SC-Database
Software version = 5.81 Data version = 4.62
Experiment list contains 4999 experiments for
 (no ligands specified)
 2 metals : Ni++, Ni+++
 (no references specified)
 (no experimental details specified)

****
e- HL Electron (442)
Electron;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ oth none 25°C 0.0 U 1970NMa (26) 1
Method: Estimated data.K(Ni+e=Ni(I))=11.8(0.7V) to 18.6(1.1V)

Ni++ oth none 25°C 0.0 M H 1968LCd (27) 2
K(Ni+2e=Ni(s))=-7.71, -228 mV
DH = 53.5 kJ mol-1

Ni++ EMF none 22°C 0.0 U 1962LOa (28) 3
K(Ni+2e=Ni(s))=-8.32(-246 mV)

Ni++ EMF none 25°C 0.0 U 1962VUa (29) 4
K(Ni+2e=Ni(s))=-9.13(-270 mV)

Ni++ EMF alc/w 25°C 100% U 1961TAa (30) 5
K(Ni+2e=Ni(s))=-5.78(-171 mV)
Medium: MeOH

Ni++ EMF none 25°C 0.0 U 1952CBa (31) 6
K(Ni+2e=Ni(s))=-7.84(-232 mV)

Ni++ oth none 25°C 0.0 U 1952LAb (32) 7
K=16.6(490 mV)
K'=56.7(1680 mV)
K: Ni(IV)O2(s)+2H2O+2e=Ni(OH)2(s)+2OH. K: Ni(IV)O2(s)+4H+2e=Ni(OH)2(s)+2H2O
From thermodynamic data

Ni++ oth none 25°C 0.0 U 1952LAb (33) 8
K=-24.3(-720 mV)
K: Ni(OH)2(s)+2e=Ni(s)+2OH. From thermodynamic data.
Estimated value: K(Ni+2e=Ni(s))=-8.45(-250 mV)

Ni++ EMF none 25°C 0.0 U 1929HBa (34) 9
K(Ni+2e=Ni(s))=-7.81(-231 mV)
****
AsO4--- H3L Arsenate CAS 7778-39-4 (1557)
Arsenate;

```
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       oth oth/un 25°C  0.0  U                        1990SAa  (1114)  10
                                      *K(Ni3L2(s)+2H=3Ni+2HL)=-2.21
Calculated from thermodynamic data.
-------------------------------------------------------------------------------
Ni++       sol oth/un 20°C  var  U                        1956CHc  (1115)  11
                                      Kso(Ni3L2)=-25.51
*******************************************************************************
AsW11O39-------       H7L                        (2468)
alpha-Heteromonoarseno-polytungstate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 1.00M U        K1=2.72         1984COa  (1170)  12
*******************************************************************************
As2W17H2O61--------   H8L                        (2469)
alpha-Heteropolydiarseno-polytungstate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 1.00M U        K1=7.75         1984COa  (1181)  13
                                      K1=4.64 (alpha2 isomer)
*******************************************************************************
BO4H4-                 HL    Borate           CAS 10043-35-3  (991)
Borate; B(OH)4-
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sol none   22°C  0.0  U                        1961SHd  (1283)  14
                                      Kso=-8.7 (solid phase ?)
                                      B3=8.44
*******************************************************************************
Br-                    HL    Bromide          CAS 10035-10-6  (19)
Bromide;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C    ?  U        K1=-2.37        1990BJa  (1406)  15
Medium: LiBr, I < 6.50 M
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U   H    K1=1.20         1990OIa  (1407)  16
Medium: DMF, 0.16 M R4NClO4. DH(K1)=17.5 kJ mol-1 by calorimetry
-------------------------------------------------------------------------------
Ni++       cal non-aq 25°C 100%  C   HM                   1989IOb  (1408)  17
                                      B(NiBr(bpy))=7.80
                                      B(NiBr2(bpy))=13.39
DH(Ni+Br+bpy)=-11.6 kJ mol-1, DH(Ni+2Br+bpy)=-48.1.
Medium:DMF, 0.16 M Et4NClO4
```

```
--------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.50M U   H                  1985BPb  (1409)  18
                                      B4=-15.0
DH(B4)=83.7 kJ mol-1; TDS(B4)=-1.7 kJ mol-1
--------------------------------------------------------------------------------
Ni++       sol oth/un 25°C  0.1M C                       1984PKb  (1410)  19
                                      Kout(Ni(phen)3+L)=0.74
                                      Kout(Ni(phen)3+2L)=0.97
Medium:0.1M NaF;Also for 0.25M K1out=0.64, B2out=0.84;for 0.5 M K1out=0.56
phen=Phenanthroline; for 0.5M B2out=0.88; for 0.75M K1out=0.49, B2out=0.82
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U       K1=3.2    B2=6.00   1978LGa  (1411)  20
                                      K3=3.5
--------------------------------------------------------------------------------
Ni++       EMF oth/un 25°C 1.50M U  I     K1=-1.3        1978LKd  (1412)  21
K1 defined in molality (Moles per kg) terms: K1=m(NiBr)/m(Ni).m(Br),  ionic
strength in m(Ni(ClO4)2). K1 (m): -1.3 (2.0), -1.3 (2.5), -1.15 (3.0)
--------------------------------------------------------------------------------
Ni++       cal NaClO4 25°C  3.0M U   H                  1974BRa  (1413)  22
Medium: LiClO4 DH(K1)=11.7 kJ mol-1, DS=23.0 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C  1.0M U       K1=-0.05       1973HHb  (1414)  23
--------------------------------------------------------------------------------
Ni++       sp  oth/un 24°C  var  M       K1=-4.25       1972RHc  (1415)  24
Medium: LiBr
--------------------------------------------------------------------------------
Ni++       ISE non-aq 161°C 100%  U T      K1=1.94   B2=2.54   1971PSa  (1416)  25
Medium: (Li,Na,K)NO3 eutectic. K1=1.85,K2=0.5(180 C) x units
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U                      1970GNb  (1417)  26
                                      K4=1.80
Medium: MeCN, 0.35 M Et4NBr
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C  3.0M U       K1=-0.82       1970MMj  (1418)  27
Medium: LiClO4
--------------------------------------------------------------------------------
Ni++       sp  alc/w  48°C 100%  U  IH                  1967SWa  (1419)  28
Medium(S): MeOH. 25-70 C, DH(NiBr2S4+Br=NiBr3S+3S)=50.6 kJ mol-1, 71.5(EtOH)
61.9(BuOH); DH(NiBr2S4=NiBr2S2+2S)=71.1(S=BuOH)
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U       K1=2.2         1966FIa  (1420)  29
Medium: MeOCH2CH2OH
--------------------------------------------------------------------------------
Ni++       cal NaClO4 40°C  2.0M U T H    K1=-0.11       1966KLb  (1421)  30
K1=-0.12(25 C), DH(K1)=0.33(25 C), 0.29(40 C) kJ mol-1. DS=1.1 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U                      1965FIa  (1422)  31
                                      K4=2.0
Medium:Me2CO
--------------------------------------------------------------------------------
```

```
Ni++       sp  NaClO4 25°C 5.70M U        K1=-0.3        1963NDa  (1423)  32
Medium: HClO4
-------------------------------------------------------------------------------
Ni++       EMF NaClO4 25°C  2.0M U T      K1=-0.12       1961LWa  (1424)  33
Method: Ag electrode. K1=-0.34(0 C), -0.10(50 C)
-------------------------------------------------------------------------------
Ni++       sp  oth/un 18°C  var  U        B2=-3.24       1936JOa  (1425)  34
                                         K3.K4=-4.88
Medium: HBr.
*******************************************************************************
BrO3-                  HL    Bromate            (6017)
Bromate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       kin non-aq 230°C 100%  U T      K1=1.1         1961DLa  (2393)  35
Medium: liquid (K,Na)NO3. K1=ca.0.1 (250 C), m units
*******************************************************************************
CN-                    HL    Cyanide          CAS 74-90-8  (230)
Cyanide;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C 0.10M U    M                   1980KNa  (2473)  36
                                            K(NiA+L)=2.95
                                            B(NiAL)=20.93
By spectrophotometry: K(NiA+L)=3.04, B(NiAL2)=24.88. H6A=Triethylenetetra-
minehexaethanoic acid
-------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C 0.10M U    M                   1980KNa  (2474)  37
                                            B(NiL(DTPA))=22.43
                                            B(NiL2(DPTA))=23.56
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.10M U T                      1974HMc  (2475)  38
                                            B4=30.5
Medium: 0.1 M NaOH. At 10 C: B4=32.2; 40 C: 29.0
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U TI                     1974KAa  (2476)  39
                                            K'(Ni(CN)4+H)=5.88
                                            K"(NiH(CN)4+H)=4.73
K'=6.3(I=0.01),6.3(I=0.02),6.1(I=0.05),5.63(I=0.2),5.0(I=0.5)
K"=4.55, 4.65, 4.57, 4.73, 4.24 at same ionic strengths
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  0.0  U TI                    1974KAa  (2477)  40
                                            K'(Ni(CN)4+H)=6.59
                                            K"(NiH(CN)4+H)=4.69
K'=6.63(30 C),6.68(35 C),6.69(40 C),6.72(45 C),6.78(50 C)
K"=4.70, 4.73, 4.74, 4.76, 4.78
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 3.00M C        K1=7.03        1974PEa  (2478)  41
```

B4=31.06

Ni++ sp non-aq 190°C 100% U 1972HNa (2479) 42
B4=16.45
Medium:liquid KSCN

Ni++ gl none 25°C 0.0 M T H 1971IJa (2480) 43
B4=30.22
B4=32.2(10 C), 27.43(40 C). DH=-189 kJ mol-1(10 C) or -185(40 C)

Ni++ sp NaClO4 20°C 2.0M U 1971PHb (2481) 44
K5=-0.77

Ni++ oth none 25°C 0.0 U K1=1.9 1969SMo (2482) 45
Method:from survey of literature data

Ni++ sp non-aq 190°C 100% U 1968HNa (2483) 46
B4=19.5
Medium: molten KSCN

Ni++ EMF oth/un 30°C var U T 1968KAa (2484) 47
B4=22.2
Method: amalgam electrode. Medium: KCN

Ni++ sp NaClO4 25°C 0.10M U 1968KMc (2485) 48
B4=30.5
K(H+NiL4)=5.4
K(H+HNiL4)=4.5

Ni++ kin NaClO4 25°C 0.10M U 1968KMc (2486) 49
K(H+H2NiL4)=2.6

Ni++ sp oth/un 22°C 0.0 U M 1965CCa (2487) 50
K(NiA+L)=1.4
Medium: 0 corr. A=cyclic tetramine

Ni++ sp oth/un 25°C 4.0M U 1965CPa (2488) 51
K5=0.03
Medium: KF, m units

Ni++ sp NaClO4 23°C 2.50M U 1964GHe (2489) 52
K5=-0.69

Ni++ gl none 25°C 0.0 U H 1963CIb (2490) 53
B4=30.1
DH(B4)=-180.7 kJ mol-1, DS(B4)=-29 (by calorimetry)

Ni++ oth NaClO4 25°C 4.0M U I M 1963PBc (2491) 54
K5=-0.55
K6=-1.02

Method: ir. K5=-0.59, K6=-1.06 in 4 M NaClO4, 2 M NH3. In 2M NaCN K(Ni(CN)5+Cl)=-0.66, K(Ni(CN)4+Cl)=-0.7

Ni++ oth NaClO4 25°C 1.34M U T H 1960MJa (2492) 55
K5=-0.72
DH(K5)=-13 kJ mol-1; K5=-0.66 (15.4 C), -0.77(33.6 C). Method:ir

---

Ni++ nmr oth/un 18°C var U 1959BGc (2493) 56
K=-2.29
K'=-7.88
K: CdL2(s)+NiL4=Cd+NiL6. K': NiL2(s)+2ZnL2(s)=2Zn+NiL6). Method: nmr

---

Ni++ sp none 25°C 0.0 U I 1959FSa (2494) 57
B4=31.0
At I=0 corr B4=30.3

Ni++ sp oth/un ??? 5.0M U I 1958KCa (2495) 58
K5.K6=3.3
B6=26 (assuming B4=22)
Medium: CH3COOK; K5.K6=3.4 in 10 M KNO2

Ni++ oth none 25°C 0.0 U 1952LAb (2496) 59
B4=22
Method: combination of thermodynamic data

Ni++ cal oth/un ??? ? U H 1951YAa (2497) 60
DH(B4)=-184.1 kJ mol-1

Ni++ vlt oth/un 25°C var U 1950HKa (2498) 61
B4=22
K(Ni2L4(s)=Ni+NiL4)=-8.77

Ni++ vlt oth/un ??? var U 1936SAa (2499) 62
B4=15.46

Ni++ ISE oth/un 25°C var U 1932MAa (2500) 63
B4=11.7 to 12.0

Ni++ ISE oth/un 25°C var U 1931MAa (2501) 64
B4=13.75

****

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

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

---

Ni++ vlt non-aq 25°C 100% U M 1994SFa (2781) 65
K(NiA+L)=5.1
Medium: CH3CN; 0.1 M Pr4NClO4. A=N,N',N",N"'-Tetramethyl-1,4,8,11-tetraaza-cyclotetradecane plus others

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sol	NaClO4	25°C	0.0	C	T		2001GPa (2980)	66
							*Kso(NiCO3+2H=Ni+CO2)=10.64		

Solid is NiCO3.6H2O, hellyerite. Medium: 1.0 m NaClO4. Data corrected to I=0. Data for 5-40 C. DH(*Kso)=8.3 kJ mol-1.

Ni++	sp	none	25°C	0.0	C	I		1987EFa (2981)	67
							K(Ni+HCO3)=1.40		

K extrapolated from data for 0.001-0.05 M NaCl solutions.
At I=0.05 M, K(Ni+HCO3)=1.06. Also data for 5% and 10% MeOH/H2O.

Ni++	oth	oth/un	25°C	0.0	C	H	K1=4.83	1984FCa (2982)	68
							K(Ni+HCO3)=2.22		

K(Ni+HCO3) calc using electrostatic model. K1 from assessment of lit data.
DH(K1)=-3.2 kJ mol-1, DH(Ni+HCO3)=4.6 (from DS calc by electrostat model)

Ni++	sol	NaClO4	75°C	1.00M	U			1982GRd (2983)	69
							*Ks(NiCO3)=-7.05		
							*Ks(NiCO3)=-6.99 (85 C)		
							*Ks(NiCO3)=-6.96 (90 C)		

*Ks: NiCO3(s)+2H=Ni+CO2(g)+H2O.

Ni++	sol	none	25°C	0.0	U			1935KAa (2984)	70
							Kso(NiCO3(s))=-6.87		
							+Kpso=-4.38		

I=0 corr. +Kpso: NiCO3(s)+CO2(g)+H2O=Ni+2HCO3

Ni++	sol	oth/un	25°C	var	U			1911AVa (2985)	71
							Kso(NiCO3(s))=-8.18		

****

CS3-- H2L CAS 549-08-1 (936)
Trithiocarbonate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	kin	alc/w	25°C	100%	U	I	K1=0.05	1972MMa (3462)	72

Medium:MeOH, 0.014 M NaClO4. K1=0.01(0.054 M NaClO4), -0.21(0.104 M NaClO4)

Ni++	sp	oth/un	?	?	U		B2=9.0	1957BIa (3463)	73

****

C6N6Fe---- H4L (2191)
Hexacyanoferrate (II); Fe(II)(CN)6----

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

```
Ni++       con oth/un 20°C       U T                    1972BMe  (3524)  74
                                        K(K2Ni3L2(s)=2K+3Ni+2L)=-33.6
                                        Ks(K4Ni4L3)=-47.5
                                        Ks(K12Ni8L7)=-113.6
30 C: Ks(K2Ni3L2)=-31.3
-------------------------------------------------------------------------------
Ni++       vlt oth/un 25°C  dil  U                    1960BRa  (3525)  75
                                        Kso(Ni2L)=-13.12
-------------------------------------------------------------------------------
Ni++       sol oth/un 25°C  var  U                    1956TGb  (3526)  76
                                        Kso(Ni2L)=-14.89
*******************************************************************************
Cl-                    HL    Chloride         CAS 7647-01-0  (50)
Chloride;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  C        K1=1.7    B2= 2.10  1999CSa  (3877)  77
                                        B3=2.2
                                        B4=2.3
Medium: DMSO, 1.0 M LiClO4. In DMF, 1.0 M LiClO4, K1=1.8, B2=2.1, B3=2.9,
B4=4.1. In PC, 0.1 M Et4NClO4, K1=9.2, B2=15.8, B3=21.4, B4=26.7.
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  C  I     K1=3.18   B2= 4.19  1998UKb  (3878)  78
                                        B3=6.00
                                        B4=7.79
Medium: DMF, 0.2 M Et4NClO4. Also data for DMA, 0.2 M Bu4NClO4.
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  C  I     K1=1.3    B2= 1.20  1995KCa  (3879)  79
Medium: methanol, 0.10 M LiClO4. In ethanol, 0.10 M LiClO4, K1=1.7, B2=1.8
In i-PrOH, 0.10 M LiClO4, K1=1.9, B2=2.2.
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  C   H    K1=4.86   B2=8.61   1993SIa  (3880)  80
                                        4.79
                                        3.29
Medium: MeCN, 0.2 M Me4NBF4. DH(K1)=-2.1 kJ mol-1, DH(K2)=8, DH(K3)=30,
DH(K4)=-10
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U TIH    K1=4.31   B2=8.53   1992SIa  (3881)  81
                                        B3=13.0
                                        B4=14.8
Medium: N,N-Dimethylacetamide; 0.1 M (C4H9)4NBF4. DH(K1)=28.4, DH(B2)=50.4,
DH(B3)=47.1, DH(B4)=40.7 kJ mol-1. Data also at 45 C, and in DMF at 45 C.
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U   H    K1=1.51        1990SIa  (3882)  82
Medium: DMSO, 0.4 M Et4NBF4. DH by calorimetry
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U   H    K1=2.85        1989IOa  (3883)  83
                                        K(Ni(bpy)+L)=3.68
                                        K(Ni(bpy)2+L)=3.77
```

```
                                        K(Ni(bpy)L+L)=1.11
                                        K(Ni(bpy)2L+L)=0.89
In N,N-dimethylformamide. DH(K1)=8.6 kJ mol-1; DH(Ni(bpy)L)=8.4;
DH(Ni(bpy)2L)=7.9; DH(Ni(bpy)L2)=15.3; DH(Ni(bpy)2L2)=10.5.
-------------------------------------------------------------------------------
Ni++       sol none   25°C  0.0  C        K1=-0.83  B2=-1.2   1989IPa  (3884)  84
Extrapolated to zero from 6 M NaClO4.  In 6M: K1=-0.69, B2=-1.2.
From solubility of Ni(IO3)2 (Kso=-5.11 at I=0)
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C  0.0  U  I     K1=-2.0        1988BJa  (3885)  85
From measurements in 0-10.7 M HCl. In LiCl, K1=-1.82
-------------------------------------------------------------------------------
Ni++       ISE non-aq 25°C 100%  U        K1=2.45        1988SGa  (3886)  86
Medium: DMSO, 0.1 M Et4NCl
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  C   H    K1=2.89   B2=3.75   1987IOa  (3887)  87
                                        K3=2.05
                                        K4=1.66
Medium: DMF, 0.4 M Et4NClO4.
-------------------------------------------------------------------------------
Ni++       cal non-aq 25°C 100%  U   H    K1=2.85   B2=3.76   1987IOa  (3888)  88
                                        K3=1.77
                                        B3=5.53
                                        K4=1.87
                                        B4=7.40
DH(K1)=8.6, DH(K2)=19.1, DH(K3)= 62.9 and DH(K4)=-13.4 kJ mol-1.
DS(K1)=84, DS(K2)=82, DS(K3)=245 and DS(K4)=-9 J K-1 mol-1. Medium: DMF
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U        K1=3.67        1986GPa  (3889)  89
Medium: N,N-dimethylformamide
-------------------------------------------------------------------------------
Ni++       sol oth/un 450°C  var  U TI                   1984LPb  (3890)  90
                                        K(NiO(s)+2HCl=NiCl2+H2O)=2.23
K=-4.17 + 4629/T(K) at 1 kbar and I=0. Results also for 2 kbar. 450-700 C
-------------------------------------------------------------------------------
Ni++       sol oth/un 25°C  0.1M C                     1984PKb  (3891)  91
                                        Kout(Ni(phen)3+L)=0.64
                                        Kout(Ni(phen)3+2L)=0.98
Medium:0.1M NaF;Also for 0.25M K1out=0.55, B2out=0.68;for 0.5 M K1out=0.44
phen=Phenanthroline; for 0.5M B2out=0.56; for 0.75M K1out=0.31, B2out=0.32
-------------------------------------------------------------------------------
Ni++       nmr none    1°C  0.0  U T      K1=-1.51       1983GDa  (3892)  92
-------------------------------------------------------------------------------
Ni++       ISE alc/w  25°C 100%  U        K1=2.82   B2=5.05   1982DKa  (3893)  93
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U  I     K1=2.41        1982LPa  (3894)  94
Medium: DMSO, 0.2 M M(ClO4)2
-------------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 1.00M C        K1=0.0         1976MKc  (3895)  95
-------------------------------------------------------------------------------
```

```
Ni++       sp  non-aq 25°C 100%  U        K1=1.9    B2=2.46   1975LPb  (3896)  96
                                         K3=-0.2
                                         K4=0.9
Medium: DMSO, Et4NCl, K1 at I=0.15,  other at I = 0.35; values of K1 to K4
in activity = 2.6, 0.9, -0.2, 0.6 resp.
-------------------------------------------------------------------------------
Ni++       con non-aq 25°C 100%  U        K1=2.47   B2=3.31   1975LPd  (3897)  97
In dimethyl sulfoxide
-------------------------------------------------------------------------------
Ni++       gl  none   25°C  0.0  U        K1=-0.43       1975LTa  (3898)  98
-------------------------------------------------------------------------------
Ni++       ISE NaClO4 25°C  1.0M U        K1=0           1974BLb  (3899)  99
-------------------------------------------------------------------------------
Ni++       ISE non-aq 25°C 100%  U  I     K1=4.7         1974BMa  (3900) 100
Medium: LiCl in tributylphosphate, saturated with H2O; AgCl/Cl-electrode
-------------------------------------------------------------------------------
Ni++       cal NaClO4 25°C  3.0M U   H                   1974BRa  (3901) 101
Medium: LiClO4. DH(K1)=9.6 kJ mol-1, DS=20.9 J K-1 mol-1
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 3.00M C        K1=0.687       1974GWa  (3902) 102
-------------------------------------------------------------------------------
Ni++       sol none   25°C  0.0  U                      1974MSd  (3903) 103
                                         Ks(Ni(OH)1.5L0.5)=-11.4
                                         Ks(Ni(OH)1.75L0.25)=-13.5
-------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C  1.0M U T      K1=0.07        1973HHb  (3904) 104
K1=-0.03(45 C)
-------------------------------------------------------------------------------
Ni++       vlt non-aq 280°C 100%  U        K1=1.80   B2=2.96   1973SSc  (3905) 105
                                         K3=1.79
Medium: molten (Na,K)NO3(equimol mixt)
-------------------------------------------------------------------------------
Ni++       kin non-aq 20°C 100%  U                      1971DHa  (3906) 106
                                         K1out=1.65
                                         K2out=0.85
Medium: DMSO
-------------------------------------------------------------------------------
Ni++       sp  KCl     rt   var  U        B2=0.34        1971KGa  (3907) 107
                                         K(NiL2+2H+2L=H2NiL4)=-3.05
-------------------------------------------------------------------------------
Ni++       sp  none    rt   0.0  U        K1=-1.3   B2=-4.1   1971PHa  (3908) 108
-------------------------------------------------------------------------------
Ni++       ISE non-aq 161°C 100%  U T      K1=2.10   B2=2.80   1971PSa  (3909) 109
Medium:(M)NO3 eutectic(M=L,Na,K). K1=2.06, K2=0.6(180 C)
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 20°C  9.0M U        K1=-0.52       1971WBa  (3910) 110
Medium: HClO4
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U    M   K1=3.05        1970GNb  (3911) 111
                                         K(NiBr4+L-=NiBr3L+Br)=2.05
```

K(NiBr3L+L=NiBr2L2+Br)=1.68
K(NiBr2L2+L-=NiBrL3+Br)=1.78
K(NiBrL3+L-=NiL4+Br)=1.79
Medium: MeCN, 0.35 M Et4N(Cl,Br)

Ni++ sp non-aq 63°C 100% U T H 1970GSd (3912) 112
K(oct-tet)=0.35
Medium: DMSO(S). K: [NiCl2S4](oct)+Cl=[NiCl3S](tetr)+3S)
DH=55.6 K=1.33(108 C), 1.93(160 C)

Ni++ sp NaClO4 25°C 3.0M U K1=-0.57 1970MMj (3913) 113
Medium: LiClO4

Ni++ sp R4N.X 56°C 6.0M U T H 1969GSc (3914) 114
K(Ni(H2O)5L+3L=NiL4)=-1.02
Medium: Me4NCl. K: octahedral=tetrahedral. DH=167(?) kJ mol-1.
K=0.38(96.1 C), 0.79(105.5 C), 1.67(120 C)

Ni++ vlt non-aq 145°C 100% U K1=0.9 B2=1.90 1968ILa (3915) 115
Medium: (Li,Na.K)NO3 eutectic. m units

Ni++ sp non-aq 20°C 100% U T H 1968MSe (3916) 116
Medium: DMF, 0-40 C, DH(NiClS5+2AlCl3=NiCl3S+2AlCl2)=32.6 kJ mol-1
DH(NiCl3S+AlCl2=NiCl2S2+AlCl3)=17.1(40-70 C). S=DMF

Ni++ sp alc/w 63°C 100% U H 1967SWa (3917) 117
Medium:EtOH. 40-85 C, DH(NiCl2S4+Cl=NiCl3S+3S)=61.0 kJ mol-1

Ni++ sp oth/un 200°C var U H 1966AGb (3918) 118
Medium: molten MgCl2. 125-320 C. DH(NiCl6=NiCl4+2Cl)=35.5 kJ mol-1

Ni++ sp NaClO4 30°C 10.0M U K1=-1.03 1966FLa (3919) 119
Medium: LiClO4

Ni++ cal NaClO4 40°C 2.0M U T H K1=-0.15 1966KLb (3920) 120
K1=-0.17(25 C), DH(K1)=2.1(25 C),1.8(40 C) kJ mol-1; DS=3.6 J K-1 mol-1

Ni++ ix NaClO4 20°C .691M U K1=0.23 B2=-0.04 1965MRa (3921) 121

Ni++ sp non-aq 25°C 100% U TIH 1964NJa (3922) 122
K4=2.55
Medium: MeCONMe2. K4=2.49(68 C), DH(K4)=-2.5 kJ mol-1, DS=41 J K-1 mol-1
In MeCN: K4=4.00(25C), 3.62(68 C), DH(K4)=-15.9, DS=24

Ni++ vlt non-aq 280°C 100% U K1=0.74 B2=0.78 1963DGd (3923) 123
B3=1.18
B4=1.15
Medium: (K,Na)NO3(liquid). Using Ni electrode: K1=0.78, B2=0.60, B3=1.15,
B4=1.20, m units

```
Ni++       sp  NaClO4 25°C 5.70M U        K1=-0.5        1963NDa  (3924) 124
--------------------------------------------------------------------------------
Ni++       vlt non-aq 25°C 100%  U        K2=0           1963NIa  (3925) 125
                                          K3=-1
                                          K4=0
Medium:MeCN, 0.1 M Et4NClO4
--------------------------------------------------------------------------------
Ni++       oth KNO3   -3°C  sat  U        K1=0.38        1962FCa  (3926) 126
Method: freezing point
--------------------------------------------------------------------------------
Ni++       sp  NaClO4   ?  1.50M U        K1=-0.85       1962TCa  (3927) 127
--------------------------------------------------------------------------------
Ni++       vlt non-aq 180°C 100%  U        K1=1.42   B2=1.7    1960COd  (3928) 128
                                          K3=1.0
Medium: (Li,K)NO3 eutectic, m unit
--------------------------------------------------------------------------------
Ni++       EMF NaClO4 25°C 0.30M U TIH    K1=-0.24       1960LRa  (3929) 129
                                          B(Ni2L)?=-0.39
Method: Ag electrode. K1=-0.29(12 C), -0.21(40 C). In 2 M NaClO4 DH(K1)=5.3
kJ mol-1
--------------------------------------------------------------------------------
Ni++       oth oth/un  0°C  sat  U  I     K1=0.23        1959KEb  (3930) 130
Method: freezing point,  Mediun: KClO3 sat. In KClO4 sat. K1=0.62. I=0 corr:
K=0.89
--------------------------------------------------------------------------------
Ni++       ix  oth/un   ?  1.50M U        K1=-0.66       1958TRa  (3931) 131
--------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C  2.0M U        K1=-0.25  B2=-0.05  1957KLa  (3932) 132
********************************************************************************
ClO3-                  HL    Chlorate         CAS 7790-93-4  (971)
Chlorate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       cal oth/un 25°C 1.00M U   H                    1975ARa  (6019) 133
DH(K1)=-5.30 kJ mol-1. DS = -24.5 J K-1 mol-1. Medium: 1.0 M NaClO3
--------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C  1.0M U        K1=-0.35       1973HHb  (6020) 134
********************************************************************************
ClO4-                  HL    Perchlorate      CAS 7001-90-3  (287)
Perchlorate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       con non-aq 25°C 100%  U        K1=1.70        1981LGa  (6118) 135
Medium: DMSO; K1 in DMSO/benzene (mole fraction 0.3)=2.04
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C    ?  U   H                    1975BWb  (6119) 136
                                          Kout((Ni(H2O)6)ClO4)=-1.88
DH=6.3 kJ mol-1, DS=-14.6 J K-1 mol-1 when T=25.
```

HClO4 from 0 to 17.3M.
****
CrO4-- H2L Chromate CAS 7738-94-5 (2382)
Chromate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	var	U		K1=2.40	1994COa	(6452) 137

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	ISE	NaClO4	25°C	0.50M	U	I	K1=0.74	1983ABd	(6598) 138

For 60% v/v EtOH in H2O K1=1.21

Ni++	ISE	R4N.X	25°C	0.05M	U	I	K1=1.32	1983SBa	(6599) 139

Medium: 0.05 M Et4NF. In MeOH, 0.05 Et4NF, K1=2.91

Ni++	ISE	NaClO4	25°C	1.00M	U	I	K1=1.0	1981KBb	(6600) 140
Ni++	ISE	NaClO4	25°C	3.00M	U		K1=0.76	1976KBa	(6601) 141
Ni++	cal	oth/un	25°C	0.50M	U	H	K1=0.31	1974ARc	(6602) 142

DH(K1)=8.1 kJ mol-1, DS=33 J K-1 mol-1

Ni++	ISE	NaClO4	25°C	1.0M	U		K1=0.34	1972BHc	(6603) 143
Ni++	ISE	NaNO3	16°C	0.50M	U		K1=0.18	1970BOa	(6604) 144
Ni++	kin	NaClO4	25°C	0.10M	U		K1=1.1	1969FTb	(6605) 145
Ni++	EMF	NaClO4	20°C	1.0M	U		K1=0.66	1969VAa	(6606) 146

electrode:quinhydrone electrode

Ni++	EMF	NaClO4	20°C	1.00M	U		K1=0.66	1956ARa	(6607) 147

****
FClBrI HL (541)
Halides, comparative (for book data under ligand 80)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	oth	non-aq	125°C	100%	U			1968LNb	(7377) 148

Method:amalgam electrode. Medium: DMSO, 2M LiClO4. B4=1.08(Cl) 11.97(Br), 9.66(I)
****
GeW11O39-------- H8L CAS 37369-86-1 (2466)
alpha-Heteromonogermanium-polytungstate;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 1.00M U        K1=6.15        1984COa  (7462) 149
*************************************************************************
HPO3--                H2L    Phosphite        CAS 13598-36-2  (6305)
Phosphite;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U         K1=3.6         1970EEa  (7498) 150
                                          K(Ni+HL)=1.4
K1 on the basis K(HL)=6.5, K(H2L)=1.6
-------------------------------------------------------------------------
Ni++       sol oth/un 90°C  var  U                        1969OGa  (7499) 151
Kso=-4.64
*************************************************************************
H2O                    L    Water            CAS 7732-18-5  (6115)
Water
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       sp  non-aq 28°C 100%  U T H                    1974BCb  (7561) 152
                                          K(NiAB+L)=1.38
K(NiAX+L)=2.30(8 C), 1.84(18 C), 1.24(30 C), 1.32(40 C), 0.83(50 C),
0.44(70 C). HA=Acetylacetone, B=Salicylaldehyde hydrazone. DH=-13 kJ mol-1
-------------------------------------------------------------------------
Ni++       cal non-aq 25°C 100%  U   H    K1=1.80   B2=3.23   1968HMc  (7562) 153
                                          B3=4.36
                                          B4=5.20
                                          B5=5.8?
Medium: C4H9OH.   DH(K1)=-12.7 kJ mol-1, DH(B2)=-20.1, DH(B3)=-21.9,
DH(B4)=-22.8, DH(B5)=-23.8?
-------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U  I     K1=0.79   B2=-0.21  1965PPa  (7563) 154
Medium: acetone. In EtOH: K1=-0.24, K2=-2.31
-------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U                      1954JOa  (7564) 155
                                          Kav=-0.09
Medium: EtOH, NO3. N=6
*************************************************************************
IO3-                    HL    Iodate           CAS 7782-68-5  (1257)
Iodate;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       sol none   25°C    0  M  I                    1989IPb  (8451) 156
                                          Kso=-5.11
Extrapolated from 6 M NaClO4. Kso (6 M)=-4.29
-------------------------------------------------------------------------
Ni++       sol NaClO4 25°C 0.50M U  I                    1973FSc  (8452) 157
```

Kso(NiL2(H2O)3)=-4.17
Medium: LiClO4. Kso=-5.06(I=0), -4.16(I=1), -4.25(I=2),-4.42(I=3),-4.64(I=4)
****
MoO4-- H2L Molybdate (443)
Molybdate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ oth oth/un 32°C satd U 1961TSc (8696) 158
B(NiH6L6)=31
Medium: saturated Na2SO4. Method:freezing point
****
NH3 L Ammonia CAS 7664-41-7 (414)
Ammonia

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sol oth/un 25°C dil C T H K1=2.71 B2= 4.89 2004ZGa (8949) 159
K(NiOH+NH3=Ni(OH)NH3)=3.04
K(Ni(OH)2+NH3=Ni(OH)2NH3)=2.76
Dissolution of NiO (bunsenite) or beta-Ni(OH)2 (theophrasite) in mM NH4OH.
Data for 21-315 C. DH(NiOH+NH3)=-33 kJ mol-1, DH(Ni(OH)2+NH3)=4.3.

Ni++ gl R4N.X 25°C 0.10M U M 1995KBb (8950) 160
K(NiA+L)=2.33
K(NiAL+L)=0.78
Medium: 0.1 M NH4NO3. H3A=NTA

Ni++ sp non-aq 25°C 100% U M 1989GRa (8951) 161
K(NiA+L)=1.69
Medium: acetonitrile. A=N,N'-ethylenebis(salicylideneamine).
Data also for complexation of other simple amines by NiA

Ni++ cal R4N.X 25°C 2.00M U TI 1987VBb (8952) 162
DH(K1)=-15.82 kJ mol-1, DH(K2)=-16.9, DH(K3)=-16.4,DH(K4)=-18.3,DH(K5)=-16.7
DH(K6)=-18.6. Medium: NH4NO3

Ni++ gl NaNO3 25°C 0.10M A M 1982SSa (8953) 163
K(NiA+L) < 2.5
A=uridine-5'-triphosphate

Ni++ cal oth/un 25°C 1.00M U TIH K1=2.78 B2=5.00 1982VBb (8954) 164
B3=6.71

Ni++ gl alc/w 25°C 1.0M C TI K1=3.08 1976KSd (8955) 165
K1=2.77 (100% H2O)
Medium 1.0 M NH4NO3 in 0.77 mol parts MeOH in H2O
For 15C K1=3.21; for 35 C K1=2.97

Ni++ gl alc/w 25°C 1.0M C TI K1=3.37 1976KSd (8956) 166

K1=2.77 (100% H2O)
Medium 1.0 M NH4NO3 in 0.54 mol parts EtOH in H2O
For 15C K1=3.49; for 35 C K1=3.26

Ni++ gl alc/w 25°C 1.0M C TI K1=3.60 1976KSd (8957) 167
K1=2.77 (100% H2O)
Medium 1.0 M NH4NO3 in 0.54 mol parts 2-propanol in H2O
For 15C K1=3.72; for 35 C K1=3.45

Ni++ oth R4N.X 30°C 2.0M C K1=4.137 B2= 7.67 1973RAc (8958) 168
B3=10.529
B4=12.681
Method: recalculation of literature data. Medium: H4NO3.

Ni++ kin R4N.X 30°C 0.20M U 1972CGa (8959) 169
Medium: 0.2M NH4NO3. K1(p)(in kbar)/K1(1atm)=0.002(p=0.34), 0.024(p=0.52),
0.048(P=0.69), 0.029(p=0.86), 0.035(p=1.03), 0.054(p=1.38)

Ni++ EMF alc/w ? 25% U K1=2.93 B2=5.25 1971MRa (8960) 170
Medium: w% MeOH, 1 M (NH4)ClO4. w=0%:K1=2.72, K2=2.17; w=50%: 3.13, 2.61;
w=65%: 3.18, 2.13; w=80%: 3.05, 2.49; w=90%: 3.12, 2.61; w=99%: 3.26, 2.53

Ni++ kin R4N.X 25°C 1.0M U K1=2.80 B2=4.99 1971RMb (8961) 171
K3=1.73
Medium: NH4ClO4. By emf, K1=2.82, K4=1.12

Ni++ ISE NaClO4 25°C 2.0M U T K1=2.61 B2=4.76 1970LEc (8962) 172
B3=6.79
B4=8.35
Method:Ag electrode. Medium:NH4NO3. 40 C: K1=2.45, B2=4.50, B3=6.37, B4=7.24
80 C:K1=1.96,B2=3.56,B3=4.80. 120 C:K1=1.36, B2=3.00. 180 C:K1=0.58, B2=1.50

Ni++ sp oth/un 20°C var U K1=3.0 B2=5.14 1970MAj (8963) 173
K3=1.60

Ni++ gl NaClO4 30°C 2.0M U K1=2.78 B2=5.05 1969NGa (8964) 174
K3=1.65
K4=1.31
K5=0.65
K6=0.08
Medium: NH4NO3

Ni++ oth oth/un 20°C var U M 1968FLb (8965) 175
K(Ni(en)2+2L)=4.11
K(Ni(phen)2+2L)=2.92
Method: chemical analysis

Ni++ gl R4N.X 20°C 1.0M U T M K1=3.0 B2=5.18 1966FLb (8966) 176
B3=6.82
B4=7.98

Medium: NH4NO3. Also values for Ni-NH3-py complexes

Ni++ ISE R4N.X 30°C 2.0M U T K1=2.72 B2=4.92 1966LMd (8967) 177
K3=1.71
K4=1.24
K5=0.80
K6=0.14

Medium: NH4NO3

Ni++ oth none 40°C 0.0 U T 1961MLa (8968) 178
B4=8.42
B5=7.79

By partial pressure of L. I=0 corr. 4=7.15(60 C), B5=5.59(60 C)

Ni++ gl R4N.X 30°C 2.0M U K1=2.79 B2=5.05 1961RYa (8969) 179
K3=1.69
K4=1.25
K5=0.74
K6=0.03

Medium: NH4NO3. B6=8.74.

Ni++ cal R4N.X 25°C 2.0M U H 1959SCd (8970) 180

Medium:NH4NO3. DH(K1)=-16.8 kJmol-1,DH2=-15.0,DH3=-18.8,DH4=-13.1, DH5=-12.4
DH6=-18.4, DS1=-2.1, DS2=-6.61, DS3=-29.2, DS4=-20.2, DS5=-26.5, DS6=-60.38.

Ni++ cal R4N.X 27°C 2.0M U H 1957YMb (8971) 181

Medium:NH4NO3. T=26.8C. DH1=DH2=DH3=DH4=-16.7kJmol-1, DH5=DH6=-18.0; DS1=
-2.1, DS2=-13.0, DS3=-22.6, DS4=-33.1, DS5=-45.6, DS6=-59.4. DHn is DH(Kn)

Ni++ sp oth/un ? var U 1956YGa (8972) 182
K5.K6=0.0

Ni++ cal R4N.X 25°C 1.0M U H 1955PBa (8973) 183
B6=8.61

Medium: NH4NO3. DH(B6)=-87.9 kJ mol-1; DS(B6)=-130 J K-1 mol-1

Ni++ gl R4N.X 25°C 1.0M U K1=2.36 B2=4.26 1954LLa (8974) 184
K3=1.55
K4=1.23
K5=0.85
K6=0.42

Medium: NH4NO3.

Ni++ gl R4N.X 23°C 2.0M U B2=5.14 1954WOa (8975) 185
B4=8.28
B6=9.42

Medium: NH4NO3

Ni++ cal oth/un rt dil U H 1952FYa (8976) 186

DH(B6)=-79.1 kJ mol-1; DS(B6)=-116.

```
-------------------------------------------------------------------------------
Ni++       cal oth/un 25°C  var  U   H                   1952YGa  (8977) 187
DH(B4)=-71 kJ mol-1, DH(B6)=-109.
-------------------------------------------------------------------------------
Ni++       oth oth/un 23°C    ?  U T H                   1945CAa  (8978) 188
                                      B6=9.13
B6=8.81(30 C). DH(B6)=-79 kJ mol-1, DS=-92 J K-1 mol-1
-------------------------------------------------------------------------------
Ni++       sol R4N.X  25°C 0.10M U       K1=2.80   B2=4.85   1943DVa  (8979) 189
                                      K3=1.66
                                      K4=1.3?
                                      K5=1.15?
Medium: NH4NO3.
-------------------------------------------------------------------------------
Ni++       gl  R4N.X  30°C  2.0M U  IH   K1=2.80   B2=5.04   1941BJa  (8980) 190
                                      K3=1.73
                                      K4=1.19
                                      K5=0.75
                                      K6=0.03
Medium: NH4NO3. B6=8.74. At I=0 corr. K1=2.67, K2=2.12, K3=1.61, K4=1.07,
K5=0.63, K6=-0.09, B6=8.01. DH(B6)=-80 kJ mol-1
-------------------------------------------------------------------------------
Ni++       sp  oth/un 16°C  var  U                      1928JOa  (8981) 191
                                      B3=4.4
-------------------------------------------------------------------------------
Ni++       oth oth/un 25°C  var  U       B2=4.62        1925WIa  (8982) 192
                                      B4=7.32
                                      B6=7.68
By partial pressure of H2O.
-------------------------------------------------------------------------------
Ni++       ISE oth/un   ?   var  U                      1904EUb  (8983) 193
                                      B4=4.96
*******************************************************************************
NH3O                    L    Hydroxylamine;   CAS 5470-11-1  (1808)
Hydroxylamine; NH2.OH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  NaCl    RT  0.05M C                      1989BCb  (9248) 194
                                      B4=3.69
                                      B6=5.64
-------------------------------------------------------------------------------
Ni++       EMF KNO3   25°C  1.0M U       K1=4.98   B2=9.30   1974ISa  (9249) 195
                                      K3=4.10
                                      K4=3.94
                                      K5=3.82
                                      K6=3.72
-------------------------------------------------------------------------------
Ni++       sp  NaNO3    ?  2.50M U       B2=1.46        1972TAb  (9250) 196
-------------------------------------------------------------------------------
```

```
Ni++       gl  NaClO4 25°C 0.10M U        K1=1.4         1968SFa  (9251) 197
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  var  U        B2=9.72        1966FPa  (9252) 198
                                         B4=12.53
                                         B6=18.55
By spectrophotometry: B2=9.84, B4=12.58, B6=18.58
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.50M U        K1=1.5         1963SZa  (9253) 199
*******************************************************************************
NO2-                    HL    Nitrite          CAS 7782-77-6  (635)
Nitrite;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  1.0M C        K1=0.77   B2=1.08   1986AEb  (9337) 200
-------------------------------------------------------------------------------
Ni++       sp  NaNO3  25°C  7.0M U        B2=-0.8        1970GAa  (9338) 201
*******************************************************************************
NO3-                    HL    Nitrate          CAS 7697-37-2  (288)
Nitrate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sol oth/un 25°C  0.1M C                         1984PKb  (9480) 202
                                        Kout(Ni(phen)3+L)=0.75
                                        Kout(Ni(phen)3+2L)=1.09
Medium:0.1M NaF;Also for 0.25M K1out=0.67, B2out=0.91;for 0.5 M K1out=0.54
phen=Phenanthroline; for 0.5M B2out=0.83; for 0.75M K1out=0.49; B2out=0.77
-------------------------------------------------------------------------------
Ni++       con non-aq 25°C 100%  U        K1=1.34        1980GPa  (9481) 203
Medium: DMSO
-------------------------------------------------------------------------------
Ni++       cal NaNO3  25°C 1.00M U   H                    1975ARa  (9482) 204
DH(K1)=-3.53 kJ mol-1. DS = -10.3 J K-1 mol-1.
-------------------------------------------------------------------------------
Ni++       kin non-aq 20°C 100%  U   H    K1=4.40   B2=7.48   1974HJa  (9483) 205
                                        K3=2.34
                                        K1out=1.86
                                        K2out=0.80
Medium: MeCN  DH(K1)=16.7 kJ mol-1, DH(K2)=14.6, DH(K3)=6.3
-------------------------------------------------------------------------------
Ni++       sol NaClO4 25°C  1.0M U  I     K1=-0.22  B2=-1.0   1973FSc  (9484) 206
K1=-0.44, B2=-0.52(I=2). K1=-0.55, B2=-0.89(I=3). K1=-0.30, B2=-0.62,
B3=-1.30(I=4). K1=0.45(I=0 corr)
-------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C  1.0M U T      K1=0.08        1973HHb  (9485) 207
K1=0.07(45 C)
-------------------------------------------------------------------------------
Ni++       ISE non-aq 125°C 100%  U        B2=3.43       1968LHa  (9486) 208
                                        K3=0.78
```

Medium: Me2SO2, 2 M LiClO4

Ni++	sp	non-aq	?	100%	U				1963TBa	(9487) 209
						K3K4=4.81				

Medium: Me2CO

Ni++	sp	non-aq	?	100%	U	M			1960MLa	(9488) 210
						K(NiL2+TPB=NiL2(TBP))=-0.1				

Medium: BuOH

****

N2H4 L Hydrazine CAS 302-01-2 (2117)

Hydrazine; H2N.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	R4N.X	25°C	0.10M	U	M			1995KBb	(10059) 211
							K(NiA+L)=2.18			
							K(NiAL+L)=0.78			

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

Ni++	gl	oth/un	25°C	var	U		K1=4.28	B2=7.66	1974AKa	(10060) 212
							K3=2.56			
Ni++	gl	NaClO4	30°C	0.10M	U	I	K1=2.6	B2=4.40	1970BGa	(10061) 213
							K3=1.7			
							K4=1.2			
							K5=1.8			
							K6=0.7			

Also data for MeN2H3,EtN2H3. Values +/- 0.5

Ni++	gl	NaClO4	25°C	0.10M	U		K1=2.4		1968SFa	(10062) 214
Ni++	gl	NaClO4	30°C	1.0M	U		K1=3.18		1967BSb	(10063) 215
Ni++	gl	oth/un	20°C	0.50M	U		K1=2.76	B2=5.20	1952SZa	(10064) 216
							K3=2.15			
							K4=1.85			
							K5=1.55			
							K6=1.24			

Medium: N2H5BF4. B6=11.99. By solubility Ks(NiHLHSO4(s)=Ni+HLHSO4)=-13.15

****

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

Azide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	KNO3	25°C	1.00M	U	M		1995ONa	(10141) 217
							K(NiA+L)=1.275		
							K(NiB+L)=1.714		
							K(NiC+L)=1.67		

A=1,4,8,11-tetraaza-1,4,8,11-tetraethylcyclooctatetradecane, B=1,4,8,11-tetraaza-1,4-dimethyl-8,11-diethyl analogue, C=8,11-dipropyl analogue

---

Ni++ gl NaClO4 25°C 2.0M C K1=0.76 B2=0.99 1992INa (10142) 218
B3=0.88
B4=2.72
B(Ni2L2)=1.51
B(Ni2L3)=2.23
B(Ni2L4)=4.32; B(Ni2L5)=5.36; B(Ni2L6)=5.86; B(Ni3L4)=4.36; B(Ni3L5)=6.54; B(Ni3L6)=8.08

Ni++ gl NaClO4 25°C 2.0M C K1=0.88 1983SNc (10143) 219
B(Ni2N3)=0.63

Ni++ cal oth/un 25°C 0.05M C H 1981ABd (10144) 220
Medium: NaN3. DH(K1)=6.32 kJ mol-1, DS(K1)=53.6 J K-1 mol-1.

Ni++ con NaClO4 25°C 1.0M U K1=0.58 B2=1.18 1980AVb (10145) 221

Ni++ ISE none 25°C 0.0 M K1=1.69 B2=2.09 1976DMa (10146) 222

Ni++ gl NaClO4 25°C 1.00M C H K1=0.87 B2=1.26 1975AAa (10147) 223
B3=1.30
DH(K1)=-0.96 kJ mol-1, DH(B2)=-3.3, DH(B3)=-10.3

Ni++ sp alc/w ? 100% U I B2=6.7 1973AEa (10148) 224
B3=16.3
Medium: MeOH. In EtOH: B4=14.6; in Me2NCHO: B2=6.7

Ni++ sp NaClO4 25°C 1.0M U K1=0.84 1970SGa (10149) 225

Ni++ kin NaClO4 25°C 0.10M U K1=0.66 1969FTb (10150) 226

Ni++ gl NaClO4 25°C 3.0M U K1=1.04 1967MRb (10151) 227

****

OCN- HL Cyanate CAS 661-20-1 (6165)
Cyanate, Fulminate;

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

---

Ni++ sp oth/un var U K1=1.97 B2=3.53 1967LOa (10289) 228
K3=1.37
K4=1.3

****

OH- HL Hydroxide (57)
Hydroxide;

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

---

Ni++ sol oth/un 25°C dil C T H 2004ZGa (10570) 229

*K1=-9.45
*B2=-22.68
Dissolution of NiO (bunsenite) or beta-Ni(OH)2 (theophrasite) in mM NaOH
Data for 21-315 C. DH(*K1)=37.4 kJ mol-1, DH(*B2)=112.

Ni++ sol oth/un 25°C dil C T H 2004ZGa (10571) 230
*Ks(Ni(OH)2+2H=Ni+2H2O)=11.81
*Ks(NiO(rhomb)+2H)=12.32
*Ks(NiO(cubic)+2H)=11.54
Dissolution of NiO (bunsenite) or beta-Ni(OH)2 (theophrasite) in mM NaOH
Data for 21-315 C. DH(*Ks(Ni(OH)2)=-89 kJ mol-1, DH(*Ks(NiO(rhomb))=99.

Ni++ sol NaClO4 25°C 0.0 C TIH 2002GWa (10572) 231
*Kso(Ni(OH)2)=11.1
Solid phase: beta-Ni(OH)2, theophrasite. Data at I=1.0 m (25-80 C) and I=
0.5-3.0 m (50 C) extrap. to I=0 using SIT. DH(*Kso)=-84.1 kJ mol-1,DS=-69.

Ni++ gl NaClO4 25°C 0.10M U 2001PSb (10573) 232
*K1=-8.10
*B2=-16.87

Ni++ gl NaNO3 25°C 0.10M C 2000MSa (10574) 233
*K1=-8.10
*B2=-16.87

Ni++ gl NaClO4 30°C 0.20M U 1999PGa (10575) 234
*K1=-8.10
*B2=-16.87

Ni++ gl NaNO3 30°C 0.20M U 1999PPa (10576) 235
*K1=-8.10
*B2=-16.87

Ni++ gl KCl 35°C 0.10M C 1998ALa (10577) 236
*B2=-18.09

Ni++ gl NaNO3 25°C 0.10M U 1998MSe (10578) 237
*K1=-8.10
*B2=-16.87

Ni++ gl alc/w 25°C 50% C 1997MGb (10579) 238
*K1=-7.62
*B2=-15.88
Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.

Ni++ sol NaClO4 25°C 0.01M C K1=5.65 1997MRb (10580) 239
Medium: 0.01 M NaClO4, pH 7-11.3. Analysis by ICP.
Kso(Ni(OH)2)=-16.1

Ni++ gl alc/w 30°C 50% C 1991MCb (10581) 240

```
                                        *K1=-7.35
                                        *B2=-15.88
Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.10M U                      1991MGb (10582) 241
                                        *K1=-8.05
                                        *B2=-16.83
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U                      1990MCb (10583) 242
                                        *K1=-8.52
                                        *B2=-17.48
Medium: 50% v/v dioxane/H2O, 0.2 M NaNO3.
-------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  50%  U                      1989MSi (10584) 243
                                        *K1=-7.62
                                        *B2=-15.88
Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3.
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  C                      1987MSd (10585) 244
                                        *K1=-7.62
                                        *B2=-15.88
Medium: 50% v/v dioxane/H2O, 0.2 M NaNO3.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M U  I                  1981MBc (10586) 245
                                        *K1=-9.87
                                        *B(4,4)=-28.04
-------------------------------------------------------------------------------
Ni++       sol none   25°C  0.0  C T H                 1980CSa (10587) 246
                                        Kso(Ni(OH)2)=-11.82
Data for 25-40 C.
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 3.00M U                      1978BKa (10588) 247
                                        *B(2,1)=-9.5
                                        *B(4,4)=-28.18
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.80M U                      1975CKb (10589) 248
                                        *B(4,4)=-27.0
-------------------------------------------------------------------------------
Ni++       sol none   25°C 0.00  U                      1974MSd (10590) 249
                                        Kso(Ni(OH)2(s)=Ni+2OH)=-14.7
-------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  10%  U  I                  1973KOb (10591) 250
                                        *B(4,4)=-27.11
Medium: 10% dioxan/H2O, 3 M LiClO4.  *B(4,4)=-27.32(0%); -27.04(20%);
-28.0(50%)
-------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  10%  U  I                  1973KOb (10592) 251
                                        *Ks=14.1
Medium: 10% dioxan/H2O, 3 M LiClO4. *Ks: Ni(OH)2(s)+2H=Ni+2H2O
;*Kso=13.3(0%); 13.1(20%)
```

