
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)4792
K(Co(NH3)6+L)=1.5
K(Co(NH3)5NO2+L)=1.3

Co+++ sp NaCl04 25°C 0.07M U 1967TKb (4649)4793
K(Co(NH3)6+L)=0.34
K(Co(en)3+L)=0.46

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Co+++      kin NaClO4 25°C 3.0M U      K1=1.42      1966CNa (4650)4794
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Co+++      sp non-aq 60°C 100% U      M      1966LWa (4651)4795
              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)4796
              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-1, DS=92 J K-1 mol-1. DH(B2)=-16, DS=64
-----
Co+++      sp non-aq 30°C 100% U TI      1966Mwa (4653)4797
              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)4798
              K(Co(NH3)5L+L)=1.0
-----
Co+++      kin alc/w 35°C 100% U      1965BIa (4655)4799
              K(Co(en)2L2+L)=2.40
Medium: MeOH
-----
Co+++      sp oth/un 25°C 0.01M U      I      1965CHa (4656)4800
              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)4801
              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)4802
              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)4803
              K((NH3)5CoO2Co(NH3)5+L)=0.10
-----
Co+++      sol NaCl 25°C var U TIH      B2=0.08      1962Fma (4660)4804
              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 NaCl04 25°C 1.0M U TIH 1962MFc (4661)4805
 $K_{out}(\text{Co}(\text{NH}_3)_6+\text{Cl})=-0.31$
 $K_{out}=-0.54(10\text{ C}), -0.06(45\text{ C}), \text{DH}=23\text{ kJ mol}^{-1}, \text{DS}=75\text{ J K}^{-1}\text{ mol}^{-1}.$
 At I=0 corr.: $K_{out}=0.6$

Co+++ sp non-aq 60°C 100% U I 1962TWa (4662)4806
 $K(\text{Co}(\text{en})_2\text{L}_2)\text{cis-trans}=0.85$
 $K_{out}(\text{cis-Co}(\text{en})_2\text{L}_2+\text{L})=3.26$
 $K_{out}(\text{trans-Co}(\text{en})_2\text{L}_2+\text{L})=1.48$
 Medium: DMF. Also data for MeCONMe2

Co+++ sp oth/un 45°C 1.0M U 1962YAA (4663)4807
 $K(\text{Co}(\text{NH}_3)_5+\text{L})=0.10$

Co+++ sp oth/un 20°C dil U 1961BCa (4664)4808
 $K(\text{Co}(\text{en})_2\text{L}(\text{H}_2\text{O})\text{cis-trans})=-0.43$

Co+++ oth none 25°C 0.0 U 1960MTb (4665)4809
 $K(\text{Co}(\text{NH}_3)_5+\text{L})=-2.80$
 From thermodynamic data

Co+++ sp NaCl 25°C 0.30M U TI 1960TAa (4666)4810
 $K(\text{Co}(\text{NH}_3)_5+\text{L})=0.17$
 $K=0.35(51\text{ C}), 0.56(80\text{ C}).$ At I=0 corr.: $K=0.99.$ In 87% D20, 0.3 NaCl: $K=0.30$

Co+++ sp alc/w 25°C 100% U 1957PHA (4667)4811
 $K(\text{cis-Co}(\text{en})_2\text{L}_2+\text{L})=2.13$
 Medium:MeOH

Co+++ sp NaCl04 25°C .054M U TIH 1953ENa (4668)4812
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=1.87$
 $K=1.96(35\text{ C}), \text{DH}(K)=15.6\text{ kJ mol}^{-1}, \text{DS}=88\text{ J K}^{-1}\text{ mol}^{-1}.$ At I=0 corr. $K=2.59,$
 $\text{DH}=18.1, \text{DS}=109(25\text{ C})$

Co+++ sp NaCl04 25°C 5.0M U T H 1953YLa (4669)4813
 $K_1(\text{Co}(\text{NH}_3)_3+\text{L})=-0.52$
 $K_2(\text{Co}(\text{NH}_3)_3\text{L}+\text{L})=-1.47$
 $\text{DH}(K_1)=32\text{ kJ mol}^{-1}, \text{DS}=107\text{ J K}^{-1}\text{ mol}^{-1}; \text{DH}(K_2)=29, \text{DS}=79.$
 At 0 C: $K_1=-0.52, K_2=-1.47$

Co+++ con none 25°C 0.0 U M 1951JMa (4670)4814
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=1.49$
 $K(\text{Co}(\text{en})_3+\text{L})=1.72$
 $K(\text{Co}(\text{pn})_3+\text{L})=1.60$

Co+++ con none 25°C 0.0 U 1949MOa (4671)4815
 $K(\text{Co}(\text{NH}_3)_6+\text{L})=1.52$

Co+++ con none 25°C 0.0 U M 1947JAA (4672)4816

K(Co(NH3)6+L)=1.57

Co+++ sp oth/un 25°C .057M U I 1941ADa (4673)4817

K(Co(NH3)5+L)=0.64

K=0.92(I=0.028)

Co+++ cal none 20°C 0.0 U H 19360Ta (4674)4818

DH(Co(NH3)4Cl2, cis-trans)=-7.7 kJ mol⁻¹, 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)4819

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⁻¹, DS=17.6 J K⁻¹ mol⁻¹.