```
--------------------------------------------------------------------------------
Ni++       sol NaCl   25°C 0.55M U                      1973NCa (10593) 252
                                      Kso(Ni(OH)2(s)=Ni+2OH)=-15.2
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.50M U                      1971BSk (10594) 253
                                      B(2,6)=38.8
--------------------------------------------------------------------------------
Ni++       oth NaCl   60°C 3.00M U                      1971BZc (10595) 254
                                      *B(2,1)=-8.5
                                      *B(4,4)=-25.33
--------------------------------------------------------------------------------
Ni++       kin oth/un   ?        U                      1971HGa (10596) 255
                                      *K1=-11.0
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 3.00M U                      1971OBa (10597) 256
                                      *K1 < -10.5
                                      *B(2,1) < -10.5
                                      *B(4,4)=-28.55
--------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C 0.10M U        K1=4.3        1969FTb (10598) 257
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.50M U                      1969KKa (10599) 258
                                      *B(4,4)=-27.05
--------------------------------------------------------------------------------
Ni++       cal NaCl   25°C 3.00M U   H                  1966AVa (10600) 259
DH(*B(4,4))=179.7 kJ mol-1. DS=58.5 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 3.00M U                      1966BIa (10601) 260
                                      *B(3,3)=-21.58
                                      *B(2,1)=-9.6
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 3.00M U                      1965BLa (10602) 261
                                      *B(4,4)=-27.37
                                      *B(2,1)=-10?
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 3.00M U                      1965BLc (10603) 262
                                      *B(4,4)=-28.42
                                      *B(2,1)=-9.3
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 1.50M U TIH                  1964PEa (10604) 263
                                      *K1=-10.18
*K1=-10.26(I=1.0). Also lower I values. At I=0 corr: *K1=-10.22(15 C),-10.05
(20 C), -9.86(25 C), -9.75(30 C),-9.43(42 C). DH(25 C)=51.8 kJ mol-1, DS=12
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U T H                  1963BJa (10605) 264
                                      *K1=-9.76
*K1=-9.65(30 C), -9.52(40 C), -9.3(50 C). DH(*K1)=32.4 kJ mol-1
--------------------------------------------------------------------------------
Ni++       gl  none     ?   0.0  U                      1963FSa (10606) 265
                                      Kso=-17.2 (aged)
```

						Kso=-14.7 (active)		
Ni++	gl	NaClO4	28°C	1.0M	U	*K1=-10.01	1963SSa (10607)	266
Ni++	gl	none	25°C	0.0	U	*K1=-10.92 *K2=-4	1959ACa (10608)	267
Ni++	sol	oth/un	20°C	dil	U	B2=10.96 K(Ni(OH)2(s)=Ni(OH)2)=-3.89	1959ASa (10609)	268
Ni++	gl	none	20°C	0.0	U	*K1=-8.94 Kso(Ni(OH)2)=-15.0	1956CKa (10610)	269
Ni++	sol	none	28°C	0.0	U	Kso(Ni(OH)2)=-16.0	1956JPa (10611)	270
Ni++	gl	none	75°C	0.0	U	Kso(Ni(OH)2)=-16.2	1954DOa (10612)	271
Ni++	gl	oth/un	?	var	U	K1=5 Kso(Ni(OH)2)=-15.5	1953SPd (10613)	272
Ni++	gl	KCl	30°C	0.10M	U	*K1=-9.4	1952CCa (10614)	273
Ni++	gl	none	25°C	0.0	U	*K1=-10.64	1952GWa (10615)	274
Ni++	gl	none	18°C	0.0	U	Kso(Ni(OH)2)=-14.87	1950AFa (10616)	275
Ni++	sol	none	25°C	0.0	U	K(Ni(OH)2(s)=Ni(OH)2)=-17.19 *Kso=10.81 K(Ni(OH)2(s))=-7 K(Ni(OH)2(s)+OH=Ni(OH)3)=-4.22	1949GGb (10617)	276
Ni++	EMF	none	25°C	0.0	U	Kso(Ni(OH)2)=-15.21	1942NAa (10618)	277
Ni++	gl	oth/un	25°C	dil	U	Kso(Ni(OH)2)=-14.5	1938OKa (10619)	278
Ni++	dis	oth/un	20°C	var	U	K1=4.70	1933JEa (10620)	279
Medium: NiAc2								
Ni++	EMF	oth/un	17°C	var	C		1925BRa (10621)	280

Kso(Ni(OH)2)=-18.06

Ni++ sol oth/un 25°C var U 1925WIa (10622) 281
Kso(Ni(OH)2)=-13.82

Ni++ kin oth/un 100°C dil U K1=3.77 1913KUa (10623) 282
*K1=-8.60

Ni++ EMF oth/un 25°C var C I 1908DEa (10624) 283
*K1=-8.3

Medium:NiSO4. Method:H electrode. Alternatively *B2=-12.96. In NiCl2 *K1=6.5

****

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

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	EMF	non-aq	750°C	100%	U		Kso=-9.5 (x units)	1970CTa (12557)	284

Ligand=Oxide, O--; Medium: fused (Na,K)Cl

****

O2-- H2L Peroxide CAS 7772-84-1 (2813)

Peroxide; -O.O-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	oth/un	?	var	U	M	K(Ni(bpy)2+HL)=4.5	1966ZSa (12646)	285

****

PO4--- H3L Phosphate CAS 7664-38-2 (176)

Phosphate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	M		K(Ni+HL)=2.20	1996SSa (12967)	286

Ni++	nmr	NaCl	25°C	1.00M	U	M	Keff(NiC+L)=1.08	1992MDa (12968)	287

In 1.0 M NaCl, 0.05M HEPES, pH 7. C=carboxypeptidase A.

Ni++	gl	NaClO4	25°C	0.20M	U		K1=3.26	1991SPa (12969)	288

Ni++	nmr	oth/un	25°C	?	U	M	K(Ni(trien)+L)=1.41	1985MGa (12970)	289

Ni++	gl	NaNO3	25°C	0.10M	C		K(Ni+HPO4)=2.08	1981BKb (12971)	290

Ni++	gl	NaClO4	25°C	0.10M	M			1976TDa (12972)	291

```
                                        K(Ni+HL)=2.11
                                        K(Ni+H2L)=0.5
--------------------------------------------------------------------------------
Ni++       gl  KNO3   15°C 0.10M U                      1972FSa (12973) 292
                                        K(Ni+HL)=2.00
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U  I                   1967SBc (12974) 293
                                        K(Ni+HL)=2.08
In 10% dioxan, 0.1 M NaClO4: K(Ni+HL)=2.22
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C  dil  U                      1961CAa (12975) 294
                                        Kso(Ni3L2)=-30.3
********************************************************************************
PW11O39-------        H7L                       (2467)
alpha-Heteromonophospho-polytungstate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 1.00M U        K1=4.27        1984COa (13394) 295
********************************************************************************
P2O7----              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
--------------------------------------------------------------------------------
Ni++       nmr NaCl   25°C 1.00M U    M                 1992MDa (13500) 296
                                        Keff(NiC+L)=2.46
In 1.0 M NaCl, 0.05M HEPES, pH 7. C=carboxypeptidase A.
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.50M C        K1=1.75   B2= 4.17  1979DHa (13501) 297
                                        K(Ni+HL=NiL+H)=-6.70
                                        K(Ni+2HL=NiL2+2H)=-12.75
                                        K(NiL+HL=NiL2+H)=-6.05
Medium: 0.50 M Me4NCl. Kso(Ni2P2O7.6H2O)=-15.3.
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.20M U T H    K1=6.60   B2= 9.75  1979MFb (13502) 298
                                        K(Ni+HP2O7)=3.95
Medium: Me4NBr, 0.20 M. Data for 5-35 C.
By calorimetry: DH(K1)=27 kJ mol-1.
--------------------------------------------------------------------------------
Ni++       kin KNO3   15°C 0.10M U        K1=6.22        1978FSa (13503) 299
                                        K(Ni+HL)=3.50
Method: temperature jump
--------------------------------------------------------------------------------
Ni++       kin R4N.X  30°C 0.10M U        K1=6.35        1978KHa (13504) 300
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.02M U  I M   K1=6.39        1973PSa (13505) 301
                                        K(Ni+HL)=4.01
K1=6.04, K(Ni+HL)=3.78(I=0.05); 5.94, 3.71(I=0.1); 5.60, 3.39(I=0.2).
I=0.1, 5 C: 5.63, 3.15; 15 C: 5.81, 3.55; 35 C: 6.21, 4.07
```

```
--------------------------------------------------------------------------------
Ni++       EMF KNO3   15°C 0.10M U        K1=6.22        1972FSa (13506) 302
                                          K(Ni+HL)=3.50
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M U        K1=6.98        1964HMb (13507) 303
                                          K(Ni+HL)=3.83
Medium: Me4NCl
--------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C  var  U        K1=3.62        1958VRb (13508) 304
--------------------------------------------------------------------------------
Ni++       sol oth/un 25°C  var  U        K1=5.82   B2=7.19   1956YVa (13509) 305
                                          Kso(Ni2L)=-12.77
--------------------------------------------------------------------------------
Ni++       sol oth/un 25°C  var  U        K2=1.48        1956YVb (13510) 306
--------------------------------------------------------------------------------
Ni++       cal oth/un 25°C  var  U   H    K1=1.60        1956YVb (13511) 307
DH(K1)=17.6 kJ mol-1, DH(K2)=-9.2
********************************************************************************
P2W17O61----------           Polytungstate      (2102)
alpha-Heterodiphospho-polytungstate (usually alpha1 isomer)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 1.00M U        K1=7.76        1984COa (13702) 308
                                          K1=5.49 (alpha2 isomer)
********************************************************************************
P3O10-----            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
--------------------------------------------------------------------------------
Ni++       kin KNO3   15°C 0.10M U        K1=7.20        1978FSa (13779) 309
                                          K(Ni+HL)=4.40
Method: temperature jump
--------------------------------------------------------------------------------
Ni++       kin oth/un 30°C 0.10M U        K1=6.65        1978KHa (13780) 310
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T H    K1=7.07        1973TRa (13781) 311
                                          K(Ni+HL)=3.95
At 2 C: K1=7.34, K(Ni+HL)=3.65; 35 C: K1=8.33, B=4.81
DH(K1)=-6.7, DH(Ni+HL)=0 kJ mol-1 (25C)
--------------------------------------------------------------------------------
Ni++       EMF KNO3   15°C 0.10M U        K1=7.20        1972FSa (13782) 312
                                          K(Ni+HL)=4.40
--------------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M U        K1=6.92   B2=8.22   1971TRa (13783) 313
                                          K(Ni+HL)=3.73
                                          K(NiL+HL)=2.1
                                          K(NiL2+H)=8.93
--------------------------------------------------------------------------------
```

```
Ni++       gl  R4N.X  20°C 0.10M U   H    K1=7.8         1965ANa (13784) 314
                                          K(Ni+HL)=4.9
                                          K(NiL+H)=5.9
Medium: Me4NNO3. By calorimetry: DH(K1)=20.9 kJ mol-1, DS=220 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=6.72        1964EMb (13785) 315
                                          K(Ni+HL)=3.65
                                          K(NiL+H)=4.99
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M U        K1=7.90        1964HMb (13786) 316
                                          K(Ni+HL)=5.01
Medium: Me4NCl
--------------------------------------------------------------------------------
Ni++       sp  KNO3   30°C  1.0M U                       1964SSc (13787) 317
                                          K(Ni+HL)=4.18
********************************************************************************
P3O9---               H3L                      CAS 13566-25-1  (235)
Cyclotrimetaphosphate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       con none   25°C  0.0  U        K1=3.22        1949JMa (13932) 318
********************************************************************************
P4O12----             H4L                      CAS 13598-74-8  (234)
Cyclotetrametaphosphate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF R4N.X  30°C 1.00M U        K1=2.63   B2=3.48   1955GGa (13983) 319
Medium: Me4NNO3, Ni/Hg electrode
--------------------------------------------------------------------------------
Ni++       con none   25°C  0.0  U        K1=4.95        1950JMb (13984) 320
********************************************************************************
P4O13------           H6L    Tetraphosphate     (1102)
Tetraphosphate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       kin oth/un 30°C 0.10M U        K1=6.45        1978KHa (14034) 321
********************************************************************************
P6O12------           H6L                      CAS 25268-83-1  (6590)
Dodecaoxohexaphosphate(III); anion of (PO.OH)6
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  KCl    25°C 1.00M U  I     K1=5.39        1990NTa (14054) 322
Data also at I=1.5 M KCl: B1=5.21; 2.0 4.95; 2.5 4.72; 3.0 4.60.
********************************************************************************
S--                   H2L    Sulfide          CAS 7783-06-4  (705)
Sulfide;
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	vlt	oth/un	25°C	0.72M	C			1999AVb (14194)	323
							K(Ni+HL)=5.1		
							K(Ni+2HL)=10.8		

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

Ni++	vlt	NaClO4	24°C	0.50M	C	I	K1=5.33	1999CRb (14195)	324
							B(Ni2(S5))=11.41		

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

Ni++	vlt	oth/un	25°C	0.70M	C	I		1996LRb (14196)	325
							K(Ni+HS)=4.97		
							K(2Ni+HS)=9.99		
							K(3Ni+HS)=15.90		

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

Ni++	vlt	NaCl	25°C	?	U			1994ZMa (14197)	326
							K1eff=5.3		

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

Ni++	oth	none	?	0	U			1990DKa (14198)	327
							*Ks(NiS+H=Ni+HS)=-5.6 (alpha)		
							*Ks(NiS+H=Ni+HS)=-11.1 (beta)		
							*Ks(NiS+H=Ni+HS)=-12.8 (gamma)		

Recalculation of literature data.

Ni++	oth	none	25°C	0.0	C			1989DYa (14199)	328
							K(Ni+HS=NiS+H)=2.3		
							*Kso(NiS)=-9.5		
							Kso(NiS)=-7.2		

Calculated from literature data, based on K(H+S)=17.0.
NiS is millerite.

Ni++	oth	none	25°C	0	U			1988LIa (14200)	329
							Kso(NiS,alpha)=-24.3		
							*Kso(NiS,alpha)=-6.9		
							Kso(NiS,beta)=-29.5		
							*Kso(NiS,beta)=-12.2		

Derived from thermodynamic data and K(H+S=HS)=17.3.
Kso(NiS,gamma)=-31.3, *Kso(NiS,gamma)=-13.9.

Ni++	oth	none	25°C	0	U			1988SBc (14201)	330
							Kso(NiS,millerite)=-28.06		

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

Ni++	dis	oth/un	25°C	0.69M	U			1985DYa (14202)	331

K(Ni+2H2S=NiHS2+3H)=-8.82
K(Ni+2H2S=Ni(HS)2+2H)=-2.54

Ni++ EMF non-aq 375°C 100% U T H 1972LZa (14203) 332
Kso=-15.5
Medium:(Li,K)Cl eutectic. Kso=-14.78(400 C),
-14.12(425 C), -13.54(450 C), -12.96(475 C); DH(Kso)=234 kJ mol-1

Ni++ vlt oth/un 25°C var U 1970CLa (14204) 333
Kso=-17.8

Ni++ oth none 25°C 0.0 U 1964PCa (14205) 334
K(NiL(s)+2H=Ni+H2S(g))=-1.7
From thermodynamic data

Ni++ oth none 25°C 0.0 U 1952GGc (14206) 335
Kso(NiL)=-20.7
From thermodynamic data

Ni++ sol oth/un 20°C 1.0M U 1931KOa (14207) 336
Kso(NiL)=-26.96
K(NiL(s)+2H=Ni+H2S(g))=-4.0

Ni++ sol oth/un 25°C var U 1914TGa (14208) 337
Kso(NiL(alpha))=-20.5
Kso(NiL(beta))=-26.0
Kso(NiL(gamma))=-27.7
alpha, beta, gamma ambiguous (see Z Anorg. Chem.,(1947) 253,345)
K(NiL(s)+2H=Ni+H2S(g))=2.5(alpha), -3.0(beta), -4.7(gamma)

Ni++ oth oth/un 18°C var U 1909BZa (14209) 338
Kso(NiL)=-23.85
From thermodynamic data
****
SCN- HL Thiocyanate CAS 463-56-9 (106)
Thiocyanate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp NaClO4 25°C 0.50M C TI K1=1.30 B2= 1.95 2003SMa (14538) 339
Data for 15, 20 and 37 C, and for 20-90% v/v MeOH/H2O.
In 80% v/v MeOH/H2O, K1=2.10, K2=2.02, K3=-0.27.

Ni++ sp non-aq 25°C 100% C M 1998KKg (14539) 340
B(Ni(NCS)bpy)=9.52
B(Ni(NCS)2bpy)=10.94
B(Ni(NCS)(bpy)2)=14.27
B(Ni(NCS)2(bpy)2)=15.49
Medium: DMF, 0.40 M Et4NClO4.

```
Ni++       oth NaClO4 25°C  1.0M U  I   R K1=1.14        1997BPa (14540) 341
IUPAC evaluation
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U   H    K1=3.88   B2=6.68   1995KIa (14541) 342
                                         B3=8.70
                                         B4=10.20
Medium: N,N-Dimethylacetamide, 0.2 M Bu4NBF4. DH(K1)=1.3 kJ mol-1, DH(B2)=
0.7, DH(B3)=7, DH(B4)=6.3 (by calorimetry)
-------------------------------------------------------------------------------
Ni++       con non-aq 25°C 100%  C        K1=4.48   B2= 7.26  1995PGa (14542) 343
Medium: dimethylformamide.
K1: Ni(DMF)6+SCN=Ni(SCN)(DMF)5+DMF.
-------------------------------------------------------------------------------
Ni++       cal non-aq 25°C 100%  U   H  T K1=2.7    B2=4.6    1990IOa (14543) 344
                                         K3=0.8
                                         K4=0.8
Medium: N,N-Dimethylformamide, 0.4 M Et4NClO4. DH(K1)=-0.7, DH(K2)=-1.8,
DH(K3)=-3.0, DH(K4)=1.4 kJ mol-1. DS(K1)=50 J K-1 mol-1.
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C  0.0  U      T               1988BJb (14544) 345
                                         K4=-0.92
Extrapolated from data in 4-10 M NaSCN
-------------------------------------------------------------------------------
Ni++       vlt KNO3   25°C 0.10M C        K1=2.13        1988ECa (14545) 346
Method: differential pulse polarography, using anodically generated Hg++
as indicator ion.  By d.c. polarography, K1=2.08.
-------------------------------------------------------------------------------
Ni++       sol oth/un 25°C  0.1M C                       1984PKb (14546) 347
                                         Kout(Ni(bipy)3+L)=2.14
                                         Kout(Ni(bipy)3+2L)=3.55
Medium: NaF ;also for I=0.25 M K1out=1.98, B2out=3.30;  I=0.5 M Kout=1.90
B2out=3.10, B3out=3.08;I=0.75 K1out=1.82; B2out=3.0; B3out=2.86,B4out=2.56
-------------------------------------------------------------------------------
Ni++       oth NaClO4 25°C  1.0M C   H    K1=1.124  B2= 1.57  1976KKg (14547) 348
                                         B3=1.26
Method: recalculation from published data. DH(K1)=-12.2 kJ mol-1, DH(B2)=
-21.7, DH(B3)=-36.
-------------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 1.00M C      T K1=1.1    B2=1.6    1976MKc (14548) 349
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.01M U TI     K1=2.6         1975CHa (14549) 350
At  30 C: K1=2.5; 20 C: 2.7
-------------------------------------------------------------------------------
Ni++       cal alc/w  25°C 100%  C        K1=2.08   B2= 3.16  1975RAa (14550) 351
                                         B3=3.94
Medium: methanol. By spectrophotometry: K1=2.06, B2=3.02, B3=3.81.
-------------------------------------------------------------------------------
Ni++       kin none   20°C  0.0  U      T K1=1.83        1974DHb (14551) 352
                                         K1out=0.74
-------------------------------------------------------------------------------
```

```
Ni++       kin alc/w  20°C 100%  U  I     K1=5.18   B2=8.23   1974DHb (14552) 353
                                          K1out=2.23
                                          K2out=1.0
Medium: MeOH. In MeCN, K1=5.52, K2=4.30, K1out=1.93, K2out=0.85
-------------------------------------------------------------------------------
Ni++       kin non-aq 20°C 100%  U      T K1=3.00   B2=4.54   1974DHb (14553) 354
Medium: DMSO
-------------------------------------------------------------------------------
Ni++       kin non-aq 20°C 100%  U      T K1=3.92   B2=6.29   1974DHb (14554) 355
                                          K1out=1.85
                                          K2out=0.88
Medium: DMF
-------------------------------------------------------------------------------
Ni++       sp  non-aq 130°C 100%  U                     1974HNa (14555) 356
                                          B4=8.59
Medium: dimethylsulfone. Using current-voltage studies, B4=5.95
-------------------------------------------------------------------------------
Ni++       cal NaClO4 25°C  1.0M U   H  T K1=1.14   B2=1.58   1974KUa (14556) 357
                                          B3=1.60
DH(K1)=-12.0 kJ mol-1, DS=-18.4 J K-1 mol-1. DH(B2)=-8.9, DS=-21.3.
DH(B3)=-8.2, DS=-27.2
-------------------------------------------------------------------------------
Ni++       sp  non-aq   ?  100%  U        B2=7.8         1974MIc (14557) 358
                                          B3=10.1
                                          B4=11.2
Medium: acetonitrile
-------------------------------------------------------------------------------
Ni++       sp  non-aq   ?  100%  U        K1=2.7    B2=3.7    1974MIc (14558) 359
                                          B4=5.4
Medium: DMSO
-------------------------------------------------------------------------------
Ni++       sp  non-aq   ?  100%  U        K1=3.3    B2=5.3    1974MIc (14559) 360
                                          B3=5.6
                                          B4=6.0
Medium: trimethylphosphate. In DMF, K1=3.5, B2=6.3, B3=8.1, B4=9.1
-------------------------------------------------------------------------------
Ni++       sp  NaClO4   ?   3.0M U                     1974NBd (14560) 361
                                          K1=0.3 to 1.4
medium:LiClO4
-------------------------------------------------------------------------------
Ni++       sp  non-aq   ?  100%  U                     1974SIb (14561) 362
                                          B6=10.5(error in abstract(?))
Medium: acetone
-------------------------------------------------------------------------------
Ni++       kin non-aq 25°C 100%  U        K1=2.995       1974WPa (14562) 363
Medium: DMSO
-------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C  1.0M U T    T K1=1.13        1973HHb (14563) 364
K1=1.04(45 C)
-------------------------------------------------------------------------------
```

```
Ni++       kin alc/w  25°C 100%  U T      K1=3.28        1973WPa (14564) 365
Medium: MeOH. K1=3.49(30 C), 3.57(33.5 C)
-------------------------------------------------------------------------------
Ni++       ISE none   25°C  0.0  U T H    K1=1.98        1971DDb (14565) 366
DH(K1)=-21.55 kJ mol-1. K1=1.85(35 C), 1.74(45 C)
-------------------------------------------------------------------------------
Ni++       kin non-aq 20°C 100%  U                       1971DHa (14566) 367
                                        K1out=1.65
                                        K2out=0.85
Medium: DMSO
-------------------------------------------------------------------------------
Ni++       ix  oth/un   ?   var  U       K1=2.2    B2=2.40   1971LCa (14567) 368
                                        K3=0.2
                                        K4=-0.5
-------------------------------------------------------------------------------
Ni++       EMF alc/w  25°C 100%  U  I     K1=4.8    B2=7.70   1970DHa (14568) 369
Medium: MeOH, 0.03 M NaClO4; K1=5.7, K2=3.3(Constants corrected I=0)
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C  3.0M U        K1=1.34        1970MMj (14569) 370
Medium: LiClO4
-------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C 0.25M U        K1=1.3         1969SUa (14570) 371
-------------------------------------------------------------------------------
Ni++       vlt NaClO4 35°C 0.65M U T H    K1=1.17        1968MTe (14571) 372
Medium: HClO4. K1=1.34(15 C), 1.24(25 C). DH(K1)=-14.4 kJ mol-1, DS=-24
-------------------------------------------------------------------------------
Ni++       EMF oth/un 35°C  0.0  U        K1=1.85        1968PRd (14572) 373
-------------------------------------------------------------------------------
Ni++       cal oth/un 25°C  0.0  U   H    K1=1.76        1967NTa (14573) 374
Medium: 0 corr. DH(K1)=-9.4 kJ mol-1, DS=2.1 J K-1 mol-1
-------------------------------------------------------------------------------
Ni++       dis NaClO4 20°C  3.0M U  I   T K1=1.19   B2=1.68   1964TCa (14574) 375
                                        B3=1.30
                                        B4=1.54
I=1.5:K1=1.14, B2=1.75, B3=1.70, B4=2.04. Kd(Ni+2L=NiL2(MeCOBu))=-0.14
-------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C 0.70M U  I     K1=1.21        1963TCb (14575) 376
Also K1=1.27(I=5), 1.11(I=2.5), 1.12(I=1.5), 1.17(I=1.0)
-------------------------------------------------------------------------------
Ni++       oth oth/un   ?   var  U        K1=1.18        1962FLa (14576) 377
Method: ir. In 3M NaClO4 K1in=1.08, K1out=0.5
-------------------------------------------------------------------------------
Ni++       sp  NaClO4   ?   2.0M U      T K1=1.10        1962TCa (14577) 378
-------------------------------------------------------------------------------
Ni++       sp  none   25°C  0.0  U      T K1=1.76        1962WIa (14578) 379
-------------------------------------------------------------------------------
Ni++       sp  oth/un  1°C 0.50M U T      K1=1.38        1961DSd (14579) 380
K1=1.28(9.3 C)
-------------------------------------------------------------------------------
Ni++       sp  none   25°C  0.0  U T H    K1=1.50        1961MDa (14580) 381
```

at 35 C(by emf) K1=1.82. DH(K1)=55 kJ mol-1, DS=213 J K-1 mol-1 ?

Ni++ sp NaClO4 ? 2.0M U K1=1.27 1959UTa (14581) 382

Ni++ sp none 22°C 0.0 U K1=1.67 1958YKa (14582) 383

Ni++ sp NaClO4 20°C 1.0M U T K1=1.18 B2=1.64 1953FRa (14583) 384
K3=0.17

Additional method: cation exchange

****

SO3-- H2L Sulfite CAS 7782-99-2 (801)
Sulfite;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	EMF	NaCl	25°C	0.00	U	I	K1=2.88		1991RZb (15413)	385

****

SO4-- H2L Sulfate CAS 7664-93-9 (15)
Sulfate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	con	mixed	20°C	50%	C	I	K1=3.14		2001MTa (15706)	386

Medium: 50 % w/w DMF/H2O. Data for 0-80 % w/w DMF/H2O. At 0% DMF/
H2O, K1=2.14

Ni++ con none 20°C 0.0 C I K1=2.14 2000TMa (15707) 387
Also data for 0.06-0.69 mole fraction MeOH/H2O.

Ni++ sp none 25°C 0.0 C K1=2.10 1990WAa (15708) 388

Ni++ con none 25°C 0.0 C K1=2.25 1985SGd (15709) 389

Ni++ con none 25°C 0.0 C T K1=2.29 1979FFc (15710) 390
Also data for 15 C. Also data at 1000 and 2000 atm.
K expressed on molal scale.

Ni++ con diox/w 25°C 100% U I M 1979NBa (15711) 391
K(NiA+L)=2.08

A=5,7,7,12,14,14-Hexamethyl-1,4,8,11-tetraazacyclotetradecane-4,11-diene.
Data also for varying dielectric constants

Ni++ nmr oth/un 25°C 0.00 U T H K1=0.98 B2=0.82 1978BLa (15712) 392

Ni++ sp NaClO4 25°C 5.00M U H 1977AHa (15713) 393
K1out=0.77

DH=0 kJ mol-1, DS=14.8 J K-1 mol-1

Ni++ dis NaClO4 25°C 1.00M C K1=1.0 B2=1.4 1976MKc (15714) 394

```
Ni++       con none    0°C  0.0  U        K1=2.4         1975TAa (15715) 395
--------------------------------------------------------------------------------
Ni++       cal NaClO4 25°C  3.0M U   H                  1974BRa (15716) 396
Medium: LiClO4. DH(K1)=2.4 kJ mol-1, DS(K1)=12.5 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       con none   25°C  0.0  U T H    K1=2.27        1973KAb (15717) 397
K1=2.19(0 C); 2.23(10 C); 2.34(45 C)
DH(K1)=5.3 kJ mol-1, DS(K1)=61.5 J K-1 mol-1(25 C)
--------------------------------------------------------------------------------
Ni++       cal none   25°C  0.0  U   H                  1973POa (15718) 398
DH(K1)=5.7 to 5.9 kJ mol-1
--------------------------------------------------------------------------------
Ni++       oth none   25°C  0.0  C        K1=2.35   B2= 1.75  1972PIa (15719) 399
Calculated from published osmotic coefficient data.
--------------------------------------------------------------------------------
Ni++       oth none    0°C  0.0  U        K1=2           1971ISc (15720) 400
Method: freezing point; K1=1.8 to 2.4(depending upon ion size parameter)
--------------------------------------------------------------------------------
Ni++       cal none   25°C  0.0  C   H                  1970LAe (15721) 401
DH(K1)=6.4 kJ mol-1, DS(K1)=65.7 J K-1 mol-1.
Method: heat of dilution measurements.
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C  3.0M U        K1=0.26        1970MMj (15722) 402
--------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C  5.0M U        K1=1.19        1970TRa (15723) 403
Method: current-voltage studies
--------------------------------------------------------------------------------
Ni++       EMF NaClO4 25°C  2.0M U    M                  1970TRa (15724) 404
                                        K(Nipy+L)=1.02
                                        K(Ni(thiourea)+L)=1.14
--------------------------------------------------------------------------------
Ni++       cal oth/un 25°C  0.0  U   H    K1=2.81        1969IEa (15725) 405
DH(K1)=1.7 kJ mol-1, DS(K1)=59.0 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       ISE oth/un 35?°C  0.0  U        K1=2.05       1968PRd (15726) 406
--------------------------------------------------------------------------------
Ni++       con oth/un 25°C  0.0  U    M   K1=2.16        1968YMa (15727) 407
                                        K(Ni(en)+L)=2.02
                                        K(Ni(en)3+L)=2.23
--------------------------------------------------------------------------------
Ni++       sol oth/un 300°C  0.0  U T H                  1967GNd (15728) 408
                                        Kso(NiLH2O)=-6.80
Kso=-3.69(160 C), -4.01(180 C), -4.35(200 C), -4.70(220 C), -5.10(240 C),
-5.57(260 C),-6.12(280 C). At 25 C: DHso=-50.2 kJ mol-1, DS=175.6 J K-1 m-1
--------------------------------------------------------------------------------
Ni++       oth oth/un 25°C  0.0  U   H    K1=2.32        1967HEb (15729) 409
From thermodynamic data. DH(K1)=13.3 kJ mol-1, DS=89.0 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       oth oth/un 25°C  0.0  U        K1=1.94        1965POa (15730) 410
                                        K(Ni(H2O)2L=Ni(H2O)L)=-0.3
```

```
--------------------------------------------------------------------------------
Ni++       oth oth/un   ?   1.0M U                      1964LAb (15731) 411
                                      K1in/K1=-1.1
Method:infrared spectra. Medium: NiSO4
--------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C  1.0M U    M   K1=0.57   B2=1.42   1963TSa (15732) 412
                                      B(NiAL)=0.0
                                      B(NiAL2)=0.5
HA=CH3CO2H
--------------------------------------------------------------------------------
Ni++       vlt KNO3   25°C 0.20M U T      K1=1.0         1961TOa (15733) 413
K1=1.16(15 C), 1.16(35 C)
--------------------------------------------------------------------------------
Ni++       EMF oth/un 25°C  0.0  U T H    K1=2.32        1959NNa (15734) 414
Method: H electrode. K1=2.08(0 C), 2.18(10 C), 2.24(15 C), 2.39(35 C), 2.46
(45 C). DH(K1)=13.9 kJ mol-1, DS=91 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       oth KNO3   -3°C  sat  U        K1=0.70   B2=1.50   1959RRc (15735) 415
Method: freezing point
--------------------------------------------------------------------------------
Ni++       oth KNO3    0°C  sat  U  I     K1=0.69        1958KEa (15736) 416
Method: freezing point. K1=1.27(KClO3 sat), 1.70(KClO4, sat). 2.29(I=0 corr)
--------------------------------------------------------------------------------
Ni++       oth oth/un  0°C  0.0  U        K1=2.34        1956FSa (15737) 417
Method: freezing point
--------------------------------------------------------------------------------
Ni++       oth oth/un  0°C  0.0  U        K1=2.2         1955BPb (15738) 418
Method: freezing point. K1=2.06 to 2.39
--------------------------------------------------------------------------------
Ni++       sol oth/un 25°C  0.0  U                       1954DOa (15739) 419
                                      Kso(Ni(OH)1.5L0.25)=-13.35
--------------------------------------------------------------------------------
Ni++       con oth/un 25°C  0.0  U        K1=2.40        1932MDa (15740) 420
********************************************************************************
S2O3--                 H2L    Thiosulfate      CAS 73686-28-7  (177)
Thiosulfate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 1.00M C        K1=0.9    B2=1.3    1976MKc (16705) 421
--------------------------------------------------------------------------------
Ni++       cal R4N.X  25°C 0.50M U   H    K1=0.78        1974ARa (16706) 422
DH=1.84 kJ mol-1.
--------------------------------------------------------------------------------
Ni++       sol none   25°C  0.0  U        K1=2.06        1951DMb (16707) 423
********************************************************************************
Se--                   H2L    Selenide           (6335)
Selenide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

```
------------------------------------------------------------------------------
Ni++       oth none   25°C  0.0  U                        1964BUe (16932) 424
                                      Kso=-32.7
******************************************************************************
SeCN-                   HL    Selenocyanate    CAS 73102-11-2  (440)
Selenocyanate;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       ISE none   25°C  0.0  U   H    K1=1.66        1975SSa (16952) 425
DH = -8.70 kJ mol-1. DS = 2.52 J K-1 mol-1.
------------------------------------------------------------------------------
Ni++       cal NaClO4 25°C  1.0M U   H    K1=0.99   B2=1.26   1974KUb (16953) 426
                                      B3=1.85
DH(K1)=-12.80 kJ mol-1, DS=-24.3 J K-1 mol-1; DH(K2)=-12.01, DS=-35.1
------------------------------------------------------------------------------
Ni++       sp  non-aq   ?  100%  U        K1=2.4    B2=4.20   1964SBd (16954) 427
                                      K3=1.5
                                      K4=1.4
                                      B4=6.9
Medium: Me2NCHO
------------------------------------------------------------------------------
Ni++       sp  alc/w    ?  100%  U  I     K1=2.70   B2=4.44   1962GSd (16955) 428
                                      B3=5.70
                                      B4=6.74
Medium: MeOH. In acetone K1=3.40, B2=6.08, B3=8.56, B4=10.39, B5=11.87,
B6=13.29
******************************************************************************
SeO3--                  H2L    Selenite         CAS 7783-00-8  (2391)
Selenite;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       con oth/un 18°C  dil  U                        1968RVa (17019) 429
                                      Kso=-5.29
------------------------------------------------------------------------------
Ni++       sol oth/un 20°C  var  U                        1957CTa (17020) 430
                                      Kso(NiL)=-5.0
******************************************************************************
SeO4--                  H2L    Selenate         CAS 7783-08-6  (459)
Selenate;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       EMF none    0°C  0.0  U T H    K1=2.42        1970GNc (17086) 431
Method: H electrode. K1=2.53(10 C), 2.56(15 C), 2.61(20 C), 2.67(25 C),
2.77(35 C), 2.82(45 C). DH(K1)=14.7 kJ mol-1, DS=95.8 J K-1 mol-1 (25 C)
******************************************************************************
SiW11O39--------      H8L                          (2464)
alpha-Heterosilicon-polytungstate;
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	1.00M	U		K1=7.32		1984COa (17228)	432
							K(beta1 isomer)=6.95			
							K(beta2 isomer)=6.75			
							K(beta3 isomer)=6.82			

****

CH2N4 L Tetrazole CAS 288-94-8 (3534)

Tetrazole; cyclo(-HN.N:N.N:CH-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	non-aq	24°C	100%	U		K1=0.4	B2=1.12	1966HDb (17474)	433

Medium: DMF, 0.179 M Ni(ClO4)2. B2=1.12 ?

****

CH2O2 HL Formic acid CAS 64-18-6 (37)

Methanoic acid; H.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	oth	NaClO4	25°C	2.0M	U		K1=0.64		1990FTa (17542)	434

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	vlt	oth/un	25°C	1.00M	U		K1=1.26	B2=1.51	1973TRc (17543)	435
							B3=1.95			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	5.00M	U		K1=1.04		1971BAb (17544)	436

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	30°C	0.40M	U		K1=0.67		1970BTa (17545)	437

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	EMF	NaClO4	25°C	2.00M	U		K1=0.46	B2=0.87	1970FMa (17546)	438

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	NaClO4	rt	2.00M	U		K1=0.40	B2=0.86	1970GFa (17547)	439

****

CH3O5P 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
Ni++	gl	NaNO3	25°C	0.10M	C		K1=5.39		1994SCa (17692)	440
							K(Ni+HL)=2.45			
							K(NiL+H)=4.63			

****

CH4N2S L Thiourea CAS 62-56-6 (51)

Thiocarbamide, Thiourea; (H2N)2CS

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

---

```
Ni++       sp  alc/w  20°C  95%  U  I     K1=-1.4   B2=0.84   1966SIc (17736) 441
Medium: 95% EtOH, 18-22 C. In 0.3 M NaClO4, 95% EtOH: B2=0.7 ?, B6=1.36 ?
--------------------------------------------------------------------------------
Ni++       EMF mixed  25°C  90%  U        K1=1.05   B2=1.50   1966SLb (17737) 442
Medium: 90% Me2CO, 2 M NaClO4
--------------------------------------------------------------------------------
Ni++       EMF mixed  25°C  90%  U        K1=1.05   B2=1.50   1966SLc (17738) 443
Medium: 90% acetone
********************************************************************************
CH4O                    L    Methyl alcohol   CAS 67-56-1  (597)
Methanol; CH3.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  non-aq 20°C 100%  U T HM                  1988LJa (17870) 444
                                       K(NiAB+2L)=0.06
                                       K(NiAC+2L)=0.46
                                       K(NiAD+2L)=0.80
Medium: 1,2-dichlorethane;  Square planar = octahedral equilibria
A:tetramethylendiamine B:acetylacetone C:benzoylacetone D:dibenzoylmethanat
********************************************************************************
CH4O3ClP              H2L                     CAS 2565-58-4  (1973)
Chloromethylphosphonic acid; Cl.CH2.PO3H2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF NaNO3  25°C 0.10M U        K1=1.81        1970TNa (17921) 445
********************************************************************************
CH5N3O                  L    Semicarbazide    CAS 563-41-7  (373)
Semicarbazide, N-Aminourea; H2N.CO.NH.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  KNO3   30°C 0.10M U T H    B2=4.79        1977AGa (18049) 446
                                       B3=6.65
DH(B2)=-58.5 kJ mol-1; DS=-103 J K-1 mol-1; DH(B3)=-65.9; DS=-95
********************************************************************************
CH5N3S                  L                    CAS 79-19-6  (372)
Thiosemicarbazide; H2N.CS.NH.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=2.04   B2=4.92   1979LGa (18060) 447
                                       B3=7.17
                                       B4=7.50
--------------------------------------------------------------------------------
Ni++       sp  KNO3   30°C 0.10M U T H    B2=4.80        1977AGa (18061) 448
                                       B3=7.20
DH(B2)=-44.1 kJ mol-1; DS=-54 J K-1 mol-1; DH(B3)=-85.7; DS=-144
********************************************************************************
```

CH5N3Se L CAS 21198-79-8 (371)
Selenosemicarbazide; H2N.CSe.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	KNO3	30°C	0.10M	U	T H	B2=3.30		1977AGa (18085)	449
							B3=5.08			

DH(B2)=-51.9 kJ mol-1; DS=-107 J K-1 mol-1; DH(B3)=-59.3; DS=-103

****

CH5O3P H2L CAS 13590-71-1 (1752)
Methylphosphonic acid; CH3.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	M		K1=2.25		1992SCa (18111)	450

****

CH5O4P H2L CAS 86703-09-5 (1751)
Methylphosphoric acid; CH3OP(O)(OH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	M		K1=1.94		1996SSa (18159)	451
Ni++	sp	oth/un	20°C	0.10M	U	T	K1=1.91		1965BRb (18160)	452

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
Ni++	gl	KNO3	25°C	0.10M	C		K1=3.95	B2=6.14	1996RLa (18178)	453
							B(NiH-1L)=-3.73			
							B(NiH-2L)=-14.0			

****

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
Ni++	gl	KNO3	25°C	0.10M	C	I R	K1=5.30	B2= 9.00	2001PRa (18199)	454
							K(Ni+HL)=1.6			

IUPAC Recommended values

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	C		K1=5.30		1994SCa (18200)	455
							K(Ni+HL)=1.47			
							K(NiL+H)=6.65			
Ni++	gl	KNO3	25°C	0.10M	U		K1=5.29	B2=8.98	1979WNb (18201)	456
							B(NiHL)=11.69			

B(NiHL2)=16.4
B(NiH2L2)=22.6

Ni++ gl NaClO4 25°C 0.10M U K1=4.90 B2=8.91 1976SOa (18202) 457

Ni++ gl oth/un 25°C 0.10M U K1=5.2 B2=8.80 1972AUa (18203) 458

Ni++ gl NaClO4 25°C 0.50M U K1=4.94 B2=8.48 1971GDa (18204) 459

Ni++ gl KNO3 25°C 0.10M U K1=5.18 B2=9.0 1971WNc (18205) 460
B(NiHL)=11.64
B(NiH2L2)=23.6
B(NiHL2)=16.8

****

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

---

Ni++ gl NaClO4 20°C 0.10M U K1=3.44 B2=6.62 1964COd (18235) 461
B3=8.64

****

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

---

Ni++ gl KCl 25°C 0.50M U K1=4.40 B2=8.10 1969BDa (18241) 462
K3=3.11

****

CH6O6P2 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

---

Ni++ gl KCl 25°C 0.10M U K1=8.16 B2=15.04 1967KLa (18258) 463
K(Ni+HL)=4.87
K(Ni+2HL)=10.01
K(2Ni+L)=12.70
K(2Ni+HL)=8.07

****

CH6O7P2 H3L CAS 56399-35-0 (7664)
Methyldiphosphoric acid;

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

---

Ni++ gl NaNO3 25°C 0.10M M K1=3.59 1999SSa (18304) 464

****

C2HO2F3 HL Trifluoracetic CAS 76-05-1 (1360)
Trifluorethanoic acid; F3C.COOH

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       con non-aq 25°C 100%  U        K1=1.85        1979PPb (18346) 465
Medium: DMSO
********************************************************************************
C2H2                    L    Acetylene        CAS 74-85-1  (703)
Ethyne; HCCH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       dis none   40°C  0.0  U T      K1=-1.47       1984DWa (18351) 466
********************************************************************************
C2H2O2Cl2               HL                    CAS 79-43-6  (1282)
Dichloroethanoic acid; Cl2CH.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 20°C 1.00M U        K1=1.3    B2=2.6    1969PJc (18388) 467
********************************************************************************
C2H2O3                  HL    Glyoxylic acid   CAS 298-12-4  (1142)
Glyoxylic acid; OHC.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M U    M   K1=0.94        1966LHc (18414) 468
See glycine, alanine and 2-aminoisobutanoic acid for ternary complexes
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=3.46   B2= 6.42  1998KRa (18602) 469
                                          B(NiLA)=7.16
HA: inosine.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M   K1=4.92        1997PSb (18603) 470
                                          K(NiL+A)=5.92
H2A is thiamine orthophosphoric acid.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U        K1=5.28        1994RSa (18604) 471
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M   K1=4.432       1993AHa (18605) 472
--------------------------------------------------------------------------------
Ni++       cal KNO3   25°C  1.0M C   H    K1=4.10   B2= 7.15  1990LGc (18606) 473
                                          B3=8.51
DH(K1)=-5.40 kJ mol-1, DH(K2)=-5.62, DH(K3)=-6.03. DH(Ni+2L+en)=-67.2, DS=
23.9 J K-1 mol-1;DH(Ni+L+en)=-58.1,DS=21.3;DH(Ni+L+2en)=-106.3, DS=-47.3.
--------------------------------------------------------------------------------
```

```
Ni++       gl  NaCl   25°C 0.50M C        K1=4.05   B2=6.01   1989FRa (18607) 474
-------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 0.10M U    M                  1988BBd (18608) 475
                                       K(NiA+L)=2.8
                                       K(NiAL+NiA)=1.6
A=1,4,8,11-tetraazacyclotetradecane
-------------------------------------------------------------------------------
Ni++       vlt alc/w  25°C  50%  C        K1=4.16   B2=7.58   1988CRa (18609) 476
Medium: 50% v/v MeOH/H2O, 0.1 M KNO3
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M   K1=5.23        1985RRc (18610) 477
                                       B(NiL(cytidine))=9.31
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C        K1=5.23        1985RRh (18611) 478
-------------------------------------------------------------------------------
Ni++       vlt NaClO4 20°C 0.10M C        K1=4.26   B2= 7.54  1981UBa (18612) 479
Method: polarography.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  2.5M M        K1=5.30        1979FLc (18613) 480
-------------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 1.00M C        K1=3.7    B2=6.6    1976MKc (18614) 481
-------------------------------------------------------------------------------
Ni++       oth oth/un 30°C  35%  C        K1=6.5         1976YGa (18615) 482
                                       K(Ni+HL)=2.3
Method: paper electrophoresis.
-------------------------------------------------------------------------------
Ni++       sp  R4N.X  25°C 1.50M U    M                  1973BDd (18616) 483
                                       K(Ni+Cu+3L+A=NiL2ACuL)=31.73
                                       K'=0.59
Medium: NH4NO3. H4A=EDTA. K': (NiL2)2A+(CuL)2A=2(NiL2)A(CuL)
-------------------------------------------------------------------------------
Ni++       sp  R4N.X  25°C 1.50M U                      1973BFd (18617) 484
                                       K(NiA+L)=1.43
                                       K(NiAL+NiL3=(NiL2)2A)=3.62
Medium : NH4NO3. H4A=EDTA
-------------------------------------------------------------------------------
Ni++       dis NaClO4 20°C 0.10M U        K1=3.83   B2=7.06   1969MBe (18618) 485
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 1.00M U    M   B2=7.64        1968FVa (18619) 486
                                       B3=8.4
                                       B(Ni(en)L)=11.20
                                       B(Ni(en)2L)=16.15
                                       B(Ni(en)L2)=13.02
B(Ni(Gly)L2)=10.45, B(Ni(Gly)2L)=12.53
-------------------------------------------------------------------------------
Ni++       sp  NaNO3  19°C 0.01M U    M                  1963CUa (18620) 487
                                       K(2NiA+L)=5
                                       K(NiB+L)=1.00
17-21 C, A=triethylenetetramine, B=4,6,6-trimethyl-3,7-diazanon-3-ene-1,9-
diamine
```

```
--------------------------------------------------------------------------------
Ni++       sol KNO3   25°C  2.0M U    M   B2=7.64        1963FVa (18621) 488
                                          B(Ni(en)L)=11.20
--------------------------------------------------------------------------------
Ni++       dis NaClO4 20°C 0.10M U        B2=7.88        1963STc (18622) 489
--------------------------------------------------------------------------------
Ni++       EMF oth/un 45°C  0.0  U   H                   1961MNa (18623) 490
Method: H electrode.  0-45 C
K1=9.065-(0.02655T+0.00004512T^(2), DH(K1)=0.6 kJ mol-1,DS=101.2 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       gl  oth/un  0°C  0.0  U T      K1=5.18        1961MNb (18624) 491
K1=5.14(15 C); 5.16(25 C); 5.17(35 C); 5.18(45 C). DH(K1)=1 kJ mol-1
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  1.0M U    M   K1=4.10   B2= 7.15  1960WDa (18625) 492
                                          K3=1.36
                                          B(Ni(en)2L)=16.15
                                          B(Ni(en)L2)=13.02
                                          B(Ni(en)L)=11.29
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=5.3         1958GHc (18626) 493
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C >0.1  U        B2=7.64        1956ZOa (18627) 494
--------------------------------------------------------------------------------
Ni++       sol oth/un 25°C  0.0  U        B2=6.51        1951BAa (18628) 495
--------------------------------------------------------------------------------
Ni++       vlt oth/un 18°C    ?  U                       1934SAa (18629) 496
                                          B3=14
********************************************************************************
C2H2S4                H2L                     CAS 82766-65-2  (2965)
Tetrathio-oxalic acid; HSSC.CSSH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.10M U        B2=9.43        1958DEb (19169) 497
********************************************************************************
C2H3N                   L    Cyanomethane     CAS 75-05-8  (1399)
Acetonitrile; CH3.CN
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U    M                   1994SFa (19172) 498
                                          K(NiA+L)=-0.93
                                          K(NiAL+L)=-0.17
Medium: CH3NO2. A=1,4,8,11-Tetraazacyclotetradecane (cyclam).   When A=7,14-
dimethyl analogue K(NiA+L)=-0.44, K(NiAL+L)=0.28 plus others
********************************************************************************
C2H3NO4                HL                      CAS 625-75-2  (2968)
Nitroacetic acid; O2N.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

Ni++ kin oth/un 18°C 0.20M U K1=0.06 1949PEa (19200) 499
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
---
Ni++ gl KNO3 25°C 0.10M C K1=6.93 2002BMa (19218) 500

Ni++ cal NaNO3 25°C 1.00M U H 1986ARa (19219) 501
K(Ni+HL)=1.90
K(Ni+2HL)=2.94
DH(Ni+HL)=-25.1, DH(Ni+2HL)=-50.0 kJ mol-1
Reference confusing. Should K2 be B2 ?

Ni++ gl KNO3 25°C 0.50M U 1980LKb (19220) 502
K(Ni+HL)=1.90
K(Ni+2HL)=4.84
K(Ni+3HL)=5.41
K(Ni+4HL)=5.64
****
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
---
Ni++ gl NaClO4 20°C 0.10M U K1=2.45 1963COb (19237) 503
****
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
---
Ni++ gl KNO3 25°C 0.10M C K1=3.60 2002BMa (19241) 504
****
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
---
Ni++ gl KNO3 25°C 0.50M U K1=1.06 B2=2.40 1982GLa (19249) 505
B3=2.69
****
C2H3O2Cl HL Chloroacetic CAS 79-11-8 (34)
Chloroethanoic acid; ClCH2.COOH

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

```
Ni++       gl  NaNO3  30°C 0.40M U        K1=0.23        1970BTa (19333) 506
--------------------------------------------------------------------------------
Ni++       EMF NaClO4 18°C 2.00M U        K1=0.20        1970FMa (19334) 507
--------------------------------------------------------------------------------
Ni++       EMF NaClO4 20°C 1.00M U        K1=1.3    B2=2.6    1969PJc (19335) 508
********************************************************************************
C2H4                    L    Ethylene         CAS 74-85-1  (478)
Ethene; H2C:CH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       dis none   40°C  0.0  U T      K1=-0.55       1984DWa (19419) 509
********************************************************************************
C2H4N2O4              H2L                    CAS 1687-60-1  (2969)
Oxaldihydroxamic acid; (CO.NH.OH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=7.07   B2=12.82  2000SFa (19445) 510
                                         B(NiH-1L2)=4.04
********************************************************************************
C2H4N2S2               L    Rubeanic acid    CAS 79-40-3  (2782)
Dithiooxamide; H2N.CS.CS.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  none   25°C  0.0  U        K1=4.70        1976AMc (19450) 511
********************************************************************************
C2H4N4                 L                    CAS 16682-77-9  (3539)
1-Methyltetrazole; CHN4-CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U        K1=0.6    B2=2.05   1963GBa (19458) 512
Medium: EtOH
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=6.14        2002BMa (19468) 513
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U  I                    1997DBa (19469) 514
                                         K(Ni+HL)=2.03
                                         K(Ni+2HL)=3.67
Data also for I=0.5 and 1.0 M
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U                       1980LKb (19470) 515
                                         K(Ni+HL)=2.34
```

K(Ni+2HL)=5.81
K(Ni+3HL)=6.95
K(Ni+4HL)=7.30

****

C2H4N4 HL CAS 584-13-4 (819)
4-Amino-1,2,4-triazole; C2H2N3.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U				1980LKb (19483)	516
							K(Ni+HL)=2.18			
							K(Ni+2HL)=5.65			
							K(Ni+3HL)=6.90			
							K(Ni+4HL)=7.70			

****

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
Ni++	gl	NaClO4	20°C	0.10M	U		K1=2.65	B2=4.80	1963COb (19489)	517

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=3.09		2003AHa (19493)	518

****

C2H4OS HL Thioacetic acid CAS 507-09-5 (4223)
Thiolethanoic acid; CH3.CO.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	30°C	60%	U		K1=4.1	B2=7.70	1972OTc (19504)	519

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

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	alc/w	25°C	0.30M	C	I	K1=2.10	B2= 3.00	1998ISc (19713)	520

Medium: 0.3 M NaClO4 in 0.5 mol parts EtOH in H2O;
For 0.3 M NaClO4 in H2O K1=1.17;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	mixed	25°C	0.30M	C	I	K1=2.63	B2= 5.13	1998ISc (19714)	521

Medium: 0.3 M NaClO4 in 0.5 mol parts acetone in H2O;
For 0.3 M NaClO4 in H2O K1=1.17;

```
Ni++       vlt NaClO4 25°C  2.0M U        K1=0.52   B2= 0.94  1991TRa (19715) 522
-------------------------------------------------------------------------------
Ni++       oth NaClO4 25°C  2.0M U        K1=0.77        1990FTa (19716) 523
Methods: averaged results from potentiometric, polarographic and
spectrophotometric measurements.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=0.87        1983LTa (19717) 524
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C        K1=0.68        1981BKb (19718) 525
-------------------------------------------------------------------------------
Ni++       kin oth/un 10°C    ?  U        K1=1.58        1976BEa (19719) 526
                                         Kout(Ni+L)=1.30
-------------------------------------------------------------------------------
Ni++       nmr NaClO4 -5°C 1.24M U TI     K1=1.7         1975FMa (19720) 527
-------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C 1.00M U        K1=0.83        1973HHb (19721) 528
-------------------------------------------------------------------------------
Ni++       kin oth/un 45°C 1.00M U        K1=0.80        1973HHb (19722) 529
-------------------------------------------------------------------------------
Ni++       ix  oth/un 25°C 0.20M U  I     K1=0.81        1973OHa (19723) 530
K1(I=0.3)=0.77, K1(I=0.4)=0.75, K1(I=0.5)=0.74, K1(I=1.0)=0.72
-------------------------------------------------------------------------------
Ni++       vlt oth/un 25°C 1.00M U        K1=0.36   B2=0.89   1971TRc (19724) 531
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 1.00M U        K1=0.36        1971TRc (19725) 532
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.40M U        K1=0.72        1970BTa (19726) 533
-------------------------------------------------------------------------------
Ni++       EMF NaClO4 25°C 2.00M U        K1=0.72   B2=1.15   1970FMa (19727) 534
                                         B3=0.40
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 2.00M U        K1=0.82   B2=0.99   1970GFa (19728) 535
-------------------------------------------------------------------------------
Ni++       dis NaClO4 20°C 0.10M U        K1=2.12        1969MBe (19729) 536
-------------------------------------------------------------------------------
Ni++       oth oth/un   ?     ?  U        B2=3.64        1967MBa (19730) 537
Method: paper electrophoresis
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  0.0  U        K1=1.43        1964AMa (19731) 538
-------------------------------------------------------------------------------
Ni++       gl  non-aq 25°C 100%  U        K2=7.63        1964KLa (19732) 539
Medium: ethanoic acid
-------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C  1.0M U    M   K1=0.28        1963TSa (19733) 540
                                         B(NiL(SO4))=0.0
                                         B(NiL(SO4)2)=0.5
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=1.0         1960YYa (19734) 541
-------------------------------------------------------------------------------
Ni++       vlt KNO3   15°C 0.20M U T      K1=0.41        1959TKa (19735) 542
```

K1=0.41(25 C); 0.38(35 C)

Ni++ sp oth/un ? ? U K1=1.12 1958SBc (19736) 543

Ni++ gl oth/un 22°C ->0 U K1=1.12 B2=1.81 1958SBc (19737) 544

Ni++ sp oth/un 20°C ? U K1=1.65 B2=2.96 1958WAb (19738) 545

Ni++ oth none 25°C 0.0 U K1=1.80 1956YFa (19739) 546

Ni++ EMF oth/un 30°C ? U K1=1.13 1953JAa (19740) 547

Ni++ ix NaClO4 20°C 1.0M U K1=0.67 B2=1.25 1952FRa (19741) 548

By quinhydrone electrode K1=0.74

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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
Ni++	gl	NaClO4	25°C	0.20M	U	T M	K1=6.78	B2=13.41	1996JOa (20276)	549
							K(NiA+L)=6.59			

Data for 35 and 45 C. A is 2,2'-bipyridylamine.