Co+++ con oth/un 25°C ? C T 1992YOb (6178)4820

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)4821

Kout(Co(NH3)6+L)=1.59

Data for T=0-50 C. At 25 C, DH=-3.6 kJ mol⁻¹.

Co+++ sp NaClO4 25°C 1.00M U I M 1988ROa (6180)4822

Kout(Co(NH3)5NO3+L)=0.03

Co+++ con oth/un 25°C ? U M 1978KWb (6181)4823

Kout(Co(en)3+L)=1.18

Co+++ con non-aq 25°C 100% U I M 1977THa (6182)4824

Kout(Co(pn)3+L)=3.77

Medium: MeCN. In DMF: Kout(Co(en)3+L)=2.21

Co+++ con non-aq 25°C 100% U I M 1976THa (6183)4825

Kout(Co(en)3+L)=1.72

Medium: DMSO. In DMF: Kout(Co(en)3+L)=2.39; in MeCN: 3.64

Co+++ con non-aq -40°C 100% U T 1975BPe (6184)4826

Kout(Co(NH3)6L2+L)=2.24

Medium: liquid ammonia. At -49 C: Kout=2.22; -71 C: 2.30

Co+++ con none 25°C 0.0 U M 1974PKa (6185)4827

K(Co(NH3)6+L)=1.40

K(Co(en)3+L)=1.14

K(Co(pn)3+L)=1.08

$$K(\text{Co}((\text{phen})_3 + \text{L})) = 0.78$$
$$K_{so}(\text{Co}(\text{NH}_3)_6\text{L}_3) = -3.71$$
$$K(\text{Co}(\text{NH}_3)_6^{3+}) = 1.34$$
$$K_{so}(\text{Co}(\text{NH}_3)_6\text{L}_3) = -6.82$$
$$K(\text{Co(en)}_3 + \text{L}) < -0.25$$
$$K_{so}(\text{Co(en)}_3\text{L}_3 = \text{Co(en)}_3 + 3\text{L}) = 0.17$$
$$K_{out}(\text{Co}(\text{NH}_3)_5\text{H}_2\text{O}\text{SO}_4 + \text{ClO}_4) = 0.80$$
$$K_{so}(\text{cis-Co(en)}_2\text{Cl}_2) = -5.76$$
$$K_{so}(\text{trans-Co(en)}_2\text{Cl}_2) = -5.59$$

Medium:MeOH. At I=0 corr: Kso=-2.75(cis), -3.88(trans)

$$K_{so}(\text{Co}(\text{NH}_3)_6\text{L}_3) = -5.47$$
$$K_{so}: \text{Co}(\text{NH}_3)_6\text{L}_3(\text{s}) = \text{Co}(\text{NH}_3)_6 + 3\text{L}, \quad K_{so} = -6.04(15^\circ \text{C}), \quad -5.03(35^\circ \text{C})$$
$$K(\text{Co}(\text{NH}_3)_6 + \text{L}) = 1.40$$
$$K(\text{Co}(\text{NH}_3)_5\text{Cl}+\text{L})=1.05$$
$$K=1.15(25\text{ }^{\circ}\text{C})$$

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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$$*K(\text{Co}(\text{NH}_3)_5(\text{H}_2\text{O})+\text{L})=-2.01$$
$$K(\text{CoA5} + \text{HL} = \text{CoA5L} + \text{H}) = -1.01$$

A=NH₃. Data for I=0.0025-0.488 and 10-35 C

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co+++ EMF NaClO4 25°C 3.0M U M 1973MKd (6812)4838

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)4839
Kout(Co(dipy)3+L)=0.66

Co+++ sp oth/un 40°C dil U 1966CPa (6814)4840
K(cis-Co(en)2H2O)=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)4841

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)4842
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)4843
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)4844
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)4845
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 10°C: K_{out}=-1.05, -0.68

Co+++ sp alc/w 25°C 100% U M 1994NSa (7934)4846

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)4847

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)4848

K_{out}(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)4849

K_{out}(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)4850

K_{out}(Co(NH₃)₃(NO₃)₃+I)=1.1

Medium: 0.50 M NaF. DH(K_{out})=-14.6 kJ mol⁻¹, DS(K_{out})=-53 J K⁻¹ mol⁻¹.

Co+++ sol oth/un 25°C 0.1M C T 1984ISd (7939)4851

K_{out}(Co(NH₃)₃(NO₂)₃+L)=-0.20

Medium: NaF; for I=0.2M K_{1out}=-0.20; I=0.3 K_{1out}=-0.19; I=0.4 K_{1out}=-0.19

I=0.5 K_{1out}=-0.20

Co+++ sp NaClO₄ 25°C 0.10M U 1976AAb (7940)4852

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)4853

K_{out}(Co(en)₃+L)=2.53

Medium: DMSO. In DMF: K_{out}(Co(en)₃+L)=3.41

Co+++ sp NaClO₄ 25°C 1.00M U HM 1975ABc (7942)4854

K(CoA+L)=1.53

A=Tetra(4-N-methylpyridyl)porphine

DH=84 kJ mol⁻¹.

Co+++ sp non-aq 25°C 100% U M 1974BGb (7943)4855

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)4856
							$K(\text{Co}(\text{pn})_3 + \text{I}) = 0.23$	
							$\text{pn} = \text{diaminopropane}$. $K = 0.28$, $K(\text{Co}(\text{pn})_3 + 3\text{L}) = -0.21 (\text{I} = 4)$	

Co+++	sol	NaClO4	25°C	1.0M	U	I	1973J0a	(7945)4857
							$K(\text{Co}(\text{NH}_3)_6 + \text{L}) = -0.4$	
							$K'(\text{Co}(\text{NH}_3)_6 + 2\text{L}) = -1.4$	
							$K_{\text{so}}(\text{Co}(\text{NH}_3)_6 + 3\text{L}) = -4.12$	
							$K = -0.3$, $K' = -0.8$, $K_{\text{so}} = -4.00 (\text{I} = 2)$. $K = -0.4$, $K' = -0.7$, $K_{\text{so}} = -4.15 (\text{I} = 4)$	

Co+++	vlt	NaClO4	25°C	0.1M	C		1973MSh	(7946)4858
							$K_{\text{out}}(\text{Co}(\text{dipy})_3 + \text{L}) = 0.23$	

Co+++	cal	none	25°C	0.0	U	H	1972P0a	(7947)4859
							$\text{DH}(\text{Co}(\text{NH}_3)_5 + \text{L}) = -3.8 \text{ kJ mol}^{-1}$	

Co+++	EMF	NaClO4	25°C	0.40M	U	I M	1971DUB	(7948)4860
							$K(\text{CoA}_2 + \text{L}) = 5.69$	
							$K(\text{CoA}_2 + 2\text{L}) = 8.14$	
							$K(\text{CoACl} + \text{L}) = 5.58$	
							$K(\text{CoA}(\text{SCN}) + \text{L}) = 2.85$	
							$K(\text{CoA}_2\text{Br} + \text{L}) = 5.35$. $\text{HA} = \text{dimethylglyoxime}$	

Co+++	sp	NaClO4	25°C	var	U		1971HEb	(7949)4861
							$K(\text{Co}(\text{NH}_3)_6 + \text{I}) = 0.97 \text{ to } 1.11$	

Co+++	sol	NaClO4	25°C	1.0M	U	I	1971J0a	(7950)4862
							$K(\text{Co}(\text{en})_3 + \text{I}) = 0.15$	
							$K(\text{Co}(\text{en})_3 + 3\text{L}) = -0.29$	
							$K_{\text{so}} = -2.91$	
							$K_1 = 0.24(\text{spec})$, $0.33 (\text{I} = 0.5, \text{spec})$, $\text{At } \text{I} = 4$: $K_1 = 0.04$, $B_3 = -0.36$, $K_{\text{so}}(-2.78)$	

Co+++	con	none	25°C	0.0	U		1971KUb	(7951)4863
							$K(\text{Co}(\text{C}_2\text{O}_4)(\text{en})_2 + \text{I}) = 1.3$	

Co+++	sp	NaClO4	25°C	0.06M	U		1971YYa	(7952)4864
							$K(\text{Co}(\text{NH}_3)_6 + \text{I}) = 0.95$	
							$K_{\text{out}}(\text{Co}(\text{NH}_3)_6 + \text{I}) = 0.73$	

Co+++	sol	NaClO4	25°C	0.20M	U	T	1970MLc	(7953)4865
							$K(\text{Co}(\text{NH}_3)_6 + \text{I}) = -0.30$	
							Medium: LiClO_4 . $K = 0.30(45 \text{ C})$, $(\text{I} = 0.2)$. $\text{At } \text{I} = 0$ corr: $K_1 = 1.78(25 \text{ C})$, $1.86(45 \text{ C})$	

Co+++	con	oth/un	25°C	0.0	U		1968KTa	(7954)4866
							$K(\text{Co}(\text{NH}_3)_6 + \text{L}) = 1.38$	

Co+++	oth	oth/un	37°C	0.0	U	M	1967MMc	(7955)4867
							$K(\text{cis-Co}(\text{en})_2(\text{NH}_3)\text{NO}_2 + \text{L}) = 1.27$	
							$K(\text{trans-Co}(\text{en})_2\text{NH}_3\text{NO}_2 + \text{L}) = 1.15$	
							$K(\text{Co}(\text{en})_2(\text{NCS})\text{Cl} + \text{L}) = 0.54$	

Method:partial pressure of H2O.

Co+++ sp NaClO4 25°C 0.07M U 1967TKb (7956)4868
K(Co(NH3)6+L)=-0.15

Co+++ sp non-aq 30°C 100% U M 1966Mwa (7957)4869
K(cis-Co(en)2Cl2+L)=2.93

Medium: DMF

Co+++ sp none 25°C 0.0 U HM 1955NAa (7958)4870
K(Co(NH3)6+L)=1.95

I=0 corr. DH(K1)=8.9 kJ mol⁻¹, DS=67 J K⁻¹ mol⁻¹

Co+++ sp NaClO4 25°C .054M U HM 1953ENa (7959)4871
K(Co(NH3)6+L)=1.23
K(Co(en)3+L)=0.93

DH(Co(NH3)6L)=6.8 kJ mol⁻¹, DS=46 J K⁻¹ mol⁻¹. 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)4872
Kout(Co(NH3)5F+L)=1.04

Co+++ sp oth/un 20°C var U M 1944LIb (7961)4873
K(Co(NH3)6+L)=1.58

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

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

Co+++ sp NaClO4 25°C 1.0M U M 1975WTa (8504)4874
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)4875
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)4876
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)4877
 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)4878
 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)4879
 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)4880
 K(Co(NH3)5(H2O)+L)=2.68