Ni++ gl alc/w 30°C 5% U K1=6.28 1995RRb (20277) 550

Medium: 5% v/v EtOH/H2O, 0.10 M KNO3.

Ni++ gl NaClO4 30°C 0.10M U K1=6.98 B2=12.88 1988NDa (20278) 551

Ni++ gl NaClO4 30°C 0.20M U M K1=6.78 1984JOa (20279) 552

K(Ni(his)+L)=5.87

K(Ni(nta)+L)=4.83

Ni++ vlt KCl 25°C 0.10M U M 1971TAb (20280) 553

K(NiBO2+2HL=NiBO2(HL)2)=7.79

Ni++ gl NaClO4 20°C 0.10M U K1=6.2 B2=13.01 1967PSe (20281) 554

B3=14.99

B(Ni2L3)=22.7

B(Ni3L4)=33.27

B(Ni4L6)=49.85

Ni++ gl KCl 25°C 0.10M U H 1960LLa (20282) 555

0-40 C. DH(B2)=-14.6 kJ mol-1, DS=200.6 J K-1 mol-1;DH(4Ni+6L)=-129.6,DS=518

Ni++ gl KCl 0°C 0.10M U T B2=13.15 1960LLa (20283) 556

B(Ni4L6)=51.83

15 C: B2=13.04, B(Ni4L6)=50.67; 35 C: B2=12.9, B(Ni4L6)=49.23, B(Ni3L4)=33.5

40 C: B2=12.70, B(Ni4L6)=48.48, B(Ni3L4)=32.7

Ni++ gl oth/un 25°C 0.10M U K1=6.98 B2=13.53 1958LEa (20284) 557

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
Ni++	gl	NaClO4	30°C	0.20M	U	M	K1=4.76 K(Ni(bpy)+L)=5.09 K(Ni(his)+L)=3.53	1988JOa (20451)	558
Ni++	con	none	20°C	0	U		K1=2.32	1983ISd (20452)	559

At 200 kg cm-1 K1=2.24, at 600 kg cm-2 K1=2.10, at 1000 kg cm-2 K1=2.00

Ni++	gl	NaClO4	30°C	0.20M	U		K1=4.76 B2=9.11	1975JBb (20453)	560
Ni++	EMF	NaClO4	25°C	2.00M	U		K1=1.69 B2=2.70 B3=3.05	1970FMa (20454)	561
Ni++	sp	NaClO4	25°C	2.00M	U		K1=1.62 B2=2.70	1970GFa (20455)	562

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
Ni++	gl	alc/w	25°C	40%	C		K1=11.77 B2=16.15 B(NiHL)=6.48	2003DKa (21129)	563

Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.

Ni++	gl	NaNO3	25°C	0.10M	C	M	K1=5.90 B2=10.78 K(NiA+L)=4.77	2000KAb (21130)	564

H2A=Dipicolinic acid.

Ni++	gl	KNO3	25°C	0.10M	C	M	K1=5.50 K(NiL+A)=3.72 B(NiLA)=9.22 K(NiL+B)=3.62 B(NiLB)=9.12	1999AAa (21131)	565

K(NiL+C)=3.44, B(NiLC)=8.94, K(NiHL+D)=3.66.
HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.

Ni++	gl	alc/w	25°C	0.1M	U	I	K1=7.26 B2=13.35 In 100% H2O K1=5.70	1999ISc (21132)	566

Medium: 0.1 M NaClO4 in 0.9 mol parts EtOH in H2O;for 0.4 mol p. K1=6.61;
Also for 0.3 M NaClO4 in 0.4 mol parts of acetone in H2O K1=7.75;K2=6.51

Ni++	gl	alc/w	25°C	0.10M	U	I	K1=7.26 B2=13.35	1999ISc (21133)	567

Medium:0.1 M NaClO4 in 0.9 mol parts EtOH/H2O;for 0.4 m.p. K1=6.61;K2=5.62

Ni++ gl mixed 25°C 0.30M U I K1=7.75 B2=14.26 1999ISc (21134) 568
Medium:0.3 M NaClO4 in 0.4 mol parts acetone/H2O;
for :0.3 M NaClO4 in H2O K1=5.70; K2=4.95

Ni++ gl NaNO3 25°C 0.10M U K1=5.77 1997ISd (21135) 569

Ni++ gl alc/w 25°C 50% C K1=6.23 1997MGb (21136) 570

Ni++ gl KNO3 35°C 0.10M C M K1=5.90 1997PSb (21137) 571
K(NiL+A)=4.95
H2A is thiamine orthophosphoric acid.

Ni++ gl NaClO4 25°C 0.20M U T M K1=5.90 B2=10.95 1996JOa (21138) 572
K(NiA+L)=5.48
Data for 35 and 45 C. A is 2,2'-bipyridylamine.

Ni++ gl KNO3 25°C 0.05M C I K1=5.827 B2=10.65 1995AKa (21139) 573
B3=13.973
Data for 0.05-2.50 m KNO3 and Me4NNO3. At I=0.0 M, K1=6.11, B2=11.07,
B3=14.363.

Ni++ gl alc/w 20°C 50% M M K1=6.09 1995AMb (21140) 574
K(NiA+L)=5.71
Medium: 50% v/v EtOH/H2O, 0.20 M NaClO4. A is 2,2',2"-terpyridine.

Ni++ gl none 25°C 0.0 C TIH K1=6.12 B2=11.10 1995CDc (21141) 575
B3=14.37
Data for 0-0.09 M and 5-45 C. DH(K1)=-18.6 kJ mol-1, DH(B2)=-39.3,
DH(B3)=-61

Ni++ gl non-aq 25°C 100% U I K1=5.70 B2=10.65 1995ILa (21142) 576
Medium: DMSO. In DMSO/H2O, 0.90 mol.parts DMSO K1=8.02, K2=7.46

Ni++ sp KNO3 25°C 0.07M C I K1=6.126 B2=10.71 1994KCb (21143) 577
K3=3.060
Method: evolving factor analysis. Data for 0.07-0.26 M KNO3.

Ni++ gl NaNO3 37°C 0.10M U M K1=5.94 1994MGc (21144) 578
Data for ternary complexes with 6-aminopenicillanic acid

Ni++ gl NaClO4 25°C 0.20M C K1=6.12 1993BAb (21145) 579

Ni++ gl NaClO4 25°C 0.20M U T M K1=5.90 B2=10.95 1993PPa (21146) 580
K(NiA+L)=5.48
A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Ni++ nmr KNO3 25°C 1.0M U H K1=5.89 B2=10.62 1992ZSa (21147) 581
B3=13.99
Also methods used: potentiometry, spectrophotometry

```
Ni++       gl  none   25°C  0.0  C TIH  R K1=6.16   B2=11.11  1991KSa (21148) 582
                                          B3=14.43
DH(K1)=-19.3, DH(B2)=-39.6, DH(B3)=-61.8 kJ mol-1. At I=0.15 M: K1=5.80, B2=
10.62, B3=14.0; 1.0 M: 5.66, 10.44, 13.9. IUPAC evaluation
-------------------------------------------------------------------------------
Ni++       gl  KNO3   37°C 0.15M C    M   K1=5.54   B2=10.16  1989KKd (21149) 583
                                          B3=13.29
                                          B(Ni(imidazole)L)=8.21
                                          B(Ni(imidazole)2L)=10.37
                                          B(Ni(imidazole)2L2)=14.367
B(NiH-1(imidazole)L)=-0.96
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=6.25        1989MAc (21150) 584
                                          K(NiA+L)=5.69
H4A is adenosine-5'-triphosphoric acid.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.20M U    M   K1=5.90   B2=10.44  1989RVa (21151) 585
                                          K(NiA+L)=5.40
A=bis(imidazol-2-yl)methane
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U    M   K1=5.90        1988JOa (21152) 586
                                          K(Ni(bpy)+L)=5.50
                                          K(Ni(his)+L)=4.89
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 27°C 0.20M U    M   K1=5.90   B2=10.95  1988PPc (21153) 587
                                          K(NiA+L)=5.23
A is 2,2'-dipyridylamine.
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 1.00M C      R K1=5.64   B2=10.39  1987BOa (21154) 588
                                          B3=13.9
Used to define a recommended technique for pH-metric determin. of constants
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M U        K1=5.55   B2=10.31  1987DSb (21155) 589
                                          B3=13.85
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 3.00M C  IH    K1=5.74   B2=10.70  1987IOc (21156) 590
                                          K3=3.74
Medium: LiClO4
Medium: LiClO4
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  C        K1=6.51   B2=12.14  1987MSd (21157) 591
Medium: 50% v/v dioxane/H2O, 0.2 M NaNO3.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U   H    K1=5.81        1986DRb (21158) 592
Data for 30-50 C. DH(K1)=-17.1 kJ mol-1, D(K1)=-54.5 J K-1 mol-1.
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 1.00M U        K1=5.63   B2=10.4   1986IBa (21159) 593
                                          B3=13.7
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C  1.0M C        K1=5.620  B2=10.36  1986IBb (21160) 594
```

```
                                        B3=13.708
-------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  55%  U   H  T K1=6.47   B2=12.20  1986IPa (21161) 595
                                        K3=4.65
                                        B3=16.85
DH(K1)=-27.6, DH(B2)=-35.9 and DH(B3)=-36.7 kJ mol-1. DS(K1)=31, DS(B2)=-11,
DS(B3)=-34 J K-1 mol-1. In 3M LiClO4.  Alternative method: calorimetry.
-------------------------------------------------------------------------------
Ni++       gl  none   25°C    0  U T      K1=6.13   B2=11.12  1986VKc (21162) 596
                                        B3=14.63
At 15 C: K1=6.05, B2=10.99, B3=14.52; 35 C: 6.25, 11.27, 14.76
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.10M C        K1=5.55   B2=10.251 1985ADa (21163) 597
                                        B3=13.75
                                        K(Ni+L=NiL(OH)+H)=-3.70
-------------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M U        K1=5.587  B2=10.237 1985CFb (21164) 598
                                        B3=13.72
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C  1.0M C        K1=5.627  B2=10.44  1985GSc (21165) 599
                                        B3=13.992
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M   K1=5.92         1985RRc (21166) 600
                                        K(Ni+HL+cytidine))=8.56
                                        K(NiL(cytidine)+H)=5.72
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C        K1=5.92         1985RRh (21167) 601
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M C        K1=5.592  B2=10.44  1985TSc (21168) 602
                                        B3=13.86
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U    M   K1=5.90         1984JOa (21169) 603
                                        K(Ni(his)+L)=4.89
                                        K(Ni(nta)+L)=4.88
-------------------------------------------------------------------------------
Ni++       oth NaClO4 35°C 0.01M U        K1=6.56   B2=10.39  1984YSa (21170) 604
Method: paper electrophoresis.
-------------------------------------------------------------------------------
Ni++       sp  KCl    25°C  1.0M U        K1=6.18   B2=11.14  1983FAa (21171) 605
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M C T HM   K1=5.81   B2=10.46  1983RKa (21172) 606
                                        B(NiAL)=5.36
HA is thiazolidine-4-carboxylic acid. DH(K1)=-17.2 kJ mol-1, DS(K1)=55
J K-1 mol-1; DH(K2)=-22.7, DS(K2)=14; DH(NiAL)=-14.9, DS(NiAL)=53
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 1.00M U        K1=5.62   B2=10.36  1982BDa (21173) 607
                                        B3=13.43
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.15M U    M                   1982ESa (21174) 608
                                        B(NiLA)=8.849
```

B(NiHLAB)=23.080
B(NiH2LAB)=29.543

A= Imidazole and B= Pyridoxamine.

Ni++ gl NaCl 25°C 1.00M C K1=5.58 B2=10.30 1982ZKa (21175) 609
B3=13.75

Ni++ gl NaNO3 30°C 0.20M C M K1=5.83 B2=10.64 1981RSd (21176) 610
K(Ni(asp)+L)=4.78
B(Ni(asp)L)=11.94

H2asp is aspartic acid.

Ni++ gl NaNO3 30°C 0.20M C M 1981RSe (21177) 611
B(Ni(ida)L)=12.95
K(Ni(ida)+L)=4.77

Ni++ sp NaCl 25°C 0.20M U IH K1=5.62 B2=10.35 1981VZb (21178) 612
K3=13.79

for 15 C K1=5.75; B2=10.63;
for 35 C K1=5.49; B2=10.05; B3=13.10

Ni++ gl KNO3 30°C 0.10M U M 1980MSb (21179) 613
K(Ni(His)+L)=4.98

Ni++ cal NaClO4 25°C 1.0M C HM T K1=5.69 B2=10.51 1979EBb (21180) 614
B3=13.95

DG(K1)=-32.50 kJ mol-1, DH=-17.2, DS=51.2 J K-1 mol-1; DG(B2)=-59.97,
DH=-37.8, DS=74.2; DG(B3)=-79.61, DH=-60.4, DS=64.2. Also Ni(Gly)(Ala) etc.

Ni++ EMF mixed 30°C 80% U 1979EHa (21181) 615
B(NiH-1L)=-3.12
B(NiH-2L2)=-8.06

Medium: 80% Dimethylsulfoxide / 0.1M NaNO3.

Ni++ gl KNO3 25°C 2.5M M K1=5.33 1979FLc (21182) 616

Ni++ gl NaCl 25°C 1.00M C R K1=5.638 B2=10.391 1978BOa (21183) 617
B3=13.922

Ni++ gl KNO3 25°C 0.10M U M 1978DOb (21184) 618
B(NiL(His))=13.39
B(NiL(Histamine))=11.75
B(NiL2(His)2)=15.17
B(NiL(Histamine)2)=15.43

Ni++ gl NaNO3 20°C 0.10M U K1=5.78 B2=10.58 1978LEb (21185) 619

Ni++ gl oth/un 30°C ? U M 1977JOa (21186) 620
K(Ni(His)+L)=4.90
K(NiA+L)=4.85

H2A=iminodiethanoic acid

Ni++ gl KNO3 25°C 0.10M C M 1977NPa (21187) 621
K(Ni(Tren)+L)=4.32
K(Ni(Trien)+L)=4.45
K(Ni(EDDA)+L)=4.16

Ni++ gl NaCl 25°C 1.0M C K1=5.53 B2=10.26 1976BOd (21188) 622
B3=13.59

Ni++ gl KNO3 25°C 0.10M C M T K1=5.74 B2=10.55 1976DOa (21189) 623
B3=13.95
B(NiL(bpy))= 12.26; B(NiL2(bpy))=18.61; B(NiL(bpy)2)=16.46

Ni++ gl KNO3 25°C 0.10M C T K1=5.75 B2=10.65 1975IPb (21190) 624

Ni++ gl NaClO4 30°C 0.20M U K1=5.90 B2=10.95 1975JBb (21191) 625

Ni++ gl KCl 25°C 0.20M U H K1=5.65 B2=10.40 1975SGc (21192) 626
By calorimetry: DH(K1)=-21.1 kJ mol-1, DS(K1)=37.7 J K-1 mol-1;
DH(B2)=-42.0, DS(B2)=58.2. Ligand is the DL-amino acid.

Ni++ gl NaNO3 25°C 0.20M U K1=5.96 B2=10.79 1974FSa (21193) 627
B3=14.36
B(NiL2A)=12.80
B(NiL2B)=12.82
B(NiL2C)=12.56
A=succinyl dihydrazide; B=1,6-hexanedioic acid dihydrazide;
C=acetylhydrazide; other data are also given

Ni++ gl KCl 25°C 0.20M C K1=5.68 B2=10.45 1974GNb (21194) 628
B3=13.83

Ni++ gl KCl 25°C 0.20M C K1=5.68 B2=10.45 1974GNd (21195) 629
B3=13.83

Ni++ gl mixed 25°C 20% C I K1=6.17 B2=11.19 1974MMa (21196) 630
K3=3.52
Medium: 20% DMF, 0.1M KNO3. Also data for 40%, 50%, 60%, 70%, 75%, 80% DMF

Ni++ gl NaClO4 25°C 0.10M C I T K1=5.96 B2=10.72 1974MMa (21197) 631
K3=3.29
Also data for 20%, 40%, 50%, 60%, 70%, 75%, 80% Dioxan, 0.1M NaClO4

Ni++ gl KCl 25°C 0.20M U H K1=5.65 B2=10.40 1974SGb (21198) 632
By calorimetry, DH(K1)=-21.1 kJ mol-1, DS(K1)=37 J K-1 mol-1; DH(K2)=-42.0
DS(K2)=54.

Ni++ gl KNO3 25°C 0.10M U M 1973BDd (21199) 633
B(NiCuL3A)=38.84, K((NiL2)2A+(CuL)2A=2(NiL2)A(CuL))=0.79. H4A=EDTA

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--------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 1.50M U    M                  1973BDd (21200) 634
                                       K(NiA+L)=3.04
                                       K(NiAL+NiL3=(NiL2)2A)=3.30
H4A=EDTA
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U    M T                1973MSb (21201) 635
                                       B(NiL(Ala))=10.67
                                       B(NiL(Ala)2)=14.10
                                       B(NiL2(Ala))=14.25
                                       B(NiL(Val))=10.57
B(NiL2(Val))=14.31; B(NiL(Val)2)=13.77
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.05M U    M T K1=5.80   B2=10.65  1972GSc (21202) 636
                                       B(NiL(Ala))=10.72
                                       B(NiLA)=10.66
                                       B(NiL(Ser)=10.63
A=norvaline. B(NiL(Phe))=10.43; B(NiL(Thr))=10.70; K(Ni+L+HTyr)=10.37.
--------------------------------------------------------------------------------
Ni++       gl  none   25°C 0.00  U T    R K1=6.13   B2=11.05  1972IJb (21203) 637
                                       K3=3.18
10 C: K1=6.28, K2=5.14, K3=3.51; 40 C: K1=6.00, K2=4.76, K3=3.00.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T  M                  1972IVc (21204) 638
                                       K(NiA+L)=4.91
H2A=methyliminodiethanoic acid. 15 C, K=5.06; 50 C, K=4.68; 70 C, K=4.43
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U      T K1=5.94   B2=10.79  1972UTa (21205) 639
                                       K3=3.21
--------------------------------------------------------------------------------
Ni++       cal KCl    25°C 0.05M U   H  T K1=5.77   B2=10.65  1971GNa (21206) 640
DH(K1)=-15.0 kJ mol-1, DS=59 J K-1 mol-1; DH(B2)=-20, DS=25
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U      T K1=5.83   B2=10.74  1971GSb (21207) 641
                                       K3=3.3
--------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.10M U      T K1=5.79   B2=10.57  1971LNa (21208) 642
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C       U        K1=5.86   B2=10.84  1970CBb (21209) 643
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.50M U  I   T K1=5.60   B2=10.34  1970FRa (21210) 644
                                       K3=3.44
Medium: LiClO4.  Other media: 54,3% MeOH, 0.5 M LiClO4: K1=6.16,K2=5.27,
K3=3.91; 48.1% dioxan, 0.5 M LiClO4: K1=6.51, K2=5.62, K3=4.26
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U      T K1=5.69   B2=10.50  1970MMa (21211) 645
                                       B3=13.94
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U      T K1=5.73   B2=10.56  1969GEb (21212) 646
                                       B3=14.00
```

Ni++ EMF KNO3 ? ? U T B2=10.55 1968FVa (21213) 647
B3=14.06

Ni++ gl KCl 25°C 0.50M U M T K1=5.63 B2=10.48 1968LBa (21214) 648
B3=14.0
Terrnary complexes with NTA, Solochrome violet R, diethylenetriamine, salic-
ylaldehyde, pyridoxal, 5-sulfosalicylic acid

Ni++ gl oth/un 40°C 0.0 U T H T K1=6.09 B2=11.01 1967AGa (21215) 649
Medium:0 corr. K1=6.36(10 C),6.18(25 C); K2=5.29(10 C),5.07(25 C). By calor.
DH(K1)(25 C)=-20.5 kJ mol-1,DS=49.7 J K-1 mol-1. DH(K2)=-19.2,DS=13.8

Ni++ cal KCl 25°C 0.10M U H 1967BBd (21216) 650
DH(K1)=-17.1 kJ mol-1, DS=60.2 J K-1 mol-1

Ni++ gl KNO3 30°C 0.10M U T H T K1=5.70 B2=10.47 1967GNa (21217) 651
K1=5.80(20 C), 5.73(25 C); B2=10.70(20 C), 10.56(25 C)
DH(K1)=-17.1 kJ mol-1, DS=54.3 J K-1 mol-1; DH(K2)=-22.2, DS=16.7

Ni++ cal KNO3 20°C 0.10M U H 1967SSl (21218) 652
DH(B2)=-36.8 kJ mol-1, DS=75.24 J K-1 mol-1

Ni++ gl KCl 25°C 0.50M U M T K1=5.65 B2=10.51 1966LHc (21219) 653
B3=13.95
B(NiAL)=8.07
B(NiBL)=8.08
K(NiAL2)=12.97
HA=pyruvic acid, HB=glyoxylic acid. B(NiBL2)=12.92; B(NiA2L2)=15.283;
B(NiB2L2)=14.69

Ni++ gl KCl 40°C 0.20M U T H T K1=5.78 B2=10.49 1965SMb (21220) 654
K1=6.04(15 C), 5.94(25 C), K2=4.98(15 C), 4.84(25 C).
DH(K1)=-18.0 kJ mol-1, DS=54.3 J K-1 mol-1, DH(K2)=-18.4, DS=29.3

Ni++ EMF oth/un 45°C 0.0 U T H R K1=6.000 B2=11.75 1964BDa (21221) 655
Method: H electrode. K1=6.465(0 C), 6.286(15 C), 6.179(25 C), 6.083(35 C);
K2=5.286(0 C),5.076(15 C),5.951(25 C),5.836(35 C). DH(K1)=17.1, DH(K2)=19.6

Ni++ oth KNO3 20°C 0.10M U K1=6.4 B2=10.80 1964JOa (21222) 656
K3=3.0
Method: paper electrophoresis

Ni++ gl KCl 25°C 0.65M U T H T K1=5.66 B2=10.51 1964LSa (21223) 657
B3=14.0
10 C: K1=5.73,B2=10.80,B3=14.4. At 25 C: DH(K1)=-7.9 kJ mol-1, DH(B2)=-31.4

Ni++ gl KCl 25°C 0.65M U T HM 1964LSa (21224) 658
B(NiAL)=8.09
B(NiAL2)=13.00

```
                                        B(NiA2L2)=15.29
10 C: K(NiAL)=8.19,K(NiAL2)=13.57,K(NiA2L2)=15.76, At 25 C: DH(NiAL)=-10.9
kJ mol-1; DH(NiA2L2)=-49.7. HA=pyruvic acid
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  1.0M U    M T K1=5.70   B2=10.50  1964MPb (21225) 659
                                        B3=13.96
                                        B(NiL(Ala))=10.85
                                        B(NiL2(Ala))=15.50
                                        B(NiL(Ala)2)=14.40
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.15M U T    T K1=5.97   B2=10.92  1956LWa (21226) 660
30 C: K1=5.88, K2=4.86; 40 C: K1=5.74, K2=4.70. DH(B2)=-58.5 kJ mol-1,
DS=10.5 J K-1 mol-1
-------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  45%  U T      K1=7.16   B2=13.22  1956LWa (21227) 661
30 C: K1=7.09, K2=5.97; 40 C: K1=6.96, K2=5.77.  In 70% dioxan: 25 C:
K1=8.51, K2=7.24; 30 C: K1=8.45, K2=7.22
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.15M U        K1=5.97   B2=10.92  1956WMb (21228) 662
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U      T K1=5.86   B2=10.64  1954BCb (21229) 663
-------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=5.73   B2=10.49  1954IRa (21230) 664
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=9.0    B2=13.8   1954UFa (21231) 665
-------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=6.1    B2=11.0   1953ALa (21232) 666
-------------------------------------------------------------------------------
Ni++       gl  oth/un 22°C 0.01M U        B2=11.0        1952PEa (21233) 667
Medium: NiCl2
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  ->0  U      R K1=6.18   B2=11.14  1951MOa (21234) 668
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.01M U        K1=6.12   B2=11.15  1949MMa (21235) 669
-------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.50M U        K1=5.77   B2=10.57  1945FLa (21236) 670
                                        K3=3.61
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M                  2000FEa (21785) 671
                                        B(Ni(en)L)=12.62
                                        B(Ni(bpy)L)=12.78
                                        B(Ni(gly)L)=10.20
                                        B(Ni(tiron)L)=13.36
B(Ni(en)L2)=15.89, B(Ni(en)2L)=17.85, B(NiH-1(en)L)=1.8,
B(Ni(bpy)L2)=17.31, B(Ni(gly)2L)=14.18.
```

```
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M   K1=5.15   B2=9.18   1993FBa (21786) 672
                                           B(NiH-1L)=-4.35
                                           B(NiAL)=9.87
                                           B(NiAL2)=12.75
                                           B(NiA2L)=13.27
HA: alanine.
--------------------------------------------------------------------------------
Ni++       gl  NaCl   31°C 0.15M U  I     K1=5.66        1992SKa (21787) 673
Also data for 25 and 50% v/v EtOH/H2O.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=5.81   B2=10.09  1991DAc (21788) 674
                                           K(Ni(ida)+L)=4.15
                                           K(Ni(bpy)+L)=5.70
                                           K(NiA+L)=5.68
                                           K(Ni(phen)+L)=5.88
K(NiB+L)=6.20, K(NiC+L)=5.60. A: 2,2'-dipyridylamine;
B: 5-nitro-1,10-phenanthroline; C: 5-methyl-1,10-phenanthroline.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=5.81   B2=10.09  1989DAb (21789) 675
                                           B(Ni(ida)L)=12.28
                                           B(Ni(mida)L)=12.75
                                           B(Ni(nta)L)=15.42
                                           B(Ni(bpy)L)=12.74
B(Ni(phen)L)=14.73, B(NiAL)=13.33 where H3A is N-(2-carboxyphenyl)-
iminodiethanoic acid
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M U        K1=5.42   B2=14.90  1983BRc (21790) 676
                                           B3=11.73
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=3.41        1985WTa (21825) 677
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.01M U T H    K1=10.53  B2=18.31  1979SBa (21842) 678
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.01M U        K1=10.53  B2=18.30  1975SSb (21843) 679
--------------------------------------------------------------------------------
Ni++       sp  oth/un 15°C    ?  U        B2=19.55       1960KAa (21844) 680
********************************************************************************
C2H5N5                 L                       (6902)
5-Aminomethyl-1H-tetrazole; NH2CH2.CHN4
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	20°C	0.10M	U		K1=6.32 B2=11.20	1978LEb (21858)	681

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
Ni++	gl	NaClO4	37°C	0.15M	U	M	K1=4.08 B(NiH-1L)=-2.90 B(NiH-2L2)=-10.99 *K(NiL)=-6.98 B(NiAL)=6.89	1995NNa (21939)	682

B(NiHCL)=16.03, B(NiCL)=10.34, B(NiH-1CL)=2.98, K(NiHC+L)=4.18.
A is imidazole, C is histamine.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiH(his)L)=17.43 B(Ni(his)L)=12.39 B(NiH-1(his)L)=5.36 K(NiH(his)+L)=4.35	1995NNa (21940)	683
Ni++	gl	NaClO4	25°C	0.10M	U		K1=3.80 B2=6.88 B3=9.3 B(NiH-2L2)=-12.13	1975DBa (21941)	684
Ni++	gl	NaClO4	25°C	0.10M	U		K1=4.13	1972TSc (21942)	685
Ni++	gl	KNO3	25°C	0.16M	U		K1=4.20 B2=7.6 K3=2.1 K(NiH-1L+H)=9.8 K(NiH-1LOH+H)=10.1	1960MCa (21943)	686
Ni++	gl	oth/un	25°C	0.15M	U		K1=4.18 B2=7.27	1958LCa (21944)	687

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
Ni++	gl	NaNO3	25°C	0.20M	U		K1=2.4 B2=4.52 B3=6.26	1974FSa (21960)	688

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

```
Ni++       gl  NaCl   25°C 0.15M U        K1=7.045  B2=13.643 1986EMb (21981) 689
                                          B(NiH-1L)=-0.216
                                          B(NiH-1L2)=3.968
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M C        K1=6.768  B2=13.38  1986LEb (21982) 690
                                          B(NiH-1L2)=5.061
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M U        K1=6.60   B2=19.70  1983BRc (21983) 691
*******************************************************************************
C2H6N2S2               HL                        (5846)
2-Methylhydrazinedithiocarboxylic acid; H2N.N(CH3)CSSH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.01M M                      1986IGb (22013) 692
                                          Kso(NiL2)=-19.79
In tris or phosphate buffer, pH 6.4-8.9; by atomic absorption spectroscopy.
Data also for (CH3)2N.NH.CSSH and (CH3)(C6H5)N.NH.CSSH
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.01M U        K1=7.20   B2=14.02  1985IGb (22014) 693
*******************************************************************************
C2H6N4O2             H2L                    CAS 110-21-4  (2971)
Diaminoglyoxime; (C(NH2):NOH)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  none   20°C  0.0  U        K1=2.69   B2=7.39   1958WMa (22018) 694
                                          K3=7.33
*******************************************************************************
C2H6O                   L    Ethanol          CAS 64-17-5  (1913)
Ethanol; CH3.CH2.OH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  non-aq 20°C 100%  U T HM                 1988LJa (22024) 695
                                          K(NiAB+2L)=-0.42
                                          K(NiAC+2L)=-0.11
                                          K(NiAD+2L)=0.13
Medium: 1,2-dichlorethane;  Square planar = octahedral equilibria
A:tetramethylendiamine B:acetylacetone C:benzoylacetone D:dibenzoylmethanat
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C 0.50M U        K1=3.92        2000LTa (22049) 696
Voltammetry using Hg/HL electrode.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U                      1974BPa (22050) 697
```

```
                                        K0=-2.126
                                        K=13.023
logBn=logK0+nlogK 'core + links';  Ni(NiL2)n complexes. Various hypotheses
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U                        1972BPb (22051) 698
                                        B(Ni(NiL2)n)=13.051*n - 2.30
--------------------------------------------------------------------------------
Ni++       gl  oth/un   ?   0.0  U        B2=11.19       1961AMa (22052) 699
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       sp  non-aq 20°C 100%  U                         1978CMa (22132) 700
                                        K'=0.20
                                        K"=-0.9
Medium: DMSO, K': Ni(DMSO)2L2 + L = NiL3 + 2 DMSO
K": Ni(DMSO)4L + 2DMSO = Ni(DMSO)6 + L
********************************************************************************
C2H6S2                H2L                     CAS 540-63-6  (2966)
Ethane-1,2-dithiol; HS.CH2.CH2.SH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  R4N.X  30°C 0.10M U        B2=25.6        1960LAb (22204) 701
                                        B(Ni2L3)=47.3
Medium: NH4Cl
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U   H    K1=2.42   B2=4.42   1989KRb (22342) 702
                                        K3=1.80
Medium: dimethylformamide
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  0.0  M  I     K1=2.98   B2=5.59   1987AAb (22343) 703
                                        B3=7.02
                                        B4=8.10
Data for I=0.2, 0.3, 0.5, 0.7 and 1.0 M KNO3.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.50M U  I     K1=3.12   B2= 5.68  1982BDd (22344) 704
                                        K3=1.80
                                        K4=0.32
Also data for 2 M NaClO4.
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=3.05   B2=5.30   1981HAa (22345) 705
                                        K3=1.85
```

Medium: 0.1 M HOCH2CH2NH2.HNO3

Ni++ gl mixed 25°C 0.4M U K1=3.24 B2= 5.84 1979TMa (22346) 706
K3=2.05
K2=2.16 in 100% H2O
K1=2.98 in 100% H2O
K3=1.64 in 100% H2O

Medium: 35 mol % ethyleneglycol in H2O
Also data for 10 mol%:K1=3.11;K2=2.31; K3=1.77

Ni++ gl mixed 25°C 0.4M U K1=3.37 B2= 5.87 1979TMa (22347) 707
K3=1.83
K2=2.16 in 100% H2O
K1=2.98 in 100% H2O
K3=1.64 in 100% H2O

Medium: 35 mol % glycerine in H2O
Also data for 10 mol%:K1=3.14;K2=2.26; K3=1.76

Ni++ gl mixed 25°C 0.4M U K1=3.61 B2= 6.47 1979TMa (22348) 708
K3=2.03
K2=2.16 in 100% H2O
K1=2.98 in 100% H2O
K3=1.64 in 100% H2O

Medium: 28.8 mol % diethylenglycol in H2O
Also data for 13 mol%:K1=3.30;K2=2.59; K3=1.83

Ni++ gl mixed 20°C 0.35M U K1=3.45 B2= 6.05 1979TMb (22349) 709
K(NiL2+L)=1.86
K2=2.20 in 100% H2O
K1=2.94 in 100% H2O
K3=1.60 in 100% H2O

Medium: 64 mol % MeOH in H2O
Also data for 10; 16; 23 and 40 mol% MeOH

Ni++ sp alc/w 25°C 100% U K1=2.48 B2=4.58 1975KDa (22350) 710
K3=1.91

Medium: MeOH; in EtOH K1=2.54, K2=2.11, K3=1.89; in BuOH K1=2.54, K2=2.10, K3=1.93

Ni++ gl NaClO4 30°C 1.0M U K1=3.18 B2=6.04 1972BSd (22351) 711
K3=1.72
K4=1.47
K5=0.47
K6=0.33

Ni++ gl NaClO4 30°C 1.0M U K1=3.18 B2=6.03 1971BSh (22352) 712
B3=7.77
B4=9.24
B5=9.70

```
Ni++       gl  NaClO4 30°C  3.0M U                      1971BSh (22353) 713
                                    B(Ni2L2)=7.00
                                    B(Ni3L3)=12.83
--------------------------------------------------------------------------
Ni++       sp  alc/w    ?     ?  U        K1=6.64   B2=12.38  1969GTb (22354) 714
                                    K3=4.12
Medium: EtOH
--------------------------------------------------------------------------
Ni++       sp  oth/un   ?   dil  U        K1=4.18   B2=7.38   1966UDa (22355) 715
                                    K3=2.88
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.98   B2=5.33   1962CWa (22356) 716
                                    K3=2.00
--------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.40M U        K1=3.06   B2=5.52   1962SGa (22357) 717
                                    B3=6.95
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M M    M   K1=3.62        1984MCb (22433) 718
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C        K1=9.14   B2=18.72  1995LMa (22462) 719
                                    B(NiH-1L)=1.68
--------------------------------------------------------------------------
Ni++       sp  NaClO4 20°C 1.00M U    M   K2=10.0        1972GSg (22463) 720
                                    K(Ni+NiL2)=2.95
                                    K(Ni+2NiL2)=6.10
                                    K(3NiL2+2H=Ni3L4+2HL)=18.0
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=9.23        1955FRa (22464) 721
                                    K(Ni+HL)=4.29
--------------------------------------------------------------------------
Ni++       gl  KNO3    0°C  1.0M U T      K1=10.96  B2=21.50  1951GOa (22465) 722
30 C: K1=10.05, K2=9.76; 50 C: K1=9.96, K2=9.76
**************************************************************************
C2H7N3O                 L                     CAS 67015-05-8  (2702)
2-Aminoacetamidoxime; H2N.CH2.C(:NOH)NH2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  1.0M C        K1=5.72   B2=10.843 1983SOa (22505) 723
                                    B3=14.74
```

B(NiH-1L2)=4.27

****

C2H7N5 L Biguanide CAS 56-03-1 (2967)

Biguanide; H2N.C(:NH)NH.C(:NH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	cal	KCl	25°C	0.10M	C	H		1978FMc (22520)	724

DH(B2)=-101 kJ mol-1, DS=84 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	KCl	30°C	0.50M	U		B2=18.31	1959RRb (22521)	725
Ni++	gl	oth/un	32°C	0.05M	U		B2=13.54	1956SRb (22522)	726

****

C2H7OPS2 HL CAS 993-44-2 (4228)

Dimethyldithiophosphonic acid; (CH3S)2PO.H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	ISE	alc/w	25°C	90%	U		K1=2.46 B2=4.44	1972TCa (22525)	727

Medium: 90% EtOH, 0.3 M NaClO4

****

C2H7O2PS2 HL CAS 5930-72-3 (4229)

O,O-Dimethyldithiophosphoric acid; (CH3O)2.PS.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	M		1977FMa (22539)	728
							K(NiL2+A)=2.16		
							K(NiL2A+A)=2.48		

Medium: Toluene, A=4-picoline

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U T	M		1972MFa (22540)	729
							K(NiL2+A)=3.47		
							K(NiL2+B)=3.03		
							K(NiL2+C)=2.30		

Medium: benzene. K(NiL2+D)=2.56. Temperature range 8-34.6 C. A=pyrrolidine, B=piperidine, C=morpholine, D=hexamethyleneimine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	M		1970NYa (22541)	730
							K(NiL2+py)=1.98		
							K(NiL2+bpy)=7.17		
							K(NiL2+2py)=4.20		

Medium: benzene

****

C2H7O3P H2L CAS 71778-99-9 (1978)

Ethylphosphonic acid; CH3.CH2.PO3H2

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

```
Ni++       gl  NaNO3  25°C 0.10M M        K1=2.30        1992SCa (22559) 731
**************************************************************************
C2H8NO2P               HL                        (7266)
Aminomethyl(methylphosphinic acid); H2NCH2PO(OH)CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.22   B2=5.68   1996RLa (22583) 732
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=10.11  B2=15.66  1998KMa (22602) 733
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=5.42   B2=9.31   1987KBb (22603) 734
                                          B3=12.20
                                          B(NiHL)=11.98
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M C        K1=5.18   B2=9.10   1978MAb (22604) 735
                                          K(Ni+HL)=1.00
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=5.34   B2=9.04   1987KBb (22622) 736
                                          B(NiHL)=12.37
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=5.20   B2=10.1   1979WNb (22623) 737
                                          B(NiHL)=12.80
                                          B(NiHL2)=18.8
                                          B(NiH2L2)=25.6
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M C        K1=5.36   B2=9.79   1978MAb (22624) 738
                                          K(Ni+HL)=1.76
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=5.14        1987BPb (22650) 739
                                          K(Ni+HL)=2.80
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M C                       1978MAb (22651) 740
                                          K(Ni+HL)=1.87
--------------------------------------------------------------------------
```

```
Ni++       gl  KNO3   25°C 0.20M C                      1978MAc (22652) 741
                                      K(Ni+HL)=1.87
-------------------------------------------------------------------------------
Ni++       gl  R4N.X  20°C 0.10M U       K1=4.6         1965HFb (22653) 742
                                      K(Ni+HL)=1.8
Medium: (C3H7)4NI
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  50%  C       K1=7.33         1997MGb (22910) 743
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U       K1=7.56         1994RSa (22911) 744
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C       K1=7.12   B2=13.06  1993KKb (22912) 745
                                      B3=17.25
-------------------------------------------------------------------------------
Ni++       gl  mixed  25°C  80%  C       K1=8.74   B2=16.69  1991LMa (22913) 746
                                      B3=23.17
Medium: 80% w/w DMSO/H2O, 0.1 M KClO4
-------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 1.50M U   HM                  1989KCa (22914) 747
DH(Ni(IDA)+L)=-22.8 kJ mol-1
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.30M U  I     K1=7.50   B2=14.04  1989NSb (22915) 748
                                      K3=4.50
In 0.7 Mol EtOH/H2O:K1=9.57  K2=8.39  K3=6.27
-------------------------------------------------------------------------------
Ni++       cal oth/un 25°C  dil  C   H    K1=7.35   B2=13.54  1989OFa (22916) 749
                                      B3=17.71
Medium: NH4Cl/NH3 buffer, pH 10. DH(K1)=-36.65 kJ mol-1,
DH(B2)=-78.91, DH(B3)=-117.9.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M U    M   K1=7.08         1989RSb (22917) 750
                                      K(Ni(thiodipropanoate)+L)=6.99
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.20M U    M   K1=7.46   B2=13.71  1989RVa (22918) 751
                                      K(NiA+L)=6.63
A=bis(imidazol-2-yl)methane
-------------------------------------------------------------------------------
Ni++       gl  NaCl   20°C 2.00M U       K1=5.47   B2=11.69  1987BDa (22919) 752
                                      B3=16.76
                                      B(NiHL)=12.52
                                      K(Ni+HL)=2.35
                                      B(NiH2L2)=26.56
B(NiH3L3)=38.15; K(Ni+3HL)=7.64. Other data also given.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U  IH    K1=7.59   B2=14.08  1987GCa (22920) 753
```

```
                                        K3=4.50
In 0.8 mol dimethylacetamide/H2O: K1=10.96; K2=9.62; K3=7.80
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 3.00M C  IH    K1=7.87   B2=14.53  1987IOc (22921) 754
                                        K3=4.65
Medium: LiClO4. DH(K1)=-45.4 kJ mol-1, DS=-2 J K-1 mol-1; DH(K2)=-50.2,
DS=-41; DH(K3)=-53.6, DS=-91
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M                  1984MSb (22922) 755
                                        K(Ni(thiolactate)+L)=5.91
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C  1.0M C TIH  R K1=7.54   B2=13.94  1984PAa (22923) 756
                                        B3=18.39
IUPAC evaluation. DH(K1)=-37.7, DH(K2)=-38.5, DH(K3)=-40.5 kJ mol-1
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U        K1=7.392  B2=13.662 1984PRa (22924) 757
                                        B3=18.002
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  3.0M C  IH    K1=7.87   B2=14.53  1983IOb (22925) 758
                                        B3=19.18
Medium: LiClO4. Data for 0.1, 0.2 mole fraction dioxane/H2O. Calorimetry:
DH(K1)=-45.4 kJ mol-1, DS=-1.7; DH(K2)=-50.2, DS=-41; DH(K3)=53.6, DS=-91.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M C T HM   K1=7.61   B2=14.20  1983RKa (22926) 759
                                        B(NiAL)=7.20
HA is thiazolidine-4-carboxylic acid. DH(K1)=-39.8 kJ mol-1, DS(K1)=14
J K-1 mol-1; DH(NiAL)=-38.6, DS(NiAL)=10
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=7.48        1982KJa (22927) 760
                                        K(Ni2(CDTA)+2L)=13.59
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.50M M        K1=7.69   B2=14.39  1982MAd (22928) 761
                                        B3=18.48
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M C    M   K1=7.40   B2=13.71  1981RSd (22929) 762
                                        K(Ni(asp)+L)=6.56
                                        B(Ni(asp)L)=13.72
H2asp is aspartic acid.
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M C    M                  1981RSe (22930) 763
                                        B(Ni(ida)L)=14.76
                                        K(Ni(ida)+L)=6.58
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M                  1980MMf (22931) 764
                                        B(NiA+L)=7.38
                                        B(NiB+L)=6.35
                                        B(NiC+L)=7.44
                                        B(NiAL(gly))=17.20
H2A is oxalic acid; H2B is malonic acid; H2C is phthalic acid.
B(NiBL(gly))=14.57; B(NiCL(gly))=16.25.
```

```
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  2.5M M        K1=7.60        1979FLc (22932) 765
--------------------------------------------------------------------------------
Ni++       gl  mixed  25°C  0.3M U TI     K1=4.37   B2= 5.87  1979GSd (22933) 766
                                          B3=7.33
                                          B2=9.42 !00% H2O
                                          K1=7.48 100% H2O
                                          B3=10.68 100% H2O
In 0.1 M NaClO4 in 0.82 mol parts dimethylacetamide in H2O
for 35 C K1=4.14; B2=5.55; B3=6.91
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C   HM   K1=7.36   B2=13.52  1979SGb (22934) 767
                                          B3=17.78
--------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C 0.10M U    M                  1978KNd (22935) 768
                                          K(NiL2+CN)=7.17
                                          K((NiL2CN+CN)=3.02
                                          B(NiL2+2CN)=10.19
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U    M   K1=7.36   B2=13.52  1978SKa (22936) 769
                                          B3=17.78
--------------------------------------------------------------------------------
Ni++       sp  oth/un  3°C    ?  U T                  1976MHb (22937) 770
                                          K(Ni(RR-PMCN)+L)=3.60
RR-PMCN=N,N'-bis[2(S)-2-pyrrolidinylmethyl]-1(R),2(R)-cyclohexanediamine
--------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C    ?  U T                  1976MHb (22938) 771
                                          K(Ni(RR-PMCN)+L)=3.04
RR-PMCN=N,N'-bis[2(S)-2-pyrrolidinylmethyl]-1(R),2(R)-cyclohexanediamine
K=2.48 (48 C); 1.98 (72 C). Data also for some similar ligands
--------------------------------------------------------------------------------
Ni++       cal non-aq 25°C 100%  U   H    K1=11.7   B2=22.50  1976WVa (22939) 772
                                          K3=8.8
Medium: DMSO. DH(K1)=-70.7 kJ mol-1, DH(K2)=-45.1 and DH(K3)=-36.8
--------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 0.50M U        K1=7.36   B2=13.74  1975LMc (22940) 773
                                          B3=18.06
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C  I     K1=7.56   B2=13.85  1974MMa (22941) 774
                                          K3=4.30
Also data for 55%, 60%, 65%, 70%, 75%, 80% MeOH, 0.1M KNO3
--------------------------------------------------------------------------------
Ni++       gl  mixed  25°C  20%  C  I     K1=7.71   B2=14.11  1974MMa (22942) 775
                                          K3=4.45
Medium: 20% DMF, 0.1M KNO3. Also data for 40%, 50%, 60%, 70%, 75%, 80% DMF
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C  I     K1=7.44   B2=13.49  1974MMa (22943) 776
                                          K3=4.07
Also data for 20%, 40%, 50%, 60%, 70%, 75%, 80% Dioxan, 0.1M NaClO4
--------------------------------------------------------------------------------
```

```
Ni++       gl  NaClO4 30°C 0.15M U    M   K1=7.82        1974PBb (22944) 777
                                           B(NiL(bpy))=7.32
                                           B(NiL(phen))=7.09
-------------------------------------------------------------------------------
Ni++       gl  mixed  25°C 1.00M U TI     K1=7.40   B2=13.46  1974SHa (22945) 778
                                           K3=3.70
Medium: 0.43 mole parts of acetone in H2O; data at other ratio also given.
0.106-0.430 m.p.   In H20: K1=7.52, K2=6.36, K3=4.35
-------------------------------------------------------------------------------
Ni++       sp  R4N.X  25°C 1.50M U    M                  1973BDd (22946) 779
B((NiL2)A(CuL))=44.8, K((NiL2)2A+(CuL)2A=2(NiL2)A(CuL))=1.30. H4A=EDTA.
Medium: NH4NO3
-------------------------------------------------------------------------------
Ni++       sp  R4N.X  25°C 1.50M U    M                  1972BFd (22947) 780
                                           K(NiA+L)=4.30
                                           K(NiAL+NiL3=Ni2AL4)=2.52
Medium: NH4NO3. H4A=EDTA
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C       U        K1=7.30   B2=13.25  1972NBa (22948) 781
                                           K3=4.08
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=6.97   B2=13.15  1971GSb (22949) 782
                                           K3=4.38
-------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C 0.30M U    M                  1971KKb (22950) 783
                                           K(NiA+L)=5.84
H3A=nitrilotriethanoic acid
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K2=6.30        1970DNa (22951) 784
-------------------------------------------------------------------------------
Ni++       EMF oth/un   ?     ?  U        K1=7.63   B2=13.96  1970FAa (22952) 785
                                           K3=4.31
-------------------------------------------------------------------------------
Ni++       sp  oth/un   ?     ?  U        K1=7.62   B2=13.98  1970FAa (22953) 786
                                           K3=4.40
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.50M U  I     K1=7.36   B2=13.62  1970FRa (22954) 787
                                           K3=4.40
Media: LiClO4; 0.5 LiClO4, 54.3% MeOH: K1=7.64, K2=6.54, K3=4.60;
0.5 LiClO4, 48.1% dioxan: K1=8.18, K2=7.02, K3=5.02
-------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 0.50M U        K1=7.76   B2=14.61  1970MAg (22955) 788
                                           K3=4.78
-------------------------------------------------------------------------------
Ni++       oth oth/un   ?     ?  U        K1=7.69   B2=14.02  1969MMb (22956) 789
                                           K3=4.37
Data from survey of literature data
-------------------------------------------------------------------------------
Ni++       dis oth/un 20°C    ?  U    M   K1=7.45   B2=13.66  1968FLb (22957) 790
                                           B3=18.1
```

```
                                        B(NiL(NH3)2)=17.77
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 1.00M U    M   B2=14.06       1968FVa (22958) 791
                                        B3=18.61
                                        B(NiL(Gly))=12.55
                                        B(NiL2(Gly))=18.51
                                        B(NiL(Gly)2)=15.45
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U       K1=7.80   B2=14.01  1968HOa (22959) 792
                                        K3=4.09
Constants corrected to zero ionic strength
-------------------------------------------------------------------------------
Ni++       gl  KNO3   37°C 0.15M U    M   K1=6.982  B2=12.79  1968PSf (22960) 793
                                        K3=3.662
                                        K(NiA+L)=5.78
                                        K(NiA2+L)=3.93
                                        K(NiAL+L)=3.29
A=histamine. K(Ni(ser)+L)=6.57; K(Ni(ser)2+L)=4.99; K(Ni(ser)L+L)=4.30.
Ternary complexes with NTA and EDTA also
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.30M C   H    K1=7.49   B2=13.94  1967HWa (22961) 794
                                        K3=4.11
By calorimetry DH(K1)=-39.1 kJ mol-1, DH(K2)=-38.4, DH(K3)=-39.5
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  var  U  I                   1965NKd (22962) 795
                                        K1=7.32+0.290I
                                        K2=6.18+0.343I
                                        K3=4.11+0.409I
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 1.20M U       K1=7.55   B2=13.75  1963CAb (22963) 796
                                        K3=4.77
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C  1.0M U   H                   1960CPa (22964) 797
DG(K1)=-43.89 kJ mol-1; DH=-37.2, DS=23; DG(B2)=-80.2, DH=-76.8, DS=12;
DG(B3)=-104.9, DH=-118.5, DS=-45
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  1.0M U    M   K1=7.61   B2=14.00  1960WDa (22965) 798
                                        K3=4.35
Ternary complexes with oxalate.
-------------------------------------------------------------------------------
Ni++       gl  oth/un 10°C  ->0  U T      K1=7.74   B2=14.18  1959MBa (22966) 799
                                        K3=4.67
20 C: K1=7.52, K2=6.32, K3=4.49; 30 C: K1=7.27, K2=6.11, K3=4.20;
40 C: K1=7.04, K2=5.89, K3=4.05
-------------------------------------------------------------------------------
Ni++       gl  oth/un 10°C  ->0  U T H                   1959MBa (22967) 800
10-40 C: DG(K1)=-41.8 kJ mol-1, DH=-40, DS=8; DG(K2)=-8.3, DH=-31, DS=13;
DG(K3)=-25.50, DH=-31, DS=-38
-------------------------------------------------------------------------------
Ni++       vlt oth/un 25°C 0.10M U       K1=7.52   B2=13.80  1957MCa (22968) 801
```

K3=4.26

Ni++ gl oth/un 25°C 1.40M U K1=7.51 B2=13.86 1957PBa (22969) 802
K3=4.42

Ni++ oth oth/un 25°C 1.0M U H 1956RAa (22970) 803
DS(Ni(NH3)6+3L=NiL3+6NH3)=88 J K-1 mol-1

Ni++ gl oth/un 25°C 0.15M U H 1955CHa (22971) 804
DH(K1)=-33.0 kJ mol-1, DS=41.8 J K-1 mol-1; DH(K2)=-32.6, DS=8.4;
DH(K3)=-29, DS=-20

Ni++ gl oth/un 0°C 0.15M U T K1=7.88 B2=14.58 1955CHb (22972) 805
K3=4.78
49.1 C: K1=6.92, K2=5.75, K3=3.90

Ni++ cal KNO3 25°C 1.0M U H 1955PBa (22973) 806
DH(K1)=-37.6 kJ mol-1, DS=17.1 J K-1 mol-1; DH(B2)=-76.1, DS=9.6;
DH(B3)=-116.6, DS=-42.2

Ni++ cal KNO3 0°C 0.50M U H 1954BMa (22974) 807
DH(B3)=-104.9 kJ mol-1, DS=4.2 J K-1 mol-1

Ni++ cal KCl 25°C 0.10M U H 1954DSa (22975) 808
DH(B2)=-72.3 kJ mol-1, DS=14.2 J K-1 mol-1; DH(B3)=-117.0, DS=-58.5

Ni++ gl diox/w 30°C 75% U K1=8.2 1954UFa (22976) 809

Ni++ gl oth/un 0°C 30.0M U T K1=7.83 B2=14.44 1953MCa (22977) 810
K3=4.84
30 C: K1=7.28, K2=6.09, K3=4.20

Ni++ gl KNO3 0°C 0.50M U T K1=7.92 B2=14.69 1952BMa (22978) 811
K3=5.36
25 C: K1=7.60, K2=6.48, K3=5.03

Ni++ gl KNO3 0°C 0.50M U H 1952BMb (22979) 812
0-25 C. DH(K1)=-20.1 kJ mol-1, DS=79.4 J K-1 mol-1; DH(K2)=-18.0, DS=62.7;
DH(K3)=-20.5, DS=29.3

Ni++ gl KCl 30°C 1.0M U K1=7.45 B2=13.68 1952HAa (22980) 813
K3=4.34

Ni++ gl KCl 25°C 1.0M U K1=7.72 B2=14.08 1950EDa (22981) 814
K3=4.33

Ni++ gl KCl 30°C 1.0M U K1=7.52 B2=13.80 1945CMa (22982) 815
K3=4.26

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C2H8N4S L CAS 35771-42-7 (4227)

S-Methylisothiocarbohydrazide; H2N.N:C(S.CH3).NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.50M	U		K1=6.16 B2=11.79 B3=16.395	1972BMc (23249)	816

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=8.62 K(NiL+H)=6.96 K(NiHL+H)=4.8	1997DBb (23309)	817
Ni++	gl	KNO3	25°C	0.10M	U		K1=8.6 B(NiHL)=15.7 B(NiH2L)=20.7 B(Ni(OH))=3.3 B(Ni(OH)2)=10.7	1995DSa (23310)	818
Ni++	nmr	oth/un	25°C	?	U		K1=9.51 K(Ni+HL)=4.74 K(Ni+H2L)=2.72 B(Ni2L)=13.82	1987ASa (23311)	819
Ni++	gl	KNO3	25°C	0.10M	U		K1=5.64 K(Ni+HL)=3.80 K(Ni+H2L)=3.01	1980ZRc (23312)	820
Ni++	gl	KCl	25°C	0.10M	U		K1=9.24 K(Ni+HL)=5.14 K(2Ni+H-1L))=18.53 K(2Ni+L)=12.18 K(2Ni+HL)=7.70	1967KLa (23313)	821

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.1M	C		K1=8.32 B2=9.84 B(NiHL)=14.23 B(NiH2L)=19.01	1985MMa (23438)	822
Ni++	gl	KNO3	25°C	1.00M	M		K1=7.71 K(Ni+HL)=3.01	1982BGb (23439)	823
Ni++	gl	KCl	25°C	0.10M	U		K1=10.06	1979ZPa (23440)	824

****

C2H16N5O4Co HL (231)
Pentaammineoxalatocobalt(III); Co(NH3)5(HC2O4)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	NaClO4	28°C	0.30M	U		K1=2.14	1974NDa (23469)	825

****

C3H2N2O3 H2L (7432)
2-Cyano-2-(hydroxyimino)ethanoic acid; NC.C(:NOH)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		B2=9.67 B(NiHL2)=14.79 B(NiH-1L2)=-1.10	1998SDa (23484)	826

****

C3H3NO L Isoxazole CAS 288-14-2 (384)
Isoxazole; cyclo(-O.N:CH.CH:CH-) C3H3NO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		K1=0.28	1978KLa (23494)	827