 Co+++ vlt NaCl 25°C 0.10M U I 1973LHa (8722)4881
 K(Co(NH3)6 + L)=1.34

K=2.60 (0 corr)

NH2SO3- H2L Sulfamate CAS 5329-14-6 (452)

Sulfamate;

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

 Co+++ gl oth/un 25°C .004M U T 1968PJa (8799)4882
 K(Co(NH3)4(NH2)L+H)=5.83

K=6.40(0 C), 6.03(13 C). In 1 M NaClO4: K=5.70(25 C)

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

Ammonia

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

 Co+++ sol R4N.X 25°C 1.00M U 1995MPa (9099)4883
 Kout(Co(NH3)6+L)=0.79

Medium: NH4ClO4

 Co+++ sp oth/un 25°C 0.10M U 1994HPa (9100)4884
 K(CoA(H2O)+L=CoAL+H2O)=3.15

CoA(H2O): Co(III)aquacyanocobinamide. Medium: phosphate buffer.

 Co+++ sol oth/un 25°C 3.0M C T 1984ISc (9101)4885
 Kout(Co(bipy)3+L)=-0.77

Medium: LiClO4;

 Co+++ gl NaClO4 25°C 1.0M U 1982BCb (9102)4886

*K(trans-CoL4(NO2)H2O)=-7.16

Co+++ sol NaClO4 25°C 1.0M C 1982MSg (9103)4887

Kout(Co(NH3)6+L)= -0.32

Also for I=2 M K1out=-0.38; for 3 M K1out= - 0.44;for 4 M K1out=-0.49
for 5 M K1out= -0.55;

Co+++ sol NaClO4 25°C 1.0M C 1982MSg (9104)4888

Kout(Co(en)3+L)= -0.66

Also for I=2 M K1out=-0.69; for 3 M K1out= - 0.73;for 4 M K1out=-0.78
for 5 M K1out= -0.82;

Co+++ sol NaClO4 25°C 1.0M C 1982MSg (9105)4889

Kout(Co(NH3)5F+L)= -0.23

Also for I=2 M K1out=-0.27; for 3 M K1out= - 0.30;for 4 M K1out=-0.34
for 5 M K1out= -0.37;

Co+++ sol NaClO4 25°C 1.0M C 1982MSg (9106)4890

Kout(Co(NH3)5Cl+L)= -0.28

Also for I=2 M K1out=-0.32; for 3 M K1out= - 0.35;for 4 M K1out=-0.40
for 5 M K1out= -0.43;

Co+++ sol NaClO4 25°C 1.0M C 1982MSg (9107)4891

Kout(Co(NH3)5Br+L)= -0.32

Also for I=2 M K1out=-0.36; for 3 M K1out= - 0.40;for 4 M K1out=-0.44
for 5 M K1out= -0.48;

Co+++ vlt NaClO4 25°C 3.0M C 1976KMc (9108)4892

Kout(Co(en)3+L)=-1.10

Co+++ oth none 25°C 0.0 U K1=7.00 B2=13.35 1975DDb (9109)4893

B3=19.16

B4=24.44

Co+++ kin NaClO4 25°C 1.0M U 1974EWb (9110)4894

Medium:LiClO4. K((Co)2(NH3)8(OH)2NH2+H)=0.18, DH=-40.6 kJ mol⁻¹, DS=-129.6

Co+++ kin NaClO4 21°C 1.0M U I 1972BKa (9111)4895

K(Co(NH3)4OH(H2O)+H)=8.5

I=0.3: K=8.2; I=2, K=8.3

Co+++ kin NaClO4 26°C 1.0M U 1972SRb (9112)4896

K((NH3)5CoOSO2NH2+OH=(NH3)5CoOSO2NH+H2O)=0.7

Co+++ sp NaClO4 25°C 1.0M U 1971BLa (9113)4897

K(Cr(NH3)5OH+H)=5.7

By EMF measurements, K=5.75

Co+++ sol alc/w 25°C 75% U I 1971KBi (9114)4898

K(Co(en)3+L)=-0.34

$K(\text{Co}(\text{en})_3+2\text{L})=-1.70$
 $K(\text{Co}(\text{en})_3+3\text{L})=-1.46$
 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)4899
 $K(\text{cisCo}(\text{NH}_3)_4(\text{OH})(\text{H}_2\text{O})+\text{H})=5.69$
 $K(\text{cis-Co}(\text{NH}_3)_4(\text{OH})_2+\text{H})=7.99$
 $K(\text{Co}(\text{NH}_3)_2(\text{NO}_2)_2\text{OH}(\text{H}_2\text{O})+\text{H})=6.93$. $K(\text{Co}(\text{NH}_3)_2(\text{NO}_2)_2(\text{OH})_2+\text{H})=8.78$

Co+++ sp NaClO₄ 25°C 2.0M U T H 1971TSd (9116)4900
 Medium:LiClO₄. $K((\text{Co})_2(\text{NH}_3)_6(\text{OH})_2\text{NH}_2+\text{H}+\text{H}_2\text{O})=1.8(25\text{C})$, $1.5(50\text{C})$, $\text{DH}=-25.08$
 kJ mol⁻¹

Co+++ kin oth/un 62°C 0.0 U 1970TJa (9117)4901
 $K(\text{Cr}(\text{NH}_3)_5(\text{NH}_2)+\text{H})=12.1$

Co+++ sp NaClO₄ 20°C 1.0M U 1969LSc (9118)4902
 $K(\text{H}_2\text{O}(\text{NH}_3)_3\text{Co}(\text{OH})_2\text{Co}(\text{NH}_3)_3\text{OH})=1.7$ to 1.8

Co+++ gl KNO₃ 25°C 0.10M A I 1969SMg (9119)4903
 $K(\text{Cr}(\text{NH}_3)_5\text{OH}+\text{H})=6.4$
 Medium:MX. $K=6.31(M=\text{Na}, X=\text{ClO}_4)$, $6.15(M=\text{Li}, X=\text{ClO}_4)$

Co+++ EMF NaClO₄ 25°C 0.10M U 1969SMg (9120)4904
 Medium:LiClO₄. $K(\text{Co}_2(\text{NH}_3)_8(\text{OH})\text{NH}(X)+\text{H})=6.4(X=\text{Cl})$, $5.9(X=\text{Br})$, $6.3(X=\text{H}_2\text{O})$

Co+++ oth none 25°C 0.0 U M 1961KYa (9121)4905
 $B(\text{CoL}_5\text{Cl})=34.7$
 Method: combination of thermodynamic data. $I=0$ corr.

Co+++ oth none 25°C 0.0 U H 1961KYa (9122)4906
 $B_5=32.82$
 $B_6=29.70$
 Method: combination of thermodynamic data. $I=0$ corr.
 $\text{DH}(B_5)=-204$ kJ mol⁻¹, $\text{DH}(B_6)=-238$; $\text{DS}(B_5)=-57.3$, $\text{DS}(B_6)=-226$.

Co+++ oth none 25°C 0.0 U 1960MTb (9123)4907
 $K_6=0.23$
 Method: combination of thermodynamic data. $I=0$ corr.

Co+++ gl oth/un ? 1.12M U M 1958JBa (9124)4908
 $K(\text{CoL}_4(\text{OH})_2+\text{HL}=\text{CoL}_5\text{OH}+\text{H}_2\text{O})=2.6$
 $K(\text{CoL}_5\text{OH}+\text{HL}=\text{CoL}_6+\text{H}_2\text{O})=1.0$
 Additionak method: chemical analysis. Medium: 0.12M NO₃, ca 1M SCN.

Co+++ sol R4N.X 20°C 1.0M U I 1958LAb (9125)4909
 $K_7=-0.62$
 $K_7.K_8=-1.3$
 Medium: NH₄ClO₄. In 0.1 M, by spectrophotometry, $K_7=-0.5$

 Co+++ sol R4N.X 20°C 1.0M U M 1957LAa (9126)4910
 $K(\text{CoL6}+\text{H2O}=\text{CoL5OH}+\text{HL})=-1.4$
 $K(\text{CoL6}+\text{NO2}=\text{CoL5NO2}+\text{L})=1.63$
 $K(\text{CoL6}+\text{SCN}=\text{CoL5SCN}+\text{L})=-0.5$
 $K(\text{CoL5SCN}+\text{SCN}=\text{CoL4}(\text{SCN})_2+\text{L})=0$

Medium: NH4ClO4.

 Co+++ cal oth/un 25°C dil U HM 1950YAA (9127)4911
 $K:\text{CoL5}+\text{X}=\text{CoL5X}.$ $\text{DH}(\text{K})=8.8 \text{ kJ mol}^{-1}(\text{X}=\text{CO3}^{--}), -28.9(\text{X}=\text{L}), -33.9(\text{X}=\text{NO2}^-),$
 $0.4(\text{X}=\text{NO3}^-), 15.1(\text{X}=\text{SO4}^{--}), 13.8(\text{X}=\text{Cl}^-), 6.7(\text{X}=\text{Br}^-),$ and additional $\text{DH}(\text{K}).$

 Co+++ cal oth/un 25°C dil U H 1949YPa (9128)4912
 $\text{DH}(\text{K5})=-6.3 \text{ kJ mol}^{-1}; \text{DH}(\text{K6})=-29.$

 Co+++ EMF R4N.X 30°C 2.0M U I 1941BJa (9129)4913
 $\text{K5}=5.05$
 $\text{K6}=4.41$
 $\text{B6}=35.21$

Also by chemical analysis. Medium: NH4NO3. In 1 M NH4NO3: $\text{B6}=34.36$

 Co+++ EMF oth/un 25°C dil U 1920LLa (9130)4914
 $\text{B6}=33.66$

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)4915
 $K(\text{CoA}+\text{L})=-0.60$
 $\text{CoA}=\text{aquacobalamin}.$ $\text{DH}=45 \text{ kJ mol}^{-1}, \text{DS}=139 \text{ J K}^{-1} \text{ mol}^{-1}.$ 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)4916
 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)4917
 $\text{Kout}(\text{CoA}+\text{L})=-0.46$
 $\text{CoA}=\text{aquacobalamin}.$ 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)4918
 $\text{B3}=0.59$
 $\text{B4}=0.84$
 $\text{B5}=0.97$