****

C3H3NO2 HL Cyanoacetic CAS 372-09-8 (38)
Cyanoethanoic acid; NC.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	2.0M	U		K1=0.44	1981MFa (23506)	828

****

C3H3NS L Isothiazole CAS 288-16-4 (383)
Isothiazole; cyclo(-S.N:CH.CH:CH-) C3H3NS

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		K1=0.65 B2=1.60	1978KLa (23515)	829

****

C3H3NS L Thiazole CAS 288-47-1 (382)
Thiazole; cyclo(-S.CH:N.CH:CH-) C3H3NS

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		K1=1.96 B2=3.51 B3=4.68	1974LKb (23523)	830

****

C3H3N3O2 HL (7390)
2-Cyano-2-(hydroxyimino)acetamide; CNC.C(NOH).CO.NH2

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

```
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.38        1997SDb (23532) 831
                                          B(NiH-1L2)=-1.88
                                          B(NiH-2L2)=-7.72
********************************************************************************
C3H4N2                  L    Pyrazole         CAS 288-13-1  (367)
1,2-Diazole, pyrazole; cyclo(-NH.N:CH.CH:CH-)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U   HM                 1984CGa (23550) 832
                                          K(NiA2+L]=0.82
                                          K(NiA2+2L)=0.98
In 1,2-dichloroethane, HA=N,N-diethyl-N'-benzoylthiourea
When HA=piperidyl-N'-beyzoylthiourea, K values are 1.09, 1.78
--------------------------------------------------------------------------------
Ni++       vlt KNO3   25°C 0.10M C        K1=1.70   B2= 2.96  1983CRc (23551) 833
                                          K3=1.05
                                          K4=0.67
                                          K5=0.60
                                          K6=0.27
Method: polarography.
--------------------------------------------------------------------------------
Ni++       cal NaNO3  25°C  1.0M U   H    K1=0.25        1981ARd (23552) 834
DH(K1)=-21.3 kJ mol-1, DH(K2)=-12.1
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=1.79   B2=3.20   1977BBb (23553) 835
                                          B3=4.11
                                          B4=4.43
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=2.08   B2=3.80   1977LNa (23554) 836
                                          B3=5.16
                                          B4=6.18
                                          B5=6.85
                                          B6=7.20
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.20M U  I     K1=1.88   B2=3.28   1970MHb (23555) 837
                                          K3=0.90
                                          K4=0.44
                                          K5=-0.05
                                          K6=-0.52
I=0.08: K1=1.86; I=1.0: K1=1.91
********************************************************************************
C3H4N2                  L    Imidazole        CAS 288-32-4  (90)
1,3-Diazole, imidazole; C3H4N2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=2.83        2001PSb (23709) 838
--------------------------------------------------------------------------------
```

```
Ni++       gl  KNO3   35°C 0.10M C    M   K1=3.07        1999DSb (23710) 839
                                           B(NiAL)=4.04
A is thiamine hydrochloride.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1999NNa (23711) 840
                                           B(NiAL)=9.81
                                           B(NiAL2)=11.57
                                           K(NiA+L)=3.49
                                           K(NiL+A)=6.44
K(NiL2+A)=5.87. HA is nicotinic acid.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1999NNb (23712) 841
                                           B(NiHAL)=12.17
                                           B(NiAL)=7.75
                                           B(NiAL2)=10.56
                                           K(NiA+L)=4.48
K(NiL+A)=4.38, K(NiAL+L)=2.81. A is 6-aminopenicillanic acid.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U        K1=2.83        1999PGa (23713) 842
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M U        K1=2.78        1999PPa (23714) 843
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M M        K1=3.09        1998KSa (23715) 844
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U    M   K1=3.69        1998MSe (23716) 845
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.10M U        K1=2.99        1997MGa (23717) 846
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M   K1=3.30        1997PSb (23718) 847
                                           K(NiL+A)=6.72
H2A is thiamine orthophosphoric acid.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C  IH  R K1=3.03   B2=5.54   1997SJa (23719) 848
                                           K3=2.01
                                           K4=1.47
IUPAC evaluation. DH(K1)=-24.3 kJ mol-1(I=0.16).
I=0: K1=3.02, K2=2.50, K3=2.00, K4=1.46. I=3.0: 3.35, 2.74, 2.21, 1.61
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C    M   K1=3.12        1994MGb (23720) 849
                                           K(Ni(succinate)+L)=3.44
                                           K(Ni(malate)+L)=3.46
                                           K(Ni(tartrate)+L)=3.39
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.10M U        K1=2.99        1994MGc (23721) 850
Data for ternary complexes with 6-aminopenicillanic acid
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M    M   K1=3.04        1993JCa (23722) 851
                                           K(NiA+L)=2.96
HA=N,N-bis(2-hydroxyethyl)glycine (bicine)
-------------------------------------------------------------------------------
```

```
Ni++       gl  NaClO4 37°C 0.15M C    M   K1=3.37   B2=5.70   1993NAa (23723) 852
                                           B3=7.90
                                           B4=9.57
Also data for ternary complexes with cysteine, cysteic acid and penicill-
amine.
-------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U    M                 1992NDa (23724) 853
                                           K(Ni2A(S)4+2L=Ni2AL2+4S)=2.06
Medium(S): methanol. A is 3,7,15,19-tetraaza-11,23-dimethyltricyclo[19.3.1.1
(9,13)]hexacosa-1(25),9,11,13(26),21,23-hexaene-25,26-diol.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   37°C 0.15M C    M   K1=3.04   B2= 5.38  1989KKd (23725) 854
                                           B3=7.38
Data for ternary complexes with valine, glycine and alanine.
-------------------------------------------------------------------------------
Ni++       vlt KNO3   25°C 0.10M C        K1=3.18   B2= 5.78  1984CRa (23726) 855
                                           B3=8.11
                                           B4=9.30
                                           B5=10.00
                                           B6=11.74
Method: polarography. Values only approximate because of high stability.
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.15M U        K1=3.198  B2=5.250  1983ERa (23727) 856
                                           B4=10.113
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.10M U    M                 1983ERa (23728) 857
                                           B(NiL(Gly))=8.849
                                           B(NiL4(Gly))=16.846
                                           B(NiL2(Gly)2)=16.247
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=3.16   B2=5.76   1983LWa (23729) 858
                                           B3=7.76
                                           B4=9.16
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M A    M                 1982SSa (23730) 859
                                           K(Ni(ATP)+L)=2.44
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M A    M   K1=3.03       1982SSa (23731) 860
                                           K(Ni(ATP)+L)=2.44
                                           K(NiA+L)=2.63
A=uridine-5'-triphosphate
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 1.00M C        K1=3.106  B2=5.541  1979FOa (23732) 861
                                           B3=7.44
                                           B4=8.81
                                           *K(NiL)=-9.26
                                           *K(NiL3)=-9.47
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M C        K1=2.890  B2= 5.14  1979KBf (23733) 862
                                           B3=6.882
```

B4=7.967

Ni++ gl alc/w 25°C 0.24M U T K1=3.79 1979SKc (23734) 863

Medium: 0.24 M NaClO4 in 0.9 mol parts EtOH in H2O;
For 15 C K1=3.94; for 35 C K1=3.65; Als data for 0.5 mol parts EtOH

Ni++ gl NaClO4 25°C 3.00M C M 1978FOa (23735) 864
B(NiLCl)=3.16
B(NiL2Cl)=5.48
B(NiL3Cl)=8.29
B(NiL2Cl2)=5.70

B(NiL4Cl2)=10.17. Combined potentiometric and spectrophotometric method

---

Ni++ gl NaClO4 25°C 0.16M U T K1=3.20 1978SPc (23736) 865

Ni++ gl NaClO4 25°C 3.00M C M K1=3.344 B2=6.087 1975FSa (23737) 866
B3=8.31
B4=9.92
*K(NiL)=-5.85

Ni++ gl NaCl 25°C 3.00M C M K1=3.250 B2=5.852 1975FSa (23738) 867
B3=7.86
B4=9.08
*K(NiL)=-6.04

Ni++ gl NaClO4 25°C 0.50M C TIH K1=3.034 B2=5.517 1974LVa (23739) 868
B5=12.328

Ni++ ISE R4N.X 29°C 0.50M U K1=3.02 B2=5.45 1971BLb (23740) 869
B3=7.5
B4=9.1
B5=10.2
B6=10.7

Medium: NH4NO3

Ni++ gl NaClO4 25°C 0.10M U M K1=2.94 1968ISa (23741) 870
K(Ni(NTA)+L)=3.01
K(Ni(NTA)L+L)=1.57
K(Ni(EDTA)+L)=2.23

Ni++ gl KNO3 25°C 0.16M U H K1=3.09 B2=5.56 1966SKc (23742) 871
K3=2.00
K4=1.54
K5=1.1
K6=0.5

10-50 C:DH(K1)=-21.7 kJ mol-1,DS=-12 J K-1 mol-1;DH(K2)=-19.2,DS=-17; DH(K3)
=-17.5,DS=-22; DH(K4)=-16,DS=-20; DH(K5)=-12,DS=-25; DH(K6)=-12,DS=-29

Ni++ gl KNO3 25°C 0.20M U K1=3.01 1963CCb (23743) 872

Ni++ gl KNO3 25°C 0.15M U K1=3.27 B2=5.95 1955LCa (23744) 873
K3=2.15
K4=1.65
K5=1.12
K6=0.52

Ni++ gl KCl 0°C .135M U T K1=3.36 B2=6.15 1955MAb (23745) 874
K3=2.24
K4=1.3
25 C: K1=2.94, K2=2.41, K3=1.99, K4=1.3
****
C3H4N2O2 HL Hydantoin CAS 461-72-3 (389)
2,4-Imidazolidinedione;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M U H K1=3.33 B2= 5.11 1979BEc (23941) 875
B3=6.09
By calorimetry: DH(K1)=-11.7 kJ mol-1, DS(K1)=25 J K-1 mol-1;
DH(B2)=-28.9, DS(B2)=0.8; DH(B3)=-29.
****
C3H4N2S L CAS 95-50-4 (821)
2-Aminothiazole; C3H2NS.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M U K1=1.45 B2=2.50 1982GKa (23954) 876
B3=3.12

Ni++ gl KNO3 25°C 0.10M U T H K1=2.19 1978BBd (23955) 877
Data for 30, 35 and 40 C. DH(K1)=-23 kJ mol-1, DS(K1)=-34 J K-1 mol-1.
****
C3H4N2S HL Imidazolethiol CAS 872-35-5 (1823)
2-Mercaptoimidazole; C3H3N2.SH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U K1=5.36 B2=10.00 1977STc (23966) 878
****
C3H4O2 HL Malondialdehyde (4232)
Malondialdehyde; (O:)CH.CH2.CHO

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF KCl 25°C 0.10M U K1=2.07 1972OSa (23979) 879
****
C3H4O2S2 H2L CAS 60925-37-3 (2979)
Dithiomalonic acid; HSOC.CH2.COSH

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

```
--------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C .001M U        K1=8.63        1958DEa (24006) 880
********************************************************************************
C3H4O3                 HL    Pyruvic acid     CAS 127-17-3  (1152)
2-Oxopropanoic acid; CH3.CO.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 2.00M U        K1=0.73   B2=0.81   1980MKb (24027) 881
--------------------------------------------------------------------------------
Ni++       sol KCl    25°C 0.50M U    M   K1=1.12   B2=0.46   1966LHb (24028) 882
Ternary complexes with glycine, sarcosine, b-alanine, isoleucine, alanine
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.65M U T      K1=1.15        1964LSa (24029) 883
At 10 C: K1=1.40
********************************************************************************
C3H4O4                 H2L    Malonic acid     CAS 141-82-2  (79)
Propanedioic acid; CH2(COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=3.92   B2= 6.84  1998KRa (24269) 884
                                          B(NiLA)=8.47
HA: inosine.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M   K1=3.51        1997PSb (24270) 885
                                          K(NiL+A)=5.35
H2A is thiamine orthophosphoric acid.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M   K1=4.583       1993AHa (24271) 886
--------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C 0.10M U        K1= 3.28  B2= 5.45  1992URa (24272) 887
                                          B(NiHL)=7.17
                                          K(Ni+HL)=1.85
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.50M C        K1=2.74        1989FRa (24273) 888
--------------------------------------------------------------------------------
Ni++       con none   20°C  0.0  U                       1986KIa (24274) 889
                                          K1=1.09 (0.1 MPa)
                                          K1=1.05 (20 MPa)
                                          K1=1.02 (40 MPa)
                                          K1=0.96 (60 MPa)
K1=0.90 (80 MPa) and K1=0.84 (100 MPa).
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M C    M   K1=3.17        1981RSd (24275) 890
                                          K(Ni(asp)+L)=2.06
                                          B(Ni(asp)L)=9.22
H2asp is aspartic acid.
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M C    M   K1=3.17        1981RSe (24276) 891
```

B(Ni(ida)L)=10.20
K(Ni(ida)+L)=2.02

Ni++ gl NaClO4 30°C 0.10M U K1=3.96 1978JSc (24277) 892

Ni++ gl diox/w 25°C 50% C I K1=5.70 B2=8.93 1978RZa (24278) 893
K3=2.5
Data available for 10 to 50% v/v dioxan/H2O

Ni++ vlt NaClO4 25°C 1.00M U 1975TQa (24279) 894
K(Ni+HL)=0.54

Ni++ sp oth/un 25°C ? U I K1=3.98 1974UYa (24280) 895
Data also given for dioxan/H2O mixtures to 0.064 mole fraction

---

Ni++ kin none 25°C 0.00 U K1=4.48 1972HAa (24281) 896
Method: pressure jump

Ni++ gl NaClO4 25°C 0.10M U K1=3.29 1970OVa (24282) 897

Ni++ gl KNO3 25°C 0.10M U K1=3.27 B2=4.94 1969PJb (24283) 898

Ni++ gl NaClO4 25°C 0.10M U K1=3.29 1968OVa (24284) 899
K(Ni+HL)=1.04

Ni++ gl NaClO4 20°C 0.10M U K1=3.30 1963CAa (24285) 900
K(Ni+HL)=1.41

Ni++ gl NaClO4 25°C 0.20M U I K1=3.02 1962BNa (24286) 901
K1=4.102(0 corr), 4.097(I=0), 3.516(I=0.03), 3.393(I=0.05), 3.196(I=0.10), 3.090(I=0.15)

Ni++ gl oth/un 0°C ->0 U T H K1=4.02 1961NNa (24287) 902
DH(K1)=7.5 kJ mol-1, DS=104 J K=1 mol-1. K1=4.04(15 C), 4.10(25 C), 4.14(35 C), 4.20(45 C)

Ni++ sp oth/un 25°C 0.10M U K1=3.2 1960YYa (24288) 903

Ni++ EMF oth/un 25°C 0.04M U K1=4.00 1949SDa (24289) 904

Ni++ con oth/un 25°C ->0 U K1=3.72 1935DAa (24290) 905

Ni++ con oth/un ? ->0 U K1=4.14 1932MDa (24291) 906

****

C3H4O5 H2L Tartronic acid CAS 80-69-3 (839)
Hydroxypropanedioic acid; HO.CH(COOH)2

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

---

Ni++ con none 20°C 0.0 U 1986KIa (24607) 907

```
                                        K1=0.83 (0.1 MPa)
                                        K1=0.77 (20 MPa)
                                        K1=0.73 (40 MPa)
                                        K1=0.69 (60 MPa)
K1=0.61 (80 MPa) and K1=0.58 (100 MPa).
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 20°C 0.10M U       K1=3.45        1963CAa (24608) 908
                                        K(Ni+HL)=2.10
********************************************************************************
C3H5NO3              H2L                    (7332)
2-Hydroxyiminopropanoic acid; CH3.C(:NOH).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C       B2=13.49       1997SJb (24663) 909
                                        B(NiH2L2)=28.86
                                        B(NiHL2)=23.66
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U       K1=6.0         1956ARd (24675) 910
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U       K1=1.24        1982GLa (24680) 911
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U       K1=0.76        1982GLa (24686) 912
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       oth oth/un 25°C 0.00  U       K1=1.38        1976HYa (24725) 913
Method: laser temperature jump
********************************************************************************
C3H6                   L    Propylene       CAS 115-07-1  (702)
Propene; CH3.CH:CH2
--------------------------------------------------------------------------------
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	dis	none	40°C	0.0	U	T	K1=-1.21	1984DWa (24750)	914

****

C3H6N2O2 HL (7333)

2-Hydroxyiminopropanamide; CH3.C(:NOH).CONH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=4.82 B2=9.21 B(NiH-1L2)=1.57 B(NiH-2L2)=-8.97	1997SJb (24775)	915

****

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
Ni++	gl	KNO3	25°C	0.50M	U		K1=1.84 B2=4.81 B3=3.82 B4=5.92	1983GWa (24786)	916
Ni++	gl	KCl	25°C	0.10M	U		K1=2.07 K(Ni+H-1L)=4.02 K(Ni+2H-1L)=7.23	1981BDb (24787)	917

****

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
Ni++	gl	diox/w	25°C	50%	U		K1=9.6 B2=18.8	1958BPa (24799)	918

****

C3H6N2O3 H2L (7445)

2-(Hydroxyimino)propanohydroxamic acid; CH3C(:NOH)CONHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		B2=22.16 B(NiHL2)=27.48 B(NiH-1L2)=10.56 B(NiH2L2)=32.71	1999DDa (24822)	919
Ni++	gl	KNO3	25°C	0.10M	C		B2=22.16 B(NiH2L2)=32.71 B(NiHL2)=27.48 B(NiH-1L2)=10.56	1998DFa (24823)	920

****

C3H6O L Acetone CAS 67-64-1 (1912)

Propan-2-one, acetone; CH3.CO.CH3

```
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  non-aq 20°C 100%  U T HM                  1988LJa (24852) 921
                                        K(NiAB+2L)=-1.51
                                        K(NiAC+2L)=-0.98
                                        K(NiAD+2L)=-0.51
Medium: 1,2-dichlorethane;  Square planar = octahedral equilibria
A:tetramethylendiamine B:acetylacetone C:benzoylacetone D:dibenzoylmethanat
*******************************************************************************
C3H6OS2                HL    Xanthic acid     CAS 151-01-9  (590)
(Ethoxy)dithiomethanoic acid; CH3.CH2O.CSSH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       cal non-aq 30°C 100%  U    M                  1971DGb (24864) 922
                                        K(NiL2+2py)=3.23
Medium: benzene
-------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C  75%  U        B2=7.74        1970BPd (24865) 923
Medium: 75% MeOH, 0.3 M NaClO4
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U  I M                  1970NYa (24866) 924
                                        K(NiL2+2A)=-0.81
                                        K(NiL2+2py)=3.32
                                        K(NiL2+2B)=0.16
                                        K(NiL2+bpy)=5.31
Medium: benzene. K(NiL2+2C)=3.57. A=a-picoline, B=quinoline, C=b-picoline
Values for K(NiL2+2py) in CCl4: 3.08; CHCl3: 2.73; EtOH: 2.35
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       oth NaClO4 25°C  2.0M U        K1=0.81        1990FTa (24942) 925
Methods: averaged results from potentiometric, polarographic and
spectrophotometric measurements.
-------------------------------------------------------------------------------
Ni++       oth oth/un 25°C 0.00  U        K1=1.48        1976HYa (24943) 926
Method: laser temperature jump
-------------------------------------------------------------------------------
Ni++       vlt oth/un 25°C 1.00M U        K1=0.85   B2=1.40   1971TRc (24944) 927
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 1.00M U        K1=0.88        1971TRc (24945) 928
-------------------------------------------------------------------------------
Ni++       EMF NaClO4 25°C 2.00M U        K1=0.73   B2=0.96   1970FMa (24946) 929
                                        B3=0.97
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 2.00M U        K1=0.86   B2=1.26   1970GFa (24947) 930
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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
Ni++	gl	NaClO4	25°C	0.20M	U	T M	K1=7.31 K(NiA+L)=6.78	B2=14.29	1996JOa (25111)	931

Data for 35 and 45 C. A is 2,2'-bipyridylamine.

Ni++	gl	NaClO4	30°C	0.10M	U		K1=6.65	B2=12.80	1988NDa (25112)	932
Ni++	gl	NaClO4	25°C	0.10M	U	M	K(NiL+dientriamine)=7.54		1985MSa (25113)	933
Ni++	gl	NaClO4	30°C	0.20M	U	M	K1=7.31 K(Ni(his)+L)=6.41 K(Ni(nta)+L)=4.59		1984JOa (25114)	934
Ni++	gl	NaClO4	25°C	0.10M	U	M	K1=5.88 K(NiL+en)=5.91	B2=13.52	1984MSb (25115)	935
Ni++	kin	KNO3	25°C	0.50M	U		K(Ni+HL)=1.75		1981CKc (25116)	936
Ni++	cal	KNO3	25°C	0.50M	U	H	K1=6.052 B(Ni3L4)=30.71	B2=13.144	1975BGa (25117)	937

DH(B2)=-0.8 kJ mol-1, DS(B2)=247 J mol-1 K-1, DH(Ni3L4)=-33.5, DS=472

Ni++	EMF	NaClO4	20°C	0.10M	U	T	K1=5.66	B2=13.35	1972SSd (25118)	938

30 C: K1=6.03, K2=7.65; 40 C: K1=6.28, K2=7.52

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		B(Ni5L10)=64.54 B(Ni6L12)=78.94 B(Ni6L9)=63.58 B(Ni6L10)=67.80		1976BCa (25193)	939
Ni++	gl	KNO3	20°C	0.10M	U	T	K1=5.39	B2=10.58	1969SGf (25194)	940

K1(30 C)=5.49, K2(30 C)=5.25; K1(40 C)=5.59, K2(40 C)=5.34
Conductivity also used.

****

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
Ni++	gl	NaClO4	25°C	2.00M	U		K1=0.96 B3=1.56	B2=1.30	1976KGa (25251)	941
Ni++	sp	NaClO4	25°C	2.00M	U		K1=0.77	B2=1.32	1972SSa (25252)	942

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
Ni++	EMF	NaClO4	25°C	1.0M	C	TIH R	K1=1.65	B2= 2.90	2003PLa (25342)	943

IUPAC Recommended values. Data for metal complexes of all aliphatic hydroxycarboxylic acids evaluated critically

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	30°C	0.20M	U	M	K1=5.01 K(Ni(bpy)+L)=5.12 K(Ni(his)+L)=4.07		1988JOa (25343)	944
Ni++	con	none	20°C	0	U		K1=2.19		1983ISd (25344)	945

At 200 kg cm-1 K1=2.10, at 600 kg cm-2 K1=1.96, at 1000 kg cm-2 K1=1.86

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	2.00M	U		K1=1.71 B3=3.50	B2=2.84	1976KGa (25345)	946
Ni++	gl	NaClO4	30°C	0.20M	U		K1=5.01	B2=9.60	1975JBb (25346)	947
Ni++	kin	oth/un	var	var	U	T	K1=2.18		1973HTa (25347)	948

Method: pressure jump. 10 C, K1=2.20; 30 C, K1=2.18

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	NaClO4	25°C	2.00M	U		K1=1.57	B2=2.94	1972SSa (25348)	949
Ni++	oth	oth/un	25°C	0.20M	U		B2=1.89		1968BVa (25349)	950

Method: circular dichroism.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	EMF	NaClO4	25°C	1.0M	U		K1=1.59 K3=0.3	B2=2.67	1967TGa (25350)	951

Method: quinhydrone electrode

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	con	oth/un	25°C	?	U		K1=2.216		1954EMa (25351)	952

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
Ni++	sp	NaClO4	25°C	2.00M	U		K1=1.32 B3=3.00	B2=2.38	1975PGa (25622)	953

C3H7NO L DMF CAS 68-12-2 (598)
N,N-Dimethylformamide; HCO.N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	M	K(Ni(acac)A+L)=1.21 K(Ni(acac)AL+L)=2.05 K(Ni(bzac)A+L)=1.23 K(Ni(bzac)AL+L)=2.70	1994LTa (25646)	954

A:N,N'-tetramethyl-1,2-diaminoethane; bzac:benzolyacetone. Medium: nitro-methane. Also data for other diones and amines.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	HM	K(NiA+L)=-0.097	1992REb (25647)	955

Medium: Nitromethane/0.1 M NaClO4. A is 1,4,8,11-Tetramethyl-1,4,8,11-Tetra-azacyclotetradecane. DH=-16.2 kJ mol-1, DS=-34.4 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	H	K(NiA+L)=1.0	1984LHa (25648)	956

Medium: DMF. A=1,4,8,11-tetramethyl-1,4,8,11-tetraazacyclotetradecane
DH(NiAL)=-12.8 kJ mol-1; DS(NiAL)=-24.1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	T	K(NiR+L=NiRL)=0.18	1984MSa (25649)	957

trans complex; R=1,4,8,11-tetramethyl-1,4,8,11-tetra-azacyclotetradecane
Medium: DMF

****

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
Ni++	gl	alc/w	25°C	40%	C		K1=11.30 B2=15.35 B(NiHL)=6.22	2003DKa (25944)	958

Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	U		K1=5.75	1997ISd (25945)	959
Ni++	gl	KNO3	35°C	0.10M	C	M	K1=5.26 K(NiL+A)=4.76	1997PSb (25946)	960

H2A is thiamine orthophosphoric acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.20M	U	T HM	K1=5.38 K(Ni(bpy)+L)=5.00	1996JLd (25947)	961

Data for 25-45 C. DH(K1)=-3.4 kJ mol-1, DS(K1)=3.4 J K-1 mol-1;
DH(Ni(bpy)L)=-8.8, DS(Ni(bpy)L)=123.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.20M	U	T M	K1=5.55 B2=10.08 K(NiA+L)=5.28	1996JOa (25948)	962

Data for 35 and 45 C. A is 2,2'-bipyridylamine.

Ni++ gl alc/w 20°C 50% M M K1=5.93 1995AMb (25949) 963
K(NiA+L)=5.29

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

Ni++ gl KNO3 30°C 0.10M U K1=5.56 1994RSa (25950) 964

Ni++ gl NaClO4 25°C 0.20M C K1=5.77 1993BAb (25951) 965

Ni++ gl KCl 25°C 0.20M C M 1993BCf (25952) 966
K(NiA+(S)-L)=18.37
K(NiA+(R)-L)=18.54

A: N,N'-bis[(2S)-pyrrolidine-2-yl]propane-1,3-diamine.

Ni++ gl KCl 25°C 0.20M C K1=5.32 B2=9.74 1993FBa (25953) 967
B3=12.80
B(NiH-1L2)=-1.79

Ni++ gl NaClO4 25°C 0.20M U T M K1=5.55 B2=10.08 1993PPa (25954) 968
K(NiA+L)=5.28

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Ni++ gl KCl 25°C 0.10M C IH R K1=5.41 B2=9.89 1993SKa (25955) 969
B3=12.99

IUPAC evaluation. DH(K1)=-15 kJ mol-1,DH(B2)=-33. All T
At I=0:K1=5.87,B2=10.56. Recommended: I=1.0:K1=5.40, B2=9.92, B3=13.04

Ni++ gl KNO3 35°C 0.10M U K1=5.32 1990RSe (25956) 970

Ni++ gl KNO3 25°C 0.10M C M K1=5.45 1989MAd (25957) 971
K(NiA+L)=4.75
B(NiAL)=12.77

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

Ni++ gl KNO3 35°C 0.20M U M K1=5.60 B2=9.70 1989RVa (25958) 972
K(NiA+L)=5.07

A=bis(imidazol-2-yl)methane

Ni++ gl KNO3 25°C 0.20M U M K1=5.83 1988BSc (25959) 973
K(Ni(bpy)+L)=5.37

Ni++ gl NaClO4 30°C 0.20M U M K1=5.54 1988JOa (25960) 974
K(Ni(bpy)+L)=5.14
K(Ni(his)+L)=4.64

Ni++ gl NaClO4 27°C 0.20M U M K1=5.55 B2=10.08 1988PPc (25961) 975
K(NiA+L)=4.93

A is 2,2'-dipyridylamine.

```
Ni++       gl  KNO3   30°C 0.10M U   H    K1=5.35        1986DRb (25962) 976
Data for 30-50 C. DH(K1)=-11.5 kJ mol-1, D(K1)=-64.5 J K-1 mol-1.
-------------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M U    M                  1986XHa (25963) 977
                                       B(NiL(His))=12.60
                                       B(NiL2(His))=14.51
-------------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M U    M   K1=5.261  B2=9.567  1985CFb (25964) 978
                                       B3=12.36
B(NiL(His))=12.60; B(NiL2(His))=14.51
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U    M   K1=5.05        1984JOa (25965) 979
                                       K(Ni(his)+L)=4.64
                                       K(Ni(nta)+L)=4.72
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M                  1984KDb (25966) 980
                                       K(Ni(DOPA)+L)=4.72
                                       B(NiHL(DOPA))=24.62
                                       K(Ni(Dopamine)+L)=4.31
                                       B(NiHL(Dopamine))=23.68
K(NiA+L)=4.58, B(NiHLA)=22.84;  K(NiB+L)=4.47, B(NiHLB)=23.31
A=Noradrenaline, B=Adrenaline, H3DOPA=3,4-dihydroxyphenylalanine
-------------------------------------------------------------------------------
Ni++       sp  KCl    25°C  1.0M U        K1=5.96   B2=10.66  1983FAa (25967) 981
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M C T HM   K1=5.35   B2= 9.67  1983RKa (25968) 982
                                       B(NiAL)=4.91
HA is thiazolidine-4-carboxylic acid. DH(K1)=-11.5 kJ mol-1, DS(K1)=65
J K-1 mol-1; DH(K2)=-20.3, DS(K2)=16; DH(NiAL)=-7.1, DS(NiAL)=71
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=5.50   B2=10.16  1980OFa (25969) 983
                                       K3=3.29
                                       B(NiL(ATP))=8.10
                                       K(Ni(ATP)+L)=5.49
                                       K(NiL+ATP)=2.60
-------------------------------------------------------------------------------
Ni++       cal NaClO4 25°C  1.0M C   HM T K1=5.39   B2=9.92   1979EBb (25970) 984
                                       B3=13.06
DG(K1)=-30.78 kJ mol-1, DH=-16.8, DS=46.8 J K-1 mol-1; DG(B2)=-56.60,
DH=-37.3, DS=64.6; DG(B3)=-74.53, DH=-56.6, DS=60.1. Also Ni(Gly)(Ala) etc.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M M    M   K1=5.96   B2=10.66  1978MSi (25971) 985
                                       K(Ni(his)+L)=4.78
                                       B(Ni(his)L)=13.47
                                       K(Ni(his)+OH+L)=8.14
-------------------------------------------------------------------------------
Ni++       gl  oth/un 30°C    ?  U    M                  1977JOa (25972) 986
                                       K(Ni(His)+L)=4.65
                                       K(NiA+L)=4.59
H2A=iminodiethanoic acid
```

```
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C  1.0M C        K1=5.16   B2= 9.50  1976BOd (25973) 987
                                        B3=12.35
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U        K1=5.54   B2=10.07  1975JBb (25974) 988
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U   H    K1=5.32   B2= 9.74  1975SGc (25975) 989
By calorimetry: DH(K1)=-16.8 kJ mol-1, DS(K1)=45.2 J K-1 mol-1;
DH(B2)=-36.3, DS(B2)=62.8. Ligand is the DL-amino acid.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U   H    K1=5.32   B2= 9.74  1974SGb (25976) 990
By calorimetry, DH(K1)=-16.9 kJ mol-1, DS(K1)=45.2 J K-1 mol-1;
DH(K2)=-36.3, DS(K2)=62.3.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U    M                  1973MSb (25977) 991
                                        B(NiL(Val))=10.24
                                        B(NiL(Val)2)=13.42
                                        B(NiL2(Val))=13.38
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.05M U    M T K1=5.48   B2=10.01  1972GSc (25978) 992
                                        B(NiL(Thr))=10.37
                                        B(NiL(Phe))=10.11
                                        B(NiHL(Tyr))=10.10
                                        B(NiL(Gly))=10.72
B(NiLA)=10.24; B(NiLB)=10.26, B(NiL(Ser))=10.29. HA=a-aminobutanoic acid,
HB=norleucine
-------------------------------------------------------------------------------
Ni++       gl  none   25°C 0.00  U T    T K1=5.832  B2=10.48  1971GKa (25979) 993
K1(35 C)=5.744; K2(35 C)=4.549.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.05M U T H  T K1=5.463  B2=9.93   1971GKa (25980) 994
K1(35 C)=5.375, K2(35 C)=4.376
DH(K1)=-14.2 kJ mol-1, DH(K2)=-16.3, DS(K1)=59 J K-1 mol-1, DS(K2)=33
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  dil  U        K1=5.85   B2=10.34  1970CBb (25981) 995
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U    M R K1=5.39   B2=9.91   1970MMa (25982) 996
                                        B3=13.05
                                        B(NiL(Gly))=10.67
                                        B(NiL(Gly)2)=14.25
                                        B(NiL2(Gly))=14.10
-------------------------------------------------------------------------------
Ni++       gl  oth/un 40°C  0.0  U T H  T K1=5.69   B2=10.19  1967AGa (25983) 997
K1=5.93(10 C),5.81(25 C); K2=4.87(10 C),4.73(25 C). DH(K1)=-13.4 kJ mol-1,
DS=66.5 J K-1 mol-1; DH(K2)=-21.3, DS=19.6
-------------------------------------------------------------------------------
Ni++       cal oth/un 25°C  0.0  U T H                  1967AGa (25984) 998
DH(K1)=-14.2 kJ mol-1(10 C),-13.79(25 C),-15.01(40 C);DS=63.1 J K-1 mol-1,
64.8,64.4(10,25,40 C).DH(K2)=-19.2,-16.3,-10.8(10,25,40 C),DS=22.7,36.4,47.7
-------------------------------------------------------------------------------
```

```
Ni++       oth NaClO4 25°C 0.50M U      T K1=5.40   B2=9.55   1967RPd (25985) 999
                                          K3=3.17
Method: optical rotation
-------------------------------------------------------------------------------
Ni++       cal KNO3   22°C 0.10M U   HM                  1967SSl (25986)1000
DH(B2)=-29.3 kJ mol-1, DS(B2)=92.0 J K-1 mol-1. Ternary complexes with Gly
and solochrome violet R
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M U    M T K1=5.31   B2=9.73   1966LHc (25987)1001
                                          B3=12.73
                                          B(NiAL)=7.14
                                          K(NiBL)=7.56
                                          B(NiAL2)=11.6
HA=pyruvic acid, HB=glyoxalic acid. B(NiBL2)=12.30, B(NiA2L2)=14.03,
B(NiB2L2)=13.75
-------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.37M U      T K1=5.22   B2=9.91   1966SWa (25988)1002
-------------------------------------------------------------------------------
Ni++       gl  KCl    40°C 0.20M U T H  T K1=5.38   B2=9.66   1965SMb (25989)1003
K1=5.65(15 C), 5.53(25 C); K2=4.57(15 C), 4.45(25 C). DH(K1)=18.4 kJ mol-1,
DS=41.8 J K-1 mol-1, DH(K2)=-20.1, DS=16.7
-------------------------------------------------------------------------------
Ni++       oth KNO3   20°C 0.10M U        K1=6.0    B2=10.30  1964JOa (25990)1004
                                          K3=2.9
Method: paper electrophoresis
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  1.0M U      T K1=5.40   B2=9.91   1964MPb (25991)1005
                                          B3=13.02
-------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U      T K1=5.40   B2=9.90   1963IPa (25992)1006
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  ->0  U        K1=5.96   B2=10.66  1951MOa (25993)1007
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C TIH  T K1=4.55   B2=7.85   1993SKa (26394)1008
                                          B3=9.62
IUPAC evaluation. DH(B2)=-25.5 kJ mol-1(T)
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.50M C      T K1=4.544  B2=7.663  1986GGa (26395)1009
                                          B(NiH-1L)=-4.70
                                          B(NiH-1L2)=-2.31
-------------------------------------------------------------------------------
Ni++       oth NaNO3  35°C 0.10M U    M                  1985VSa (26396)1010
                                          K(Ni(NTA)+L)=4.95
By electrophoresis
-------------------------------------------------------------------------------
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```
Ni++       gl  NaNO3  30°C 0.20M C    M   K1=4.64   B2= 7.97  1981RSd (26397)1011
                                          K(Ni(asp)+L)=3.68
                                          B(Ni(asp)L)=10.84
H2asp is aspartic acid.
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M C    M   K1=4.64   B2= 7.97  1981RSe (26398)1012
                                          B(Ni(ida)L)=11.85
                                          K(Ni(ida)+L)=3.67
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.10M U        K1=4.68   B2=7.95   1978LEb (26399)1013
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 1.00M C      T K1=4.45   B2=7.75   1976BOb (26400)1014
                                          B3=9.95
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=4.50   B2=7.78   1976DOa (26401)1015
                                          B3=9.7
B(NiL(bpy))=11.99; B(NiL2(bpy))=17.13; B(NiL(bpy)2)=13.48
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  dil  U        K1=5.28        1970CBb (26402)1016
-------------------------------------------------------------------------------
Ni++       oth oth/un 45°C  0.0  U T HM T K1=4.86        1967BBd (26403)1017
Method: H electrode. K1=5.22(0 C),5.08(15 C),4.99(25 C),4.92(35 C). DH(K1)=
-14.5 kJ mol-1. By calorimetry,25 C: DH(K1)=-15.9,DS=42.6. See Solochrome VR
-------------------------------------------------------------------------------
Ni++       cal KNO3   22°C 0.10M U   H                   1967SSl (26404)1018
DH(B2)=-25.5 kJ mol-1, DS=66.5 J K-1 mol-1
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M U    M T K1=4.46   B2=7.84   1966LHb (26405)1019
                                          B3=9.55
                                          B(NiAL)=8.34
                                          B(NiAL2)=11.95
                                          B(NiA2L2)=15.17
HA=pyruvic acid
-------------------------------------------------------------------------------
Ni++       gl  KCl    40°C 0.20M U T H  T K1=4.65   B2=7.89   1965SMb (26406)1020
K1=4.80(15 C),4.71(25 C); K2=3.54(15 C),3.41(25 C)
DH(K1)=-16.7 kJ mol-1, DS=33.4 J K-1 mol-1; DH(K2)=-20.9, DS=-4.2
-------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U      T K1=4.63   B2=8.03   1954IRa (26407)1021
*******************************************************************************
C3H7NO2                HL    DL-Alanine       CAS 302-72-7  (189)
DL-2-Aminopropanoic acid; H2N.CH(CH3).COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       nmr KNO3   25°C  1.0M U   H    K1=5.58   B2=10.05  1992ZSa (26522)1022
                                          B3=13.20
Also methods used: potentiometry, spectrophotometry
-------------------------------------------------------------------------------
Ni++       gl  KNO3   37°C 0.15M C    M   K1=5.18   B2= 9.46  1989KKd (26523)1023
```

B3=12.24
B(Ni(imidazole)2L)=10.29
B(Ni(imidazole)2L2)=14.04

Ni++ gl NaNO3 30°C 0.20M C M K1=5.51 B2= 9.98 1981RSd (26524)1024
K(Ni(asp)+L)=4.32
B(Ni(asp)L)=11.48

H2asp is aspartic acid.

Ni++ gl KCl 25°C 0.20M C M 1979KGa (26525)1025
B(NiHLA)=23.68
B(NiLA)=13.32

H2A=dopamine.

Ni++ gl diox/w 25°C 20% U K1=5.71 B2=10.51 1977GKa (26526)1026
B3=13.91

In 35%:K1=6.01, B2=11.06, B3=14.67; 50%:6.48, 11.98, 16.03; 65%:6.85, 12.71, 17.13

Ni++ gl alc/w 25°C 20% U K1=5.62 B2=10.30 1977GKa (26527)1027
B3=13.51

In 40% MeOH/H2O: K1=5.92, B2=10.87, B3=14.27; 60%:6.27, 11.53, 15.25; 75%: 6.54, 12.06,16.09

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C3H7NO2 L Methylglycinate CAS 616-34-3 (1738)

Glycine methyl ester; NH2.CH2.COOCH3

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

---

Ni++ gl KNO3 25°C 0.10M C M 1977NPa (26552)1028
K(Ni(Tren)+L)=1.48
K(Ni(Trien)+L)=1.42
K(Ni(EDDA)+L)=1.54

Where Tren= 2,2',2''-Triaminotriethylamine, Trien=triethylenetetramine

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Ni++ gl oth/un 25°C 0.15M U K1=2.45 1956WMb (26553)1029

****

C3H7NO2 HL Sarcosine CAS 107-97-1 (87)

N-Methyl-2-aminoethanoic acid; CH3.NH.CH2.COOH

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

---

Ni++ gl NaClO4 21°C 0.10M M I K1=5.42 B2=9.87 1985LWb (26583)1030

Values in 50% methanol-water (v/v) are also given.

Ni++ gl KNO3 25°C 0.10M C M K1=5.39 B2=9.75 1976DOa (26584)1031
B3=12.6

B(NiL(bpy))=11.90; B(NiL2(bpy))=18.30; B(NiL(bpy)2)=16.56

Ni++ gl KNO3 25°C 0.10M U M 1972IVc (26585)1032

K(NiA+L)=4.63

H2A=methyliminodiethanoic acid

Ni++ gl KCl 25°C 0.50M U M K1=5.24 B2=9.54 1966LHb (26586)1033
B3=12.4
B(NiAL)=5.97
B(NiAL2)=7.8
B(NiA2L2)=8.7

HA=pyruvic acid

Ni++ gl oth/un 25°C 0.01M U K1=5.42 B2=9.90 1959DLb (26587)1034

Ni++ gl NaClO4 25°C 0.10M U K1=5.50 B2=9.88 1954BCb (26588)1035

****

C3H7NO2 HL (6927)

N-Methylacetohydroxamic acid; CH3.CO.N(OH)CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=4.73	B2= 8.27	2000FEc (26616)	1036
							B(NiH-1L2)=-3.2			

****

C3H7NO2 HL (7502)

Propanohydroxamic acid; C2H5CONHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=5.24	B2= 9.51	2000FEc (26628)	1037
							B3=12.34			
							B(NiH-1L2)=-0.76			
							B(NiH-1L)=-3.78			

****

C3H7NO2S H2L Cysteine CAS 52-90-4 (96)

2-Amino-3-mercaptopropanoic acid; H2N.CH(CH2.SH)COOH

Ni++ gl NaClO4 37°C 0.15M U M 2000NNb (26693)1038
B(NiAL)=13.54
B(NiHAL)=18.17
B(NiH-1AL)=4.58
K(NiHA+L)=9.28

K(NiA+L)=9.96, K(NiL+A)=4.40, K(NiH-1A+L)=9.22. HA is ampicillin.

Ni++ gl NaClO4 37°C 0.15M U M 2000NNb (26694)1039
B(NiAL)=13.12
B(NiHAL)=18.84
K(NiHA+L)=11.11
K(NiA+L)=9.85

K(NiL+A)=3.98. HA 6-aminopenicillanic acid.

```
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1999NAb (26695)1040
                                        B(NiAL)=18.50
                                        B(NiHAL)=27.10
                                        B(NiH2AL)=33.99
                                        K(NiHA+L)=8.98
K(NiL+A)=9.36, K(NiA+L)=8.84. H2A is dopamine.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1999NAb (26696)1041
                                        B(NiAL)=19.06
                                        B(NiHAL)=27.89
                                        B(NiH2AL)=35.08
                                        K(NiA+L)=8.76
K(NiL+A)=10.46. H2A is dopa: 2-amino-3-(3,4-dihydroxyphenyl)propanoic acid
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C TI   R K1=8.7    B2=19.61  1995BEa (26697)1042
                                        B(NiHL)=14.87
                                        B(NiHL2)=24.02
                                        B(Ni2L3)=30.3
                                        B(Ni3L4)=44.51
IUPAC evaluation. I=0.15 M, 37 C: K1=9.60, B2=19.22, B(Ni2L3)=31.49;
I=0.1 M, 20 C: K1=9.0, B2=14.20, B(Ni2L3)=26.34, B(Ni3L4)=37.98
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M C    M                  1995NAb (26698)1043
                                        B(NiL(dapa))=18.68
                                        B(NiL(daba))=18.20
                                        B(NiHL(dapa))=23.71
                                        B(NiHL(daba))=25.13
B(NiHL(orn))=25.02, B(NiH2L(dapa))=29.41, B(NiH2L(daba))=30.51,
B(NiH2L(orn))=31.48 daba: 2,3-diaminopropanoate daba: 2,4-diaminobutanoate
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1995NAc (26699)1044
                                        B(NiL2Zn)=25.15
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M C    M   K1=9.14   B2=20.21  1993NAa (26700)1045
                                        B(NiHL2)=25.86
                                        B(NiHAL)=19.84
                                        B(NiAL)=13.80
                                        B(NiA2L)=16.43
A=imidazole. Also complexes for A=histamine: B(NiAL)=16.94, B(NiHAL)=23.09,
B(NiH2AL)=27.56;HA=histidine: B(NiAL)=18.36, B(NiHAL)=23.77, B(NiH2AL)=29.1
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M M T H    K1=9.75        1988MAa (26701)1046
Data for 25-40 C. DH(K1)=35.0 kJ mol-1, DS(K1)=-70.3 J K-1 mol-1.
--------------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M U      T K1=9.603  B2=19.219 1985CFb (26702)1047
                                        B(Ni2L3)=31.49
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U      T K1=8.7    B2=19.61  1979SGa (26703)1048
                                        B(NiHL)=14.87
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                                        B(NiHL2)=24.02
                                        B(Ni2L3)=30.3
                                        B(Ni3L4)=44.51
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U       K1=10.45  B2=19.95  1975IMa (26704)1049
Medium not stated.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U       K1=9.82   B2=20.07  1972RJa (26705)1050
DL cysteine: K2=10.55
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 20°C 0.10M U     T K1=9.0    B2=20.16  1968PSe (26706)1051
                                        B(NiHL)=15.43
                                        B(Ni2L3)=33.01
                                        B(Ni3L4)=45.72
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U       K1=9.64   B2=19.04  1964LMa (26707)1052
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.15M U       K1=10.48  B2=19.79  1956WMb (26708)1053
-------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U       B2=19.3       1952ALa (26709)1054
*******************************************************************************
C3H7NO3                HL    Serine          CAS 56-45-1  (49)
2-Amino-3-hydroxypropanoic acid; H2N.CH(CH2.OH)COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  40%  C       K1=11.25  B2=15.44  2003DKa (27010)1055
                                        B(NiHL)=6.22
Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M  K1=5.62       1999AAa (27011)1056
                                        K(NiL+A)=3.85
                                        B(NiLA)=9.47
                                        K(NiL+B)=3.41
                                        B(NiLB)=9.03
K(NiHL+C)=3.15, K(NiL+D)=3.45, B(NiLD)=9.07.
HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M  K1=5.80       1996AEa (27012)1057
Data for ternary complexes with dipicolinic acid.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M                1993BCf (27013)1058
                                        K(NiA+(S)-L)=18.52
                                        K(NiA+(R)-L)=18.62
A: N,N'-bis[(2S)-pyrrolidine-2-yl]propane-1,3-diamine.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U T  M  K1=5.69   B2=10.45  1993PPa (27014)1059
                                        K(NiA+L)=5.20
A is 2,2'-bipyridylamine. Also data for 35 and 45 C.
-------------------------------------------------------------------------------
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```
Ni++       gl  KNO3   25°C 0.10M U  I     K1=5.19   B2=8.40   1990RAb (27015)1060
Data also for 10% w/w EtOH/H2O (K1=5.57; B2=9.07) and 25% (5.81; 10.07)
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=5.90        1989MAc (27016)1061
                                          K(NiA+L)=4.94
H4A is adenosine-5'-triphosphoric acid.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=5.39        1989MAd (27017)1062
                                          K(NiA+L)=4.35
                                          B(NiAL)=12.37
H2A is N-(2-acetamido)imino diethanoic acid.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.20M U    M   K1=5.42   B2=9.76   1989RVa (27018)1063
                                          K(NiA+L)=4.88
A=bis(imidazol-2-yl)methane
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 3.00M M        K1=5.34   B2=9.94   1988BFa (27019)1064
                                          B3=13.02
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 27°C 0.20M U    M   K1=5.69   B2=10.45  1988PPc (27020)1065
                                          K(NiA+L)=5.21
A is 2,2'-dipyridylamine.
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 3.00M C        K1=5.34   B2=9.94   1985PBb (27021)1066
                                          B3=13.02
D-, L- and DL-serine studied.
-------------------------------------------------------------------------------
Ni++       sp  KCl    25°C  1.0M U        K1=5.42   B2= 9.76  1983FAa (27022)1067
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M C    M   K1=5.40   B2= 9.68  1981RSd (27023)1068
                                          K(Ni(asp)+L)=4.30
                                          B(Ni(asp)L)=11.46
H2asp is aspartic acid.
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M C    M   K1=5.40   B2= 9.68  1981RSe (27024)1069
                                          B(Ni(ida)L)=12.58
                                          K(Ni(ida)+L)=4.40
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C      T K1=5.14   B2=9.74   1976PSa (27025)1070
                                          B3=12.73
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.20M U        K1=5.54   B2=10.04  1974FSa (27026)1071
                                          B(NiL2A)=11.83
                                          B(NiLA2)=9.76
                                          B(NiLA)=7.52
A=acetylhydrazide
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 3.00M U      T K1=5.63   B2=10.62  1973WIa (27027)1072
                                          B3=14.18
-------------------------------------------------------------------------------
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```
Ni++       gl  KCl    25°C 0.05M U T      K1=5.43   B2=9.96   1972GMb (27028)1073
K1(20 C)=5.48, K2=4.59; K1(30 C)=5.40, K2=4.47; K1(35 C)=5.30, K2=4.41
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.15M U    M   K1=5.43   B2=9.96   1972GSc (27029)1074
                                           B(NiL(Phe))=10.07
                                           B(NiL(Thr))=10.34
                                           K(Ni+L+HTyr)=10.13
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.05M U    M                 1972GSc (27030)1075
                                           B(NiL(Gly))=10.63
                                           B(NiL(Ala))=10.29
                                           B(NiLA)=10.21
                                           B(NiLB)=10.27
B(NiLC)=10.21. A=a-aminobutanoic acid, B=norvaline, C=norleucine
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.16M U        K1=5.45   B2=9.98   1970LBa (27031)1076
                                           K3=3.54
-------------------------------------------------------------------------------
Ni++       gl  KNO3   37°C 0.15M U    M   K1=5.211  B2=9.590  1968PSf (27032)1077
                                           B3=12.491
Ternary complexes with 4(2-aminoethyl)imidazole
-------------------------------------------------------------------------------
Ni++       gl  KNO3   40°C 0.20M U T H    K1=5.28   B2=9.47   1968RMb (27033)1078
K1=5.50(15 C),5.42(25 C); K2=4.44(15 C),4.34(25 C)
DH(B2)=-32.6 kJ mol-1, DS=79  J K-1 mol-1
-------------------------------------------------------------------------------
Ni++       cal KNO3   22°C 0.10M U   H                  1967SSl (27034)1079
DH(B2)=-33.4 kJ mol-1, DS=79.4 J K-1 mol-1
-------------------------------------------------------------------------------
Ni++       oth oth/un 25°C  0.0  U        K1=6.0    B2=10.6   1964SYa (27035)1080
-------------------------------------------------------------------------------
Ni++       gl  oth/un 10°C    ?  U T      K1=5.66   B2=10.37  1960PEd (27036)1081
                                           B3=13.68
19.5 C: K1=5.56, B2=10.12, B3=13.20; 25 C: 5.48, 9.94, 12.97; 30 C: 5.43,
9.82, 12.79; 40 C: 5.27, 9.57, 12.34
-------------------------------------------------------------------------------
Ni++       gl  oth/un 10°C    ?  U T H    K1=5.66   B2=10.37  1957PEa (27037)1082
                                           B3=13.68
DH(K1)=-21.8 kJ mol-1, DS=33; DH(K2)=-23.7, DS=6.7; DH(K3)=-26.2, DS=-30.
20 C: K1=5.44, B2=9.82, B3=12.79; 30 C: K1=5.27, B2=9.57, B3=12.34
-------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C    ?  U        K1=5.44   B2=10.06  1956PCb (27038)1083
                                           B3=13.17
*******************************************************************************
C3H7NO3                HL                      CAS 2786-22-3  (1893)
2-Aminooxypropanoic acid;CH3.CH(O.NH2).COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=3.18        1985WTa (27208)1084
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C3H7NO3 HL iso-Serine CAS 632-12-2 (351)
DL-3-Amino-2-hydroxypropanoic acid; H2N.CH2.CH(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	cal	KCl	25°C	0.10M	U	H	K1=9.083 B2=13.91	1980BDb (27223)	1085

DH(K1)=-43.34 kJ mol-1, DH(B2)=-55.44.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	U		K1=9.083 B2=13.915	1976BMe (27224)	1086
Ni++	gl	oth/un	25°C	0.16M	U		K1=4.19 B2=7.85	1970LBa (27225)	1087

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C3H7NO5S H2L Cysteic acid CAS 23537-25-9 (2603)
2-Amino-3-sulfonatopropanoic acid; HO3S.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiAL)=9.03 B(NiHAL)=14.13 K(NiHA+L)=6.76 K(NiA+L)=5.76	2000NNb (27242)	1088

K(NiL+A)=3.10. HA 6-aminopenicillanic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiAL)=9.49 B(NiHAL)=14.36 B(NiH-1AL)=1.27 K(NiHA+L)=5.47	2000NNb (27243)	1089

K(NiA+L)=5.91, K(NiL+A)=3.56, K(NiH-1A+L)=5.91. HA is ampicillin.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiAL)=14.92 B(NiHAL)=23.51 B(NiHA+L)=5.39 K(NiA+L)=5.26	1999NAb (27244)	1090

K(NiL+A)=8.99. H2A is dopamine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiAL)=16.12 B(NiHAL)=23.78 B(NiH2AL)=31.76 K(NiA+L)=5.28	1999NAb (27245)	1091

K(NiL+A)=10.19. H2A is dopa: 2-amino-3-(3,4-dihydroxyphenyl)propanoic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	C	M	B(NiL(dapa))=14.05 B(NiL(daba))=14.28 B(NiL(orn))=12.39	1995NAb (27246)	1092

```
                                          B(NiHL(dapa))=19.67
B(NiHL(daba))=20.50, B(NiHL(orn))=20.66, B(NiH2L(dapa))=24.74,
B(NiH2L(daba))=26.4 daba: 2,3-diaminopropanoate daba: 2,4-diaminobutanoate
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M C    M   K1=5.93   B2=10.53  1993NAa (27247)1093
                                          B(NiAL)=10.60
                                          B(NiA2L)=13.56
A=imidazole. Also complexes for A=histamine: B(NiAL)=12.49, B(NiHAL)=18.15,
B(NiH2AL)=23.83;HA=histidine: B(NiAL)=14.11, B(NiHAL)=19.72, B(NiH2AL)=23.93
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=6.69   B2=12.08  1979DZb (27248)1094
********************************************************************************
C3H7NS2                HL                      CAS 128-04-1  (2125)
Dimethyldithiocarbamic acid; (CH3)2N.CSSH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF non-aq 25°C 100%  U        B2=11.9        1987USa (27266)1095
Medium: DMF, 0.1 M LiClO4
--------------------------------------------------------------------------------
Ni++       ISE non-aq 25°C 100%  U        K1=4.05   B2=6.87   1974TBa (27267)1096
Medium: DMF, Ag electrode
********************************************************************************
C3H7N5                  L                        (6903)
5-(2-Aminoethyl)-1H-tetrazole; NH2.CH2.CH2.CHN4
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.10M U        K1=5.95   B2=12.20  1978LEb (27288)1097
********************************************************************************
C3H7O5P               H3L                      CAS 5926-41-4  (3549)
2-Phosphonopropanoic acid; CH3.CH(PO3H2).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.25M U        K1=2.34        1957WBa (27296)1098
Medium: 0.1-0.4 M (C3H7)4NI
********************************************************************************
C3H7O6P               H2L                      (6830)
3-Hydroxy-2-oxopropylphosphoric acid; CH2(OH).CO.CH2.OPO3H2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=1.85        1992LCb (27316)1099
********************************************************************************
C3H7O7P               H3L                      CAS 28474-06-8  (3552)
D-2,3-Dihydroxypropanoic acid 2-phosphate (D-2-phosphoglyceric acid)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

Ni++ gl R4N.X 25°C 0.25M U K1=2.88 1957WBa (27326)1100
Medium: 0.1-0.4 M (C3H7)4NI

****

C3H8NO5P H3L 3-Phosphono-Ala CAS 20263-06-3 (1509)
2-Amino-3-phosphonatopropanoic acid; (H2O3P)CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=7.38	B2=12.14	1989KFb	(27342)1101
							B(NiHL)=13.3			
Ni++	gl	KNO3	25°C	0.20M	C		K1=6.94	B2=12.03	1978MAb	(27343)1102
							K(Ni+HL)=2.80			
							K(NiL+HL)=2.90			

****

C3H8NO5P H3L CAS 23052-80-4 (1508)
3-Amino-3-phosphonatopropanoic acid; (H2O3P)(NH2)CH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=7.23	B2=11.83	1989KFb	(27357)1103
							B(NiH2L)=17.99			
							B(NiHL)=13.20			

****

C3H8NO5P H3L Glyphosate CAS 1071-83-6 (1617)
N-(Phosphonomethyl)glycine; H2O3P.CH2.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	C	I R	K1=8.0	B2=12.30	2001PRa	(27382)1104
							B(NiHL)=13.3			
IUPAC Recommended value										
Ni++	gl	KNO3	25°C	0.10M	C		K1=8.08	B2=12.48	1998PGa	(27383)1105
							B(NiHL)=13.34			
							B(NiH-1L)=-2.83			
							B(NiH-1L2)=0.98			
							B(Ni2L)=9.48			
Ni++	gl	NaCl	25°C	0.10M	U		K1=7.90	B2=12.27	1993DLa	(27384)1106
							B(NiHL)=13.22			
Ni++	gl	KNO3	25°C	0.1M	C		K1=8.10	B2=12.25	1985MMa	(27385)1107
							B(NiHL)=13.36			

****

C3H8NO6P H3L Phosphoserine CAS 17885-08-4 (1865)
Serine dihydrogenphosphate, O-Phosphoserine; NH2.CH(CH2.OPO3H2).COOH

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

```
Ni++       gl  KNO3   15°C 0.15M C        K1=6.48   B2=11.22  1983MBa (27436)1108
                                          K(Ni+HL)=2.31
Data for LL. For DL: K1=6.50, K2=4.68, K(Ni+HL)=2.31
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M C    M   K1=6.32   B2=10.17  1979MBa (27437)1109
                                          K(Ni+HL)=2.45
                                          K(NiL+HL)=2.32
                                          B(NiH(histamine)L)=18.94
                                          K(Ni(histamine)+L)=5.55
K(Ni(phen)+HL)=1.99,K(Ni(phen)+L)=5.87,K(Ni(bpy)+HL)=2.25,K(Ni(bpy)+L)=5.93
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M C        K1=6.29   B2=10.87  1978MAb (27438)1110
                                          K(Ni+HL)=2.35
                                          K(NiL+HL)=1.98
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M C        K1=6.29   B2=10.87  1978MAc (27439)1111
                                          K3=2.84
                                          K(Ni+HL)=2.35
                                          K(NiHL+L)=1.98
                                          K(NiL+H)=5.78
-------------------------------------------------------------------------------
Ni++       gl  R4N.X  20°C 0.10M U        K1=6.7         1965HFa (27440)1112
                                          K(Ni+HL)=2.6
Medium: (C3H7)NI
*******************************************************************************
C3H8N2O                 L    Alaninamide      CAS 2726-84-5  (5392)
Alaninamide, 2-Aminopropanoic acid amide; NH2.CH(CH3).CO.NH2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C        K1=3.18   B2= 5.80  1997DFb (27482)1113
                                          B3=7.64
                                          B(NiH-2L2)=-11.64
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.01M U        K1=3.36   B2=6.08   1959DLb (27488)1114
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  2002NNa (27531)1115
                                          B(NiH2LA)=21.92
                                          B(NiHLA)=17.35
                                          B(NiAL)=12.05
```

K(NiHL+A)=3.64
HA is 6-aminopenicillanic acid. K(NiA+L)=8.78, K(NiL+A)=3.58.