Reaction: $\text{Co}(\text{NH}_3)_5\text{CO}_3 + n\text{L}$. For $\text{Co}(\text{NH}_3)_5\text{SO}_4 + \text{L}$: $K_1=0.32$, $B_2=0.45$, $B_3=0.54$.
 For $\text{Co}(\text{NH}_3)_5\text{SeO}_3$, $K_1=0.48$, $B_2=0.48$, $B_3=0.57$, $B_4=0.88$. Also $\text{Co}(\text{NH}_3)_5\text{TeO}_3$

Co+++ kin NaClO4 25°C 2.50M U 1966MGa (9359)4919
 $K(\text{Co}(\text{NH}_3)_4(\text{HL})\text{LCl} + \text{H}) = -0.22$
 $K_{\text{out}}(\text{Co}(\text{NH}_3)_4\text{L}_2 + \text{Cl}) = 0.40$

Co+++ sol oth/un 25°C 0.0 U T M 1960MTa (9360)4920
 $K_s(\text{KCo}(\text{NH}_3)_2\text{L}_4(\text{s})) = -3.51$
 $K_s = -3.13(0^\circ\text{C})$, $-3.26(15^\circ\text{C})$, $-3.51(25^\circ\text{C})$, $-3.91(30^\circ\text{C})$. Data also for cis- and trans- $\text{Co}(\text{NH}_3)_4\text{L}_2\text{Co}(\text{NH}_3)_2\text{L}_4$ and others

Co+++ oth oth/un 25°C 0.0 U 1960MTb (9361)4921
 $K(\text{Co}(\text{NH}_3)_5 + \text{L}) = 38.5$

From thermodynamic data

Co+++ sol oth/un 20°C 0.0 U M 1958KSa (9362)4922
 $K_s(\text{Ti}_3\text{CoL}_6(\text{s}) = 3\text{Ti} + \text{CoL}_6) = -14.94$
 $K_s(\text{Cs}_3\text{CoL}_6(\text{s}) = 3\text{Cs} + \text{CoL}_6) = -15.46$

Co+++ kin oth/un 75°C ? U HM 1956BSa (9363)4923
 Medium: solid $\text{Co}(\text{NH}_3)_5\text{LCl}_2$. $K(\text{Co}(\text{NH}_3)_5\text{ONO} = \text{Co}(\text{NH}_3)_5\text{NO}_2) = 0.21$. $K = 0.34(45.5^\circ\text{C})$
 $-0.28(58^\circ\text{C})$. $\text{DH} = 7.8 \text{ kJ mol}^{-1}$

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co+++	con	alc/w	25°C	10%	C	TIH		2002PAa (9626)4924		
									$K_{\text{out}}(\text{Co}(\text{NH}_3)_6 + \text{NO}_3) = 2.158$	
Medium: 10% w/w EtOH/H2O. Also data for 30-70% w/w EtOH/H2O and 10-50 C. $\text{DH} = -4.1 \text{ kJ mol}^{-1}$, $\text{DS} = 24.8 \text{ J K}^{-1} \text{ mol}^{-1}$.										

Co+++	con	oth/un	25°C	?	C	T		1992YOb (9627)4925		
									$K_{\text{out}}(\text{Co}(\text{en})_3 + \text{L}) = 1.67$	
$K = 1.72(0^\circ\text{C})$, $1.71(5^\circ\text{C})$, $1.70(10^\circ\text{C})$, $1.69(15^\circ\text{C})$, $1.68(20^\circ\text{C})$, $1.67(30^\circ\text{C})$, $1.67(35^\circ\text{C})$, $1.67(40^\circ\text{C})$, $1.66(45^\circ\text{C})$, $1.68(50^\circ\text{C})$										

Co+++	EMF	none	25°C	0.0	U	T H		1991YKa (9628)4926		
									$K_{\text{out}}(\text{Co}(\text{NH}_3)_6 + \text{L}) = 1.70$	
Data for $T = 0-50^\circ\text{C}$. At 25°C , $\text{DH} = -2.2 \text{ kJ mol}^{-1}$.										

Co+++	con	oth/un	25°C	?	U	M		1978KWb (9629)4927		
									$K_{\text{out}}(\text{Co}(\text{en})_3 + \text{L}) = 1.28$	

Co+++	sp	NaNO3	25°C	2.0M	U			1970STc (9630)4928		
$K(\text{Co}_2(\text{NH}_3)_8(\text{OH})(\text{NH}_2) + \text{H} + \text{L} = \text{CO}_2(\text{NH}_3)_8(\text{OH}_2)\text{L}) = -1.7$										

Co+++	con	oth/un	25°C	0.0	U			1968KTa (9631)4929		
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$$K(\text{Co}(\text{NH}_3)_6 + \text{L}) = 1.63$$

Co+++ oth oth/un 37°C 0.0 U M 1967MAF (9632)4930
K(Co(en)2(SCN)Cl+L)=0.3

Co+++ oth oth/un 37°C 0.0 U M 1967MMd (9633)4931
K(cis-Co(en)2(NH3)NO2+L)=2.3
K(tr-Co(en)2(NH3)NO2+L)=2.3

Method: partial pressure of H₂O

Co+++ sol oth/un 25°C 0.0 U 1965AEa (9634)4932
K(Co(NH3)5Cl+L)=1.15

Co+++ sp oth/un 25°C 1.0M U M 1963HTa (9635)4933
K(Co(NH3)5+L)=-0.19

Co+++ oth oth/un 25°C 0.0 U 1960MTb (9636)4934
K(Co(NH₃)₆+L)=-1.30

Method: From thermodynamic data

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co+++ kin oth/un 5°C 2.0M U T K1=1.44 1969JSc (10078)4935
Medium: H2SO4. K1=1.44(5 C), 1.74(10 C)

N3- Azide;	HL	Azide	CAS 7782-79-8 (441)
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Co+++ sp NaNO3 25°C 0.50M U T H 1998HBb (10183)4936
K(CoA+L)=1.08
K(CoB+L)=1.04

CoA: beta-trifluoromethylcobinamide, CoB: beta-cyanomethylcobinamide.

Data at 5, 15, 35 and 45 C. $\Delta H(\text{CoA}+\text{L})=-16.4 \text{ kJ mol}^{-1}$, $\Delta S=-34.9 \text{ J K}^{-1} \text{ mol}^{-1}$

Co+++ kin KCl 25°C 2.20M U T H 1994MMc (10184)4937
Kout(CoA+L)=-0.52

CoA=aquacobalamin. Also data at 5C: K=-0.21, 10C: K=-0.39, 15C: K=-0.28, 20C: K=-0.48.

Co+++	EMF NaCl04 25°C 2.00M U	K1=8.477	B2=15.00	1989CNb (10185)4938
		B3=19.85		
		B4=23.18		
		B5=23.11		
		B6=24.00		

Co+++ sp oth/un 25°C 1.00M U I M 1988ROa (10186)4939
Kout(Co(NH3)5NO3+L)=-0.05

Medium: NaN3

Co+++ sp oth/un 35°C 0.0 U M 1969IBa (10187)4940
K1out(Co(NH3)6+L)=1.15

Co+++ kin NaCl04 25°C 0.51M U 1969SGb (10188)4941
K(Co(NH3)5+L)=2.92

Co+++ kin oth/un 25°C var U M 1968STb (10189)4942
K(Co(NH3)5L+H)=2.78

Co+++ sol oth/un 25°C 0.0 U T 1965AEa (10190)4943
K(Cr(NH3)5Cl+L)=-1.07
K1=0.96(35 C)

Co+++ sp NaCl04 25°C 0.50M U 1964HAb (10191)4944
K(cis=trans)=-0.66
Complex: Co(NH3)4(H2O)L

Co+++ sp NaCl04 40°C 1.0M U M 1962Hwa (10192)4945
K(Co(CN)6+L)=3.18
K(Co(CN)5L+H)=0.67

Co+++ sp NaCl04 25°C 0.05M U IHM 1953ENa (10193)4946
K(Co(NH3)6+L)=1.30
K'(Co(en)3+L)=1.06

DH(K)=-16.5 kJ mol⁻¹, DS=-29.3 J K⁻¹ mol⁻¹. 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 NaCl04 25°C 2.2M C H 2002MKa (11133)4947
*K(CoA(H2O))=-10.71

CoA(H2O) is 10-nitrosoaquacobalamin. DH(*K)=120 kJ mol⁻¹,
DS(*K)=198 J K⁻¹ mol⁻¹.

Co+++ sp NaCl04 25°C 0.30M M T M 1993DNa (11134)4948
*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)4949

$K\{[Co(NH_3)_5(OH)][NH_4]/[[Co(NH_3)_6][H_2O]]=-1.35$ Medium: NH_4NO_3

Co+++ sp NaClO4 25°C 1.00M U I 1988ROa (11136)4950
 $K_{out}(Co(NH_3)_5NO_3+L)=-0.22$

Co+++ sp NaNO3 25°C 1.00M U 1986MCc (11137)4951
 $*K(cis-Co(en)_3A(H_2O))=-7.67$
 $K(Coen_3HA_{aq}=Coen_3A_{aq}+H)=-1.76$

H2A=oxalic acid

Co+++ sp NaClO4 25°C 0.20M U 1983BBe (11138)4952
 $*K_1(CoA)=-5.9$
 $*K_2(CoA)=-10.3$

CoA is diaquacobinamide.

Co+++ sp NaClO4 25°C 0.20M U 1983BBe (11139)4953
 $K(CoA(H_2O)L+H)=5.9$
 $K(CoAL_2+H)=10.3$
 $K(CoB(H_2O)+L)=1.0$

CoA=cobinamide, vitamin B12. CoB(H2O)=ethynylaquocobinamide

Co+++ gl NaClO4 40°C 1.0M U I M 1981BGa (11140)4954
 $K(Co(CN)_5_{aq}+L=Co(CN)_5L+_{aq})=3.4$

Ionic strength range: 0.22-4.10 M

Co+++ kin NaClO4 25°C 1.00M U H 1977JSb (11141)4955
 $K(Co_2L_3+H=Co_2L_2(H_2O)_2)=0.37$

Medium: LiClO4. $Co_2L_3 = (Co(NH_3)_3)_2(OH)_3$

Co+++ oth none 25°C 0.0 U M K1=12.36 1975DDb (11142)4956
B6=48.16
 $B(CoL(NH_3))=18.49$
 $B(CoL_4(NH_3)_2)=44.82$

Co+++ sp NaCl 15°C 0.50M U TIHM 1975DHa (11143)4957
 $*K(CoA(H_2O)_2)=-5.36$, $*K(CoA(OH)(H_2O))=-8.05$. A=triaminotriethylamine

Co+++ EMF NaClO4 ? 1.00M U 1973BLb (11144)4958
 $K(CoA_5+H_2O=CoA_5OH+H)=-5.75$

A= NH_3 . By spectrophotometry, $*K_1=-5.70$

Co+++ nmr oth/un 25°C U 1972YKa (11145)4959
 $K'=0.40$
 $K''=-0.28$
 $K'''=0.08$

K' : trans- $Co(en)_2(NH_3)(OH)=cis$. K'' : trans- $Co(en)_2(OH)_2=cis$.