Ni++ gl NaClO4 37°C 0.15M U M 2000NNa (27532)1116
B(NiAH2L)=22.51
B(NiAHL)=17.86
B(NiAL)=11.99
B(NiAH-1L)=3.58
HA is ampicillin. K(NiHL+A)=4.15, K(NiA+L)=8.41, K(NiL+A)=3.52,
K(NiH-1A+L)=8.22.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAa (27533)1117
B(NiHAL)=17.16
B(NiAL)=11.38
B(NiA2L)=14.24
K(NiHL+A)=3.45
A is imidazole. K(NiA+L)=7.81, K(NiL+A)=2.91, K(NiAL+A)=2.86, K(NiA2+L)=
8.54. B(NiC2L)=13.22, B(NiHCL)=16.72, B(NiCL)=11.22. C is benzimidazole.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAb (27534)1118
B(NiH2LA)=26.49
B(NiHLA)=20.95
B(NiLA)=15.08
K(NiA+L)=8.72
K(NiL+A)=6.61. A is histamine. HL is DL-2,3-diaminopropanoic acid.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAb (27535)1119
B(NiH2L(his))=27.52
B(NiHL(his))=22.10
B(NiL(his))=16.87
K(Ni(his)+L)=8.13
K(NiL+his)=8.50. HL is DL-2,3-diaminopropanoic acid.

Ni++ gl NaClO4 37°C 0.15M C M K1=8.47 B2=15.77 1995NAb (27536)1120
B(NiHL)=13.71
B(NiHL2)=21.61
Data for ternary complexes with cysteine, cysteic acid and penicillamine.

Ni++ gl KCl 25°C 0.20M C K1=8.13 B2=15.17 1981FGb (27537)1121
B3=18.35
B(NiHL)=13.43
B(NiH2L2)=26.36
B(NiHL2)=21.04
B(NiHL3)=26.46

Ni++ gl NaCl 37°C 0.15M C M K1=8.148 B2=14.966 1981JMa (27538)1122
B(NiL(His))=15.198
B(NiHL)=13.224
B(NiHL(His))=20.855
B(NiHL2)=20.49

```
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=8.16   B2=15.17  1976BPb (27539)1123
                                          B(NiHL)=13.43
                                          B(NiH2L2)=36.30
                                          B(NiHL2)=21.06
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=8.48   B2=15.27  1971HMd (27540)1124
                                          K(Ni+HL)=3.93
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        B2=15.2        1952ALa (27541)1125
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=6.54   B2=13.31  1990KBb (27568)1126
                                          B(NiL2(OH))=4.76
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=6.76   B2=14.13  1989FSa (27569)1127
                                          B(NiH-1L2)=5.47
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M C        K1=6.92   B2=14.06  1989LEa (27570)1128
                                          B(NiH-1L2)=5.82
********************************************************************************
C3H8N2O2               HL                        (6039)
Sarcosinehydroxamic acid; CH3.NH.CH2.CO.NH.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=6.21   B2=12.18  1990KBb (27585)1129
                                          B(NiL2(OH))=2.66
********************************************************************************
C3H8N2O2               HL                        (6666)
beta-Alaninehydroxamic acid; NH2.CH2.CH2.CO.NHOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        B2=11.57       1993KFa (27599)1130
                                          B(NiHL)=14.12
                                          B(NiHL2)=20.26
                                          B(NiH-1L2)=1.99
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        B2=11.83       1993KKb (27600)1131
                                          B(NiHL)=14.62
                                          B(NiH-1L2)=2.66
                                          B(NiHL2)=20.58
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M C        K1=6.57   B2=13.48  1989LEd (27615)1132
                                          B(NiH-1L2)=5.36
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M U        K1=7.20   B2=20.30  1983BRc (27616)1133
********************************************************************************
C3H8N2S2               HL                     CAS 14353-59-4  (6147)
N,N-Dimethylhydrazine-dithiocarboxylic acid; (CH3)2N.NH.CSSH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.01M U        K1=6.32   B2=12.64  1985IGb (27637)1134
********************************************************************************
C3H8N4O                 L                     CAS 44648-02-4  (2983)
Guanylmethylurea; H2N.C(:NH).CH2.NH.CO.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        B2=10.26       1960DUa (27640)1135
********************************************************************************
C3H8O                   L    n-Propanol       CAS 71-23-8  (1914)
1-Propanol; CH3.CH2.CH2.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  non-aq 20°C 100%  U T HM                    1988LJa (27642)1136
                                          K(NiAB+2L)=-0.65
                                          K(NiAC+2L)=-0.31
                                          K(NiAD+2L)=-0.056
Medium: 1,2-dichlorethane;  Square planar = octahedral equilibria
A:tetramethylendiamine B:acetylacetone C:benzoylacetone D:dibenzoylmethanat
********************************************************************************
C3H8OS2               H2L    BAL              CAS 59-52-9  (379)
2,3-Dimercaptopropan-1-ol; HS.CH2.CH(SH).CH2(OH)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  KCl    30°C 0.10M U        B2=22.78       1959LEa (27655)1137
                                          B(Ni2L3(OH))=45.6
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 20°C 0.10M U TI     K1=8.73        1986NDb (27701)1138
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U                       1974BPa (27702)1139
```

K0=-1.730
K=13.232
logBn=logK0+nlogK 'core + links'; Ni(NiL2)n complexes. Various hypotheses
---
Ni++ gl KNO3 25°C 0.50M U 1972BPb (27703)1140
K(Ni(NiL2)+Ni+2L)=13.25
B(Ni(NiL2)n)=13.25n-2.00
****
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
---
Ni++ sp oth/un ? 0.20M U B2=9.57 1972OFa (27771)1141
****
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
---
Ni++ ISE R4N.X 25°C 2.00M U K1=2.81 B2=5.02 1969PMc (27817)1142
K3=1.77
K4=1.52
Medium: NH4NO3
****
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
---
Ni++ ISE R4N.X 25°C 2.00M U K1=2.71 B2=4.86 1970PMa (27838)1143
K3=1.71
K4=1.26
K5=0.60
Medium: NH4NO3
****
C3H9NO L CAS 2799-16-8 (905)
1-Aminopropan-2-ol; H2N.CH2.CH(OH).CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF KNO3 25°C 1.0M U K1=3.20 B2=5.63 1981AAa (27871)1144
B3=6.49
****
C3H9NO L CAS 109-83-1 (899)
2-(Methylamino)ethanol; HO.CH2.CH2.NH.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.0 M I K1=2.83 B2=4.80 1987AAb (27883)1145

```
                                        B3=5.85
Data for I=0.2, 0.3, 0.5, 0.7 and 1.0 M KNO3.
--------------------------------------------------------------------------------
Ni++       vlt KNO3   25°C 1.00M U        K1=2.87   B2=4.66   1980AAa (27884)1146
********************************************************************************
C3H9NO                  L    i-Propanolamine  CAS 14008-30-1  (945)
2-Aminopropan-2-ol; CH3.C(NH2)(OH).CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 1.00M U        K1=3.46   B2=6.48   1982RMa (27891)1147
                                        K3=2.08
********************************************************************************
C3H9NO                  L                    CAS 156-87-6  (906)
3-Aminopropan-1-ol; HO.CH2.CH2.CH2.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF KNO3   25°C  1.0M U        K1=2.82   B2=4.59   1981AAa (27913)1148
********************************************************************************
C3H9NS                  L                    CAS 18542-42-2  (1215)
1-Amino-3-thiabutane; H2N.CH2.CH2.S.CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M C   H    K1=3.299  B2=6.10   1977HGa (27938)1149
                                        K3=1.63
DH(K1)=-23.3 kJ mol-1,  DS(K1)=-15.0 J K-1 mol-1
DH(K2)=-25.3 kJ mol-1   DS(K2)=-31.0 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C  1.0M U T H    K1=3.23   B2=6.02   1954GFa (27939)1150
                                        K3=1.73
DH(K1)=-21 kJ mol-1, DS=-13; DH(K2)=-25, DS=-33; DH(K3)=-17, DS=-29.
0 C: K1=3.64, K2=3.26, K3=2.00; 50 C: K1=2.98, K2=2.50, K3=1.48
********************************************************************************
C3H9N2O4P            H2L                    CAS 30211-73-5  (7117)
Glycylaminomethylphosphonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=4.541  B2=7.95   1995HLa (27963)1151
                                        B(NiHL)=10.33
                                        B(NiH-1L)=-3.94
                                        B(NiH-1L2)=-0.99
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=4.75        1975HMc (27964)1152
                                        K(NiL+H)=5.79
********************************************************************************
C3H9N3O                 L                    CAS 19728-65-5  (2703)
2-(Methylamino)acetamidoxime; CH3.NH.CH2.C(:NOH)NH2
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	1.00M	C		K1=5.253 B2=9.505 B3=11.88 B(NiH-1L2)=2.406	1983SOa (27973)	1153

****

C3H9N3O HL (6985)

3-Aminopropanamidoxime; H2N.CH2.CH2.C(:NOH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaCl	25°C	0.10M	C		B(0,1,1)=4.89 B(0,1,2)=8.35 B(-1,1,2)=-0.51 B(-8,5,4)=-36.32	1996OSa (27977)	1154

B(-9,5,4)=-45.9. B(p,q,r): pH+qNi+r(HL)=(H)p(Ni)q(HL)r.

****

C3H9N3O2 HL CAS 471915-95-4 (8549)

2,3-Diamino-N-hydroxypropanamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		B2=16.22 B(NiHL)=15.92 B(NiH2L2)=30.16 B(NiHL2)=23.83 B(NiH-1L2)=6.10	2002ECa (27980)	1155

****

C3H9N5 L CAS 80247-85-7 (2974)

Methylbiguanide; CH3.NH.C(:NH).NH.C(:NH).NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	32°C	0.05M	U		B2=11.78	1956SRb (27990)	1156

****

C3H9OPS2 HL CAS 999-83-7 (4241)

Methyl(ethyl)dithiophosphonic acid; (CH3S)(C2H5S)PO.H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	ISE	alc/w	25°C	90%	U		K1=2.47 B2=4.47	1972TCa (27991)	1157

Medium: 90% EtOH, 0.3 M NaClO4

****

C3H9O4P H2L (6694)

(Phosphonylmethoxy)ethane; H2O3P.CH2.O.CH2.CH3

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

Ni++ gl NaNO3 25°C 0.10M M K1=2.33 1992SCa (28014)1158
****
C3H9O6P H2L CAS 57-03-4 (2984)
2,3-Dihydroxypropylphosphoric acid, Glycerol 1-phosphate; HO.CH2.CH(OH).CH2.OPO3H2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.10M U K1=1.90 1992LCb (28038)1159
****
C3H9P L CAS 594-09-2 (1732)
Trimethyl phosphine; (CH3)3P

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp non-aq 25°C 100% U 1974TSa (28054)1160
K4<9
Medium: benzene
****
C3H10NO3P H2L (1986)
1,1-Dimethyl-1-aminomethylphosphonic acid; H2N.C(CH3)2.PO3H2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.10M U K1=5.65 B2=10.98 1969DMd (28069)1161
K(Ni+HL)=3.02
****
C3H10NO3P H2L CAS 35869-68-2 (1989)
Dimethylaminomethylphosphonic acid; (CH3)2N.CH2.PO3H2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M C K1=5.07 1993SKc (28094)1162
K(NiL+H)=8.01
****
C3H10N2 L CAS 78-90-0 (2905)
1,2-Diaminopropane; CH3.CH(NH2)CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 37°C 0.15M U M 2002NNa (28137)1163
B(NiAL)=10.57
K(NiA+L)=7.30
K(NiL+A)=3.62
HA is 6-aminopenicillanic acid.

Ni++ gl NaClO4 37°C 0.15M U M 2000NNa (28138)1164
B(NiAHL)=16.48
B(NiAL)=10.98
K(NiHL+A)=4.19
K(NiA+L)=7.40

HA is ampicillin. K(NiL+A)=4.03.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAa (28139)1165
B(NiHAL)=15.60
B(NiAL)=10.22
B(NiA2L)=12.65
K(NiHL+A)=3.31
A is imidazole. K(NiA+L)=6.65, K(NiL+A)=3.27, K(NiAL+A)=2.43, K(NiA2+L)= 6.95. B(NiC2L)=11.73, B(NiCL)=9.97, B(NiHCL)=15.11. C is benzimidazole.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAb (28140)1166
B(NiH2LA)=24.31
B(NiHLA)=19.08
B(NiLA)=13.15
K(NiA+L)=6.79
K(NiL+A)=6.20. A is histamine.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAb (28141)1167
B(NiH2L(his))=26.02
B(NiHL(his))=20.83
B(NiL(his))=15.74
K(Ni(his)+L)=6.90
K(NiL+his)=8.79.

Ni++ gl KNO3 25°C 0.10M M M 1980MMf (28142)1168
B(NiA+L)=7.48
B(NiB+L)=6.45
B(NiC+L)=7.72
B(NiAL(gly))=17.50
H2A is oxalic acid; H2B is malonic acid; H2C is phthalic acid. B(NiBL(gly))=14.71; B(NiCL(gly))=16.30.

Ni++ gl NaClO4 30°C 0.15M U M K1=8.16 1974PBb (28143)1169
B(NiL(bpy))=7.48
B(NiL(phen))=7.57

Ni++ gl NaClO4 25°C 0.10M U I K1=7.295 B2=13.59 1972CHa (28144)1170
K3=4.88
I=0.35 M, K1=7.33, K2=6.38, K3=4.74

Ni++ EMF none 25°C 0.00 U M 1972KKe (28145)1171
B(NiL(en))=13.7
B(NiL2(en)=18.2
B(NiL(en)2)=18.3

Ni++ gl oth/un 25°C 0.10M U K1=7.34 B2=13.43 1970ABc (28146)1172
DL, D and L isomers

Ni++ gl NaClO4 25°C var U I M 1962NMb (28147)1173
K1=7.29+1.32I-1.72I^(3/2)+0.69I^(2), B2=13.43+1.99I-2.18I^(3/2)+0.84I^(2)

B3=17.61+2.99I-3.19I^(3/2)+1.21I^(2). Ternary complexes with EDTA

Ni++ gl KNO3 25°C 0.50M U T K1=7.43 B2=13.62 1954BCa (28148)1174
K3=4.27
0 C: K1=8.05, K2=6.80, K3=4.92

Ni++ gl KCl 25°C 1.0M U K1=8.04 B2=14.41 1950EDa (28149)1175
K3=4.24

Ni++ gl KCl 30°C 0.50M U K1=7.41 B2=13.71 1945CMa (28150)1176
K3=4.29

****

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

---

Ni++ gl NaClO4 37°C 0.15M U M 2002NNa (28244)1177
B(NiH2LA)=21.25
B(NiHLA)=17.10
B(NiAL)=9.82
K(NiHL+A)=3.65
HA is 6-aminopenicillanic acid. K(NiA+L)=6.55, K(NiL+A)=3.86.

Ni++ gl NaClO4 37°C 0.15M U M 2000NNa (28245)1178
B(NiAH2L)=21.82
B(NiAHL)=17.56
B(NiAL)=10.73
K(NiHL+A)=4.11
HA is ampicillin. K(NiA+L)=7.15, K(NiL+A)=4.77.

Ni++ gl NaClO4 37°C 0.15M U K1=5.96 B2=11.28 1999NAa (28246)1179
B(NiHL)=13.45

Ni++ gl NaClO4 37°C 0.15M U M 1998NAa (28247)1180
B(NiHAL)=17.60
B(NiAL)=9.95
B(NiA2L)=12.03
K(NiHL+A)=4.15
A is imidazole. K(NiA+L)=6.38, K(NiL+A)=3.99, K(NiAL+A)=2.08, K(NiA2+L)=
6.33. B(NiC2L)=10.72, B(NiHCL)=16.36, K(NiHL+C)=2.91. C is benzimidazole.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAb (28248)1181
B(NiH2LA)=25.36
B(NiHLA)=19.48
B(NiLA)=12.11
K(NiA+L)=5.75
K(NiL+A)=6.15. A is histamine.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAb (28249)1182

B(NiH2L(his))=26.77
B(NiHL(his))=21.73
B(NiL(his))=14.66
K(Ni(his)+L)=5.82
K(NiL+his)=8.70.

Ni++ gl KNO3 25°C 0.10M U M K1=7.80 1982KJa (28250)1183
K(Ni2(CDTA)+2L)=10.02

Ni++ gl KCl 25°C 0.20M C HM K1=6.31 B2=10.62 1979SGb (28251)1184
B3=13.40

Ni++ gl KNO3 25°C 0.10M C M K1=6.30 B2=10.62 1978DAa (28252)1185
B3=13.30
B(NiL(citrate))=11.34

Ni++ gl KCl 25°C 0.20M C H K1=6.31 B2=10.62 1976GSd (28253)1186
B3=13.40
By calorimetry: DH(K1)=-36.0 kJ mol-1, DH(B2)=-67.4

Ni++ gl oth/un 30°C 0.10M U M K1=6.44 B2=10.72 1975PBb (28254)1187
K(Ni(NTA)+L)=5.21
K(Ni(His)+L)=5.25
K(Ni(IDA)+L)=5.21

Ni++ gl oth/un 25°C U K1=6.18 B2=10.46 1972NBa (28255)1188

Ni++ sp KCl 22°C 0.10M U K1=6.3 B2=10.60 1970MAi (28256)1189
K(NiL+H2L=NiHL2+H)=-6.98

Ni++ gl NaClO4 25°C 0.30M C H K1=6.92 B2=12.27 1967HWa (28257)1190
K3=3.01
By calorimetry DH(K1)=-30.3 kJ mol-1, DH(K2)=-30.7, DH(K3)=-29.8

Ni++ gl NaClO4 25°C var U 1965NKd (28258)1191
K1=6.28+0.272I
K2=4.20+0.321I

Ni++ gl oth/un 10°C ->0 U T H K1=6.67 B2=11.38 1958BFa (28259)1192
DH(K1)=-42.7 kJ mol-1, DS=-25; DH(K2)=-34, DS=-29. 20 C: K1=6.40, K2=4.44;
30 C: K1=6.18, K2=4.28; 40 C: K1=5.94, K2=4.09

Ni++ gl KNO3 0°C 1.0M U K1=7.00 B2=11.92 1956HFb (28260)1193

Ni++ oth oth/un 25°C 1.0M U H 1956RAa (28261)1194
DS(Ni(NH3)6+2L=NiL2+6HN3)=59 J K-1 mol-1

Ni++ gl oth/un 25°C 0.15M U H 1955CHa (28262)1195
At 25 C: DH(K1)=-36.8 kJ mol-1, DS=0 J K-1 mol-1; DH(K2)=-34.3,DS=-29.3;
DH(K3)=-25.1, DS=-54 0-49 C

```
--------------------------------------------------------------------------------
Ni++       gl  oth/un  0°C 0.15M U T      K1=6.98   B2=11.91  1955CHb (28263)1196
                                          B3=13.8
49.1 C: K1=5.91, K2=3.93, B3=11.0
--------------------------------------------------------------------------------
Ni++       cal KNO3   25°C  1.0M U   H    K1=6.39   B2=10.78  1955PBa (28264)1197
                                          B3=12.01
DH(K1)=-32.5 kJ mol-1, DS=12.5 J K-1 mol-1; DH(B2)=-62.7, DS=-4.59
DH(B3)=-89.0, DS=-69.4
--------------------------------------------------------------------------------
Ni++       gl  KNO3    0°C  1.0M U T      K1=7.00   B2=11.92  1952HAa (28265)1198
30 C: K1=5.32, K2=3.27
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 1.00M C   H    K1=7.31   B2=13.12  1982ABc (28346)1199
                                          K3=2.27
By calorimetry:  DH1=-29.1 kJ mol-1, DS1=42.7; DH(B2)=-63.4, DS(B2)=38.5
--------------------------------------------------------------------------------
Ni++       gl  none   25°C 0.00  U        K1=7.12   B2=12.66  1970NKa (28347)1200
--------------------------------------------------------------------------------
Ni++       gl  oth/un 10°C  ->0  U T H    K1=7.40   B2=13.15  1959MBa (28348)1201
                                          K3=2.78
DH(K1)=-39 kJ mol-1, DS=4; DH(K2)=-33, DS=-4; DH(K3)=-17, DS=-8
20C: K1=7.17,K2=5.56,K3=2.72; 30 C: 6.97,5.40,2.68; 40 C: 6.70,5.16,2.45
--------------------------------------------------------------------------------
Ni++       gl  KNO3    0°C 0.50M U T      K1=7.95   B2=14.10  1952BMa (28349)1202
                                          B3=16.51
25 C: K1=5.74, B2=13.10, B3=15.11
--------------------------------------------------------------------------------
Ni++       gl  KNO3    0°C 0.50M U   H                    1952BMb (28350)1203
At 0 C: 0-25 C: DH(K1)=-36.8 kJ mol-1, DS=16.7J K-1 mol-1, DH(K2)=-25.5,
DS=24.7, DH(K3)=-25.1, DS=-46
--------------------------------------------------------------------------------
Ni++       gl  oth/un  0°C  ->0  U        K1=7.58   B2=13.71  1952MCa (28351)1204
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C  1.0M U        K1=7.79   B2=13.77  1950EDa (28352)1205
                                          K3=2.34
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaCl   30°C 0.16M U        K1=5.47   B2=9.61   1965MBa (28377)1206
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C  0.0  U T H    K1=5.56   B2=9.88   1958BBc (28378)1207
```

DH(K1)=-24 kJ mol-1, DS=25; DH(K2)=-21, DS=13. 10 C: K1=5.68, K2=4.41;
30 C: K1=5.42, K2=4.16; 40 C: K1=5.25, K2=4.05

Ni++ gl KNO3 30°C 1.0M U T K1=5.64 B2=10.02 1955GFa (28379)1208
0 C: K1=6.19, K2=4.88; 50 C: K1=5.37, K2=4.01

****

C3H11NO6P2 H4L (6735)
N-Methylimino-N,N-bis(methylenephosphonic acid); CH3.N(CH2PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	C	I R	K1=9.6		2001PRa	(28427)1209
							K(Ni+HL)=3.8			
							K(NiL+H)=6.25			
							K(NiHL+H)=4.4			
							K(NiHL+HL)=3.0			
IUPAC Recommended values										
Ni++	gl	KCl	25°C	0.20M	C		K1=9.00		2000KKa	(28428)1210
							B(NiHL)=15.01			
							B(NiH2L)=19.13			
							B(NiH-1L)=-2.09			
Ni++	gl	KNO3	25°C	0.10M	C		K1=9.59		1993SKc	(28429)1211
							K(NiL+H)=6.26			
							K(NiHL+H)=4.58			
							*K(NiL)=-12.1			
Ni++	gl	NaClO4	25°C	0.10M	U		K1=9.40	B2=13.23	1988LDa	(28430)1212
							B(NiHL)=15.63			
							B(NiH2L2)=30.58			

****

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
Ni++	gl	oth/un	25°C	0.10M	U		K1=9.6	B2=16.25	1972AUa	(28462)1213
							K(Ni+HL)=4.3			

****

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
Ni++	gl	KCl	25°C	0.10M	C		K1=9.58	B2=17.35	1998ZMa	(28476)1214
							B(NiHL)=15.45			
							B(NiHL2)=23.87			
Ni++	gl	NaCl	25°C	0.15M	C	H	K1=9.35	B2=17.40	1997CSa	(28477)1215

```
                                        B(NiHL)=15.613
                                        B(NiHL2)=24.318
                                        B(NiH2L2)=30.24
By calorimetry: DH(K1)=-41 kJ mol-1, DS=42 J K-1 mol-1; DH(K2)=-42, DS=13;
DH(Ni+HL)=-30, DS=14; DH(NiL+HL)=-33, DS=-9; DH(NiHL+L)=-44, DS=19
-------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=9.3         1950PSa (28478)1216
                                        K(Ni+HL)=6.0
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C  I   R                 2001PRa (28519)1217
                                        K(Ni+HL)=7.1
                                        K(NiL+H)=8.2
                                        K(NiHL+H)=5.60
                                        K(NiH2L+H)=3.5
IUPAC Recommended values.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=11.3        1997DBb (28520)1218
                                        K(NiL+H)=8.28
                                        K(NiH2L+H)=3.4
                                        K(NiHL+H)=5.67
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=12.68       1990VSa (28521)1219
                                        K(Ni+HL)=7.50
                                        K(Ni+H2L)=5.60
                                        K(Ni+H3L)=3.40
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  0.1M C        K1=12.68       1990VSb (28522)1220
                                        K(Ni+HL)=7.50
                                        K(Ni+H2L)=5.60
                                        K(Ni+H3L)=3.40
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=11.7        1989SAa (28523)1221
                                        K(NiL+H)=8.11
                                        K(NiHL+H)=5.56
                                        K(NiH2L+H)=3.5
-------------------------------------------------------------------------------
Ni++       nmr none   25°C       U    M   K1=11.18       1986SAb (28524)1222
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C  0.1M M        K1=11.06       1975MNa (28525)1223
                                        K(Ni+HL)=7.23
                                        K(Ni+H2L)=5.69
                                        K(Ni+H3L)=4.31
By spectrophotometry: K1=11.96, K(Ni+H2L)=6.54, K(Ni+H3L)=4.60
-------------------------------------------------------------------------------
Ni++       gl  R4N.X  20°C  0.1M C        K1=9.85        1967HEa (28526)1224
```

K(Ni+HL)=6.9
K(Ni+H2L)=5.2

****

C3H12O10P4 H6L (7924)
Tris(dihydroxy-phosphonylmethyl)phosphineoxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	R4N.X	20°C	0.10M	C		K1=8.5	1977ANb	(28607)1225
							K(Ni+H2L)=3.75		
							K(NiHL+H)=5.35		
							K(NiL+H)=7.94		

****

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
Ni++	sp	NaClO4	25°C	3.00M	U		K1=1.29	1973AVa	(28632)1226
							K(2Ni+L)=2.03		
Ni++	oth	NaClO4	25°C	0.50M	U		K1=1.49	1969TWa	(28633)1227

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
Ni++	gl	NaNO3	25°C	0.10M	C	M		2000SSd	(28679)1228
							K(Ni+HL)=6.19		

Also data for ternary complexes.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	U	M	K1=5.12	1996SGa	(28688)1229
							K(NiA+L)=6.22		

A is adenine.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	C	M		2000SSd	(28697)1230
							K(Ni+HL)=5.98		

Also data for ternary complexes.

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.50M	C		K1=3.51	B2= 5.89	1984HNb (28712)	1231
Ni++	gl	NaNO3	25°C	0.10M	C				1979DDb (28713)	1232
							K(Ni+H2L)=3.50			
							K(Ni+2H2L)=5.89			
Ni++	gl	diox/w	30°C	50%	U		K1=3.82	B2=8.12	1973CSb (28714)	1233

Medium: 50% dioxan, 0.1 M NaClO4

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	mixed	25°C	80%	C				1986GMb (28738)	1234
							K(Ni+H2L)=5.06			
							K(Ni+2H2L)=9.38			
							K(Ni+3H2L)=12.98			
							K(Ni(HL)3+H)=8.368			
Ni++	gl	NaNO3	25°C	0.50M	C		K1=3.56	B2= 6.35	1984HNb (28739)	1235
Ni++	sp	oth/un	25°C	?	U		K1=3.96	B2=7.49	1980FMc (28740)	1236
							B3=10.65			
Ni++	gl	NaNO3	25°C	0.50M	U		K1=3.5	B2= 6.30	1978DDa (28741)	1237
Ni++	sp	oth/un	rt	?	U		B2=7.6		1971ENb (28742)	1238

Medium: 80% DMSO/H2O, 0.1 M NaClO4. K(Ni(HL)3+2H)=15.760
K(Ni(HL)3+3H)=22.361

Borate buffer

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	NaClO4	20°C	0.20M	U		K1=6.51	1981LDa (28755)	1239

****

C4H3N3O5 H3L Dilituric acid CAS 480-68-2 (8715)
5-Nitrobarbituric acid, 5-Nitro-2,4,6-pyrimidinetrione;

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

```
Ni++       gl  KCl    25°C 0.05M C                          2002MGb (28762)1240
                                          K(Ni+HL)=3.79
**************************************************************************
C4H4N2                  L    Pyridazine       CAS 289-80-5  (1484)
1,2-Diazine, Pyridazine; cyclo(-N:N.CH:CH.CH:CH-)
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=1.33   B2=2.21   1988KLa (28766)1241
                                          B3=2.95
**************************************************************************
C4H4N2                  L    Pyrazine         CAS 290-37-9  (620)
1,4-Diazine, Pyrazine;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U    M                    1992NDa (28783)1242
                                          K(Ni2A(S)4+2L=Ni2AL2+4S)=0.67
Medium(S): methanol. A is 3,7,15,19-tetraaza-11,23-dimethyltricyclo[19.3.1.1
(9,13)]hexacosa-1(25),9,11,13(26),21,23-hexaene-25,26-diol.
--------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 1.00M U T      K1=1.01        1972MSf (28784)1243
K1(10 C)=1.12, K1(35 C)=0.91
**************************************************************************
C4H4N2OS               HL    2-Thiouracil     CAS 141-90-2  (4278)
4-Hydroxy-2-mercaptopyrimidine; HO.C4H2N2.SH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.01M U        K1=2.49   B2=5.15   1970GWa (28802)1244
**************************************************************************
C4H4N2O2               HL    Uracil           CAS 66-22-8  (412)
2,4-Dihydroxypyrimidone, 2,4-Pyrimidinedione;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.10M U    M   K1=3.95        1994MGd (28836)1245
                                          B(NiAL)=7.62
                                          *K(NiAL)=-7.27
                                          *K(Ni(OH)AL)=-9.77
HA is 6-aminopenicillanic acid.
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U        K1=3.12        1991SPa (28837)1246
--------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M U    M   K1=3.89        1989SRc (28838)1247
                                          K(Ni(thiamine)+L)=3.28
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T H    K1=3.85        1983KSa (28839)1248
--------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M U        K1=3.99   B2=7.90   1981TSa (28840)1249
```

Ni++ gl KNO3 45°C 0.10M U K1=3.8 1974KKa (28841)1250
****
C4H4N2O2 H2L CAS 123-33-1 (8346)
3,6-Dihydroxypyridazine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ vlt mixed 25°C 30% C T H K1=10.72 1992SBb (28873)1251
Method: polarography. Medium: 30% DMSO/H2O, 0.10 M LiClO4.
Data for 15 and 35 C. DH(K1)=-57.9 kJ mol-1, DS(K1)=-61 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
---
Ni++ gl NaClO4 31°C 0.10M U T H K1=5.65 B2= 9.82 1984SJa (28880)1252
Also data for 18 and 42 C. DH(K1)=-54.5 kJ mol-1, DS(K1)=-79.4 J K-1 mol-1
DH(K2)=-38.2, DS(K2)=-46.1.
****
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
---
Ni++ gl KNO3 35°C 0.10M C K1=4.14 1996RRa (28927)1253

Ni++ gl KNO3 45°C 0.10M C K1=4.43 1986KZa (28928)1254
****
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
---
Ni++ gl KNO3 30°C 0.10M U K1=5.5 1983SKa (28946)1255

Ni++ gl KNO3 45°C 0.10M U K1=4.4 1973TKa (28947)1256
****
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
---
Ni++ gl alc/w 25°C 50% U M K1=9.47 1978MCb (28959)1257
K(Ni(bpy)+L)=7.56
K(Ni(phen)+L)=9.36
K(Ni(NTA)+L)=4.83
****
C4H4O4 H2L Maleic acid CAS 110-16-7 (111)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	C	M	K1=3.70	B2= 6.52 B(NiLA)=7.54	1998KRa (29023)	1258

HA: Inosine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	M	M	K1=5.270	1993AHa (29024)	1259
Ni++	kin	none	25°C	0.00	U		K1=2.6	1973HYa (29025)	1260
Ni++	gl	oth/un	25°C	0.10M	U		K1=2.0	1960YYa (29026)	1261

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
Ni++	gl	NaClO4	25°C	0.50M	U	TI	K1=2.19		1990MOf (29247)	1262
At 0.1 M, K1=2.56. At 30 C and 0.5 M, K1=2.17.										
Ni++	gl	oth/un	25°C	0.10M	U		K1=3.5	K(NiL+Ni)=2.2	1958GHc (29248)	1263

C4H5NO L Methylisoxazole CAS 5765-44-6 (2045)
5-Methylisoxazole; C3H2NO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	EMF	KNO3	25°C	0.50M	U		K1=0.32	B2=0.84	1977LKa (29287)	1264

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
Ni++	gl	oth/un	25°C	0.10M	U		B2=9.08	1977CWa (29293)	1265

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
Ni++	gl	KNO3	25°C	0.50M	U	H	K1=2.93	B2= 4.49 B3=6.63	1979BEc (29303)	1266
By calorimetry: DH(K1)=-9.08 kJ mol-1, DS(K1)=25.7 J K-1 mol-1; DH(B2)=-18.4, DS(B2)=25; DH(B3)=-24.7, DS(B3)=44.										
Ni++	sp	alc/w	?	100%	U				1971MSc (29304)	1267

B4=7.93

****

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
Ni++	gl	KNO3	25°C	0.50M	U		K1=0.59	B2=1.04	1976LKb (29322)	1268

****

C4H5N2Cl L CAS 872-49-1 (7589)
5-Chloro-1-methylimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.50M	M		K1=2.60	1998KSa (29329)	1269

****

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
Ni++	gl	KNO3	25°C	0.50M	U		K1=0.41	B2=0.93	1988KLa (29340)	1270

****

C4H5N3O HL Cytosine CAS 71-30-7 (1096)
2-Oxy-6-aminopyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	M			1995LWa (29378)	1271
							K(Ni+HL)=1.22		
							K(Ni(atp)+HL)=1.54		
Ni++	gl	NaNO3	37°C	0.10M	U	M	K1=1.70	1994MGd (29379)	1272
							B(NiAL)=5.38		
							*K(NiAL)=-7.31		

HA is 6-aminopenicillanic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	35°C	0.10M	U	M	K1=2.31	1989SRe (29380)	1273
							B(NiHLAsp)=8.30		
							B(NiLAsp)=7.57		
							K(NiL+gly)=5.80		
Ni++	gl	KNO3	35°C	0.10M	U	M		1986RRe (29381)	1274
							K(Ni+HL+HA)=8.53		
							K(Ni(HL)A+H)=5.99		
							K(Ni+HL+D)=9.45		
							K(Ni+HL+C)=11.45		

HA is glycine; H2D is oxalic acid; C is histamine.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	35°C	0.10M	U	T H		1983KSa (29382)	1275

```
                                        K(Ni+HL)=2.31
                                        K(Ni+2HL)=3.16
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U        K1=5.2         1983SKa (29383)1276
--------------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M U                       1978KJa (29384)1277
                                        K(Ni+HL)=2.21
                                        K(NiHL+HL)=3.40
--------------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M U                       1974KKa (29385)1278
                                        K(Ni+HL)=2.9
********************************************************************************
C4H5N3O2               HL                        (1327)
4-Oximino-3-methyl-2-pyrazolin-5-one;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  alc/w  20°C  50%  U T      K1=4.31   B2=7.52   1981SSc (29426)1279
At 30 C: K1=4.30, B2=7.40
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U        K1=3.00        1999PGa (29461)1280
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M U        K1=3.96        1999PPa (29462)1281
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C    M                  1994MGb (29463)1282
                                        K(Ni(malate)+L)=3.23
                                        K(Ni(tartrate+L)=3.17
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=1.80   B2=3.23   1975LWc (29498)1283
                                        B3=4.39
                                        B4=5.28
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=2.01   B2=3.66   1978LKc (29509)1284
                                        B3=4.96
                                        B4=5.96
```

B5=6.62
B6=6.92
****
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
---
Ni++ gl KNO3 25°C 0.50M U K1=2.92 B2=5.25 1977LOa (29521)1285
B3=7.03
B4=8.25
****
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
---
Ni++ gl NaNO3 25°C 0.50M M K1=3.04 1998KSa (29548)1286

Ni++ cal NaNO3 25°C 1.0M C 1983ARa (29549)1287
DH(K1)=-22.72 kJ mol-1, DS(K1)=-17.9 J K-1 mol-1.

Ni++ gl KNO3 25°C 0.50M M K1=3.05 B2= 5.95 1977LBb (29550)1288
B3=7.61
B4=9.13
****
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
---
Ni++ ISE KNO3 25°C 0.50M U K1=0.32 B2=0.67 1977LGa (29611)1289
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
---
Ni++ gl KCl 30°C 0.10M U K1=1.4 1957TBb (29627)1290
****
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
---
Ni++ gl KCl 30°C 0.10M U K1=1.7 1957TBb (29633)1291
****
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=0.80        1985GLa (29639)1292
Competitive potentiometric method using Ag(I) as an auxiliary cation
Using spectrophotometry, K1=0.76
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=0.95        1982GKa (29646)1293
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=5.52   B2=10.68  1977STc (29655)1294
********************************************************************************
C4H6N4O                 L                        (1012)
4(5)-Aminoimidazole-5(4)-carboxyamide; H2N.CO.C3H2N2.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C        K1=2.45   B2= 4.16  1998TSa (29675)1295
********************************************************************************
C4H6N4O                 L                      CAS 1672-50-0  (5993)
4,5-Diamino-6-hydroxypyrimidine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M C                         1986KZa (29678)1296
                                        K(Ni+HL)=3.06
                                        K(NiHL+HL)=3.3
********************************************************************************
C4H6N4O3S2              L                        (6481)
2-Acetylamino-1,3,4-thiadiazole-5-sulphonamide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  50%  U        K1=4.94        1990FBb (29687)1297
                                        B(Ni2L3)=17.80
********************************************************************************
C4H6O4                H2L    Succinic acid    CAS 110-15-6  (112)
1,4-Butanedioic acid; HOOC.CH2.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Ni++       gl  KNO3   25°C 0.10M C    M                  2002BMa (29861)1298
                                        K(NiL+A)=6.86
                                        K(NiL+B)=9.23
                                        K(NiL+C)=3.40
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)
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=3.12        1998KRa (29862)1299
                                        B(NiLA)=8.04
HA: inosine.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=1.62        1998VAa (29863)1300
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  0.1M C        K1=1.62        1998VZb (29864)1301
Also K1=1.33 found by specrophotometry
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U    M   K1=6.54        1997ISd (29865)1302
                                        K(NiL+gly)=5.55
                                        K(NiL+ala)=5.65
                                        K(NiL+leu)=5.41
                                        K(NiL+asp)=7.21
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M   K1=5.921       1993AHa (29866)1303
-------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C 0.10M U  I     K1= 1.84       1992URa (29867)1304
In 0.5 NaClO4: K1=1.18.
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.50M C        K1=1.47        1989FRa (29868)1305
                                        B(NiHL)=5.79
-------------------------------------------------------------------------------
Ni++       cal KCl    25°C 0.10M U   H                  1967MNc (29869)1306
DH(K1)=10.5 kJ mol-1, DS=79.4 J K-1 mol-1
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  ->0  U T H    K1=2.36        1961MNc (29870)1307
DH(K1)=9.5 kJ mol-1, DS=76.6. K1=2.25(0 C),2.29(15 C),2.41(35 C),2.48(45 C)
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=1.6         1960YYa (29871)1308
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.40M U        K1=0.63        1970BTa (30081)1309
*******************************************************************************
C4H6O4                H2L    Me-Malonic Acid  CAS 516-15-2  (816)
Methylpropanedioic acid; HOOC.CH(CH3).COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
```

Ni++ gl NaClO4 25°C 0.10M U K1=2.62 1968OVa (30106)1310
****
C4H6O4S H2L Thiodiacetic CAS 123-93-3 (140)
2,2'-Thiodiglycolic acid, Thiodiethanoic acid; HOOC.CH2.S.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 35°C 0.10M C M K1=4.24 1999DSb (30185)1311
B(NiAL)=5.38
A is thiamine hydrochloride.

Ni++ gl KNO3 35°C 0.10M U M 1990RSd (30186)1312
B(Ni(asp)L)=6.53
K(NiL+en)=6.89
K(NiL+his)=8.64
K(NiL+A)=2.71
K(NiL+met)=4.92, K(NiL+ox)=2.74, K(NiL+B)=4.99, K(NiL+trp)=5.31,
K(NiL+HC)=4.80. A is imidazole, HB is phenylalanine, H2C is tyrosine.

Ni++ gl NaClO4 25°C 0.10M U TIH K1=4.26 B2= 7.09 1984DBa (30187)1313
Data for 35 and 45 C and I=0.2 and 0.3 M. At I=0, K1=4.07, K2=2.64.
DH(B2)=-11.9 kJ mol-1, DS(B2)=92.6 J K-1 mol-1.

Ni++ gl KNO3 25°C 0.10M U M K1=3.93 B2=6.6 1981ACa (30188)1314
B(NiHL)=6.0
B(NiLpy)=6.40

Ni++ gl NaClO4 30°C 0.10M U K1=4.18 1978JSc (30189)1315

Ni++ gl none 25°C 0.0 U B2=12.67 1974DVa (30190)1316
B(Ni3L4)=32.70
B(Ni4L6)=49.30

Ni++ gl NaClO4 25°C 2.00M U K1=3.93 B2=7.03 1972ANa (30191)1317
B3=8.55

Ni++ gl NaClO4 25°C 0.10M U K1=4.20 B2=7.01 1970PPa (30192)1318
K(Ni+HL)=2.15

Ni++ gl oth/un 25°C 0.10M U K1=4.0 1960YYa (30193)1319

Ni++ gl KCl 30°C 0.10M U K1=4.1 B2=6.7 1957TBb (30194)1320
****
C4H6O4S H3L Thiomalic acid CAS 70-49-5 (109)
2-Mercaptosuccinic acid, 2-Sulfanyl-1,4-butanedioic acid; HOOC.CH(SH).CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.20M U T M K1=7.62 B2=14.24 1996JOa (30283)1321
K(NiA+L)=7.99

Data for 35 and 45 C. A is 2,2'-bipyridylamine.

Ni++ gl NaClO4 30°C 0.10M U K1=6.49 B2=12.28 1988NDa (30284)1322

Ni++ gl NaCl 37°C 0.15M C K1=7.219 B2=13.107 1986FIa (30285)1323
B(Ni4L3)=30.904
B(Ni2L2)=17.014

Ni++ gl NaClO4 30°C 0.20M U K1=7.68 1984JOa (30286)1324

Ni++ gl KNO3 20°C 0.10M U K1=7.02 1977CAd (30287)1325
K(Ni+HL)=1.89

Ni++ gl KNO3 25°C 0.10M U K1=7.97 B2=12.29 1969PPa (30288)1326
K(Ni+HL)=2.17

Ni++ gl KNO3 30°C 0.10M U T H K1=7.96 B2=14.35 1968SGf (30289)1327
K1=7.86(20 C),7.87(25 C); K2=6.24(20 C),6.31(25 C)
DH(B2)=-36.8(?) kJ mol-1, DS=146(?) J K-1 mol-1

Ni++ gl KNO3 25°C 0.10M U 1965LMa (30290)1328
K(NiLOH+H)=9.37

Ni++ gl KNO3 25°C 0.10M U K1=7.67 B2=13.88 1965LMa (30291)1329

Ni++ sp oth/un 30°C 0.40M U 1965NKc (30292)1330
B3=9.6(?)
Medium: ammomia buffer. By polarography: B3=10.2(?)

Ni++ vlt oth/un ? ? U B2=9.6 1962NKa (30293)1331
B3=10.2

Ni++ gl oth/un 25°C ? U K1=7.97 B2=12.87 1959CFa (30294)1332

****

C4H6O4S2 H2L CAS 505-73-7 (3585)
Dithiodiethanoic acid; HOOC.CH2.S.S.CH2.COOH

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

---

Ni++ gl NaClO4 25°C 0.10M U TIH K1=2.84 1984DBa (30406)1333
Data for 35 and 45 C and I=0.2 and 0.3 M. At I=0, K1=2.81.
DH(K1)=-6.95 kJ mol-1, DS(K1)=30.0 J K-1 mol-1.