K''' : trans- $Co(en)(NH_3)_2(OH)_2=cis$

Co+++ nmr oth/un 25°C 1.00M U 1971YYb (11146)4960
 $K(CoA_5+H_2O=CoA_5OH+H)=-6.36$

A=NH3. Method: nmr

Co+++ nmr oth/un 25°C 2.00M U 1971YYb (11147)4961

*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)4962

K(CoA5+H2O=CoA5OH+H)=-6.07

A=NH3. DH(*K)=37.78 kJ mol⁻¹, DS=12.1 J K⁻¹ mol⁻¹

Co+++ kin diox/w 25°C 10% U TI 1970CHE (11149)4963

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)4964

*K1(Co(H2O)6) < -2

Co+++ sp NaClO4 26°C 1.00M U T H 1969FJa (11151)4965

K(Co(en)2A+OH)=1.69

A=CO3²⁻. DH=-27.2 kJ mol⁻¹. K=1.56(34 C), 1.42(44 C)

Co+++ gl NaNO3 20°C 0.10M U I 1968CHb (11152)4966

*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)4967

*K1(Co(H2O)6)=-1.3

Co+++ sp NaClO4 25°C 1.00M U 1968LSa (11154)4968

K(c-t(Co(en)2(OH)(H2O)))=-0.10

K: cis = trans

Co+++ gl NaClO4 25°C 0.30M U I 1968SHd (11155)4969

*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 1967BOa (11156)4970

*K1(Co(NH3)5(OCNH3))=-0.83

Co+++ sp oth/un 15°C 0.01M U TI 1967CHb (11157)4971

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)4972

*K1(Co(NH3)5C2O4H)=-2.06

*K=-1.77(70 C)

Co+++ gl NaCl04 25°C 1.00M U T 1966CEa (11159)4973
 *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 NaCl04 0°C 0.10M U T M 1966CHa (11160)4974
 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 NaCl04 25°C 0.01M U 1966CLc (11161)4975
 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)4976
 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 NaCl04 25°C 3.00M U 1966CNa (11163)4977
 *K1(Co(H2O)6)=-0.66

Co+++ gl oth/un 20°C 0.10M U M 1966JSa (11164)4978
 *K1(Co(NH3)5(CH3OH))=-5.58

Co+++ gl oth/un 0°C ? U 1965BMc (11165)4979
 *K1(Co(en)2(SO4)(H2O))=-6.3

Co+++ gl oth/un 18°C dil U 1964BBf (11166)4980
 *K1(trans-Co(NH3)4CN(H2O))=-8.6
 *K1(trans-Co(NH3)4NO2H2O)=-9.0

Co+++ gl NaCl04 10°C 0.10M U T 1964HSb (11167)4981
 *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 NaCl04 10°C 0.10M U T 1964HSb (11168)4982
 *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)4983
 *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)4984	*K(Co(CN)5H2O)=-9.7
Co+++	kin	NaClO4	50°C	0.10M	U T	1962MTa (11171)4985	*K(Co(en)2NH3H2O)=-5.1
							*K=-5.2(60 C)
Co+++	gl	KNO3	25°C	1.0M	U	1961APb (11172)4986	*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)4987	Kso(Co(OH)3)=-40.5
Co+++	sp	none	25°C	0.0	U	1960Bhb (11174)4988	*K(in D20)/*K(in H2O)=-0.18
							K(in D20)/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)4989	K(Co(OH)3(s)=Co(OH)3)=-4.54
							B3=38.47
Co+++	kin	oth/un	64°C	1	U H	1959BSe (11176)4990	*K(Co(NH3)6)=-10.46
							DH(*K)=39.7 kJ mol-1
Co+++	gl	oth/un	?	dil	U	1959GVa (11177)4991	*K(Co(NH3)6) < -12
							*K(Co(en)3) < -12
Co+++	gl	oth/un	20°C	var	U	1958FPa (11178)4992	*K1(Co(NH3)4SO4H2O)=ca. -6
Co+++	gl	NaNO3	25°C	1.0M	U	1957SCf (11179)4993	*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)4994	Kout(Co(NH3)6+OH)=1.85
Co+++	sp	none	25°C	0.0	U	1956PBa (11181)4995	Kout(Coen3+OH)=1.50
Co+++	sp	none	25°C	0.0	U	1956PBa (11182)4996	Kout(Copn3+OH)=1.27
Co+++	sp	NaClO4	23°C	1.0M	U T H	1956SWb (11183)4997	

*K1=-1.78

DH(*K1)=42 kJ mol⁻¹, 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)4998

*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⁻¹; *Kso=-5.65(81 C),
Kso=-43.50(81 C). Redox also used

Co+++ gl NaNO3 25°C 1.0M U 1952BRa (11185)4999

*K1(cis-Coen2(H2O)2)=-6.06
*K2=-8.19 (cis)
*K1(trans-Coen2(H2O)2)=-4.45
*K2=-7.94 (trans)

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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

END