Ni++ gl NaClO4 25°C 0.10M U K1=1.8 1968SKd (30407)1334

****

C4H6O4S2 H4L CAS 304-55-2 (3002)
meso-2,3-Dimercaptobutanedioic acid (meso-dithiotartaric acid)

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

---

```
Ni++       gl  KNO3   25°C 0.10M U                      1965LMa (30422)1335
                                      K(NiL+H)=8.7
                                      K(NiHL+H)=3.3
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U       K1=11.69  B2=22.09  1965LMa (30423)1336
                                      K(Ni+H2L)=3.9
                                      K(Ni+HL)=9.5
                                      K(NiOHL+H)=11.14
                                      K(NiL2OH+H)=10.4
*******************************************************************************
C4H6O4Se              H2L                    CAS 6228-62-2  (984)
Selenodiethanoic acid; HOOC.CH2.Se.CH2.COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C       K1=2.96        1975LPa (30441)1337
                                      K(Ni+HL)=1.76
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U       K1=2.9         1966SYa (30442)1338
*******************************************************************************
C4H6O5                H2L    Malic acid      CAS 617-48-1  (393)
2-Hydroxybutane-1,4-dioic acid, Hydroxy-succinic acid; HOOC.CH2.CH(OH).COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=3.25        2002BMa (30537)1339
                                      K(NiL+A)=6.71
                                      K(NiL+B)=8.60
                                      K(NiL+C)=3.25
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)
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=4.60        1998KRa (30538)1340
                                      B(NiLA)=9.43
HA: inosine.
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U    M   K1=5.75        1997ISd (30539)1341
                                      K(NiL+gly)=5.20
                                      K(NiL+ala)=4.95
                                      K(NiL+leu)=4.82
                                      K(NiL+asp)=6.97
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U    M   K1=5.50        1988JOa (30540)1342
                                      K(Ni(bpy)+L)=5.22
                                      K(Ni(his)+L)=4.57
-------------------------------------------------------------------------------
Ni++       con oth/un 20°C    ?  U                      1986IKa (30541)1343
                                      K1=3.90 (0.1 MPa)
                                      K1=3.85 (20 MPa)
                                      K1=3.79 (40 MPa)
```

```
                                        K1=3.71 (60 MPa)
K1=3.65 (80 MPa) and K1=3.58 (100 MPa).
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U    M                  1978JSc (30542)1344
                                        B(NiAL)=5.52
                                        K(NiA+L)=3.91
                                        K(NiL+A)=2.23
H2A is thiodipropanoic acid.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U    M                  1978JSc (30543)1345
                                        B(NiAL)=9.02
                                        K(NiA+L)=4.85
                                        K(NiL+A)=5.73
H2A is thiodiglycolic acid.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U    M                  1978JSc (30544)1346
                                        B(NiAL)=7.44
                                        K(NiA+L)=4.15
                                        K(NiL+A)=3.33
H2A is 3.5-dinitrosalicylic acid.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U        K1=3.29        1978JSc (30545)1347
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U        K1=5.50   B2=10.39  1975JBb (30546)1348
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 20°C 0.10M U                       1963CAa (30547)1349
                                        K(Ni+H2L)=1.83
                                        K(Ni+HL)=3.17
********************************************************************************
C4H6O5                H2L    Diglycolic acid  CAS 110-99-6  (243)
Di(carboxy)methyl ether, 2,2'-Oxydiethanoic acid; HOOC.CH2.O.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M   K1=3.32        1989NDb (30815)1350
                                        B(NiAL)=7.32
                                        B(NiBL)=5.48
                                        B(NiCL)=5.41
H2A is maleic acid, H2B is malonic acid, H2C is phthalic acid.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M M    M   K1=3.32        1987NDb (30816)1351
                                        B(Ni(ida)L)=7.73
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U TIH    K1=2.74        1984DBa (30817)1352
Data for 35 and 45 C and I=0.2 and 0.3 M. At I=0, K1=2.70.
DH(K1)=-7.20 kJ mol-1, DS(K1)=27.4 J K-1 mol-1.
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C        K1=2.81        1984MMg (30818)1353
                                        K(NiL+H)=1.97
--------------------------------------------------------------------------------
```

```
Ni++       gl  KNO3   25°C 0.10M U    M   K1=2.32        1981ACa (30819)1354
B(NiLpy)=5.05; B(NiL(py)2)=6.10
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.78        1975MTc (30820)1355
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 2.00M U        K1=2.25   B2=3.45   1972ANa (30821)1356
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=2.6         1960YYa (30822)1357
--------------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        K1=2.8         1957TBb (30823)1358
********************************************************************************
C4H6O6                 H2L    DL-Tartaric acd  CAS 133-37-9  (94)
DL-Tartaric acid,DL-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  0.1M C        K1=3.07        1998VKb (30996)1359
                                          K(Ni+HL)=1.86
Also for I=0.5 M K1=2.86, K(Ni+HL)=1.99;for I=1.0 M K1=3.15, K(Ni+HL)=2.27
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U    M   K1=5.54        1997ISd (30997)1360
                                          K(NiL+gly)=5.00
                                          K(NiL+ala)=4.75
                                          K(NiL+leu)=4.55
                                          K(NiL+asp)=6.82
--------------------------------------------------------------------------------
Ni++       con oth/un 20°C    ?  U                       1986IKa (30998)1361
                                          K1=3.45 (0.1 MPa)
                                          K1=3.37 (20 MPa)
                                          K1=3.30 (40 MPa)
                                          K1=3.23 (60 MPa)
K1=3.18 (80 MPa) and K1=3.11 (100 MPa).
********************************************************************************
C4H6O6                 H2L    L-Tartaric acid  CAS 87-69-4  (92)
L-Tartaric acid, L-2,3-Dihydroxybutanedioic acid; HOOC.CH(OH).CH(OH).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=2.95        2002BMa (31126)1362
                                          K(NiL+A)=6.58
                                          K(NiL+B)=8.07
                                          K(NiL+C)=3.17
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)
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=4.68   B2= 9.04  1998KRa (31127)1363
                                          B(NiLA)=8.54
HA: inosine.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M   K1=4.682       1993AHa (31128)1364
```

```
--------------------------------------------------------------------------------
Ni++       oth NaClO4 40°C 0.10M C        B2=5.65        1982SYb (31129)1365
                                          K(Ni+HL)=3.16
Method: paper electrophoresis. Medium: 0.10 M HClO4.
--------------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        B2=7.55        1980ZHa (31130)1366
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.03M U                       1970TPa (31131)1367
                                          K(Ni+H2L)=-4.57
                                          K(NiH-1L+H)=7.30
                                          K(NiH-2L+H)=9.63
                                          B(NiH-1L)=-4.40
--------------------------------------------------------------------------------
Ni++       dis NaClO4 20°C 0.10M U        K1=3.01   B2=5.04   1969MBe (31132)1368
--------------------------------------------------------------------------------
Ni++       dis NaClO4   ?  0.10M U        K1=5.47   B2=7.60   1969SKb (31133)1369
--------------------------------------------------------------------------------
Ni++       dis NaClO4 20°C 0.10M U        B2=5.42        1963STc (31134)1370
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=9.9    B2=16.8   1954UFa (31135)1371
********************************************************************************
C4H7NO2                HL                        (8137)
(S)-Azetidine-2-carboxylic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=8.8    B2=16.40  1989ARa (31437)1372
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  75%  U        K1=7.3    B2=12.40  1986BTa (31452)1373
Medium: 75% MeOH/H2O, 0.1 M NaClO4
********************************************************************************
C4H7NO2S               HL    Thioproline      CAS 444-27-9  (1183)
Thiazolidine-4-carboxylic acid; C3H6NS.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M C T H    K1=4.03        1983RKa (31465)1374
DH(K1)=-13.4 kJ mol-1, DS(K1)=33.
--------------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M C        K1=4.007  B2=7.259  1981HMa (31466)1375
                                          B3=9.239
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.15M U        K1=3.925  B2=7.207  1976FJa (31467)1376
                                          B3=8.825
********************************************************************************
```

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
Ni++	gl	NaNO3	40°C	0.50M	U		K1=0.58		1970BTa	(31493)1377

****

C4H7NO4 H2L Aspartic acid CAS 56-84-8 (21)
Aminobutanedioic acid; H2N.CH(CH2.COOH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=7.41		2003AHa	(31680)1378
							K(NiL+A)=3.82			
HA is 3-amino-5-mercapto-1,2,4-triazole.										
Ni++	gl	NaNO3	25°C	0.10M	C	M	K1=7.07	B2=12.44	2000KAb	(31681)1379
							K(NiA+L)=7.48			
H2A=Dipicolinic acid.										
Ni++	gl	NaNO3	25°C	0.10M	C		K1=7.33	B2=12.00	2000MSa	(31682)1380
							B(NiH-1L)=-1.77			
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=7.49		1999AAa	(31683)1381
							K(NiL+A)=3.85			
							B(NiLA)=11.34			
							K(NiL+B)=3.67			
							B(NiLB)=11.16			
K(NiHL+C)=5.82, K(NiHL+D)=1.61.										
HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.										
Ni++	gl	KNO3	25°C	0.10M	C		K1=7.20		1999BIa	(31684)1382
Ni++	gl	NaNO3	30°C	0.20M	U	M	K1=7.25		1999PPa	(31685)1383
							B(NiAL)=10.13			
							B(NiBL)=11.31			
							B(NiCL)=10.40			
A is imidazole, B is 2-Me-imidazole, C is 2-Et-imidazole.										
Ni++	gl	NaCl	25°C	0.15M	C	M	K1=7.09	B2=12.66	1999SMa	(31686)1384
							B(NiHL)=12.79			
							B(NiH4L2)=32.84			
							B(NiH2L3)=31.86			
							B(NiH4L3)=42.00			
B(NiHLA)=22.04, B(NiH2LA)=29.49, B(NiH3LA)=34.50, B(NiH4LA)=38.22, B(NiL2A)=19.62, B(NiH3L2A)=41.66, B(NiH4L2A)=47.46. HA=Pyridoxamine.										
Ni++	gl	alc/w	25°C	20%	M	M	K1=7.42		1998ABa	(31687)1385
							K(NiL+oxine)=9.02			
Medium: 20% w/w EtOH/H2O, 0.1 M KNO3.										

```
---------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U    M   K1=7.33   B2=12.00  1998MSe (31688)1386
                                          B(NiH-1L)=-1.77
                                          B(NiAL)=11.08
                                          B(NiH-1AL)=-1.44
                                          B(Ni2AL2)=21.06
B(Ni2(H-1A)L2)=15.08. A is imidazole.
---------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=7.35        1997ISd (31689)1387
---------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U    M   K1=7.17   B2=12.49  1997PJa (31690)1388
                                          K(Ni(bpy)+L)=6.04
                                          K(Ni(phen)+L)=6.47
                                          K(NiA+L)=6.74
                                          K(Ni(his)+L)=4.73
A is 2,2'-bipyridylamine. K(Ni(ida)+L)=5.09.
---------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M   K1=7.41        1996AEa (31691)1389
Data for ternary complexes with dipicolinic acid.
---------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.01M U        K1=6.54   B2=11.22  1996EMa (31692)1390
---------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U T  M   K1=7.12   B2=12.44  1996JOa (31693)1391
                                          K(NiA+L)=6.75
Data for 35 and 45 C. A is 2,2'-bipyridylamine.
---------------------------------------------------------------------------
Ni++       gl  alc/w  20°C  50%  M    M   K1=7.63        1995AMb (31694)1392
                                          K(NiA+L)=7.95
Medium: 50% v/v EtOH/H2O, 0.20 M NaClO4. A is 2,2',2"-terpyridine.
---------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M C        K1=7.34        1993BAb (31695)1393
---------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M   K1=7.81   B2=12.88  1993NAd (31696)1394
                                          B(NiHL)=12.08
                                          B(NiLZn)=10.43
                                          B(NiL2Zn)=17.41
---------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U T  M   K1=7.17   B2=12.49  1993PPa (31697)1395
                                          K(NiA+L)=6.75
A is 2,2'-bipyridylamine. Also data for 35 and 45 C.
---------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U                   1990APa (31698)1396
                                          K(Ni+H2L=NiL+2H)=-6.15
                                          *K(NiL)=-7.71
                                          K(Ni+2H2L=NiL2+4H)=-14.54
                                          K(Ni+HL=NiL+H)=-2.72
---------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=7.15        1989MAc (31699)1397
                                          K(NiA+L)=8.91
H4A is adenosine-5'-triphosphoric acid.
```

```
---------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=7.35        1989MAd (31700)1398
                                          K(NiA+L)=9.58
                                          B(NiAL)=17.60
H2A is N-(2-acetamido)imino diethanoic acid.
---------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.20M U    M   K1=7.17   B2=13.16  1989RVa (31701)1399
                                          K(NiA+L)=6.46
A=bis(imidazol-2-yl)methane
---------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U    M   K1=7.12        1988JOa (31702)1400
                                          K(Ni(bpy)+L)=6.72
                                          K(Ni(his)+L)=4.78
---------------------------------------------------------------------------
Ni++       gl  NaClO4 27°C 0.20M U    M   K1=7.12   B2=12.44  1988PPc (31703)1401
                                          K(NiA+L)=6.75
A is 2,2'-dipyridylamine.
---------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U    M   K1=7.12        1984JOa (31704)1402
                                          K(Ni(his)+L)=4.78
                                          K(Ni(nta)+L)=4.19
---------------------------------------------------------------------------
Ni++       cal KNO3   25°C 1.00M U TIH                   1983VKa (31705)1403
DH(K1)=-15.41 kJ mol-1; DH(B2)=-37.86
---------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M        K1=6.74   B2=11.31  1981GVa (31706)1404
---------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M C        K1=7.16   B2=12.36  1981RSd (31707)1405
---------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U    M   K1=7.12   B2=12.39  1978JSa (31708)1406
                                          K(Ni+L+HA)=14.35
                                          K(Ni+L+HB)=5.92
                                          B(NiLC)=6.88
                                          B(NiLD)=11.37
H3A=thiomalic acid; H3B=thiodiglycollic acid; H2C=malic acid;
H2D=3,5-dinitrosalicylic acid
---------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U    M                   1978JSc (31709)1407
                                          B(NiAL)=5.92
                                          K(NiL+A)=4.31
H2A is thiodipropanoic acid.
---------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U        K1=7.12   B2=12.44  1975JBb (31710)1408
---------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M   K1=7.14   B2=12.43  1974GNb (31711)1409
                                          B(NiHL)=11.19
                                          B(Ni(gly)L)=11.89
                                          B(Ni(gly)2L)=14.43
---------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 1.00M U    M   K1=6.81   B2=11.99  1973BJd (31712)1410
```

```
                                        B(NiL(Met))=11.95
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M                  1973SSe (31713)1411
                                        K(NiL+Gly)=4.86
                                        K(NiL+Ala)=4.62
                                        K(NiL+Val)=4.47
                                        K(NiL+Leu)=4.71
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=6.60   B2=11.92  1972IBa (31714)1412
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=7.14   B2=12.34  1965RWa (31715)1413
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        B2=12.7        1952ALa (31716)1414
--------------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        K1=7.12   B2=12.39  1952CMb (31717)1415
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M   K1=8.76        1999DSb (32101)1416
                                        B(NiAL)=10.05
A is thiamine hydrochloride.
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M        K1=8.45        1996KSc (32102)1417
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.50M U        K1=8.10   B2=14.63  1992GLa (32103)1418
                                        B(NiH-1L)=-1.02
                                        B3=17.65
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=8.13        1991DAc (32104)1419
Data for ternary complexes with acetohydroxamic acid
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=8.13        1990DAb (32105)1420
                                        K(NiL+A)=4.87
                                        B(NiLA)=13.00
H2A: salicylaldoxime
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=8.13        1990DAc (32106)1421
                                        K(NiL+A)=3.92
                                        B(NiAL)=12.05
HL: benzohydroxamic acid
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M C    M                  1990UBc (32107)1422
                                        B(Ni(Gly)L)=13.55
                                        B(Ni(Ala)L)=13.31
                                        B(Ni(Phe)L)=12.80
                                        B(Ni(HTyr)L)=12.86
B(Ni(Trp)L)=13.37, B(Ni(en)L)=15.77; B(Ni(1,3-pn)L)=14.78,
```

B(Ni(catecholate)L)=15.42 plus others

Ni++ gl NaClO4 25°C 0.10M M K1=8.35 1987NDb (32108)1423

Ni++ gl NaClO4 25°C 0.10M U TIH K1=8.22 B2=14.25 1984DBa (32109)1424
Data for 35 and 45 C and I=0.2 and 0.3 M. At I=0, K1=8.17, K2=6.00.
DH(B2)=-13.6 kJ mol-1, DS(B2)=220 J K-1 mol-1.

Ni++ cal KNO3 25°C 0.50M U TIH 1984VKb (32110)1425
DH(K1)=-12.25 kJ mol-1; DH(B2)=-40.74

Ni++ gl KNO3 25°C 0.10M U K1=8.13 1983FSa (32111)1426

Ni++ gl KNO3 25°C 0.10M U M K1=8.07 B2=14.23 1981ACa (32112)1427
B(NiLpy)=10.07; B(NiL(py)2)=11.4

Ni++ gl KNO3 25°C 0.10M U I K1=8.5 B2=14.8 1981FMb (32113)1428
Interpolated from graph. Data also for 20, 50, 80% v/v MeOH/H2O

Ni++ gl NaNO3 30°C 0.20M C K1=8.18 B2=14.40 1981RSe (32114)1429

Ni++ gl KNO3 25°C 2.5M M K1=7.53 1979FLc (32115)1430

Ni++ gl KNO3 25°C 0.10M U M 1971TSh (32116)1431
K(NiL+Ala)=4.68
K(NiL+Gly)=5.02
K(NiL+Asp)=5.70

Ni++ gl KNO3 30°C 0.10M U M 1971TSj (32117)1432
K(NiL+A)=6.45
A=1,2-diaminopropane

Ni++ sp oth/un 25°C 0.33M U K1=14.9 1970CMa (32118)1433

Ni++ sp NaClO4 25°C 0.10M U M 1970CMa (32119)1434
K(NiL+2CN)=11.20

Ni++ oth none 25°C 0.00 U K1=9.24 B2=15.71 1970NLb (32120)1435

Ni++ gl NaClO4 25°C 0.12M U I K1=8.48 B2=15.03 1970NPc (32121)1436
In 0.52 M NaClO4 K1=8.21, K2=6.57; in 1.0 M K1=8.18, K2=6.61;
in 2.0 M K1=8.40, K2=6.90; in 0.007-0.008 M K1=8.93, K2=6.44

Ni++ EMF oth/un 30°C 0.10M U M 1970STf (32122)1437
K(NiL+en)=6.32
K(NiL+A)=6.45
K(NiL+B)=5.29
A=1,2-diaminopropane; B=1,3-diaminopropane

Ni++ gl R4N.X 25°C 1.50M U K1=8.21 1969FDa (32123)1438

Medium: NH4NO3

Ni++ dis R4N.X 25°C 1.50M U M 1969FDa (32124)1439
B(NiL(py))=10.10
B(NiL(py)2)=10.9
B(NiL(py)3)=11.27
B(NiL(NH3))=10.72
Medium: NH4NO3. B(NiL(NH3)2)=12.37, B(NiL(NH3)3)=13.73. B(NiL(py)(NH3))=12.1
Data for other complexes also given.

Ni++ gl KNO3 20°C 0.10M U H K1=8.19 B2=14.3 1964ANa (32125)1440
By calorimetry: DH(K1)=-21.1 kJ mol-1, DS=83.6 J K-1 mol-1
DH(B2)=-39.7, DS(B2)=138.4

Ni++ gl oth/un 30°C 0.10M U K1=8.21 1957TBb (32126)1441

Ni++ gl KCl 30°C 0.10M U K1=8.26 B2=14.61 1952CMa (32127)1442

****

C4H7NO5 H2L (1234)
N-Hydroxyiminodiethanoic acid; HO.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=6.4	B2=11.05	1987AKa	(32417)1443
Ni++	gl	KNO3	25°C	0.10M	U		K1=6.4	B2=11.05	1987BKa	(32418)1444
Ni++	gl	KNO3	25°C	0.10M	C		K1=6.43	B2=10.97	1984FVa	(32419)1445

****

C4H7N3 L CAS 13400-46-9 (3567)
4(5)-Aminomethylimidazole; C3H3N2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.30M	C	H	K1=5.85	B2=10.67	1967HWa	(32435)1446
							K3=3.12			
Ni++	gl	oth/un	25°C	0.01M	U		K1=6.0	B2=11.0	1960HJa	(32436)1447
							B3=14.3			

By calorimetry DH(K1)=-36.3 kJ mol-1, DH(K2)=-36.2, DH(K3)=-36.2

****

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
Ni++	gl	KNO3	25°C	0.50M	U		K1=1.15	1985GLa	(32442)1448

****

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
Ni++	gl	KNO3	25°C	0.50M	U		K1=0.84	B2=1.75	1982GLa (32448)	1449

****

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
Ni++	sp	oth/un	25°C	0.01M	M				1986IGb (32503)	1450
							Kso(NiL2)=-23.06			

In tris or phosphate buffer, pH 6.4-8.9; by atomic absorption spectroscopy.

Ni++	ix	KCl	?	0.20M	U				1967BKa (32504)	1451
							K(NiL2+L)=3.02			
Ni++	sol	NaClO4	20°C	0.10M	U		K1=8.08	B2=16.65	1964ASb (32505)	1452
Ni++	dis	NaClO4	25°C	0.10M	U		K1=9.0	B2=17.62	1964SAe (32506)	1453
Ni++	gl	diox/w	25°C	75%	U	I	K1=11.0	B2=23.1	1963BAb (32507)	1454
							Kso=-23.66			

In aqueous soln: B2=17.0

Ni++	gl	alc/w	20°C	50%	U		B2=21.8		1961VLa (32508)	1455

Medium: 50% MeOH, 0.1 M KCl

Ni++	sp	diox/w	20°C	50%	U		B2=21.8		1961VLb (32509)	1456
Ni++	dis	non-aq	25°C	100%	U		K1=14.73	B2=17.24	1959DKa (32510)	1457

Medium: CHCl3, 0.1 M NaClO4

Ni++	sol	non-aq	25°C	100%	U	IH			1959FLa (32511)	1458
							Ks2=-3.34			

Medium: CHCl3, DH(s2)=20 kJ mol-1. In dil soln. Ks2=-5.98, DH=38; C6H6: Ks2=-6.60, DH=27.6 plus others

Ni++	sol	oth/un	25°C	?	U	T H			1958BBb (32512)	1459
							Kso=23.78			

DH(so)=50 kJ mol-1, DS=-280. 40 C: Kso=23.23

Ni++	gl	diox/w	25°C	50%	U		K1=11.55	B2=21.88	1958BPa (32513)	1460
Ni++	sol	alc/w	?	9.6%	U	I			1955BMa (32514)	1461
							Ks2=-3.52			

In CHCl3 Ks2=-3.26, plus others

Ni++	gl	diox/w	25°C	50%	U	T H	K1=11.16	B2=21.70	1954CFa (32515)	1462

DH(B2)=8.8 kJ mol-1. At 39.6 C: K1=11.18, K2=10.59

```
-------------------------------------------------------------------------------
Ni++       sol none   25°C  0.0  U  I     B2=17.72       1954CSa (32516)1463
In 0.05 M NaCl B2=17.35, Kso=-23.37, Ks2=-6.01. In CHCl3 Ks2=-3.32
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=14.6   B2=28.40  1954UFa (32517)1464
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  0.3M C  IH    K1=6.02   B2= 9.70  2003ZKb (32631)1465
DH1=-6.41 kJ/mol
For I=0.5 M K1=6.46; B2=9.76;   for I=1.0 M K1=6.43, B2=9.72
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C TIH    K1=5.61        2001BTa (32632)1466
Data for 20-50% w/w EtOH, DMF, dioxane, AN/H2O, 0.10 M KNO3 and 15-45 C.
DH(K1)=-19.26 kJ mol-1, DS(K1)=-42.8 J K-1 mol-1.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=5.61        1999BIa (32633)1467
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M   K1=5.57        1996AEa (32634)1468
Data for ternary complexes with dipicolinic acid.
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 1.00M C        K1=5.31   B2=9.43   1996BFb (32635)1469
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M C        K1=5.62        1993BAb (32636)1470
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T H    K1=5.69   B2=10.33  1980ZYb (32637)1471
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 3.00M C      T K1=6.152  B2=11.16  1974BWa (32638)1472
                                          B3=14.545
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M   K1=7.14   B2=12.43  1974GNd (32639)1473
                                          B(NiHL)=11.19
                                          B(Ni(gly)L)=11.89
                                          B(Ni(gly)2L)=14.43
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 3.00M C                            1974GWa (32640)1474
                                          B(NiLCl)=6.1
                                          B(NiL2Cl)=11.7
                                          B(NiH-1LCl)=11.64
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U      T K1=5.68   B2=10.23  1965RWa (32641)1475
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.15M U        K1=5.58   B2=9.96   1958LDa (32642)1476
-------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        B2=10.6        1950ALa (32643)1477
*******************************************************************************
C4H8N2O3               HL    Gly-Gly          CAS 556-50-3  (54)
```

Glycyl-glycine; H2N.CH2.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=3.96 B2= 7.16 B(NiH-1L)=-4.91 B(NiH-1L2)=-2.51 B(NiH-2L2)=-11.99	2003AMb (32914)	1478
Ni++	gl	NaCl	25°C	0.15M	M		K1=3.96 B2= 7.19 B(NiH-1L)=-4.83 B(NiH-2L2)=-11.45	2003MYa (32915)	1479
Ni++	gl	NaClO4	25°C	0.20M	U	M	K1=4.33 B2= 7.74 K(Ni(bpy)+L)=3.88 K(Ni(phen)+L)=4.19 K(NiA+L)=4.00 K(Ni(his)+L)=3.96	1997PJa (32916)	1480
A is 2,2'-bipyridylamine. K(Ni(ida)+L)=4.02.									
Ni++	gl	NaClO4	37°C	0.15M	U	M	K1=4.38 B(NiH-1L)=-2.06 B(NiH-2L2)=-8.95 B(NiH-1L2)=0.41 *K(NiL)=-6.44	1995NNa (32917)	1481
B(NiAL)=7.28, B(NiHCL)=16.70, B(NiCL)=10.80, Ni(H-1CL)=3.80, K(NiHC+L)=4.85. A is imidazole, C is histamine.									
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiH(his)L)=17.75 B(Ni(his)L)=12.81 B(NiH-1(his)L)=5.94 K(NiH(his)+L)=4.67	1995NNa (32918)	1482
Ni++	gl	NaNO3	37°C	0.15M	M	M	K1=3.95 B2=7.18 B(NiH-1L)=-4.77 B(NiH-2L2)=-11.56 B(NiLA)=8.82 B(NiL2A2)=14.30	1987MOb (32919)	1483
A=imidazole. Also B(NiH2LB)=26.26, B(NiH2L2B)=29.07, B(NiH2LB2)=32.13 where B=pyridoxamine. Also ternary NiHLAB complexes.									
Ni++	oth	NaClO4	35°C	0.10M	C	M	K1=4.20 B2= 7.20 K(Ni(nta)+L)=5.39	1986SYa (32920)	1484
Method: paper electrophoresis. Medium pH 8.5.									
Ni++	gl	NaNO3	35°C	0.10M	U	M	K1=4.10 K(NiL+CMP)=2.15	1985KSc (32921)	1485
H2CMP=cytidine-5'-monophosphoric acid									

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Ni++       gl  KCl    25°C 0.20M C    M                  1984KDb (32922)1486
                                       K(Ni(DOPA)+L)=3.84
                                       B(NiHL(DOPA))=23.74
Ternary data also with Dopamine, Adrenaline and Noradrenaline
-------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.20M U        K1=4.08   B2=7.32   1982KRd (32923)1487
                                       B3=9.68
                                       B(NiH-1L2)=-1.8
                                       B(NiH-2L2)=-11.57
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.10M U                    1979EHa (32924)1488
                                       B(NiH-1L)=-3.36
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=4.17   B2=7.44   1977PNa (32925)1489
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=4.17   B2= 7.44  1976PNa (32926)1490
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.88   B2= 7.00  1975KMe (32927)1491
                                       K(Ni+HL)=2.69
                                       K(NiL+H)=6.29
                                       *K(NiL)=-8.88
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.88   B2=7.00   1974KMc (32928)1492
                                       K(Ni+HL)=2.69
                                       K(NiH-1L+H)=8.88
                                       K(NiL+H)=6.29
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U                    1972TSc (32929)1493
                                       K3=2.11
                                       K(NiH-1L2+H)=8.80
                                       K(NiH-2L2+H=NiH-1L2)=9.48
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=4.11   B2=7.32   1971LNa (32930)1494
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U    M   K1=4.03   B2=7.24   1970MMa (32931)1495
                                       B3=9.41
                                       K(NiH-1L+H)=2.07
                                       K(NiH-2L+2H)=12.15
Data for other complexes also given
-------------------------------------------------------------------------------
Ni++       EMF oth/un   ?     ?  U        K1=4.17   B2=7.44   1970PBb (32932)1496
-------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  45%  U T      K1=5.06   B2=9.09   1969MPb (32933)1497
                                       B3=11.82
Temperature range 10-40C
K1(10 C)=5.28, B2(10 C)=9.55, B3(10 C)=12.38
-------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  60%  U T      K1=6.33   B2=11.79  1969MPb (32934)1498
                                       B3=15.52
In 70% MeOH: K1=5.81, B2=9.87, B3=12.94. In 39%: K1=4.92, B2=8.75, B3=11.43
```

```
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.14M U T      K1=4.17   B2=7.32   1969MPb (32935)1499
                                          B3=9.34
Temperature range 10-40C
K1(40 C)=3.98, B2(40 C)=6.92, B3(40 C)=8.71
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=3.34   B2=7.41   1967KMa (32936)1500
                                          K3=2.5
--------------------------------------------------------------------------------
Ni++       cal KNO3   22°C 0.10M U   H                  1967SSl (32937)1501
DH(B2)=-25.1 kJ mol-1
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.16M U                      1960MCa (32938)1502
                                          K(NiH-1L+H)=9.35
                                          K(NiH-1LOH+H)=9.95
--------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.16M U        K1=3.93   B2=7.18   1960MCa (32939)1503
                                          K3=2.0
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.15M U        K1=4.18        1958LCa (32940)1504
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.20M U        K1=4.49   B2=7.91   1957LDa (32941)1505
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C .058M U T      B2=7.22        1957LYa (32942)1506
0 C: B2=7.64
--------------------------------------------------------------------------------
Ni++       gl  oth/un 21°C 0.01M U        B2=7.6         1952PEa (32943)1507
Medium: NiCl2
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  ->0  U        K1=4.49   B2=7.91   1951MOa (32944)1508
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=7.19        1983FSa (33073)1509
--------------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        K1=6.9    B2=12.2   1957TBb (33074)1510
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=7.8    B2=13.0   1956ARb (33075)1511
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=8.38        1993FBa (33127)1512
                                          B(NiHL)=14.45
                                          B(Ni2HL)=21.74
```

B(Ni2L)=14.42
B(Ni2H-1L)=4.56

Ni++ gl KCl 25°C 0.20M C K1=8.38 B2=14.41 1990FBa (33128)1513
B(NiHL)=14.45
B(NiHL2)=21.74
B(NiH-1L2)=4.56

****

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
Ni++	gl	KCl	25°C	0.50M	C		K1=8.38	B2=14.73	1988LEb	(33146)1514
							B(NiHL)=14.25			
							B(Ni2L3)=25.78			

****

C4H8N2S2 L CAS 120-79-6 (2820)
N,N'-Dimethyl-dithiooxamide; CH3.NH.CS.CS.NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	none	25°C	0.0	U		K1=5.26		1976AMc	(33167)1515

****

C4H8N3O3P H2L CAS 270249-45-1 (8827)
Amino-1H-imidazol-4ylmethylphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		B2=14.63		2003SBc	(33171)1516
							B(NiH2L2)=30.16			

****

C4H8O2 HL CAS 107-92-6 (1118)
n-Butanoic acid; CH3.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	oth	NaClO4	25°C	2.0M	U		K1=0.75		1990FTa	(33301)1517

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	oth	oth/un	25°C	0.00	U		K1=1.54		1976HYa	(33302)1518

Method: laser temperature jump

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	NaClO4	25°C	2.00M	U	I	K1=0.71	B2=0.88	1974GMb	(33303)1519

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	EMF	NaClO4	25°C	2.00M	U		K1=0.73	B2=0.80	1970FMa	(33304)1520
							B3=1.34			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	NaClO4	25°C	2.00M	U		K1=0.81	B2=0.80	1970GFa	(33305)1521

****
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
---
Ni++ cal NaNO3 25°C 1.0M U H K1=1.04 B2= 1.81 1977ARa (33390)1522
K3=0.47
DH(K1)=1.2 kJ mol-1, DH(K2)=1.2,DH(K3)=-1.2

Ni++ gl NaClO4 25°C 1.00M U K1=1.04 B2=1.81 1970SAa (33391)1523
B3=2.28

Ni++ gl diox/w 30°C 50% U K1=3.12 1956IFa (33392)1524
****
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
---
Ni++ EMF NaClO4 25°C 1.0M U K1=1.67 B2=2.80 1967TGa (33435)1525
K3=0.4
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
---
Ni++ oth NaClO4 25°C 2.0M U K1=1.72 1990FTa (33563)1526
Methods: averaged results from potentiometric, polarographic and
spectrophotometric measurements.

Ni++ EMF NaClO4 25°C 2.00M U K1=1.72 B2=2.89 1978MMg (33564)1527
B3=3.63

Ni++ sp NaClO4 25°C 2.00M U I K1=1.72 B2=2.91 1974GMb (33565)1528
B3=3.35

Ni++ sp NaClO4 25°C 2.00M U K1=1.72 B2=2.91 1973GPa (33566)1529
B3=3.35
****
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
---
Ni++ oth NaClO4 25°C 2.0M U K1=1.00 1990FTa (33603)1530
Methods: averaged results from potentiometric, polarographic and
spectrophotometric measurements.

```
-------------------------------------------------------------------------------
Ni++       EMF NaClO4 25°C 2.00M U        K1=1.00   B2=1.34   1978MMg (33604)1531
                                          B3=1.71
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 2.00M U  I     K1=1.00   B2=1.36   1974GMb (33605)1532
                                          B3=1.57
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       EMF NaClO4 25°C 2.00M U        K1=0.63   B2=0.18   1978MMg (33646)1533
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 2.00M U  I     K1=0.52   B2=1.04   1974GMb (33647)1534
*******************************************************************************
C4H8O3                 HL    Ethoxyacetic ac  CAS 627-03-2  (2996)
Ethoxyacetic acid; C2H5.O.CH2.COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       cal NaNO3  25°C  1.0M U   H    K1=1.02   B2= 1.50  1977ARa (33666)1535
DH(K1)=4.1 kJ mol-1, DH(K2)=5.0
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U        K1=1.02   B2=1.51   1970SAa (33667)1536
                                          B3=1.23
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       cal non-aq 30°C 100%  U   H                  1976GSb (33725)1537
                                          K(NiA2+L)=0.43
In benzene. A2 = BF2-bridged methylpropylglyoxime. DH=-12.0 kJ mol-1; DS=-31
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C    ?  U    M                  1981CKb (33780)1538
                                          K(Ni(C6H5)4porphin+L)=1.30
-------------------------------------------------------------------------------
Ni++       sp  non-aq 13°C 100%  U T  M                  1976CUa (33781)1539
                                          K(NiA+2L)=5.28
Medium: chlorobenzene. H2A=biacetyl-bis-a-hydroxybenzylidenehydrazone
K=4.99(19 C); 4.68(26 C); 4.46(31 C)
-------------------------------------------------------------------------------
Ni++       ISE R4N.X  25°C 2.00M U        K1=2.54   B2=4.62   1969PDa (33782)1540
```

K3=1.65
K4=1.16
K5=0.93
K6=0.97

Medium: NH4NO3

****

C4H9NO2 HL Aminoisobutyric CAS 144-90-1 (188)

2-Amino-2-methylpropanoic acid; H2N.C(CH3)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaCl	25°C	1.0M	C		K1=5.14	B2= 9.25	1976BOd	(33826)1541
							B3=12.06			
Ni++	gl	KCl	25°C	0.50M	U	M	K1=5.12	B2=9.32	1966LHc	(33827)1542
							B3=11.91			
							B(NiAL)=7.36			
							B(NiAL2)=12.35			
							B(NiA2L2)=14.17			

HA=glyoxylic acid

Ni++	gl	KCl	20°C	0.10M	U		K1=5.16	B2=9.39	1963IPa	(33828)1543

****

C4H9NO2 HL 2-Aminobutyric CAS 2835-81-6 (571)

2-Aminobutanoic acid; CH3.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M		1999NAa	(33880)1544
							B(NiAL)=11.72		
							B(NiHAL)=19.51		
							K(NiL+A)=6.16		
							K(NiA+L)=5.76		

A is 1,3-diaminopropane.

Ni++	gl	NaClO4	37°C	0.15M	U	M		1998NAa	(33881)1545
							B(NiAL)=8.94		
							B(NiA2L)=11.23		
							K(NiA+L)=5.37		
							K(NiL+A)=3.88		

K(NiAL+A)=2.29, K(NiA2+L)=5.53, K(NiL+2A)=5.67. A is imidazole.
B(NiCL)=8.14, K(NiC+L)=5.77, K(NiL+C)=2.58. C is benzimidazole.

Ni++	gl	NaClO4	37°C	0.15M	U	M		1998NAb	(33882)1546
							B(NiHLA)=17.59		
							B(NiLA)=11.87		
							K(NiA+L)=5.61		
							K(NiL+A)=6.41		

A is histamine. HL is DL-2-aminobutanoic acid.

```
Ni++       gl  NaClO4 37°C 0.15M U    M                  1998NAb (33883)1547
                                        B(NiHL(his))=19.06
                                        B(NiL(his))=14.28
                                        K(Ni(his)+L)=5.44
                                        K(NiL+his)=8.72
HL is DL-2-aminobutanoic acid.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1998NAc (33884)1548
                                        B(NiAHL)=19.80
                                        B(NiAL)=12.49
                                        B(NiA2HL)=26.87
                                        B(NiA2L)=18.50
A is 1,2-diaminopropane. K(NiA+L)=5.54, K(NiL+A)=6.93, K(NiA2+L)=5.43,
K(NiAL+A)=6.01.
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C  1.0M C        K1=5.23   B2= 9.56  1976BOd (33885)1549
                                        B3=12.52
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U   H    K1=5.22   B2= 9.53  1975SGc (33886)1550
By calorimetry: DH(K1)=-17.2 kJ mol-1, DS(K1)=42.3 J K-1 mol-1;
DH(B2)=-33.9, DS(B2)=68.6. Ligand is DL-amino acid.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U   H    K1=5.22   B2= 9.53  1974SGb (33887)1551
By calorimetry, DH(K1)=-17.2 kJ mol-1, DS(K1)=42.3 J K-1 mol-1;
DH(K2)=-33.9, DS(K2)=68.6.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.05M U        K1=5.35   B2=9.76   1972GMb (33888)1552
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.05M U    M   K1=5.38   B2=9.80   1972GSc (33889)1553
                                        B(NiLA)=10.18
                                        B(NiLB)=10.21
                                        B(NiL(Ser))=10.21
                                        B(NiL(Phe))=10.02
HA=norleucine, HB=norvaline. B(NiL(Thr))=10.27, K(Ni+L+HTyr)=10.02
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.05M U    M                  1972GSc (33890)1554
                                        B(NiL(Gly))=10.59
                                        B(NiL(Ala))=10.24
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.16M U        K1=5.46   B2=9.82   1970LBa (33891)1555
-------------------------------------------------------------------------------
Ni++       gl  KCl    40°C 0.20M U T H    K1=5.29   B2=9.48   1965SMb (33892)1556
K1=5.58(15 C),5.46(25 C); K2=4.48(15 C),4.36(25 C)
DH(K1)=-20.1 kJ mol-1,DS=37.6 J K-1 mol-1; DH(K2)=-20.1,DS=16.7
*******************************************************************************
C4H9NO2                HL    3-Aminobutyric   CAS 2835-82-7  (2894)
3-Aminobutanoic acid; CH3.CH(NH2).CH2.COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
```

```
Ni++       gl  NaClO4 37°C 0.15M U    M                  1999NAa (33943)1557
                                        B(NiAL)=10.12
                                        B(NiHAL)=18.57
                                        K(NiL+A)=6.05
                                        K(NiA+L)=4.16
A is 1,3-diaminopropane.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1998NAa (33944)1558
                                        B(NiAL)=8.12
                                        B(NiA2L)=9.91
                                        K(NiA+L)=4.55
                                        K(NiL+A)=4.05
K(NiAL+A)=1.79, K(NiA2+L)=4.21, K(NiL+2A)=5.84. A is imidazole. B(NiCL)=
7.07, B(NiC2L)=8.75, K(NiC+L)=4.70, K(NiL+C)=3.00. C is benzimidazole.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1998NAb (33945)1559
                                        B(NiHLA)=16.99
                                        B(NiLA)=10.37
                                        K(NiA+L)=4.01
                                        K(NiL+A)=6.30
A is histamine. HL is DL-3-aminobutanoic acid.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1998NAb (33946)1560
                                        B(NiHL(his))=18.65
                                        B(NiL(his))=12.82
                                        K(Ni(his)+L)=3.98
                                        K(NiL+his)=8.75
HL is DL-3-aminobutanoic acid.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1998NAc (33947)1561
                                        B(NiAHL)=20.39
                                        B(NiAL)=12.26
                                        B(NiA2HL)=27.48
                                         K(NiA+L)=5.31
A is 1,2-diaminopropane. K(NiL+A)=8.19.
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 1.00M C       K1=4.36   B2=7.76   1976BOb (33948)1562
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.16M U       K1=4.56   B2=7.86   1970LBa (33949)1563
-------------------------------------------------------------------------------
Ni++       gl  KCl    40°C 0.20M U T H   K1=4.49   B2=7.64   1965SMb (33950)1564
K1=4.72(15 C),4.60(25 C); K2=3.44(15 C),3.32(25 C)
DH(K1)=-15.9 kJ mol-1,DS=33.4 J K-1 mol-1; DH(K2)=-20.1,DS=-4.2
*******************************************************************************
C4H9NO2                HL    4-Aminobutyric   CAS 56-12-2  (574)
4-Aminobutanoic acid; H2N.CH2.CH2.CH2.COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1999NAa (33973)1565
```

B(NiAL)=9.20
B(NiHAL)=18.25
K(NiL+A)=6.00
K(NiA+L)=3.24

A is 1,3-diaminopropane.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAa (33974)1566
B(NiAL)=7.45
B(NiA2L)=9.22
K(NiA+L)=3.88
K(NiL+A)=4.25

K(NiAL+A)=1.77, K(NiA2+L)=3.52, K(NiL+2A)=6.02. A is imidazole. B(NiC2L)= 7.97, K(NiC2+L)=3.86, K(NiL+2C)=4.77. C is benzimidazole.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAb (33975)1567
B(NiHLA)=16.84
B(NiLA)=9.42
K(NiA+L)=3.06
K(NiL+A)=6.22

A is histamine.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAb (33976)1568
B(NiHL(his))=18.06
B(NiL(his))=11.87
K(Ni(his)+L)=3.03
K(NiL+his)=8.67

Ni++ gl NaClO4 37°C 0.15M U M 1998NAc (33977)1569
B(NiAHL)=20.54
B(NiAL)=10.03
B(NiA2HL)=28.35
K(NiL+A)=6.83

A is 1,2-diaminopropane.

Ni++ gl NaCl 25°C 1.00M C K1=3.54 1976BOb (33978)1570

****

C4H9NO2 L CAS 623-33-6 (3011)

Glycine ethyl ester; H2N.CH2.CO.OCH2CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	30°C	1.0M	U		K1=2.30	B2=4.22	1966HJa	(33998)1571
Ni++	gl	oth/un	25°C	0.15M	U		K1=2.49	B2=4.58	1956WMa	(33999)1572

****

C4H9NO2 HL Dimethylglycine CAS 1118-68-9 (88)

N,N-Dimethyl-2-aminoethanoic acid; (CH3)2N.CH2.COOH

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

Ni++ gl alc/w 21°C 50% M I K1=4.98 B2=9.17 1984LOe (34022)1573
B(NiHL)=10.82

Ni++ gl KNO3 25°C 0.10M U M 1972IVc (34023)1574
K(NiA+L)=4.45
H2A=iminodiethanoic acid

Ni++ gl oth/un 25°C 0.15M U K1=4.77 B2=8.47 1958LDa (34024)1575

Ni++ gl NaClO4 25°C 0.10M U K1=4.82 B2=8.60 1954BCb (34025)1576
****
C4H9NO2 HL N-Ethylglycine CAS 627-01-0 (3010)
N-Ethylglycine; CH3.CH2.NH.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U K1=4.81 B2=8.54 1954BCb (34038)1577
****
C4H9NO2S HL CAS 3335-52-2 (8306)
2-(Aminoethyl)thioethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M U H K1=6.14 B2=11.53 1983HTa (34042)1578
By calorimetry: DH(K1)=-22.6 kJ mol-1, DH(K2)=-22.7.
****
C4H9NO2S HL CAS 88806-98-8 (3019)
2-Amino-3-mercaptopropanoic acid methyl ester, cysteine methyl ester;
HSCH2CH(NH2)COOCH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.10M U K1=7.61 B2=17.24 1969PPd (34049)1579
B3=24.27
B(Ni4L6)=58.35
B(NiHL)=11.46
B(NiHL2)=20.48
K(NiLOH+H)=8.6
****
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
---
Ni++ gl NaClO4 37°C 0.15M U M 2000NNb (34077)1580
B(NiAL)=9.29
B(NiHAL)=14.59
K(NiHA+L)=7.22
K(NiA+L)=6.02
K(NiL+A)=3.57. HA 6-aminopenicillanic acid.

```
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  2000NNb (34078)1581
                                        B(NiAL)=9.81
                                        B(NiHAL)=14.49
                                        B(NiH-1AL)=1.32
                                        K(NiHA+L)=5.60
K(NiA+L)=6.23, K(NiL+A)=4.09, K(NiH-1A+L)=5.96. HA is ampicillin.
--------------------------------------------------------------------------------
Ni++       dis NaClO4 35°C 0.10M U    M   K1=5.35   B2=9.70   1990TSb (34079)1582
Method: electrophoresis. Ternary complexes with NTA
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=5.14   B2=9.78   1987SPa (34080)1583
                                        B3=12.76
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=5.26   B2=9.82   1964LMa (34081)1584
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.01M U        K1=5.51   B2=9.91   1996EMa (34228)1585
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C T    R K1=5.47   B2=9.99   1995BEa (34229)1586
IUPAC evaluation
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M                  1993BCf (34230)1587
                                        K(NiA+(S)-L)=18.41
                                        K(NiA+(R)-L)=18.68
A: N,N'-bis[(2S)-pyrrolidine-2-yl]propane-1,3-diamine.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U T  M   K1=5.96   B2=10.89  1993PPa (34231)1588
                                        K(NiA+L)=5.34
A is 2,2'-bipyridylamine. Also data for 35 and 45 C.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=5.51        1989MAc (34232)1589
                                        K(NiA+L)=4.30
H4A is adenosine-5'-triphosphoric acid.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=5.53        1989MAd (34233)1590
                                        K(NiA+L)=4.81
                                        B(NiAL)=12.83
H2A is N-(2-acetamido)imino diethanoic acid.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.20M U    M   K1=5.52   B2=9.80   1989RVa (34234)1591
                                        K(NiA+L)=4.94
A=bis(imidazol-2-yl)methane
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 27°C 0.20M U    M   K1=5.96   B2=10.89  1988PPc (34235)1592
                                        K(NiA+L)=5.35
```

A is 2,2'-dipyridylamine.

Ni++ gl oth/un 20°C 0.10M U K1=5.59 B2=10.30 1987MTa (34236)1593

Ni++ gl NaCl 37°C 0.15M U M K1=4.92 B2=9.09 1986XHa (34237)1594
B(NiL(His))=12.90
B(NiHL(His))=19.26

Ni++ gl KNO3 25°C 0.10M C T K1=5.14 B2=9.74 1976PSa (34238)1595
B3=12.73

Ni++ gl KNO3 25°C 0.05M U T K1=5.42 B2=9.95 1972GMb (34239)1596
20-35C
K1(20 C)=5.52, K1(35 C)=5.38, K2(20 C)=4.59, K2(35 C)=4.44

Ni++ gl KNO3 25°C 0.05M U M K1=5.50 B2=10.08 1972GSc (34240)1597
B(NiL(Phe))=10.09
K(Ni+L+HTyr)=10.14

Ni++ gl KNO3 25°C 0.05M U M 1972GSc (34241)1598
B(NiL(Gly))=10.70
B(NiL(Ala))=10.37
B(NiLA)=10.29
B(NiLB)=10.30
B(NiLC)=10.27, B(NiL(Ser))=10.34. HA=norvaline, HB=norleucine,
HC=2-aminobutanoic acid

Ni++ gl oth/un 25°C 0.16M U T K1=5.46 B2=9.97 1970LBa (34242)1599
K3=3.45

Ni++ gl KNO3 40°C 0.20M U T H T K1=5.28 B2=9.47 1968RMb (34243)1600
K1=5.50(15 C),5.42(25 C); K2=4.44(15 C),4.34(25 C)
DH(B2)=-33.9 kJ mol-1, DS=79.4 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

---

Ni++ gl KCl 25°C 0.10M U K1=5.40 B2=9.52 1971BDc (34351)1601
K3=2.6

Ni++ gl oth/un 25°C 0.16M U K1=5.51 B2=10.11 1970LBa (34352)1602
K3=3.26

****

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

---

Ni++ gl KNO3 25°C 0.50M U K1=2.81 1985WTa (34362)1603
****
C4H9NO3 HL CAS 924-49-2 (538)
4-Amino-3-hydroxybutanoic acid; H2N.CH2.CH(OH).CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 37°C 0.15M U M 1999NAa (34384)1604
B(NiAL)=14.55
K(NiL+A)=6.08
K(NiA+L)=8.59
A is 1,3-diaminopropane.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAa (34385)1605
B(NiAL)=12.35
K(NiA+L)=8.78
K(NiL+A)=3.88
B(NiC2L)=13.05
A is imidazole. K(NiC2+L)=8.94, K(NiL+2C)=4.58. C is benzimidazole.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAb (34386)1606
B(NiHLA)=23.06
A is histamine. HL is DL-4-aminobutanoic acid.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAb (34387)1607
B(NiHL(his))=23.84
HL is DL-4-aminobutanoic acid.

Ni++ gl NaClO4 37°C 0.15M U M 1998NAc (34388)1608
B(NiAL)=15.32
K(NiA+L)=8.37
A is 1,2-diaminopropane.

Ni++ gl NaClO4 37°C 0.15M U M K1=8.47 B2=16.17 1993NAd (34389)1609
B(NiLCu)=15.28
B(NiL2Cu)=24.33
B(NiLZn)=11.43
B(NiL2Zn)=21.42

Ni++ gl oth/un 25°C 0.16M U K1=3.99 B2=7.17 1970LBa (34390)1610
****
C4H9NO3 L CAS 2788-84-3 (3014)
Serine methyl ester; H2N.CH(CH2.OH).CO.OCH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 25°C 0.15M U K1=2.37 B2=4.35 1958LDa (34396)1611
****
C4H9N3O2 HL CAS 20238-94-2 (1136)
Glycyl-glycinamide; H2N.CH2.CO.NH.CH2.CO.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U K1=3.42 B2=6.21 1975DBa (34413)1612
B3=8.6
B(NiH-1L)=-5.10
B(NiH-2L)=-14.44
B(NiH-3L)=-24.97
****
C4H9N3O2 HL CAS 57-00-1 (8275)
Methylguanidoethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 20°C 0.10M U T H K1=3.00 B2= 5.38 1983SSg (34416)1613
Also data for 30 and 40 C. DH(B2)=-8.08 kJ mol-1, DS(B2)=212 J K-1 mol-1.
****
C4H9N3O3 HL (6027)
Glycylglycine hydroxamic acid; H2N.CH2.CO.NH.CH2.CO.NHOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.20M C K1=5.88 B2=10.23 1989BMc (34426)1614
B(Ni2L)=8.94
B(NiH2L2)=24.29
B(NiH-1L2)=1.32
B(NiH-2L2)=-7.79
B(NiH3L3)= 36.11
****
C4H9N5 L (6904)
5-(3-Aminopropyl)-1H-tetrazole; NH2.CH2.CH2.CH2.CHN4

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 20°C 0.10M U K1=5.86 B2=8.92 1978LEb (34437)1615
****
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
---
Ni++ gl KCl 20°C 0.10M U K1=7.51 1987BDc (34447)1616
K(Ni+HL)=2.83
****
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
---
Ni++ gl KCl 25°C 0.20M C K1=6.41 B2=10.47 1989KFb (34456)1617

B3=12.01
B(NiHL)=13.04

Ni++ gl KCl 20°C 0.10M U K1=5.73 1987BDc (34457)1618
K(Ni+HL)=3.31

****

C4H10NO6P H2L CAS 6401-59-8 (2399)
O-Phospho-2-methylserine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.20M	C		K1=6.26	B2=10.78	1978MAc (34471)	1619
							K(Ni+HL)=1.98			
							K(NiHL+L)=1.93			
							K(NiL+H)=5.79			

****

C4H10NO6P H2L CAS 1114-81-4 (2400)
O-Phospho-threonine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.20M	C		K1=6.57	B2=11.16	1978MAc (34479)	1620
							K(Ni+HL)=2.76			
							K(NiL+H)=5.86			

****

C4H10N2 L (7831)
3-Aminopyrrolidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	C		K1=4.1	B2= 8.1	2001KSa (34493)	1621

****

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
Ni++	gl	oth/un	25°C	0.01M	U		K1=3.21	B2=6.04	1959DLb (34511)	1622

****

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
Ni++	gl	NaClO4	37°C	0.15M	U	M			2002NNa (34550)	1623
							B(NiH2LA)=23.12			
							B(NiHLA)=18.10			
							B(NiAL)=12.41			
							K(NiHL+A)=3.67			

HA is 6-aminopenicillanic acid. K(NiA+L)=9.14, K(NiL+A)=3.64.

```
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  2000NNa (34551)1624
                                        B(NiAH2L)=23.02
                                        B(NiAHL)=19.19
                                        B(NiAL)=12.52
                                        B(NiAH-1L)=3.77
HA is ampicillin. K(NiHL+A)=4.76, K(NiA+L)=8.44, K(NiL+A)=3.75,
K(NiH-1A+L)=8.41.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M   K1=8.77   B2=15.57  1998NAa (34552)1625
                                        B(NiHL)=14.43
                                        B(NiHL2)=22.42
                                        B(NiAL)=11.53
                                        B(NiHAL)=17.77
K(NiHL+A)=3.34, K(NiA+L)=7.96, K(NiL+A)=2.76. A is imidazole.  B(NiHCL)=
17.29, B(NiC2L)=13.69, K(NiHL+C)=2.86, K(NiC2+L)=9.58. C is benzimidazole.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1998NAb (34553)1626
                                        B(NiH2LA)=26.55
                                        B(NiHLA)=20.74
                                        B(NiLA)=14.82
                                        K(NiA+L)=8.46
K(NiL+A)=6.05. A is histamine. HL is DL-2,4-diaminobutanoic acid.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1998NAb (34554)1627
                                        B(NiHL(his))=22.60
                                        B(NiL(his))=16.68
                                        K(Ni(his)+L)=7.34
                                        K(NiL+his)=7.91
HL is DL-2,4-diaminobutanoic acid.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M C    M   K1=8.77   B2=15.57  1995NAb (34555)1628
                                        B(NiHL)=14.43
                                        B(NiHL2)=22.42
Data for ternary complexes with cysteine, cysteic acid and penicillamine.
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=8.97   B2=16.34  1981FGb (34556)1629
                                        B3=19.80
                                        B(NiHL)=14.89
                                        B(NiH2L2)=29.15
                                        B(NiHL2)=23.12
B(NiHL3)=29.49; B(NiH2L3)=36.61; B(NiH3L3)=43.55
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=8.91   B2=15.97  1976BPb (34557)1630
                                        B(NiHL)=14.74
                                        B(NiHL2)=22.84
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        B2=16.4        1952ALa (34558)1631
********************************************************************************
C4H10N2O2              HL                        (2557)
```

2-Amino-3-(methylamino)propanoic acid, CH3.NH.CH2.CH(NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=8.42	B2=15.25	1989NOa	(34572)1632
							B(NiHL)=14.03			
							B(NiHL2)=21.46			
							B3=17.89			

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
Ni++	gl	KCl	25°C	0.50M	C		K1=10.106	B2=16.629	1985LEa	(34583)1633
Ni++	vlt	NaClO4	25°C	0.30M	U		K1=10.44		1974KOb	(34584)1634
Ni++	sp	NaClO4	25°C	0.30M	U		K1=10.44	B2=16.78	1970KFa	(34585)1635

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
Ni++	gl	KCl	25°C	0.50M	C		K1=6.476	B2=13.300	1989LEc	(34600)1636
							B(NiH-1L2)=5.115			

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
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=3.85		2001AAa	(34613)1637
Also data for ternary complexes with 5'-GMP, 5'-IMP and 5'-CMP.										
Ni++	gl	KNO3	25°C	0.10M	C		K1=3.67		2000ADa	(34614)1638

C4H10N4O L CAS 16352-04-8 (3016)
Guanylethylurea; H2N.C(:NH).CH2.CH2.NH.CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	30°C	0.10M	U		B2=11.81		1960DUa	(34642)1639

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

```
------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.20M U        K1=2.44   B2=4.66   1974FSa (34643)1640
                                          B3=6.51
******************************************************************************
C4H10O                  L    n-Butanol        CAS 71-36-3  (1915)
1-Butanol; CH3.CH2.CH2.CH2.OH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       sp  non-aq 20°C 100%  U T HM                 1988LJa (34648)1641
                                       K(NiAB+2L=NiABL2)=-0.68
                                       K(NiAC+2L)=-0.19
                                       K(NiAD+2L)=-0.041
Medium: 1,2-dichlorethane;  Square planar = octahedral equilibria
A:tetramethylendiamine B:acetylacetone C:benzoylacetone D:dibenzoylmethanat
******************************************************************************
C4H10O2S                L                      CAS 111-48-8  (4275)
3-Thiapentan-1,5-diol; HO.CH2.CH2.S.CH2.CH2.OH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  1.0M C        K1=-0.16       1979SRa (34674)1642
******************************************************************************
C4H10O2S2            H2L    Dithiothreitol   CAS 3483-12-3  (8164)
Threo-2,3-Dihydroxy-1,4-dithiobutane
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=10.67  B2=14.90  2001KLb (34692)1643
                                          B(NiH-1L2)=4.6
B(NiH-1L2) by spectrophotometry.
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       ISE R4N.X  25°C  2.0M U        K1=2.78   B2=4.97   1967PMc (34800)1644
                                          K3=1.75
                                          K4=1.21
                                          K5=0.94
Medium: NH4NO3
******************************************************************************
C4H11NO                 L                      CAS 110-73-6  (900)
2-(Ethylamino)ethanol; CH3.CH2.NH.CH2.CH2.OH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  0.0  M  I     K1=2.34   B2=4.89   1987AAb (34832)1645
Data for I=0.2, 0.3, 0.5, 0.7 and 1.0 M KNO3.
```

```
--------------------------------------------------------------------------------
Ni++       vlt KNO3   25°C 0.10M U        K1=2.43   B2=3.69   1980AAa (34833)1646
********************************************************************************
C4H11NO                L                       CAS 124-68-5  (948)
2-Amino-2-methylpropan-1-ol; CH3.C(NH2)(CH3).CH2.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 1.00M U        K1=2.305  B2=4.18   1982RMa (34849)1647
                                         K3=0.54
********************************************************************************
C4H11NO                L                       CAS 108-01-0  (3590)
N,N-Dimethyl-2-aminoethanol; HO.CH2.CH2.N(CH3)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  0.0  M  I     K2=2.90        1987AAb (34872)1648
Data for I=0.3, 0.5, 0.7 and 1.0 M KNO3.
********************************************************************************
C4H11NOS               L                         (1220)
1-Hydroxy-3-thia-5-aminopentane; HO.CH2.CH2.S.CH2.CH2.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M C   H    K1=3.208  B2=5.76   1977HGa (34883)1649
DH(K1)=-20.1 kJ mol-1,  DS(K1)=-6.3 J K-1 mol-1
DH(K2)=-22.7 kJ mol-1   DS(K2)=-27.2 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C  1.0M U T      K1=3.28   B2=6.01   1953MCa (34884)1650
                                         K3=1.70
50 C: K1=3.07, K2=2.40, K3=1.69
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U   H    K1=2.33   B2=4.10   1989KRb (34927)1651
Medium: dimethylformamide
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  0.5M U  I     K1=2.60   B2= 4.47  1982BDd (34928)1652
Also data for 2 M NaClO4.
--------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U        K1=2.89   B2=4.75   1975KDa (34929)1653
Medium: MeOH; in EtOH K1=2.96, K2=1.89; in BuOH K1=2.97, K2=1.76
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 1.00M U        K1=2.79   B2=4.42   1972BSd (34930)1654
                                         K3=1.18
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.43M U        K1=3.31   B2=5.44   1966SKe (34931)1655
```

K3=1.42

Medium: CH2OHCH2NH3NO3

****

C4H11NO2 L CAS 115-69-5 (949)

2-Amino-2-methyl-1,3-propanediol; HO.CH2.C(NH2)(CH3).CH2.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	30°C	1.00M	U		K1=2.70	B2=4.70	1982RMa (34980)	1656
							K3=1.27			

****

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
Ni++	gl	NaCl	25°C	0.15M	C		K1=2.641	B2=4.75	1983BSa (35030)	1657
							B(Ni2H-3L3)=-14.58			
							K(Ni4H-5L4)=-21.65			
							B(Ni4H-6L4)=-29.75			
Ni++	gl	KNO3	30°C	1.00M	U		K1=2.54	B2=4.74	1982RMa (35031)	1658
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=2.74		1979FHa (35032)	1659
							K(Ni(ATP)+L)=2.35			
Ni++	gl	NaClO4	25°C	3.00M	C	M	K1=3.18	B2=5.73	1978FOb (35033)	1660
							B(-5,3,2)=-30.06			
							B(-8,4,4)=-46.65			
							B(-9,4,4)=-54.85			
							B(-10,4,4)=-63.60			
B(p,q,r): pH+qNi+rL=Hp(Ni)qLr										
Ni++	gl	KNO3	25°C	0.10M	U		K1=2.63	B2=4.53	1969BMd (35034)	1661
							K(2Ni+3L=Ni2H-3L3+3H)=-13.4			
							K(3Ni+3L=Ni3H-5L3+5H)=-27.0			
Ni++	gl	KNO3	?	0.10M	U		K1=2.86		1962HSa (35035)	1662

****

C4H11NO8P2 H5L CAS 2439-99-8 (2129)

N-Carboxymethyl-N,N-bis(methylenephosphonic acid); HOOC.CH2.N(CH2.PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=12.6		2000SDa (35090)	1663
							K(NiL+H)=6.45			
							K(NiHL+H)=4.88			
							K(NiL+OH)=3.0			
Ni++	gl	NaCl	25°C	0.10M	U		K1=11.99		1993DLa (35091)	1664

B(NiH2L)=23.06
B(NiHL)=18.24

Ni++ sp KNO3 20°C 0.50M U K1=11.63 1974NKa (35092)1665
K(Ni+HL)=7.04
K(Ni+H2L)=5.55
K(Ni+H3L)=2.67

****

C4H11N2O4P H2L CAS 53626-52-1 (9088)
2[(Aminoacetyl)amino]ethylphosphonic acid;

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

---

Ni++ gl KNO3 25°C 0.10M U K1=4.44 1975HMc (35146)1666
K(NiL+H)=6.64

****

C4H11N2O4P H2L (7118)
Alanylaminomethylphosphonic acid;

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

---

Ni++ gl KNO3 25°C 0.10M C K1=3.939 B2=6.89 1995HLa (35150)1667
B(NiH-1L)=-4.69
B(NiHL)=9.80

****

C4H11N2O4P H2L (7121)
Glycyl-1-aminoethylphosphonic acid;

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

---

Ni++ gl KCl 25°C 0.10M U K1=4.625 B2=7.963 1995HLa (35155)1668
B(NiHL)=10.64
B(NiH-1L)=-4.14

****

C4H11N3 L CAS 171868-16-9 (7833)
cis-3,4-Diaminopyrrolidine;

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

---

Ni++ gl KCl 25°C 0.10M C K1=6.41 B2=11.24 2001KSa (35159)1669
B3=13.7
B(NiHL)=14.14
B(NiH2L2)=27.06
B(NiHL2)=19.37

****

C4H11N3O L (2704)
2-(Dimethylamino)acetamidoxime; (CH3)2N.CH2.C(:NOH)NH2

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

---

Ni++ gl NaClO4 25°C 1.00M C K1=3.979 B2=5.52 1983SOa (35165)1670
B(NiH-1L2)=-3.24
K(4Ni+4L=Ni4H-6L4+6H)=-26.77

****

C4H11N3O HL (6986)
3-(Methylamino)propanamidoxime; CH3.NH.CH2.CH2.C(:NOH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaCl	25°C	0.10M	C		B2=6.78 B(0,1,1)=4.46 B(0,1,2)=6.78 B(-1,1,2)=-1.18 B(-8,5,4)=-37.34	1996OSa	(35169)1671

B(-9,5,4)=-46.7. B(p,q,r): pH+qNi+r(HL)=(H)p(Ni)q(HL)r.

****

C4H11N3O2 HL CAS 471915-94-3 (8550)
2,4-Diamino-N-hydroxybutanamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		B2=16.75 B(NiHL)=15.70 B(NiH2L2)=31.00 B(NiHL2)=24.18 B(NiH-1L2)=4.96	2002ECa	(35172)1672

****

C4H11N5 L CAS 657-24-7 (2998)
Dimethylbiguanide; CH3.NH.C(:NH).NH.C(:NH).NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	32°C	0.05M	U		B2=10.56	1956SRa	(35183)1673

****

C4H11N5 L CAS 41283-85-6 (2999)
Ethylbiguanide; CH3.CH2.NH.C(:NH).NH.C(:NH).NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	32°C	0.05M	U		B2=11.78	1956SRa	(35186)1674

****

C4H11N5O L CAS 53490-38-3 (3017)
N-(2-Hydroxyethyl)biguanide; HO.CH2.CH2.NH.C(:NH).NH.C(:NH).NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	30°C	0.20M	U		B2=12.50	1960SRa	(35189)1675

****

C4H11N5O2 HL CAS 20004-00-6 (2934)
Iminobis(acetamidoxime); HN(CH2.C(:NOH)NH2)2

```
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M C        K1=7.59   B2=14.65  1985OSa (35192)1676
                                          K(NiH-1L2+H)=7.50
*******************************************************************************
C4H11N203P             HL                      (7917)
(Glycylamino)methyl(methylphosphinic acid);
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=4.087  B2= 7.27  2001LKa (35197)1677
                                          B(NiHL)=9.32
*******************************************************************************
C4H11O2PS2            H3L                     CAS 298-06-6  (210)
O,O'-Diethyldithiophosphoric acid; (C2H5O)2P(S)SH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       dis KNO3   25°C 0.20M C        B2=1.11        1985HSd (35213)1678
Method: distribution from 0.10 M KNO3 into CHCl3.
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U    M                  1977FMa (35214)1679
                                          K(NiL2+A)=1.85
                                          K(NiL2A+A)=1.95
Medium: benzene. A=4-picoline. In toluene K(NiL2+A)=1.95, K(NiL2A+A)=1.91
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U T  M                  1972MFa (35215)1680
                                          K(NiL2+A)=3.20
                                          K(NiL2+B)=2.60
                                          K(NiL2+C)=2.04
                                          K(NiL2+D)1.86
Medium: benzene. A=pyrrolidine, B=piperidine, C=hexamethyleneimine,
D=morpholine.  Temperature range 6-39.5 C
-------------------------------------------------------------------------------
Ni++       ISE alc/w  25°C  90%  U        K1=2.30   B2=4.12   1972TCa (35216)1681
Medium: 90% MeOH, 0.3 M NaClO4
-------------------------------------------------------------------------------
Ni++       cal non-aq 25°C 100%  U    M                  1971DGb (35217)1682
                                          K(NiL2+py)=1.42
                                          K(NiL2+A)=1.72
                                          K(NiL2py+py)=1.34
                                          K(NiL2A+A)=1.86
Medium: benzene. A=4-methylpyridine
-------------------------------------------------------------------------------
Ni++       ISE alc/w  25°C  90%  U        K1=2.07   B2=3.71   1971TCa (35218)1683
Medium: 90% EtOH, 0.3 M NaClO4
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U    M                  1970NYa (35219)1684
                                          K(NiL2+A)=-0.24
```

K(NiL2+B)=1.56
K(NiL2+py)=1.49
K(ML2+2py)=3.41
Medium: benzene. K(NiL+C)=1.86, K(NiL+D)=-0.23, K(NiL+bpy)=6.47,
A=2-picoline, B=3-picoline, C=4-picoline, D=quinoline

Ni++ sp alc/w 20°C 95% U I B2=7.8 1967LSc (35220)1685
Medium: 95% EtOH. B2=4.0(80%), 4.8(85%), 6.3(90%). In acetone/H2O:
B2=3.9(75%), 4.8(80%), 5.9(85%), 6.7(90%), 9.0(95%)
****
C4H11O4P H2L (5867)
n-Butyl phosphoric acid; C4H9.O.PO(OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.10M C K1=2.08 1988MSa (35280)1686
****
C4H11PS2 HL CAS 886-54-6 (3591)
Diethylphosphinodithioic acid; (CH3.CH2)2PSSH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp non-aq 25°C 100% U 1970NYa (35291)1687
K(NiL2+py)=1.98
K(NiL2+bpy)=6.21
K(NiL2+2py)=3.38
Medium: benzene
****
C4H12NO3P H2L AMPPH CAS 18108-24-2 (222)
1-Amino-2-methylpropylphosphonic acid; (CH3)2.CH.CH(NH2).PO3H2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 24°C 0.10M U K1=6.19 1989YKa (35304)1688
****
C4H12N2 L CAS 881-93-8 (3581)
1,2-Diamino-2-methylpropane; H2N.CH2.C(NH2)(CH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U I K1=6.55 B2=12.55 1972CHa (35321)1689
K3=3.06
Range of ionic strengths 0-0.20. I=0.0, K1=6.48, K2=6.25, K3=3.7
I=0.2, K1=6.60, K2=5.95, K3=2.90
****
C4H12N2 L (4260)
1,2-Diaminobutane; H2N.CH2.CH(NH2).CH2.CH3

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

Ni++ gl NaClO4 25°C 0.10M U I K1=7.29 B2=13.91 1972CHa (35324)1690
K3=5.19
I=0.0: K1=7.24, K2=6.85, K3=5.24.
I=0.2, K1=7.33, K2=6.62, K3=5.15
****
C4H12N2 L CAS 590-88-5 (3580)
1,3-Diaminobutane; H2N.CH2.CH2.CH(NH2).CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl none 25°C 0.00 U K1=6.25 B2=10.43 1968NTa (35328)1691

Ni++ gl NaClO4 25°C var U 1968NTa (35329)1692
K(Ni+H2L=NiL+2H)=-12.69-1.018SQRTI/(1+1.48SQRTI)-0.250I
K(NiL+H2L=NiL2+2H)=-14.76-1.018SQRTI/(1+1.36SQRTI)-0.192I.

Ni++ gl oth/un 25°C 0.0 U K1=6.25 B2=10.43 1968NTa (35330)1693
****
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
---
Ni++ gl KNO3 25°C 0.10M U H K1=7.640 B2=14.01 1977PSb (35374)1694
B(NiHL)=12.84
B3=18.0
By calorimetry, DH1=-32.4 kJ mol-1, DS1=37.2 J K-1 mol-1, DH(B2)=-62.0,
DH(B3)=-81.7

Ni++ gl KCl 25°C 0.10M U K1=7.39 B2=13.55 1970ABc (35375)1695
For DL isomer, K1=7.39, K2=6.16. For D isomer, K1=7.35, K2=6.09

Ni++ gl KNO3 25°C 0.50M U T K1=7.71 B2=14.19 1954BCa (35376)1696
K3=4.31
0 C: K1=8.30, K2=7.09, K3=5.00
****
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
---
Ni++ gl KCl 25°C 0.20M C HM K1=5.76 B2=9.61 1979SGb (35410)1697
B3=11.27

Ni++ gl NaClO4 25°C 0.0 U I K1=6.84 B2=10.69 1966NKa (35411)1698
In I M NaClO4: K(Ni+H2L=NiL+2H)=-9.986-1.018SQRTI/(1+0.983SQRTI)-0.315I
K(NiL+H2L=NiL2+2H)=-12.977-1.018SQRTI/(1+1.897SQRTI)-0.314I

Ni++ gl KNO3 25°C 0.50M U T K1=7.11 B2=11.84 1954BMa (35412)1699
K3=1.5

0 C: K1=7.87, K2=5.28, K3=2.50

Ni++ gl KCl 25°C 0.10M U K1=6.65 B2=10.50 1954IGa (35413)1700
****
C4H12N2 L CAS 108-00-9 (2661)
N,N-Dimethyl-1,2-diaminoethane; (CH3)2N.CH2.CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.50M C I K1=5.95 B2=9.92 1975OTa (35450)1701
B3=11.48

Ni++ gl KNO3 25°C 0.50M U T K1=6.77 B2=12.17 1954BCa (35451)1702
K3=2.25
0 C: K1=7.27, K2=5.94, K3=2.77
****
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
---
Ni++ gl none 25°C 0.00 U K1=6.51 B2=11.36 1969NTa (35468)1703

Ni++ gl KNO3 25°C 0.50M U T K1=6.78 B2=12.08 1952BMa (35469)1704
K3=2.00
0 C: K1=7.19, K2=5.78, K3=2.51

Ni++ gl KNO3 13°C 0.50M U T H 1952BMb (35470)1705
At 0 C: DH(K1)=-25.5 kJ mol-1, DS=44.3 J K-1 mol-1; DH(K2)=-30.1, DS=1.7;
DH(K3)=-31.8, DS=-69

Ni++ gl KCl 25°C 1.0M U K1=7.81 B2=13.79 1950EDa (35471)1706
K3=2.56
****
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
---
Ni++ gl NaClO4 25°C 0.10M C K1=5.43 B2=8.34 1980OTb (35474)1707
****
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
---
Ni++ gl KNO3 25°C 0.10M U H K1=6.729 B2=12.31 1977PSb (35484)1708
B(NiHL)=12.7
B3=14.87
By calorimetry, DH(K1)=-28.2 kJ mol-1, DS1=34 J K-1 mol-1, DH(B2)=-51.9,

DH(B3)=-63

Ni++ gl oth/un 25°C 0.10M U K1=6.71 B2=12.39 1970ABc (35485)1709

Ni++ gl KNO3 25°C 0.50M U T K1=7.04 B2=12.74 1954BCa (35486)1710
K3=2.89
0 C: K1=7.37, K2=6.16, K3=3.21
****
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
---
Ni++ gl KNO3 25°C 0.50M C H K1=5.78 B2=9.25 1995MMd (35496)1711
B(NiH-1L=Ni(OH)L)=9.1
B(NiH-1L2=Ni(OH)L2)=13.41
DH(K1)=-29.1 kJ mol-1, DS=13 J K-1 mol-1; DH(K2)=-26.7, DS=-23;
DH(NiH-1L2)=-36.7, DS=134

Ni++ gl KNO3 25°C 0.50M U H K1=5.895 B2=9.52 1974BVa (35497)1712
By calorimetry: DH(K1)= -28.0 kJ mol-1, DS=18.8, DH(K2)= -27.2, DS=-20

Ni++ gl oth/un 20°C 0.0 U T H K1=5.75 B2=9.25 1959LBb (35498)1713
DH(K1)=-30 kJ mol-1, DS=8; DH(K2)=-31, DS=-42. 10 C: K1=5.93, k2=3.69;
30 C: K1=5.54, k2=3.19; 40 C: K1=5.41, K2=3.18
****
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
---
Ni++ gl KNO3 25°C 0.50M C H K1=6.96 B2=12.78 1995MMd (35529)1714
DH(K1)=-29.7 kJ mol-1, DS=34 J K-1 mol-1; DH(K2)=-37.8, DS=-15

Ni++ gl NaNO3 25°C 0.10M U K1=6.85 B2=12.34 1982HTa (35530)1715

Ni++ cal NaClO4 25°C 0.10M C 1975BAa (35531)1716
DH(K1)=-32.5 kJ mol-1, DS=24.2 J K-1 mol-1, DH(K2)=-34.7, DS=-5.0

Ni++ gl NaClO4 25°C var U 1966NTa (35532)1717
K1=6.76+1.018SQRTI/(1+0.904SQRTI)-1.018SQRTI/(1+1.56SQRTI)+0.231I
K2=5.52+1.018SQRTI/(1+0.904SQRTI)-1.018SQRTI/(1+2.52SQRTI)+0.262I

Ni++ gl oth/un 25°C 0.50M U K1=6.66 B2=12.46 1960HDa (35533)1718

Ni++ gl KCl 25°C 1.0M U K1=7.78 B2=13.86 1950EDa (35534)1719
****
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
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=7.377  B2=13.52  1979HGb (35557)1720
-------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.50M C   H                    1979HGd (35558)1721
DH(K1)=-41.9 kJ mol-1, DS(K1)=0.7 J K-1 mol-1; DH(K2)=-48.6, DS(K2)=-45
-------------------------------------------------------------------------
Ni++       gl  KNO3   30°C  1.0M U T H    K1=7.27   B2=13.37  1954GFa (35559)1722
DH(K1)=-42 kJ mol-1, DS=0; DH(K2)=-92, DS=-46. 0 C: K1=8.05, K2=6.96;
50 C: K1=6.81, K2=5.53
*************************************************************************
C4H12O7P2             H3L                     CAS 52811-47-9  (7665)
N-Butyldiphosphoric acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M        K1=3.73         1999SSa (35579)1723
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C         K1=8.14         2000KKa (35597)1724
                                          B(NiHL)=15.00
                                          B(NiH2L)=19.44
                                          B(NiH-1L)=-2.94
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 1.00M M         K1=7.97         1982BGb (35598)1725
                                          K(Ni+HL)=2.72
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U         K1=9.90         1962ANb (35627)1726
                                          K(Ni+HL)=5.55
-------------------------------------------------------------------------
Ni++       gl  KNO3   22°C  1.0M U         K1=9.23         1961SBa (35628)1727
                                          K(Ni+HL)=5.90
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U    M                    1996UBa (35708)1728
                                          B(Ni(catecholate)L)=16.90
```

B(Ni(oxalate)L)=12.45
B(Ni(malonate)L)=11.37
B(Ni(gly)L)=13.85
B(Ni(beta-Ala)L)=13.27, B(Ni(en)L)=16.13, B(Ni(1,3-pn)L)=14.15,
B(Ni(2-aminophenol)L)=12.70.

Ni++ gl diox/w 30°C 50% U M K1=11.00 1987PCb (35709)1729
K(NiA+L)=9.48
K(NiB+L)=9.15
K(Ni(bpy)+L)=8.83
K(Ni(phen)+L)=8.90
K(Ni(dipyridylamine)+L)=8.80; K(Ni(2-(2'-pyridyl)imdazoline)+L)=8.52
A=5-nitrophenanthroline, B=2-(2'-pyridyl)benzimidazole

Ni++ gl NaClO4 25°C 0.10M U M K1=10.68 B2=18.87 1985MSa (35710)1730
K(Ni(thiolactate)+L)=7.54

Ni++ gl KNO3 25°C 0.10M U K1=10.9 B2=19.10 1973AHc (35711)1731

Ni++ sp KNO3 22°C 0.50M U K1=10.89 B2=19.22 1970MAi (35712)1732

Ni++ sp NaCl 25°C 0.50M U M 1967JMa (35713)1733
K(NiL+Gly)=5.13
In 1 M KCl: K(NiL+A)=4.59, H2A=oxalic acid

Ni++ cal KCl 25°C 0.10M U H 1961CPa (35714)1734
DG(K1)=-105.75 kJ mol-1, DH=-49.6, DS=36; DG(K2)=-59.97, DH=-56.3, DS=-36

Ni++ gl oth/un 35°C 1.0M U H 1952JHa (35715)1735
DH(K1)=-50.2 kJ mol-1, DH(K2)=-54.4

Ni++ gl KCl 30°C 1.0M U T K1=10.81 B2=18.95 1952JHa (35716)1736
40 C: K1=10.54, K2=7.83

Ni++ gl KCl 20°C 0.10M U K1=10.7 B2=18.9 1950PSa (35717)1737
****
C4H14N2O4P2 H2L CAS 37107-07-6 (4287)
Ethylenebis(iminomethylenephosphonous acid)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M U K1=7.52 1971MMh (35825)1738
****
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
---
Ni++ gl KCl 25°C 0.10M C K1=11.57 2001MNa (35851)1739
B(NiHL)=20.95

B(NiH4L2)=52.69
B(NiH2L2)=36.77
B(NiH6L2)=65.29
B(Ni2L)=16.79; B(NiH2L)=26.55; B(NiH3L)=32.04

Ni++ gl KNO3 25°C 0.10M U K1=11.52 1976TIa (35852)1740
K(Ni+H2L)=4.32

Ni++ gl KNO3 25°C 0.10M U M K1=11.52 1975ITa (35853)1741

Ni++ gl oth/un 25°C 0.10M U K1=11.65 1972AUa (35854)1742
K(Ni+HL)=6.75
K(Ni+H2L)=3.85

Ni++ gl KNO3 25°C 0.10M U K1=11.70 1971MMh (35855)1743
K(NiL+H)=5.53
K(NiHL+H)=4.99

Ni++ gl KCl 25°C 0.10M U K1=12.02 1965DKb (35856)1744
K(Ni+HL)=4.71

****

C4H14N4 L (7798)
1,2,3,4-Tetraaminobutane;

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

---

Ni++ gl KCl 25°C 0.10M C K1=10.5 B2=19.10 2001ZKa (35899)1745
B(NiHL)=18.0
B(NiHL2)=27.3
B(NiH2L2)=35.0
B(Ni2L)=13.8
Data for (2R,3S) isomer. For the (2S,2S) isomer B2=18.5, B(NiHL)=17.4
B(NiH2L)=21.9, B(NiHL2)=26.4, B(NiH2L2)=33.8, B(NiH3L2)=38.2

****

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

---

Ni++ dis NaClO4 25°C 1.0M U K1=1.9 B2=3.1 1977SIa (35914)1746

Ni++ dis NaClO4 25°C 1.0M C M K1=1.78 B2= 3.26 1977SMe (35915)1747
K(NiL2(org)+A(org))=5.8
K(NiL2(org)+2A(org))=10.5
Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylposphine
oxide (A). K(Ni+2HL(org)=NiL2(org)+2H)=-4.0.

****

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
-------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M U        K1=4.19        1964TTa (35957)1748
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
-------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M U        K1=4.65        1964TTa (35964)1749
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
-------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 0.10M U        K1=3.1         1964TTa (35970)1750
-------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=3.04        1961TDa (35971)1751
*************************************************************************
C5H3N4Cl                L    6-Chloropurine   CAS 87-42-3  (3032)
6-Chloropurine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M U        K1=6.6         1971TKc (35984)1752
*************************************************************************
C5H4NBr                 L                    CAS 1120-87-2  (8780)
4-Bromopyridine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M C        K1=1.58        2002KSb (35997)1753
*************************************************************************
C5H4NCl                 L                    CAS 626-60-8  (322)
3-Chloropyridine; C5H4N.Cl
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M C        K1=1.34        2002KSb (36011)1754
-------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  C    M                  1989ANb (36012)1755
                                        K(Ni(OAc)2+L)=1.11
Medium: CCl4 + 10% acetic acid
-------------------------------------------------------------------------
Ni++       sp  non-aq 11°C 100%  U T  M                  1976CUa (36013)1756
                                        K(NiA+2L)=2.78
Medium: chlorobenzene. H2A=biacetyl-bis-a-hydroxybenzylidenehydrazone
```

K=2.55(17 C); 2.33(23 C); 2.13(28 C)

****

C5H4N2O2 L 4-Nitropyridine CAS 1122-61-8 (1357)
4-Nitropyridine; C5H4N.NO2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	none	25°C	0.0	U	T H	K1=0.83		1974VSa	(36038)1757

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	NaClO4	25°C	1.0M	C		K1=5.69	B2=10.35	1979MMi	(36044)1758
							B3=14.10			
							K(Ni+HL=NiL+H)=2.99			
							K(NiL+HL=NiL2+H)=1.96			
							K(NiL2+HL=NiL3+H)=1.05			
Ni++	sp	NaClO4	25°C	1.00M	U		K1=5.69	B2=10.35	1977MAa	(36045)1759
							B3=14.1			

****

C5H4N2O3S H2L Thioorotic acid (4335)
1,2,3,6-Tetrahydro-2-thio-6-oxo-4-pyrimidinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaCl	20°C	0.15M	U		K1=6.29		1979DZe	(36069)1760
							K(Ni+HL)=2.65			
Ni++	oth	oth/un	?	?	U		K1=5.84	B2=9.67	1973SLa	(36070)1761

****

C5H4N2O4 H2L Orotic acid CAS 65-86-1 (624)
1,2,3,6-Tetrahydro-2,6-dioxo-4-pyrimidinecarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaCl	25°C	0.15M	U	T H	K1=7.00		1979DZd	(36093)1762
Ni++	gl	NaCl	20°C	0.15M	U		K1=7.28		1979DZe	(36094)1763
							K(Ni+HL)=2.78			
Ni++	gl	R4N.X	25°C	0.10M	U		K1=6.82		1967TKc	(36095)1764

Medium: Me4NBr

****

C5H4N2O4 H2L Isoorotic acid CAS 23945-44-0 (3616)
1,2,3,6-Tetrahydro-2,6-dioxo-5-pyrimidinecarboxylic acid;

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

```
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U                      1961TDb (36124)1765
                                          K(Ni+HL)=2.95
********************************************************************************
C5H4N4                 HL    Purine           CAS 120-73-0  (2149)
Purine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       kin oth/un 25°C 0.10M U        K1=7.70   B2=12.70  1973KKb (36142)1766
Method: temperature jump
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=4.88        1959CFb (36143)1767
********************************************************************************
C5H4N4O                HL    Allopurinol      CAS 315-30-0  (1207)
4-Hydroxypyrazolo[3,4-d]pyrimidine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U        K1=5.729       1976LSa (36147)1768
                                          B(NiH-1L)=-1.078
********************************************************************************
C5H4N4O                HL    Hypoxanthine     CAS 68-94-0  (1174)
6-Hydroxypurine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T H                    1983KSa (36169)1769
                                          K(Ni+HL)=2.79
                                          K(Ni+2HL)=4.26
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U TIH    K1=4.55   B2= 8.26  1979RPb (36170)1770
Medium: KClO4. Data for 35 and 45 C and for I=0.05 and 0.20 M at 45 C.
DH(K1)=-96.6 kJ mol-1, DS(K1)=-237 J K-1 mol-1; DH(K2)=-133.6, DS(K2)=-377
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U        K1=4.10        1976LSa (36171)1771
                                          B(NiH-1L)=-4.01
--------------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M U        K1=7.23        1971TKc (36172)1772
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=5.04        1959CFb (36173)1773
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.01M U        K1=4.7         1953ALa (36174)1774
********************************************************************************
C5H4N4O2               HL    Xanthine         CAS 69-89-6  (4305)
Xanthine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=2.90        1991KMa (36202)1775
```

****
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
Ni++	gl	KNO3	45°C	0.10M	U		K1=6.8	1971TKc	(36218)1776
Ni++	gl	diox/w	25°C	50%	U		K1=5.29	1959CFb	(36219)1777

****
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
Ni++	gl	KNO3	25°C	0.10M	U	T M	K1=2.83 B(NiAL)=8.46	1988NSc	(36240)1778

HA is pyridine-2-carboxylic acid. At 40 C, K1=2.72, B(NiAL)=8.32.

Ni++	cal	NaNO3	25°C	1.00M	U	H		1979ARa	(36241)1779

DH(NiL)=0.13 kJ mol-1; DS=39.5.

Ni++	gl	diox/w	25°C	50%	U		K1=1.85	1968EGb	(36242)1780

Medium: 50% dioxan, 0.1 M NaClO4
****
C5H4O3 HL Pyromeconic aci CAS 496-63-9 (3600)
3-Hydroxy-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U	T H	K1=4.473 B2=8.45	1977SMd	(36270)1781

****
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
Ni++	cal	NaNO3	25°C	1.0M	C			1987ARb	(36285)1782

DH(K1)=0.67 kJ mol-1, DS(K1)=18.0 J K-1 mol-1.

Ni++	cal	NaNO3	25°C	1.0M	C			1982ARb	(36286)1783

DH(K1)=0.67 kJ mol-1, DS(K1)=18.0 J K-1 mol-1.

Ni++	gl	NaNO3	25°C	0.10M	U		K1=1.87	1982MPc	(36287)1784
Ni++	EMF	NaClO4	25°C	1.00M	U		K1=1.52	1972LPb	(36288)1785

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.50M	C		K1=1.94		2002KSb (36407)	1786
Ni++	cal	non-aq	25°C	100%	C	H	K1=4.31	B2= 7.68	2000KKb (36408)	1787
							2.34			
							1.58			

Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-35.4 kJ mol-1, DS=-36 J K-1 mol1; DH(K2)=-31.9, DS=-42; DH(K3)=-31, DS(K3)=-60; DH(K4)=-26, DS=-56.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	M		1994LTa (36409)	1788
							K(Ni(acac)A+L)=2.00		
							K(Ni(acac)AL+L)=3.62		
							K(Ni(acac)B+L)=1.73		
							K(Ni(acac)BL+L)=2.81		

A:N-dimethyl-N'-methyl-1,2-diaminoethane; B:N-diethyl-N'-ethyl-1,2-diamino-ethane. Medium: nitromethane. Also data for other diones.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	alc/w	?	????	U			1993NDa (36410)	1789
							K(Ni2A+2L)=Ni2AL2)=1.08		

Medium: methanol. A: a triamino-diphenol macrocycle.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	alc/w	25°C	100%	U	M		1992NDa (36411)	1790
							K(Ni2A(S)4+2L=Ni2AL2+4S)=1.04		

Medium(S): methanol. A is 3,7,15,19-tetraaza-11,23-dimethyltricyclo[19.3.1.1(9,13)]hexacosa-1(25),9,11,13(26),21,23-hexaene-25,26-diol.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	M		1991WEa (36412)	1791
							K(NiA2+L=NiA2L)=0.49		
							K(NiA2L+L=NiA2L2)=1.03		
							K(NiB2+L=NiB2L)=0.86		
							K(NiB2L+L=NiB2L2)=1.27		

Medium: acetone. A=N-(1-cyclohexylethyl)salicylaldimine, B=N-(1-phenylethyl) salicylaldimine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	C	M		1989ANb (36413)	1792
							K(Ni(OAc)2+L)=0.93		

Medium: CCl4 + 10% acetic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	M		1989LLa (36414)	1793
							K(NiX2+L)=1.18		
							K(NiX2+2L)=3.15		

Medium: benzene. X=Bis-(O,O'-Dicyclohexyldithiophosphato)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	0.3M	U	IH	K1=1.70	B2= 2.67	1985PSd (36415)	1794
							K3=0.40			

0.3 M LiClO4 in 0.18 mol parts dioxane in H2O;
for 0.3 M LiClO4 in H2O (100%) K1=1.93; K2=1.20; K3=0.63

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	HM		1984CGa (36416)	1795

K(NiA2+L)=0.36
K(NiA2+2L)=1.03
In 1,2-Dichloroethane, HA=N,N-diethyl-N'-benzoylthiourea
When HA=piperidyl-N'-benzoylthiourea, K values are 0.34, 1.37

Ni++ sp non-aq 25°C 100% U HM 1984ISa (36417)1796
K(NiACl+2L)=2.20
K(NiABr+2L)=1.99
K(NiAI+2L)=1.59
K(NiA(NCS)+2L)=2.90
In benzene, HA=S-methyl-N-(2-pyridyl)methylenehydrazine-carbodithioic acid
Data also for other related HA ligands.

Ni++ sp non-aq 25°C 100% U T H 1984RCa (36418)1797
K(NiA(Cl)+L=NiAL+Cl)=1.62
K(NiA(Br)+L=NiAL+Br)=2.50
K(NiA(I)+L=NiAL+I)=2.78
Medium: DMSO. A=methyl-2-(B-aminoisopropylamino)cyclopent-1-enedithiocarboxy
late

Ni++ sp non-aq 25°C 100% U I M 1982HYa (36419)1798
K(NiA2+L)=1.44
Medium: CCl4. HA=diphenylthiocarbazone Data also in 10 other media
---
Ni++ gl KNO3 25°C 0.10M U M K1=1.90 B2=3.4 1981ACa (36420)1799
Ternary complexes with Iminodiacetic, 2,2'oxydiacetic and thiodiacetic acid
e.g. B(NiL(IDA))=10.07; B(NiL(ODA))=5.05; B(NiL(TDA))=6.40.

Ni++ gl NaNO3 25°C 0.10M C K1=1.87 1981BKb (36421)1800

Ni++ vlt NaClO4 25°C 0.50M U K1=1.95 1981TMd (36422)1801

Ni++ cal non-aq 30°C 100% U H K1=2.70 B2=4.10 1978AGa (36423)1802
In chlorobenzene. DH(K1)=-34 kJ mol-1; DH(B2)=-78. Ni=bis(diphenyldithio-
phosphinato)nickel(II)

Ni++ sp non-aq 19°C 100% U 1978GSa (36424)1803
K(NiA2+L)=1.34
K(NiA2L+L)=0.64
Medium: dichloroethane. HA=dithizone

Ni++ sp non-aq 10°C 100% U T M 1976CUa (36425)1804
K(NiA+2L)=4.19
Medium: chlorobenzene. H2A=biacetyl-bis-a-hydroxybenzylidenehydrazone
K=4.02(15 C); 3.94(17 C); 3.65(25 C)

Ni++ cal non-aq 30°C 100% U H 1976GSb (36426)1805
K(NiA2+L)=0.46
In CH3CN. A2 = BF2-bridged methylethylglyoxime. DH=-28.0 kJ mol-1; DS=-84
Also data for methylpropyl-, diphenyl- and phenyl-glyoximes.

```
--------------------------------------------------------------------------------
Ni++       cal non-aq 30°C 100%  U   H                   1974DGa (36427)1806
                                       K(NiA2+2L)=4.40
                                       K(NiB2+2L)=4.56
In benzene. HA=thioacetyl-1,1,1-trifluoroacetone; DH=-64 kJ mol-1; DS=-127
HB=thiobenzoyl-1,1,1-trifluoroacetone; DH=-74 kJ mol-1; DS=-158.
--------------------------------------------------------------------------------
Ni++       cal non-aq 30°C 100%  U   H                   1974GPa (36428)1807
                                       K(NiA2+2L)=3.74
                                       K(NiB2+2L)=3.23
                                       K(NiC2+2L)=3.04
                                       K(NiD2+2L)=3.11
In benzene. DH(NiA2L2)=-79.2 kJ mol-1 (A=O-methylxanthate); DH=-75.0 (A=
O-ethylxanthate); DH=-81.4 (A=O-propylxanthate);DH=-76.8 (A=O-hexylxanthate)
--------------------------------------------------------------------------------
Ni++       cal non-aq 30°C 100%  U   H                   1974GPa (36429)1808
                                       K(NiA2+2L)=3.08
                                       K(NiB2+2L)=3.62
                                       K(NiC2+2L)=2.51
In benzene. DH=-77.4 kJ mol-1 (A=O-isobutylxanthate); DH=-80.8 (B=
O-benzylxanthate);  DH = -62.4 (C=O-isopropylxanthate). Also DS.
--------------------------------------------------------------------------------
Ni++       cal non-aq 30°C 100%  U   H                   1974GPa (36430)1809
                                       K(NiA2+2L)=2.45
                                       K(NiB2+2L)=2.26
In benzene. DH = -72.8 kJ mol-1, DS = -193 (A=O-cyclohexylxanthate);
DH = -74.9, DS = -204 (B=O-2-methylcyclohexylxanthate)
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.08        1974ILa (36431)1810
--------------------------------------------------------------------------------
Ni++       gl  none   25°C  0.0  U T H    K1=1.91        1974VSa (36432)1811
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=1.78   B2=3.00   1973BJa (36433)1812
                                       K3=0.3
                                       K4=-0.3
                                       K5=-0.3
--------------------------------------------------------------------------------
Ni++       sp  mixed  25°C  50%  U  I M                   1972RMd (36434)1813
                                       B(NiCl2L)=0.71
                                       B(NiCl2L2)=1.63
Medium: 0-71.4% (v/v) acetone.  B(NiCl2L)(0%)=0.61; B(NiCl2L2)(0%)=1.20;
B(NiCl2L)(71.4%)=0.75; B(NiCl2L2)(71.4%)=1.45
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=1.92        1972TPc (36435)1814
--------------------------------------------------------------------------------
Ni++       sp  non-aq 20°C 100%  U    M                  1971ADa (36436)1815
                                       K(NiA2+2L)=5.40
HA=thenoyltrifluoroacetone
--------------------------------------------------------------------------------
Ni++       ISE oth/un 25°C 0.10M U        K1=1.86   B2=3.12   1971HBa (36437)1816
```

```
                                        B3=3.71
Range of ionic strength 0.1-0.3
-------------------------------------------------------------------------------
Ni++       sp  non-aq   ?  100%  U  I M                  1971MAg (36438)1817
                                        K(NiA2+L)=2.39
                                        K(NiA2+2L)=2.31
Medium: Benzene. HA=benzoylacetone. Data also in CHCl3 and 92% benzene/DMF
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U  I M                  1971MAg (36439)1818
                                        K(NiA2+L)=1.88
                                        K(NiA2+2L)=1.00
                                        K(NiB2+L)=1.92
                                        K(NiB2+2L)=1.04
Medium: DMF. HA=benzoylacetone; HB=dibenzoylmethane
K(NiC2+L)=1.54; K(NiC2+2L)=1.52, HC=acetylacetone
-------------------------------------------------------------------------------
Ni++       sp  mixed    ?   60%  U  I M                  1971MAh (36440)1819
                                        K(NiCl2+L)=0.62
                                        K(NiCl2+2L)=1.21
Medium: 0-100% HCON(CH3)2.  K(NiCl2+L)(0%)=0.15; K(NiCl2+2L)(0%)=1.03.
Data also 0-100% benzene in 100-0% HCON(CH3)2
-------------------------------------------------------------------------------
Ni++       gl  NaClO4   ?  0.20M U        K1=2.40   B2=4.25   1971SBb (36441)1820
-------------------------------------------------------------------------------
Ni++       EMF none   25°C 0.00  M        K1=1.95        1970DTd (36442)1821
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.50M U  I     K1=1.88   B2=3.08   1970FRa (36443)1822
Medium: 0.5 LiClO4. In 54.3% MeOH, 0.5 M LiClO4: K1=1.89, K2=1.23;
0.5 LiClO4, 48.1% dioxan: K1=1.91, K2=1.26
-------------------------------------------------------------------------------
Ni++       ISE alc/w  25°C  50%  U  I     K1=1.04   B2=1.42   1970NBa (36444)1823
Ag electrode. Medium: 0-96% EtOH, 0.5 M LiNO3. Data also for 25-90% PrOH,
25-90% acetone
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.61M U        K1=1.91   B2=3.19   1967SBd (36445)1824
                                        B3=3.7
-------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C  1.0M U    M   K1=2.10   B2=3.39   1967TKe (36446)1825
                                        K3=-1.3
Medium: Cl- or Br-. In SO4--: K1=1.42, K2=0.74, K3=-1.4. Ternary complexes
with EDTA and 3-butylacetylacetone
-------------------------------------------------------------------------------
Ni++       dis oth/un 20°C  1.0M U    M   K1=1.98   B2=3.02   1966FLc (36447)1826
                                        B3=3.42
                                        B4=3.44
                                        B(Ni(NH3)L)=4.54
                                        B(Ni(NH3)L2)=5.4
Medium: NH4NO3. B(Ni(NH3)L3)=5.14; B(Ni(NH3)2L)=6.65, B(Ni(NH3)2L2)=6.3;
B(Ni(NH3)3L)=7.10; B(Ni(NH3)3L2)=7.0. Other constants also
-------------------------------------------------------------------------------
```

```
Ni++       sp  non-aq 20°C 100%  U   HM                  1965NSb (36448)1827
                                       K(NiL2I2+2L)=4.49
Medium: CHCl3. By calorimetry: DH(K1)=-99.5 kJ mol-1, DS=-255 J K-1 mol-1
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=1.85        1964KSb (36449)1828
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  1.0M U   H    K1=2.13   B2=3.79   1963ABa (36450)1829
                                       K3=1.12
                                       K4=0.64
By calorimetry: DHi(average)=-11.3 kJ mol-1; DS(K1)=4 J K-1 mol-1,
DS(K2)=-4, DS(K3)=-17, DS(K4)=-25
-------------------------------------------------------------------------------
Ni++       sp  mixed    ?  100%  U  I     K1=3.49        1959ANb (36451)1830
Medium: 100% acetone. K1=2.04(0%), 2.19(50%), 2.28(85%)
-------------------------------------------------------------------------------
Ni++       sp  alc/w    ?  100%  U        K1=2.35        1959ANb (36452)1831
Medium: 100% MeOH. In EtOH: K1=2.21(85%), 2.96(100%). In n-BuOH: K1=3.19
-------------------------------------------------------------------------------
Ni++       sp  oth/un   ?     ?  U        K1=1.92   B2=2.77   1957ANf (36453)1832
                                       B3=3.37
                                       B4=3.50
-------------------------------------------------------------------------------
Ni++       oth oth/un   ?     ?  U        K1=1.17   B2=1.96   1957TSd (36454)1833
                                       B3=3.48
                                       B4=-2 ?
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.50M U        K1=1.78   B2=2.83   1950BJa (36455)1834
                                       K3=0.31
Medium: 0.5 M C5H5N.HNO3
-------------------------------------------------------------------------------
Ni++       oth oth/un   ?     ?  U                   1948MMa (36456)1835
                                       B6=9.8
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=1.44   B2=2.48   1978LRa (36702)1836
                                       B3=3.10
                                       B4=3.33
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=4.844  B2= 9.06  2000FEc (36741)1837
                                       B3=11.91
                                       B(NiH-1L2)=-0.78
```

```
------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=5.16   B2=9.32   1993LMc (36742)1838
                                          K3=2.80
------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=5.7    B2=10.1   1956ARb (36743)1839
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=6.76   B2=11.81  1970GDa (36769)1840
Medium: 50% dioxan, 0.1 M NaClO4
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=5.74   B2=10.20  1970GDa (36770)1841
******************************************************************************
C5H5NO2                HL                      CAS 35940-93-3  (3618)
3-Furancarboxaldehyde oxime  (3-Furfuraldoxime); C4H3O.CH(:N.OH)
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  diox/w 20°C  60%  U  I     K1=6.30   B2=12.40  1979GBd (36808)1842
                                         B(NiHL2)=22.12
------------------------------------------------------------------------------
Ni++       gl  diox/w 15°C  75%  U  I     K1=6.76   B2=13.06  1963ASa (36809)1843
Med: 75% dioxan,0-0.104 M NaClO4. 25 C: K1=7.60,K2=7.52; 35 C:K1=6.66,
K2=6.40. DH(K1)=-85.2 kJ mol-1,DS=146 J K-1 mol-1; DH(K2)=-46.0,DS=21
******************************************************************************
C5H5NO2                HL                      CAS 634-97-9  (2877)
Pyrrole-2-carboxylic acid; C4H4N.COOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       cal NaNO3  25°C 1.00M U   H                  1981ARb (36833)1844
DH(K1)=0.25 kJ mol-1; DS(K1)=27.5.
------------------------------------------------------------------------------
Ni++       gl  none   25°C 0.00  U        K1=2.19       1972LUc (36834)1845
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M C        K1=0.17       2002KSb (36852)1846
******************************************************************************
C5H5N3O4              H2L    5-Aminoorotic    CAS 7164-43-4  (3619)
1,2,3,6-Tetrahydro-2,6-dioxo-5-amino-4-pyrimidinecarboxylic acid;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
```

```
Ni++       gl  R4N.X  25°C 0.10M U        K1=6.01        1967TKc (36862)1847
Medium: Me4NBr
********************************************************************************
C5H5N3O4              H2L                      CAS 59048-06-5  (6096)
N-Methylvioluric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M C        K1=3.49   B2= 6.57  1984HNb (36872)1848
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M C T      K1=3.49   B2=6.57   1978VNa (36873)1849
********************************************************************************
C5H5N5                  L    Adenine          CAS 73-24-5  (237)
6-Aminopurine; H2N.C5H3N4
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       vlt KCl    25°C 0.20M C                        2002MGa (36929)1850
                                       K(Ni+HL)=3.70
Method: catalytic linear sweep voltammetry. Medium pH 7.1.
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=7.66        2000SSd (36930)1851
                                       K(Ni+HL)=3.26
                                       K(Ni+HL+OH)=11.21
                                       K(NiHL+OH)=8.01
                                       K(Ni+L+2OH)=18.84
Also data for ternary complexes. K(NiLOH+OH)=5.85.
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=5.32        1996SGa (36931)1852
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M M                        1995LWa (36932)1853
                                       K(Ni+HL)=1.36
                                       K(Ni(atp)+HL)=1.64
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.10M U    M   K1=8.41        1994MGd (36933)1854
                                       B(NiAL)=12.09
                                       *K(NiAL)=-7.20
                                       *K(Ni(OH)AL)=-8.52
HA is 6-aminopenicillanic acid.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M U    M   K1=2.45        1989SRe (36934)1855
                                       B(NiHLAsp)=8.09
                                       B(NiLAsp)=7.60
                                       K(NiL+Gly)=5.84
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M U T H                    1983KSa (36935)1856
                                       K(Ni+HL)=2.45
                                       K(Ni+2HL)=3.39
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U        K1=7.1         1983SKa (36936)1857
```

```
--------------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M C                      1974MWa (36937)1858
                                      K(Ni+HL)=1.47
--------------------------------------------------------------------------------
Ni++       kin KNO3   25°C 0.10M U       K1=5.3         1971KKc (36938)1859
--------------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M U       K1=8.29        1971TKc (36939)1860
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.10M U       K1=4.37        1960ASb (36940)1861
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U       K1=6.18        1959CFb (36941)1862
********************************************************************************
C5H5N5O                HL    Guanine          CAS 73-40-5  (5387)
2-Amino-6-hydroxypurine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       vlt KCl    25°C 0.20M C                      2002MGa (36993)1863
                                      K(Ni+HL)=3.17
Method: catalytic linear sweep voltammetry. Medium pH 7.1.
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.10M U    M   K1=8.64        1994MGd (36994)1864
                                      B(NiAL)=12.38
                                      *K(NiAL)=-7.04
                                      *K(Ni(OH)AL)=-8.42
HA is 6-aminopenicillanic acid.
********************************************************************************
C5H5N5O                 L                     CAS 700-02-7  (3033)
Adenine N-Oxide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C    ?  U        K1=3.52        1960PEb (37000)1865
********************************************************************************
C5H5N5S               H3L    6-Thioguanine    CAS 3647-48-1  (4307)
2-Amino-6-mercaptopurine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M U                      1973TKa (37007)1866
                                      K(Ni+H2L)=3.3
********************************************************************************
C5H5N5S               H3L                   CAS 154-42-7  (4308)
2-Mercapto-6-aminopurine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M U                      1973TKa (37015)1867
                                      K(Ni+H2L)=3.5
********************************************************************************
```

C5H5O2F3 HL CAS 367-57-7 (163)
1,1,1-Trifluoropentane-2,4-dione; CF3.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.50M	C			1983HOb	(37038)	1868
							K(Ni+HL=NiL+H)=-1.95			
Ni++	dis	NaClO4	25°C	1.0M	U		K1=3.74	B2=6.68	1977SIa	(37039)1869
Ni++	dis	NaClO4	25°C	1.0M	C	M	K1=3.74	B2= 6.68	1977SMe	(37040)1870
							K(NiL2(org)+A(org))=ca. 5			
							K(NiL2(org)+2A(org))=ca. 8			
Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylposphine oxide (A). K(Ni+2HL(org)=NiL2(org)+2H)=ca. -9.										
Ni++	gl	diox/w	30°C	75%	U		B2=14.2		1953UFe	(37041)1871

C5H6N2 L CAS 1072-63-5 (8709)
1-Vinylimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		K1=2.94	B2= 5.34	1989LKc	(37083)1872
							B3=7.24			
							B4=8.43			
							B5=9.10			

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
Ni++	gl	NaNO3	25°C	0.50M	C		K1=0.42		2002KSb	(37108)1873
Ni++	gl	KNO3	25°C	0.10M	U	TIH	K1=3.20	B2=5.36	1976BBe	(37109)1874

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
Ni++	gl	KNO3	25°C	0.50M	U		K1=1.84	B2=3.24	1978LRa	(37149)1875
							B3=4.18			
							B4=4.68			
Ni++	gl	KNO3	25°C	0.61M	U		K1=1.97	B2=3.23	1967SBd	(37150)1876
							B3=4.1			

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
Ni++	gl	none	25°C	0.0	U	T H	K1=2.59		1974VSa (37171)	1877

****

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
Ni++	gl	KNO3	20°C	0.10M	U	TIH	K1=3.32	B2= 6.21	1982KMe (37185)	1878

Data for 0.05-0.20 M KNO3. At I=0, K1=3.66, K2=3.04.
Data for 30 and 40 C. DH(B2)=-35.1 kJ mol-1, DS(B2)=-0.4 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
Ni++	gl	NaClO4	25°C	0.10M	U		K1=<8.58		1963SBd (37198)	1879

At I=0.5 M K(Ni+HL)=1.03

****

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
Ni++	sp	NaClO4	25°C	0.10M	U		K1=3.53	B2=6.84	1981BPc (37208)	1880
							B3=9.75			

****

C5H6N2OS HL (4336)

5-Methyl-2-thiouracil (5-methyl-4-hydroxy-2-mercaptopyrimidine);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	25°C	0.01M	U		K1=2.66	B2=5.45	1970GWa (37213)	1881

****

C5H6N2OS HL CAS 3581-30-4 (4337)

6-Methyl-2-thiouracil (6-methyl-4-hydroxy-2-mercaptopyrimidine);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	26°C	0.01M	U		K1=4.13	B2=7.31	1970GWa (37217)	1882

****

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

```
Ni++       gl  NaNO3  37°C 0.10M U    M   K1=3.91        1994MGd (37253)1883
                                           B(NiAL)=7.57
                                           *K(NiAL)=-7.32
                                           *K(Ni(OH)AL)=-9.81
HA is 6-aminopenicillanic acid.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M U    M   K1=4.24        1989SRc (37254)1884
                                           K(Ni(thiamine)+L)=3.75
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T H    K1=4.38        1983KSa (37255)1885
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M U        K1=4.24   B2=8.04   1982TSa (37256)1886
--------------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M U        K1=4.30        1974KKa (37257)1887
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  C  I     K1=2.890       1992BRb (37296)1888
Data for 10-60% v/v dioxane/H2O and 10-60% DMF/H2O. In 50% DMF/H2O,
K1=3.977, B2=6.803.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=4.16   B2=8.09   1990NAa (37297)1889
                                           K(Ni(Oxine)+L)=4.38
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U        K1=3.60   B2=7.00   1981BPc (37298)1890
                                           B3=10.02
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C        K1=4.81   B2= 8.49  1998TSa (37313)1891
                                           B3=10.56
                                           B(NiH-1L)=-2.26
--------------------------------------------------------------------------------
Ni++       gl  KCl     0°C 0.25M U T H    K1=4.65   B2=8.49   1965AZa (37314)1892
                                           K3=2.28
K1=4.83(15 C),4.70(25 C),4.34(40 C); K2=3.71(15 C),3.55(25 C),2.44(40 C)
At 15 C: DH(K1)=-9.6 kJ mol-1; DH(K2)=-14.2
********************************************************************************
C5H6N2O2S              HL                      CAS 15112-09-1  (8298)
N-Methyl-2-thiobarbituric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 31°C 0.10M U T H    K1=5.76   B2=10.04  1984SJa (37322)1893
```

Also data for 18 and 42 C. DH(K1)=-60.8 kJ mol-1, DS(K1)=-90.0 J K-1 mol-1
DH(K2)=-38.9, DS(K2)=-46.5.

****

C5H6N6 HL Diaminopurine CAS 1904-98-9 (4290)
2,6-Diaminopurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	45°C	0.10M	U		K1=8.1	1973TKa (37333)	1894

****

C5H6O4 H2L Citraconic acid CAS 498-23-7 (3021)
Citraconic acid; CH3.C(COOH):CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	U		K1=1.8	1960YYa (37351)	1895

****

C5H6O4 H2L CAS 598-10-7 (70)
Cyclopropane-1,1-dicarboxylic acid; C3H4(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=3.89	1972RVh (37383)	1896

****

C5H6O4 H2L Itaconic acid CAS 97-65-4 (398)
Methylenesuccinic acid; HOOC.CH2.C(:CH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	U		K1=1.8	1960YYa (37404)	1897

****

C5H6O4S3 H2L (7055)
Trithiocarboglycolic acid; HOOC.CH2.S.CS.S.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	alc/w	25°C	20%	U	T H	K1=6.87 B2=11.60	1994BSc (37464)	1898

****

C5H6O7 H3L (8107)
Carboxymethyltartronic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	C		K1=3.84 K(NiL+H)=2.89	1984MMg (37483)	1899

****

C5H7NOF6 L (5454)
1,1-Bis(trifluoromethyl)-3-aminopropan-1-ol; (CF3)2C(OH).CH2.CH2.NH2

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

```
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        B2=8.11        1977CWa (37498)1900
********************************************************************************
C5H7NO2                HL    Glutarimide      CAS 1121-89-7  (4312)
Piperidine-2,6-dione;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  alc/w  45°C  50%  C        K1=5.77        1996MMc (37504)1901
Medium: 50% v/v MeOH/H2O, 0.10 M KNO3.
--------------------------------------------------------------------------------
Ni++       sp  alc/w    ?  100%  U        B2=9.03        1971MSc (37505)1902
Medium: MeOH
********************************************************************************
C5H7NO3                HL    5-Oxoproline     CAS 149-87-1  (2110)
2-Pyrrolidone-5-carboxylic acid, Pyroglutamic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=1.5         1991YNa (37517)1903
                                        B(NiH-1L)=-5.3
********************************************************************************
C5H7NO4S2             H3L                    CAS 36061-59-3  (1953)
Bis(carboxymethyl)dithiocarbamic acid; (HOOC.CH2)2.N.CSSH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF KNO3   22°C 1.00M U        K1=6.60   B2=12.52  1970TPb (37550)1904
--------------------------------------------------------------------------------
Ni++       dis KNO3   20°C 0.10M U        B2=7.9         1967HMc (37551)1905
********************************************************************************
C5H7NS                  L                      CAS 541-58-2  (1421)
2,4-Dimethylthiazole; C3HNS(CH3)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=-1.00  B2=-0.29  1982GKa (37566)1906
********************************************************************************
C5H7N3                  L                      CAS 42166-50-7  (4291)
2-Pyridylhydrazine; C5H4N.NH.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF NaNO3  20°C 0.10M U        K1=7.06   B2=13.87  1971ANa (37579)1907
                                        K3=5.79
********************************************************************************
C5H7N3O2                L                        (6254)
1-Carbamido-3-methyl-pyrazol-5-one; CH3.C3H2N2(:O).CO.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

```
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=6.65   B2=12.22  1979PDa (37594)1908
********************************************************************************
C5H8N2                  L                       CAS 1759-84-0  (173)
1,2-Dimethylimidazole; C3H2N2(CH3)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=2.15   B2=3.55   1980LBa (37611)1909
                                         B3=4.24
********************************************************************************
C5H8N2                  L                       CAS 7098-07-9  (2053)
1-Ethylimidazole; C3H3N2.C2H5
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=3.04   B2=5.54   1979LBa (37636)1910
                                         B3=7.52
                                         B4=8.97
                                         B5=9.85
                                         B6=10.20
********************************************************************************
C5H8N2                  L                       CAS 1072-62-4  (929)
2-Ethylimidazole; C3H3N2.C2H5
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U        K1=3.00        1999PGa (37653)1911
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M U        K1=3.05        1999PPa (37654)1912
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=1.65   B2=2.78   1982LKb (37655)1913
                                         B3=3.40
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=0.92   B2=1.59   1977LGb (37670)1914
                                         B3=2.00
--------------------------------------------------------------------------------
Ni++       vlt alc/w  25°C 100%  U        K1=0.40   B2=0.8    1966CRb (37671)1915
                                         B3=0.81
                                         B4=0.88
Medium: MeOH(?), 0.1 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
-------------------------------------------------------------------------
Ni++       ISE KNO3   25°C 0.50M U        K1=0.97        1983GWa (37682)1916
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
-------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C        K1=3.60        1994JBa (37695)1917
                                          B(NiH-1L)=-3.10
                                          B(NiH-1L2)=-0.47
                                          B(NiH-2L2)=-8.50
*************************************************************************
C5H8N2O4             H2L                        (7335)
N-Pyruvoylglycine oxime; CH3.C(:NOH).CONH.CH2.COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=5.56   B2=10.61  1997SJb (37716)1918
                                          B(NiH-1L2)=0.48
                                          B(NiH-2L2)=-10.72
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  .02M U        K1=5.6    B2=9.6    1960HJa (37722)1919
*************************************************************************
C5H8N4O2               HL                        (7433)
N-(2-Aminoethyl)-2-cyano-2-(hydroxyimino)ethanoic acid amide;
NC.C(:NOH)CONH.CH2CH2NH2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C                         1998SDa (37729)1920
                                          B(NiH-1L)=-4.00
                                          B(NiH-2L)=-12.70
*************************************************************************
C5H8OS                 HL                        (4314)
1-Mercapto-1,3-dimethylprop-1-en-3-one; HS.C(CH3):CH.CO.CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       dis oth/un 25°C 0.10M C        K1=6.60   B2=12.46  1979LJa (37733)1921
Method: 63Ni extraction from 0.10 M buffer into CHCl3.
*************************************************************************
```

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
Ni++	dis	oth/un	30°C	0.26M	U	I		1990SBa	(37836)	1922
							Keff=5.03			

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

Ni++	dis	NaClO4	25°C	0.10M	C		K1=5.9		1986SNa	(37837)	1923

Method: rate of distribution of volatile ligand between aqueous phase and inert gas phase. K(H+L)=9.17 assumed.

Ni++	oth	NaClO4	25°C	0.10M	C	I	R	K1=5.71	B2=10.16	1982SLc	(37838)	1924

IUPAC evaluation. I=0 corr.: K1=5.96, B2=10.54

Ni++	gl	diox/w	30°C	75%	U			K1=7.86	B2=14.97	1977AHb	(37839)	1925

Ni++	dis	NaClO4	25°C	1.0M	C	M			1977SMe	(37840)	1926
							K(NiL2(org)+A(org))=ca. 2				

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

Ni++	gl	diox/w	30°C	50%	U	M	K1=6.63	B2=12.19	1975DBd	(37841)	1927
							K(Ni(bpy)+L)=6.52				
							K(Ni(phen)+L)=6.43				
							K(Ni(IDA)+L)=5.39				
							K(Ni(NTA)+L)=4.85				

Ni++	sp	non-aq	25°C	100%	U	M		1972CHd	(37842)	1928
							K(Ni3L6=3NiL2)=-5.40			
							K(2Ni3L6+3py=3Ni2L4py)=11.64			
							K(Ni2L4py+3py=2NiL2py2)=6.60			

Medium: CH2Cl2

Ni++	gl	KNO3	25°C	0.02M	U	T	K1=5.69	B2=10.16	1971RMc	(37843)	1929

K1(15 C)=5.81, K1(40 C)=5.54, K2(15 C)=4.56, K2(40 C)=4.23

Ni++	gl	diox/w	25°C	75%	U	T	K1=8.77	B2=15.98	1971RMc	(37844)	1930

K1(15 C)=8.87, K1(40 C)=8.74, K2(15 C)=7.28, K2(40 C)=7.14
Medium: 0.02 N(CH3)4Cl, 75% dioxan

Ni++	EMF	oth/un	25°C	?	U		K1=7.40	B2=13.50	1968BDb	(37845)	1931

Ni++	gl	alc/w	25°C	0.61M	U	I	K1=7.92	B2=13.70	1968GDc	(37846)	1932

Medium: 0.610 mol fraction MeOH, 0.0172 NaCl. 0 MF: K1=6.05,K2=4.61; 0.285MF :K1=6.85,K2=5.21. Data also in EtOH/H2O, PrOH/H2O, dioxan/H2O

Ni++	gl	NaClO4	25°C	0.10M	U	H	K1=5.72	B2=9.66	1968GFa	(37847)	1933

By calorimetry: DH(K1)=-14.2 kJ mol-1,DS=62.7 J K-1 mol-1; DH(K2)=-31.8, DS=

79.4

Ni++ gl alc/w 30°C 100% U K1=8.0 B2=13.10 1960DRa (37848)1934
Medium: EtOH, 0.025 M NaClO4

Ni++ gl diox/w 30°C 75% U K1=10.19 B2=18.40 1959MFa (37849)1935

Ni++ gl oth/un 30°C 0.0 U K1=5.92 B2=10.38 1955IFa (37850)1936
K3=2.11

Ni++ gl oth/un 20°C 0.0 U T H K1=6.06 B2=10.77 1955IFb (37851)1937
K3=2.32
DH(K1)=-28 kJ mol-1, DS=50; DH(K2)=-26, DS=-0.8; DH(K3)=-28, DS=-50. 10 C:
K1=6.16, K2=4.84, K3=2.51; 40 C: K1=5.86, K2=4.40, K3=1.90

Ni++ gl diox/w 30°C 50% U K1=6.90 B2=12.00 1954BFb (37852)1938

Ni++ gl diox/w 30°C 50% U K1=6.91 B2=12.08 1954BRc (37853)1939

Ni++ gl diox/w 30°C 75% U K1=9.70 B2=17.85 1953UFb (37854)1940

Ni++ gl none 25°C 0.0 U I K1=5.92 B2=10.49 1949MMa (37855)1941
In 20% dioxan K1=6.12, K2=4.79
****
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
---
Ni++ gl KCl 25°C 0.10M U K1=0.79 1983LTa (38166)1942
****
C5H8O3 HL CAS 16874-33-2 (2493)
Tetrahydrofuran-2-carboxylic acid; C4H7O.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 50% U K1=2.01 1982MPc (38178)1943
****
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
---
Ni++ gl NaClO4 25°C 0.10M U K1=1.95 1970OVa (38199)1944
****
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
---

Ni++ gl NaClO4 25°C 0.10M U K1=2.53 1968OVa (38227)1945
****
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
---
Ni++ gl NaClO4 20°C 1.00M M K1=4.58 B2=7.93 1989MKa (38294)1946
K(Ni+HL)=2.45
K(Ni+2HL)=4.93
K(Ni+3HL)=6.45

Ni++ gl oth/un 25°C 0.10M U K1=1.6 1960YYa (38295)1947
****
C5H8O4S H2L CAS 36303-63-6 (988)
3-Thiahexane-1,6-dioic acid; HOOC.CH2.S.CH2.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 2.00M C K1=2.48 B2=4.15 1975AHb (38376)1948
K(Ni+HL)=1.18
By spectrophotometry: K1=2.52; K2=1.70.

Ni++ gl KNO3 25°C 0.10M C K1=2.30 1975LPa (38377)1949
****
C5H8O4S2 H2L CAS 2068-24-8 (908)
2,2'-(Methylenebis(thio))bis-ethanoic acid; HOOC.CH2.S.CH2.S.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 2.00M U K1=1.31 1974AHa (38390)1950
K(Ni+HL)=0.85
Spectrophotometry also used
****
C5H9NO2 H2L CAS 69651-97-4 (1164)
2-Amino-(2-allyl)ethanoic acid; H2N.CH(CH2.CH:CH2)COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M C K1=5.313 B2=9.89 1975IPb (38463)1951
****
C5H9NO2 HL CAS 14401-90-2 (6205)
Pent-2,4-dione monoxime; CH3.CO.CH2.C(:NOH).CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 25°C 75% U K1=6.8 B2=11.00 1986BTa (38469)1952
Medium: 75% MeOH/H2O, 0.1 M NaClO4
****
C5H9NO2 HL Proline CAS 147-85-3 (44)

Pyrrolidine-2-carboxylic acid; C4H8N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=6.60		1999BIa (38569)	1953
Ni++	nmr	KNO3	25°C	1.0M	U	H	K1=6.10	B2=11.26	1992ZSa (38570)	1954
							B3=14.58			

Also methods used: potentiometry, spectrophotometry

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	30°C	0.10M	U	H	K1=6.23		1986DRb (38571)	1955

Data for 30-50 C. DH(K1)=-12.4 kJ mol-1, D(K1)=-62.6 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	30°C	0.10M	C	T HM	K1=6.23	B2=11.41	1983RKa (38572)	1956
							B(NiAL)=5.77			

HA is thiazolidine-4-carboxylic acid. DH(K1)=-12.4 kJ mol-1, DS(K1)=73 J K-1 mol-1; DH(K2)=-19.8, DS(K2)=32; DH(NiAL)=-16.2, DS(NiAL)=52

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	M	M	K1=5.83	B2=11.00	1982LBa (38573)	1957

Data for ternary complexes with polymer-grafted L-proline ligands.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U	M	K1=5.94	B2=10.85	1981DAb (38574)	1958
							K3=3.00			
							B(NiL(bpy))=12.75			
							B(NiL(bpy)2)=18.56			
							B(NiL2(bpy))=17.78			

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=6.15	B2=11.28	1973KLa (38575)	1959

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	20°C	0.10M	U		K1=5.46		1970GVa (38576)	1960

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	20°C	0.03M	U		B2=11.3		1950ALa (38577)	1961

****

C5H9NO3 HL Hydroxyproline CAS 51-35-4 (416)

4-Hydroxy-2-pyrrolidinecarboxylic acid; C4H7N(OH)(COOH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	nmr	KNO3	25°C	1.0M	U	H	K1=6.05	B2=11.15	1992ZSa (38699)	1962
							B3=14.10			

Also methods used: potentiometry, spectrophotometry

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	vlt	NaClO4	25°C	0.10M	C		K1=12.0	B2=15.70	1983KVb (38700)	1963
							B3=18.2			

Method: polarography. pH 8.0

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	30°C	0.10M	C	T HM	K1=6.11	B2=11.03	1983RKa (38701)	1964
							B(NiAL)=5.56			

HA is thiazolidine-4-carboxylic acid. DH(K1)=-19.6 kJ mol-1, DS(K1)=52 J K-1 mol-1; DH(K2)=-22.5, DS(K2)=20; DH(NiAL)=-18.9, DS(NiAL)=44

```
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=5.94   B2=10.95  1981DAb (38702)1965
                                           K3=3.05
                                           B(NiL(bpy))=12.75
                                           B(NiL(bpy)2)=18.54
                                           B(NiL2(bpy))=17.82
------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.15M U        K1=5.92   B2=10.76  1958LDa (38703)1966
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M C                        1985FWa (38773)1967
                                           B(Ni2H-2L2)=-0.326
                                           B(NiH-1L2)=2.144
                                           B3=12.135
------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=5.44        1977SHa (38774)1968
                                           K(NiH-1L+H)=6.88
------------------------------------------------------------------------------
Ni++       EMF KNO3   20°C  1.0M U        K1=5.44        1976SHb (38775)1969
                                           B(NiH-1L)=-1.44
------------------------------------------------------------------------------
Ni++       gl  KNO3   22°C 0.10M U        K1=5.44        1975SHa (38776)1970
******************************************************************************
C5H9NO3S              H2L                    CAS 6513-26-4  (2163)
N-3-Mercaptopropanoyl-glycine; HS.CH2.CH2.CO.NH.CH2.COOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=4.49        1977SHa (38792)1971
                                           K(NiH-1L+H)=7.63
------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=4.49        1976SHb (38793)1972
                                           B(NiH-1L)=-3.14
******************************************************************************
C5H9NO3S              H2L    N-Acetyl-Cys     CAS 616-91-1  (1187)
N-Acetylcysteine; CH3.CO.NH.CH(CH2.SH)COOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=4.92   B2= 9.04  1975IMa (38806)1973
Medium not stated.
******************************************************************************
C5H9NO3S2             H3L                      (2159)
2,3-Dimercaptopropanoyl-glycine; HS.CH2.CH(SH).CO.NH.CH2.COOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

```
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=10.91  B2=21.53  1977SHa (38822)1974
                                          K(NiH-1L+H)=5.89
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=5.59        2003AHa (38946)1975
                                          K(NiL+A)=3.61
HA is 3-amino-5-mercapto-1,2,4-triazole.
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=5.96   B2=10.17  2000KAb (38947)1976
                                          K(NiA+L)=6.26
H2A=Dipicolinic acid.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=5.81        1999AAa (38948)1977
                                          K(NiL+A)=3.83
                                          B(NiLA)=9.64
                                          K(NiL+B)=3.93
                                          B(NiLB)=9.47
K(NiL+C)=3.46, B(NiLC)=9.27. HA=MOPSO, HB=MOPS, HC=DIPSO.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=5.81        1999AAa (38949)1978
                                          K(NiL+A)=3.83
                                          B(NiLA)=9.64
                                          K(NiL+B)=3.93
                                          B(NiLB)=9.47
K(NiL+C)=3.46, B(NiLC)=9.27. HA=MOPSO, HB=MOPS, HC=DIPSO.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=5.95        1999BIa (38950)1979
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.20M U    M   K1=4.90        1999PPa (38951)1980
                                          B(NiAL)=8.23
                                          B(NiBL)=9.41
                                          B(NiCL)=9.00
A is imidazole, B is 2-Me-imidazole, C is 2-Et-imidazole.
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M C    M   K1=6.06   B2=10.33  1999SMa (38952)1981
                                          B(NiHL)=12.33
                                          B(NiH-1L)=-3.21
                                          B(NiH2L2)=24.58
                                          B(NiH4L2)=33.51
B(NiH4L3)=42.33. B(NiLA)=12.09, B(NiHLA)=21.41, B(NiH2LA)=28.94,
B(NiH3LA)=35.76, B(NiH4LA)=39.80, B(NiHL2A)=25.16. HA=pyridoxamine.
--------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  20%  M    M   K1=5.40        1998ABa (38953)1982
                                          K(NiL+oxine)=8.15
Medium: 20% w/w EtOH/H2O, 0.1 M KNO3.
```

```
------------------------------------------------------------------------------
Ni++       gl  alc/w  20°C  50%  M    M   K1=5.99        1995AMb (38954)1983
                                          K(NiA+L)=6.97
Medium: 50% v/v EtOH/H2O, 0.20 M NaClO4. A is 2,2',2"-terpyridine.
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M C        K1=5.90        1993BAb (38955)1984
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  1.0M M        K1=3.78   B2=10.66  1991MKa (38956)1985
                                          K(Ni+HL)=5.00
                                          K(Ni+2HL)=5.43
                                          K(Ni+3HL)=5.08
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=5.90        1989MAc (38957)1986
                                          K(NiA+L)=7.53
H4A is adenosine-5'-triphosphoric acid.
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=5.92        1989MAd (38958)1987
                                          K(NiA+L)=8.72
                                          B(NiAL)=16.74
H2A is N-(2-acetamido)imino diethanoic acid.
------------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M U        K1=5.533  B2=9.754  1985CFb (38959)1988
                                          B3=12.02
                                          B(NiHL)=10.40
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M                  1985NSd (38960)1989
                                          K(NiL+uracil)=3.46
                                          K(NiL+thymine)=3.96
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M        K1=5.42   B2= 9.11  1981GVa (38961)1990
------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U    M                  1978JSc (38962)1991
                                          B(NiAL)=8.59
                                          K(NiA+L)=2.97
                                          K(NiL+A)=4.63
H2A is malonic acid.
------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U    M                  1978JSc (38963)1992
                                          B(NiAL)=11.26
                                          K(NiA+L)=7.08
                                          K(NiL+A)=5.64
H2A is thiodiglycolic acid.
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=5.90   B2=10.28  1976GPd (38964)1993
------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.20M U        K1=5.79   B2=10.64  1974FSa (38965)1994
                                          B3=14.12
                                          B(NiLA)=7.59
                                          B(NiL2A)=12.13
                                          B(NiLA2)=9.92
```

A=acetylhydrazide

Ni++ gl NaNO3 25°C 1.00M U K1=6.29 B2=11.13 1973BJd (38966)1995

Ni++ EMF NaCl 25°C 0.12M U K1=5.34 B2=9.34 1972IBa (38967)1996

Ni++ cal KNO3 25°C 0.10M C H 1971BPi (38968)1997

DH(B1)=-30.8 kJ mol-1, For D-His: DH=-30.9, for rac-His: DH=-30.7

Ni++ gl KNO3 25°C 0.10M U K1=5.58 B2=9.70 1965RWa (38969)1998

Ni++ oth KNO3 20°C 0.10M U K1=5.8 B2=9.20 1964JOa (38970)1999

Method: paper electrophoresis

Ni++ gl oth/un 30°C 0.10M U K1=5.62 1959NCa (38971)2000

Ni++ gl oth/un 25°C 0.02M U K1=5.90 B2=10.34 1954REa (38972)2001

Ni++ gl oth/un 20°C 0.01M U B2=10.3 1952ALa (38973)2002

****

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

---

Ni++ gl KCl 30°C 0.10M U K1=7.35 B2=12.58 1952CMb (39153)2003

****

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

---

Ni++ gl NaClO4 25°C 0.50M U K1=8.48 B2=15.61 1992GLa (39194)2004

B(NiH-1L)=1.04

Ni++ gl KNO3 25°C 0.10M C M K1=8.67 1990DAb (39195)2005

K(NiL+A)=4.78

B(NiLA)=13.45

H2A: salicylaldoxime

Ni++ gl KNO3 25°C 0.10M C M K1=8.67 1990DAc (39196)2006

K(NiL+A)=3.85

B(NiAL)=12.52

HL: benzohydroxamic acid

Ni++ gl KNO3 25°C 0.10M U K1=8.67 1983FSa (39197)2007

Ni++ gl KNO3 25°C 0.10M U K1=8.73 1977TIa (39198)2008

Ni++ gl KNO3 25°C 0.10M U T M 1973IVa (39199)2009

K(NiL+Pro)=5.18
K1(15 C)=5.33, K(37 C)=5.07, K(55 C)=4.80

Ni++ gl KNO3 25°C 0.10M U T M 1972IVa (39200)2010
K(NiL+A)=4.50
K1(15 C)=4.59, K(37 C)=4.34, K(55 C)=4.20. HA=cycloserine

Ni++ sp oth/un 25°C 0.10M U M B2=16.1 1970CMa (39201)2011
K(NiL+2CN)=10.32

Ni++ vlt NaClO4 25°C 0.10M U K1=8.4 B2=15.96 1969VPa (39202)2012

Ni++ cal KNO3 20°C 0.10M U H 1965ANa (39203)2013
DH(K1)=-19.6 kJ mol-1, DS=99.9 J K-1 mol-1, DH(B2)=-32.0, DS=196

Ni++ gl KCl 20°C 0.10M U K1=8.73 B2=15.95 1955SAa (39204)2014
****
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
---
Ni++ cal NaNO3 37°C 0.20M C K1=6.40 B2=11.65 1987ARa (39302)2015
DH(K1)=-17.1 kJ mol-1, DS(K1)=65.2 J K-1 mol-1; DH(K2)=-23.3, DS(K2)=22.

Ni++ gl NaClO4 25°C 2.00M U K1=6.40 B2=11.65 1980MAc (39303)2016

Ni++ gl NaClO4 25°C 2.0M U K1=6.40 B2=11.60 1976AHc (39304)2017

Ni++ gl KNO3 25°C 0.10M C K1=6.22 B2=11.16 1974NBb (39305)2018
****
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
---
Ni++ dis oth/un 22°C 0.01M U B2=13.2 1973SSa (39325)2019

Ni++ vlt KCl 25°C 1.00M U B2=12.7 1973SSa (39326)2020

Ni++ sp alc/w 25°C 75% U B2=8.56 1970PNa (39327)2021
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
---
Ni++ gl oth/un 25°C 0.10M U K1=7.12 B2=12.63 1969EHc (39341)2022
B3=16.16

```
**************************************************************************
C5H9N3                  L    Betazole         CAS 51-45-6  (3601)
3-(2'-Aminoethyl)pyrazole;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  .02M U        K1=5.7         1960HJa (39346)2023
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                    1999NNa (39463)2024
                                        B(NiHAL)=18.98
                                        B(NiAL)=13.31
                                        K(NiA+L)=6.99
                                        K(NiL+A)=6.95
K(NiHL+A)=7.13. HA is nicotinic acid.
--------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                    1999NNb (39464)2025
                                        B(NiH2AL)=21.82
                                        B(NiHAL)=15.69
                                        B(NiAL)=11.03
                                        K(NiA+L)=7.76
K(NiL+A)=4.67. A is 6-aminopenicillanic acid.
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C  IH  R K1=6.82   B2=11.87  1997SJa (39465)2026
                                        K3=3.12
IUPAC evaluation. DH(K1)=-38 kJ mol-1, DH(K2)=-33, DH(K3)=-25
--------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M C    M   K1=6.36   B2=11.22  1993NAa (39466)2027
                                        B(NiHL)=11.85
                                        B(NiHL2)=17.86
Also data for ternary complexes with cysteine, cysteic acid and penicill-
amine.
--------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M   K1=6.36        1985RRc (39467)2028
                                        B(NiL(cytidine))=12.65
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=6.87   B2=11.90  1983LWa (39468)2029
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M                    1979DAa (39469)2030
                                        B(NiHL(pn))=19.85
                                        B(NiL(pn))=11.58
                                        B(NiL2(pn))=15.45
                                        B(NiL(pn)2)=14.42
pn=1,3-Diaminopropane
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U    M   K1=6.85   B2=11.93  1978SKa (39470)2031
```

B3=15.13
B(NiHL)=11.56
B(NiL(Gly))=11.77, B(NiL(en))=12.89, B(NiL(His))=14.27

Ni++ gl KNO3 25°C 0.10M C M K1=6.84 B2=11.92 1976DOd (39471)2032
B3=15.05
B(NiHL(citrate)=17.54; B(NiL(citrate))=11.81;

Ni++ gl KCl 25°C 0.20M C H T K1=6.85 B2=11.93 1976GSd (39472)2033
B(NiL3)=15.13
B(NiHL)=11.56
By calorimetry: DH(K1)=-42.7 kJ mol-1, DH(B2)=-79.5

Ni++ gl KNO3 25°C 0.20M U T K1=6.70 B2=11.73 1971RMd (39473)2034
K1(15 C)=6.87, K1(40 C)=6.49, K2(15 C)=5.15, K2(40 C)=4.76

Ni++ gl oth/un 25°C 0.10M U K1=6.76 B2=11.78 1969EHc (39474)2035
B3=14.89

Ni++ gl KNO3 37°C 0.15M U M K1=6.601 B2=11.440 1968PSf (39475)2036
B3=14.370
B(NiL(Ser))=10.99
B(NiL2(Ser))=14.19
B(NiL(Ser)2)=13.09
Ternary complexes with diaminoethane

Ni++ gl NaClO4 25°C 0.30M C H T K1=6.84 B2=11.88 1967HWa (39476)2037
K3=3.15
By calorimetry DH(K1)=-32.4 kJ mol-1, DH(K2)=-29.3, DH(K3)=-25.3

Ni++ gl KNO3 25°C 0.20M U K1=6.83 1963CCb (39477)2038

Ni++ gl oth/un 25°C .02M U K1=6.84 B2=11.92 1962HJa (39478)2039
B3=14.98

Ni++ gl oth/un 20°C 0.0 U T H K1=7.03 B2=12.25 1960NFa (39479)2040
K3=3.20
DH(K1)=-45.6 kJ mol-1, DS=-20.9; DH(K2)=-34.3, DS=-16.7; DH(K3)=-9., DS=29
10 C: K1=7.36, K2=5.43, K3=3.39; 30 C: 6.77,5.01,3.25; 40 C: 6.06,4.85,3.20

Ni++ gl KNO3 30°C 1.0M U H K1=6.9 B2=11.9 1956HFb (39480)2041
B3=15.0
DH(K1)=-33.4 kJ mol-1, DS=16.7; DH(K2)=-16.7, DS=41.9; DH(K3)=-25.1, DS=-25

Ni++ gl KCl 25°C .135M U TI K1=6.88 B2=11.91 1955MAb (39481)2042
K3=3.09
0 C: K1=7.24, K2=5.25, K3=3.26. In 1 M KNO3, 30 C: K1=6.84, K2=4.96, K3=3.08
50 C: 6.50, 4.78, 2.83

Ni++ gl oth/un 20°C .015M U B2=11.7 1952ALa (39482)2043

```
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C  1.0M U T      K1=6.87   B2=11.83  1952HAa (39483)2044
                                          K3=3.08
50 C: K1=6.50, K2=4.78, K3=2.83
********************************************************************************
C5H9N3                   L                        (3602)
4(5)-Aminomethyl-2-methylimidazole;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  .02M U        K1=5.99   B2=11.10  1962HJa (39551)2045
                                          B3=15.16
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        K1=5.9         1967GNb (39557)2046
                                          K(Ni+HL)=4.6
--------------------------------------------------------------------------------
Ni++       cal KNO3   30°C 0.10M U   H                   1967GNc (39558)2047
DH(K1)=-3.3 kJ mol-1, DS=100 J K-1 mol-1
********************************************************************************
C5H9N3O5              H2L                      CAS 85594-21-4  (9125)
2-(Acetylamino)-N,N'-dihydroxypropanediamide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       vlt KNO3   25°C 0.10M C                       2004YYa (39579)2048
                                          K1eff=7.82
Method: square wave voltammetry. Medium pH 7.0.
********************************************************************************
C5H9N3O5              H2L                      CAS 4438-86-2  (3622)
Semicarbazone-1,1-diethanoic acid; H2N.CO.NH.N(CH2.COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        K1=6.4         1967GNb (39587)2049
                                          K(Ni+HL)=5.1
--------------------------------------------------------------------------------
Ni++       cal KNO3   30°C 0.10M U   H                   1967GNc (39588)2050
DH(K1)=-4.6 kJ mol-1, DS=109 J K-1 mol-1
********************************************************************************
C5H9N3S                HL                       (1822)
2-Mercaptohistamine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=7.48   B2=13.14  1977STc (39603)2051
```

****

C5H9O4P H2L CAS 91034-72-9 (6068)
Methylphosphinediethanoic acid; CH3.P(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		B2=8.24 B(NiHL2)=12.5 B(NiH2L2)=16.1	1987PHa (39619)	2052

****

C5H10NO7P H4L PMIDA CAS 5994-61-6 (2433)
N-(Phosphonomethyl)iminodiethanoic acid; H2O3P.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=13.2 K(NiL+H)=5.46 K(NiHL+H)=2.4 K(NiL+OH)=3.0	2000SDa (39642)	2053
Ni++	gl	NaCl	25°C	0.10M	U		K1=11.36 B2=14.48 B(NiHL)=16.82	1993DLa (39643)	2054
Ni++	oth	KNO3	RT	0.10M	C		K(Ni+HL) >6.8	1980MVa (39644)	2055

Method: paper electrophesis.

****

C5H10N2O L Prolinamide CAS 7531-52-4 (5978)
Prolinamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	C		K1=3.85 B2= 7.16 B(NiH-2L2)=-9.75	1997DFb (39695)	2056

****

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
Ni++	gl	diox/w	25°C	50%	U		K1=6.21 B2=12.06	1958BPa (39702)	2057
Ni++	gl	diox/w	25°C	50%	U		K1=6.38 B2=12.07	1954CFa (39703)	2058

****

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
Ni++	sol	NaClO4	25°C	0.10M	U		K1=8.42 B2=17.79	1969EGa (39712)	2059

```
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  75%  U  I     K1=10.4   B2=23.97  1963BAb (39713)2060
                                          Kso=-23.27
Medium: 75% dioxan, 0.1 M.  B2=17.26(0%)
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=11.5   B2=22.5   1958BPa (39714)2061
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=5.05        1999BIa (39784)2062
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M C        K1=5.30        1993BAb (39785)2063
--------------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M U      T K1=4.979  B2=9.015  1985CFb (39786)2064
                                          B3=11.62
                                          B(NiH-1L2)=-1.91
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=4.94   B2=9.24   1973TSb (39787)2065
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 3.00M U        K1=5.56   B2=10.28  1973WIa (39788)2066
                                          B3=13.82
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U      T K1=5.17   B2=9.45   1965RWa (39789)2067
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.20M U        K1=3.60   B2=6.41   1982KRd (39879)2068
                                          B3=8.70
                                          B(NiH-1L2)=-2.21
                                          B(NiH-2L2)=-12.08
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=4.08   B2=7.77   1977PNa (39906)2069
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=4.191  B2=7.529  1975BPa (39907)2070
                                          B3=9.74
                                          B(NiH-1L)=-5.04
                                          B(NiH-2L2)=-11.4
--------------------------------------------------------------------------------
Ni++       EMF oth/un   ?     ?  U        K1=4.08   B2=7.77   1970PBb (39908)2071
```

****
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
Ni++	gl	KCl	20°C	0.20M	U		K1=4.35 B3=10.44 B(NiH-1L2)=-1.52 B(NiH-2L2)=-11.76	B2=7.74	1982KRd (39925)	2072
Ni++	gl	NaCl	25°C	0.12M	U		K1=4.18	B2=7.70	1977PNa (39926)	2073
Ni++	EMF	oth/un	?	?	U		K1=4.18	B2=7.70	1970PBb (39927)	2074
Ni++	EMF	NaClO4	25°C	0.10M	U		K1=4.08	B2=7.87	1967SMd (39928)	2075

****
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
Ni++	gl	KNO3	25°C	0.10M	C	H	K1=4.17 B3=9.76 B(NiH-1L)=-4.5 B(NiH-2L)=-14.16 B(NiH-1L2)=-2.1	B2= 7.55	2001CFb (39989)	2076

DH(K1)=-21 kJ mol-1, DS(K1)=9 J K-1 mol-1, DH(B2)=-49, DS(B2)=-18,
DH(NiH-1L)=-13, DS(NiH-1L)=-128, DH(NiH-2L)=36, DS(NiH-2L)=-152.

Ni++	gl	NaClO4	30°C	0.20M	U	M	K1=4.21 B(NiAL)=6.15 B(NiBL)=6.66 B(NiCL)=6.66		1999PGa (39990)	2077

A=imidazole, B=2-methylimidazole, C=2-ethylimidazole.

Ni++	gl	NaCl	25°C	0.12M	U		K1=4.26	B2= 7.81	1976PNa (39991)	2078

with L=glycyl-DL-alpha-alanine K1=4.18, K2=3.52

Ni++	gl	KNO3	25°C	0.10M	C		K1=4.229 B3=9.7 B(NiH-1L)=-4.560 B(NiH-2L2)=-12.239	B2=7.596	1975BPa (39992)	2079
Ni++	EMF	oth/un	?	?	U		K1=4.26	B2=7.81	1970PBb (39993)	2080

****
C5H10N2O3 HL Gly-b-Ala CAS 7536-21-2 (9057)
Glycyl-beta-alanine;

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

```
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=4.06   B2= 7.43  2003AMb (40009)2081
                                          B(NiH-1L)=-4.94
                                          B(NiH-1L2)=-2.41
                                          B(NiH-2L2)=-12.67
********************************************************************************
C5H10N2O3              HL    Gly-Sar          CAS 29816-01-1  (2331)
Glycyl-sarcosine; H2N.CH2.CO.N(CH3).CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.16M U        K1=4.44   B2=8.09   1960MCa (40026)2082
                                          K3=2.1
                                          K(NiLOH+H)=10.7
********************************************************************************
C5H10N2O3              HL    B-Ala-Gly        CAS 2672-88-0  (4323)
beta-Alanylglycine; H2N.CH2.CH2.CO.NH.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=3.82   B2= 6.53  2003AMb (40050)2083
                                          B(NiH-1L)=-4.59
                                          B(NiH-1L2)=-2.21
                                          B(NiH-2L2)=-12.44
********************************************************************************
C5H10N2O3S             H2L    Cys-Gly          CAS 19246-18-5  (2006)
Cysteinyl-glycine; H2N.CH(CH2.SH)CO.NH.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=7.94   B2=17.77  1987KBa (40057)2084
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        B2=14.91       1987KBa (40065)2085
                                          B(Ni2H-2L2)=6.85
                                          B(NiH-1L2)=6.42
********************************************************************************
C5H10N2O4              HL                   CAS 1955-67-5  (6736)
2-Aminopentanoic-5-hydroxamic acid; HOOC.CH(NH2).CH2.CH2.CO.NOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=7.84        1993FBa (40075)2086
                                          B(NiHL)=14.42
                                          B(Ni2HL)=20.51
                                          B(Cu2L)=11.54
```

****
C5H10N2O4 HL Ser-Gly CAS 687-63-8 (2386)
Seryl-glycine; H2N.CH(CH2.OH).CO.NH.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.20M C K1=3.25 B2= 5.73 1986FTa (40115)2087
B(NiH-1L)=-4.84
B(NiH-1L2)=-3.27
****
C5H10N2S2 HL (1210)
2-Propylhydrazone-S-methyldithiocarboxylate; (CH3)2C:N.NH.CS.SCH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp NaClO4 25°C 0.10M U M 1976IDa (40123)2088
K(NiL2+py)=-0.27
K(NiL2+3-Me-py)=0.03
K(NiL2+2-Me-py)=0.20
K(NiL2+Isoquinoline)=-0.29
Other methods used include gl, polarography and nmr.
****
C5H10N4OS HL (2817)
Biacetylmonoxime-thiosemicarbazone; CH3.C(:N.NH.CS.NH2).C(:N.OH).CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 30°C 50% U T H K1=7.41 1992HRa (40128)2089
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)=-10.0 J K-1 mol-1.
****
C5H10N4O3 L CAS 54376-69-1 (8335)
N,N'-Carbonylbis(2-aminoacetamide);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U TIH K1=10.05 B2=16.00 1980SAc (40134)2090
Data for 0.075-0.15 M. At I=0, K1=10.45, K2=6.15. Also data for 30 C.
DH and DS values.
****
C5H10O2S HL CAS 7244-82-8 (3042)
3-Ethylthiopropanoic acid; CH3.CH2.S.CH2.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 50% U K1=2.86 B2=6.24 1956IFa (40238)2091
****
C5H10O6 HL D-Ribonic acid CAS 18315-89-4 (6941)
2R,3S,4R,5-Tetrahydroxo-pentanoic acid; D-Ribonic acid;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.10M C        K1=2.28   B2=4.86   1994ESa (40377)2092
                                          B(NiH-2L)=-16.66
*************************************************************************
C5H11N                  L                    CAS 1003-03-8  (304)
Cyclopentylamine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M C        K1=6.824  B2=9.06   1974MWb (40389)2093
*************************************************************************
C5H11N                  L    Piperidine       CAS 110-89-4  (105)
Perhydropyridine; cyclo(-CH2.CH2.CH2.NH.CH2.CH2-)    C5H11N
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U   HM                  1984CGa (40413)2094
                                          K(NiA2+L)=1.13
In 1,2-dichloroethane, HA=N,N-diethyl-N'-benzoylthiourea
When HA=piperidyl-N'-benzoylthiourea, K=1.17
-------------------------------------------------------------------------
Ni++       sp  non-aq 16°C 100%  U T  M                  1976CUa (40414)2095
                                          K(NiA+2L)=5.95
Medium: chlorobenzene. H2A=biacetyl-bis-a-hydroxybenzylidenehydrazone
K=5.95(22 C); 5.39(28 C); 5.16(33 C)
-------------------------------------------------------------------------
Ni++       cal non-aq 30°C 100%  U   H                  1976GSb (40415)2096
                                          K(NiA2+L)=1.86
In CH3CN.  A2 = BF2-bridged methylethylglyoxime. DH=-37.9 kJ mol-1; DS=-89
Also data for methylpropyl- and methyl-2-propylglyoxime.
-------------------------------------------------------------------------
Ni++       sp  non-aq 22°C 100%  U T HM                  1975WHa (40416)2097
                                          K(NiY+2L)=0.56
Medium: toluene. DH(NiY+2L)=-36.4 kJ mol-1 at 25 C. 25 C: K=0.41; 35 C:0.27;
45 C: 0.06. NiY=(p-Cyano)tetraphenylporphyrin complex of Ni(II)
-------------------------------------------------------------------------
Ni++       sp  non-aq 22°C 100%  U    M                  1975WHa (40417)2098
                                          K(NiW+2L)=-0.69
                                          K(NiX+2L)=-0.60
                                          K(NiY+2L)=-0.29
                                          K(NiZ+2L)=-0.12
Medium: toluene. W=(p-Methoxy)tetraphenylporphyrin complex of Ni(II).
X=(p-methyl-), Y=(p-Fluoro),  Z=(p-Chloro) analogue
-------------------------------------------------------------------------
Ni++       sp  non-aq 22°C 100%  U    M                  1975WHa (40418)2099
                                          K(NiX+2L)=0.21
                                          K(NiY+2L)=0.65
X=(p-COOCH3)tetraphenylporphyrin complex of Ni(II). Y=(p-Nitrito) analogue
Medium: toluene
```

```
--------------------------------------------------------------------------------
Ni++       sp  non-aq 22°C 100%  U    M                  1975WHa (40419)2100
                                        K(NiW+2L)=-0.55
                                        K(NiX+2L)=-0.46
                                        K(NiY+2L)=-0.46
                                        K(NiY+2L)=0.12
Medium: toluene. W=(m-Methoxy)tetraphenylporphyrin complex of Ni(II).
X=(m-methyl) analogue, Y=(H) analogue, Z=(m-Fluoro) analogue
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U    M                  1975WHa (40420)2101
                                        K(NiX+2L)=0.22
                                        K(NiY+2L)=0.76
Medium: toluene. X=(m-Chloro)tetraphenylporphyrin-Ni(II). Y=(m-Nitrito)
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U    M                  1975WHa (40421)2102
                                        K(NiY+2L)=-0.37
Medium: toluene. NiY=p-Tetraphenylporphyrin-Ni(II). 25 C: K(NiY+2L)=-0.46;
30 C: -0.54; 35 C: -0.62; 45 C: -0.70. DH=-23.4 kJ mol-1
--------------------------------------------------------------------------------
Ni++       dis non-aq 20°C 100%  U    M                  1971ADa (40422)2103
                                        K(NiA2+L)=3.18
Medium: CHCl3, 0.1 M NaClO4.   HA=thenoyltrifluoro-acetone
--------------------------------------------------------------------------------
Ni++       sp  non-aq   ?  100%  U  I M                  1971MAh (40423)2104
                                        K(NiCl2+L)=0.85
Medium: 50% benzene/50% HCON(CH3)2. 0% benzene, K=1.80, 25%, K=0.54,
40%, K1=0.74
--------------------------------------------------------------------------------
Ni++       sp  non-aq   ?  100%  U    M                  1971MAh (40424)2105
                                        K(NiA2+L)=2.52
                                        K(NiA2+2L)=2.88
Medium: benzene. HA=benzoylacetone. When HA=dibenzoylmethane, values are
2.20 and 2.18. Data in other solvent mixtures
--------------------------------------------------------------------------------
Ni++       oth non-aq 20°C 100%  U    M                  1968RMa (40425)2106
                                        K(NiA2+2L)=2.88
Medium: CHCl3.  HA=0,0-diethyldithiophosphoric acid
Method: magnetic susceptibility measurements
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  40%  C        K1=10.83  B2=15.80  2003DKa (40608)2107
                                        B(NiHL)=6.43
Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M U T HM   K1=4.74        1996JLd (40609)2108
                                        K(Ni(bpy)+L)=3.24
```

Data for 25-45 C. DH(K1)=-20.9 kJ mol-1, DS(K1)=20 J K-1 mol-1;
DH(Ni(bpy)L)=-45.6, DS(Ni(bpy)L)=91.

Ni++ gl alc/w 20°C 50% M M K1=5.68 1995AMb (40610)2109
K(NiA+L)=5.03

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

Ni++ gl KNO3 30°C 0.10M U K1=5.54 1994RSa (40611)2110

Ni++ gl NaClO4 25°C 0.20M C K1=5.75 1993BAb (40612)2111

Ni++ gl KCl 25°C 0.20M C M 1993BCf (40613)2112
K(NiA+(S)-L)=18.02
K(NiA+(R)-L)=18.51

A: N,N'-bis[(2S)-pyrrolidine-2-yl]propane-1,3-diamine.

Ni++ gl NaClO4 25°C 0.20M U T M K1=5.48 B2= 9.90 1993PPa (40614)2113
K(NiA+L)=4.90

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Ni++ gl KCl 25°C 0.10M C TIH T K1=5.27 B2=9.36 1993SKa (40615)2114

IUPAC evaluation. DH(K1)=-16.4 kJ mol-1, DH(B2)=-36.3, DH(B3)=-54

Ni++ gl KNO3 25°C 0.10M U M K1=5.12 1989MAc (40616)2115
K(NiA+L)=4.07

H4A is adenosine-5'-triphosphoric acid.

Ni++ gl KNO3 25°C 0.10M C M K1=5.40 1989MAd (40617)2116
K(NiA+L)=4.86
B(NiAL)=12.88

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

Ni++ gl KNO3 35°C 0.20M U M K1=5.70 B2=9.99 1989RVa (40618)2117
K(NiA+L)=5.14

A=bis(imidazol-2-yl)methane

Ni++ gl NaClO4 27°C 0.20M U M K1=5.48 B2= 9.90 1988PPc (40619)2118
K(NiA+L)=4.90

A is 2,2'-dipyridylamine.

Ni++ oth NaClO4 35°C 0.10M C M T K1=5.40 B2=9.70 1986SRb (40620)2119

Exp. method: paper electrophoresis. Data also for NTA ternary complexes

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Ni++ oth NaClO4 25°C 1.0M U M 1982CSc (40621)2120
B(Ni(ala)L)=10.24
B(Ni(ala)L2)=13.42
B(Ni(ala)2L)=13.4

Method: recalculation of literature data.

Ni++ oth NaClO4 25°C 1.0M U M 1982CSc (40622)2121

B(Ni(ala)(gly)L)=13.91
Method: recalculation of literature data.

Ni++ vlt NaClO4 25°C 0.50M U T K1=5.26 B2=9.42 1967RPd (40623)2122
K3=2.53

Ni++ gl oth/un 30°C ? U TIH K1=5.37 B2=9.53 1960PEa (40624)2123
B3=11.96
10 C: K1=5.62, B3=12.76; 40 C: K1=5.31, B2=9.39, B3=11.71. DH(K1)=-18.1 kJ
mol-1, DS=43.7; DH(K2)=-22.6, DS=6; DH(K3)=-18.8, DS=15.9

Ni++ gl diox/w 25°C 69% U TI K1=8.40 B2=15.44 1960PEa (40625)2124
B3=19.74
15 C: K1=8.57,K2=6.62,K3=4.44; 30 C: 8.31,6.93,4.24; 35 C:8.23,6.84,4.18;
40 C: 8.17,6.74,4.13. Also for 44.9 and 59.7% dioxan.

Ni++ gl alc/w 25°C 70% U I K1=6.52 B2=11.85 1960PEa (40626)2125
B3=15.58
Medium: 70% w/w MeOH. In 39%: K1=5.85, 2=4.85, B3=13.77

Ni++ gl oth/un 25°C 0.15M U T H T K1=5.37 B2=10.53 1956LWa (40627)2126
DH(B2)=-60.7 kJ mol-1, DS=-23.0 J K-1 mol-1. 30 C: K1=5.27, K2=4.07;
35 C: K1=5.17, K2=3.99; 40 C: K1=5.11, K2=3.91

Ni++ gl oth/un 18°C ? U K1=5.53 B2=9.88 1956PCb (40628)2127
B3=12.71
****
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
---
Ni++ gl NaNO3 25°C 0.10M C M K1=5.70 B2=10.40 2000KAb (40808)2128
K(NiA+L)=4.60
H2A=Dipicolinic acid.

Ni++ gl KNO3 25°C 0.20M U T HM K1=5.45 1996JLd (40809)2129
K(Ni(bpy)+L)=5.15
Data for 25-45 C. DH(K1)=-17.6 kJ mol-1, DS(K1)=45 J K-1 mol-1;
DH(Ni(bpy)L)=-17.6, DS(Ni(bpy)L)=21.

Ni++ gl KNO3 25°C 0.10M C T K1=5.27 B2=9.65 1975IPb (40810)2130

Ni++ gl KCl 25°C 0.20M U H K1=5.28 B2= 9.62 1975SGc (40811)2131
By calorimetry: DH(K1)=-17.9 kJ mol-1, DS(K1)=41.0 J K-1 mol-1;
DH(B2)=-35.6, DS(B2)=64.9. Ligand is the DL-amino acid.

Ni++ gl KCl 25°C 0.20M U H K1=5.28 B2= 9.62 1974SGb (40812)2132
By calorimetry, DH(K1)=-17.2 kJ mol-1, DS(K1)=42.3 J K-1 mol-1;
DH(K2)=-33.9, DS(K2)=68.6.

Ni++ gl KCl 25°C 0.05M U M T K1=5.42 B2=9.87 1972GSc (40813)2133
B(NiLA)=10.22
B(NiL(Ser))=10.27
B(NiL(Thr))=10.29
B(NiL(Phe))=10.07
K(Ni+L+HTyr)=10.05, B(NiL(Gly))=10.66, B(NiL(Ala))=10.26. HA=norleucine
---
Ni++ gl oth/un 25°C 0.02M U K1=5.68 B2=10.10 1954REa (40814)2134
****
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
---
Ni++ cal KNO3 25°C 0.25M U IH 2004ZKa (40885)2135
DH(K1)=-27.18 kJ mol-1
in 0.50 mol/L KNO3 DH(K1)=-29.34 kJ mo-1l; in 0.75 mol/L KNO3 DH=-31.34
At 35 C and in 0.25 mol/L KNO3 DH(K1)=-26.27 kJ mol-1

Ni++ nmr KNO3 25°C 1.0M U H K1=5.46 B2= 9.74 1992ZSa (40886)2136
B3=12.50
Also methods used: potentiometry, spectrophotometry

Ni++ gl KNO3 37°C 0.15M C M K1=5.09 B2= 9.19 1989KKd (40887)2137
B3=11.35
B(Ni(imidazole)L)=7.92
B(Ni(imidazole)2L)=10.34
B(Ni(imidazole)2L2)=13.99
B(NiH-1(imidazole)L)=-1.49

Ni++ gl KNO3 25°C 0.10M M M K1=5.37 B2= 9.68 1982LBa (40888)2138
Data for ternary complexes with polymer-grafted L-proline ligands.
****
C5H11NO2 HL CAS 3183-21-9 (3044)
N-Isopropylglycine; (CH3)2.CH.NH.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U K1=3.94 1954BCb (40904)2139
****
C5H11NO2 HL CAS 25303-14-4 (3043)
N-n-Propylglycine; CH3.CH2.CH2.NH.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U K1=4.79 B2=8.46 1954BCb (40907)2140
****
C5H11NO2S HL CAS 60116-17-8 (8308)
(3-Aminopropyl)thioethanoic acid;

```
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U   H    K1=4.157  B2= 7.40  1983HTa (40910)2141
By calorimetry: DH(K1)=-14.6 kJ mol-1, DH(K2)=-17.6.
*******************************************************************************
C5H11NO2S              HL    Methionine       CAS 63-68-3  (42)
2-Amino-4-(methylthio)butanoic acid; H2N.CH(CH2.CH2.S.CH3)COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  40%  C        K1=11.21  B2=15.12  2003DKa (41006)2142
                                         B(NiHL)=6.07
Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=6.02        1999AAa (41007)2143
                                         K(NiL+A)=3.78
                                         B(NiLA)=9.80
                                         K(NiL+B)=3.45
                                         B(NiLB)=9.47
K(NiHL+C)=3.26. HA=MOPSO, HB=MOPS, HC=DIPSO.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C      R K1=5.33   B2=9.90   1995BEa (41008)2144
IUPAC evaluation
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U T  M   K1=5.60   B2= 9.78  1993PPa (41009)2145
                                         K(NiA+L)=5.38
A is 2,2'-bipyridylamine. Also data for 35 and 45 C.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.70M C        K1=5.08   B2= 9.43  1992AAc (41010)2146
                                         K(Ni+OH+L)=9.42
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=5.62        1989MAc (41011)2147
                                         K(NiA+L)=4.90
H4A is adenosine-5'-triphosphoric acid.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.20M U    M   K1=5.32   B2=9.66   1989RVa (41012)2148
                                         K(NiA+L)=4.72
A=bis(imidazol-2-yl)methane
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M M T H    K1=7.55        1988MAa (41013)2149
Data for 25-40 C. DH(K1)=-35.0 kJ mol-1, DS(K1)=-263 J K-1 mol-1.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 27°C 0.20M U    M   K1=5.60   B2=10.41  1988PPc (41014)2150
                                         K(NiA+L)=5.38
A is 2,2'-dipyridylamine.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=5.23   B2=9.71   1987SPa (41015)2151
                                         B3=12.60
-------------------------------------------------------------------------------
```

Ni++ gl NaClO4 25°C 0.50M M M K1=5.10 B2=9.88 1984MCa (41016)2152
B(NiLA)=9.50; B(MHLA)=12.07. HA=ethionine.

Ni++ gl NaClO4 25°C 0.10M M M K1=5.08 B2=9.65 1984MCb (41017)2153
K(NiL2+A)=3.75. HA=2-Aminoethanesulfonic acid.

Ni++ gl KCl 25°C 0.20M U K1=5.50 B2=10.15 1982FGa (41018)2154

Ni++ gl KNO3 25°C 0.10M U H K1=5.318 B2=9.894 1976SPb (41019)2155
B3=11.7
With D-Met: K1=5.330, B2=9.892, B3=11.5; DL-Met: K1=5.340, B2=9.990, B3=11.9
L-Met:DH(K1)=-13.1 kJ mol-1, DH(K2)=-22.1; D-Met:-13.2,-21.8; DL:-13.3,-22.8

Ni++ gl KNO3 25°C 0.10M C T K1=5.34 B2=9.90 1975IPb (41020)2156

Ni++ gl NaNO3 25°C 0.20M U K1=5.57 B2=10.11 1974FSa (41021)2157
B3=13.05
B(NiLA)=7.62
B(NiL2A)=11.38
B(NiLA2)=9.63
A=acetylhydrazide; other data are also given

Ni++ gl NaNO3 25°C 1.00M U K1=5.41 B2=10.81 1973BJd (41022)2158
B3=12.43

Ni++ oth KNO3 20°C 0.10M U K1=5.7 B2=9.40 1964JOa (41023)2159
K3=2.3
Method: paper electrophoresis

Ni++ gl KNO3 25°C 0.10M U K1=5.19 B2=9.84 1964LMa (41024)2160

Ni++ gl oth/un 25°C ? U TIH K1=5.56 B2=10.19 1960PEa (41025)2161
K3=2.63
DH(K1)=-21.6 kJ mol-1,DS=34; DH(K2)=-21.6,DS=16; DH(K3)=-26.9,DS=-40.
10 C:K1=5.77,K2=4.87,K3=2.80; 15 C:5.70,4.78,2.73; 40 C:5.39,4.48,2.37

Ni++ gl diox/w 15°C 69% U TI K1=8.48 B2=15.61 1960PEa (41026)2162
K3=4.79
30 C: K1=8.43, K2=7.09; 40 C: K1=8.39, K2=6.86, K3=4.19. Data also in 44.6%,
59.7% dioxan

Ni++ gl oth/un 19°C ? U K1=5.59 B2=10.30 1956PCb (41027)2163
B3=13.12
****
C5H11NO2S HL CAS 2442-39-9 (8307)
3-(2-Aminoethyl)thiopropanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M U H K1=3.739 B2= 6.92 1983HTa (41139)2164

By calorimetry: DH(K1)=-13.6 kJ mol-1, DH(K2)=-15.9.

****

C5H11NO2S H2L D-Penicillamine CAS 52-67-5 (1323)

D-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
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiAL)=15.25 B(NiHAL)=20.02 K(NiHA+L)=12.65 K(NiA+L)=11.98	2000NNb	(41160)2165

K(NiL+A)=3.75. HA 6-aminopenicillanic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiAL)=15.71 B(NiHAL)=20.49 B(NiH-1AL)=6.99 K(NiHA+L)=11.60	2000NNb	(41161)2166

K(NiA+L)=12.13, K(NiL+A)=4.21, K(NiH-1A+L)=11.63. HA is ampicillin.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiAL)=21.74 B(NiHAL)=29.63 B(NiH2AL)=37.40 K(NiA+L)=10.90	1999NAb	(41162)2167

K(NiL+A)=10.24. H2A is dopa: 2-amino-3-(3,4-dihydroxyphenyl)propanoic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiAL)=20.86 B(NiHAL)=29.31 B(NiHA+L)=11.19 K(NiA+L)=11.20	1999NAb	(41163)2168

K(NiL+A)=9.36. H2A is dopamine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiLZn)=14.21 B(NiL2Zn)=27.18	1995NAc	(41164)2169

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	C	M	K1=11.50 B2=23.41 B(NiAL)=15.29 B(NiA2L)=17.87 B(NiHAL)=21.46	1993NAa	(41165)2170

A=imidazole. Also complexes for A=histamine: B(NiAL)=18.14, B(NiHAL)=23.76, B(NiH2AL)=29.13; HA=histidine: B(NiAL)=19.93, B(NiHAL)=24.50.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	M		K1=10.76 B2=23.03	1987HLa	(41166)2171
Ni++	sp	NaCl	25°C	0.15M	U		K1=11.22 B2=22.71	1979LPa	(41167)2172

Ni++ gl KCl 25°C 0.20M C K2=22.92 1979SGa (41168)2173
B(NiHL2)=27.06
B(NiL(His))=18.05
B(NiL(histamine))=17.0
****
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
---
Ni++ gl NaClO4 37°C 0.15M C M 1995NAb (41224)2174
B(NiL(dapa))=19.70
B(NiL(daba))=20.11
B(NiL(orn))=18.47
B(NiHL(dapa))=25.37
B(NiHL(daba))=26.63, B(NiHL(orn))=27.01, B(NiH2L(daba))=31.97,
B(NiH2L(orn))=33.4. daba: 2,3-diaminopropanoate daba: 2,4-diaminobutanoate
---
Ni++ gl KNO3 32°C 0.0 U 1992BKf (41225)2175
K(Ni+HL=NiL+H)=-0.77
K(Ni+2H2L=NiL2+4H)=-15.62
Medium: 0.005 M KNO3

Ni++ gl KCl 25°C 0.10M U K1=10.63 B2=22.87 1972RJa (41226)2176
For the DD isomer. K2=12.39

Ni++ gl NaClO4 20°C 0.10M U K1=10.75 B2=22.89 1968PSg (41227)2177

Ni++ gl KNO3 25°C 0.10M U K1=11.11 B2=21.79 1964LMa (41228)2178

Ni++ gl KNO3 25°C 0.15M U K1=11.4 B2=22.30 1962KRa (41229)2179
****
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
---
Ni++ gl NaClO4 25°C 1.00M C I K1=5.16 B2=9.93 1981CPb (41289)2180
B3=12.67
In 2.0 M NaClO4: K1=5.38, B2=10.30, B3=13.10
****
C5H11NO2S2 HL CAS 1528-32-9 (2127)
Di(2-hydroxyethyl)dithiocarbamic acid; (HO.CH2.CH2)2N.CSSH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ ISE non-aq 25°C 100% U K1=4.83 B2=7.01 1974TBa (41296)2181
Medium: DMF, Ag electrode
****
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
Ni++	gl	KCl	20°C	0.10M	U		K1=4.75 B2=8.15	1964ULa (41308)	2182

****

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
Ni++	EMF	non-aq	25°C	100%	U		B2=12.3	1987USa (41323)	2183
Medium: DMF, 0.1 M LiClO4									
Ni++	ISE	non-aq	25°C	100%	U		K1=10.3 B2=21.5	1984LSb (41324)	2184
Medium: DMSO, 0.1 M NaClO4; Ag-electrode. In MeOH: K1=9.4, B2=18.2									
Ni++	ISE	non-aq	25°C	100%	U		K1=4.25 B2=7.18	1974TBa (41325)	2185
Medium: DMF, Ag electrode									
Ni++	dis	oth/un	25°C	0.10M	U		B2=12.9	1973SSa (41326)	2186
Ni++	vlt	KCl	25°C	1.00M	U		B2=12.1	1973SSa (41327)	2187
Ni++	sp	alc/w	25°C	75%	U		B2=8.56	1970PNa (41328)	2188
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
Ni++	gl	NaNO3	25°C	0.10M	C		K1=2.00	1988MSa (41411)	2189
Ni++	gl	NaClO4	25°C	0.10M	M		K1=1.99	1976TDa (41412)	2190
							K(Ni+HL)=0.7		
Ni++	gl	KNO3	15°C	0.10M	U		K1=1.90	1972FSa (41413)	2191

****

C5H12NO3P H2L PYPH (223)

Piperidine-2-phosphonic acid; C5H10N.PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	24°C	0.10M	U		K1=5.89	1989YKa (41431)	2192
							K(Ni+HL)=2.07		

****

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
-------------------------------------------------------------------------
Ni++       gl  NaClO4 23°C 0.10M U        K1=6.21        1990YTa (41439)2193
*************************************************************************
C5H12N2                 L                      CAS 38932-70-6  (4301)
1,1-Di(aminomethyl)cyclopropane; C3H4(CH2.NH2)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  oth/un 25°C       U        K1=6.42   B2=10.42  1972NBa (41451)2194
*************************************************************************
C5H12N2                 L                      CAS 171868-16-9  (7832)
cis-1,2-Cyclopentanediamine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C        K1=7.02   B2=12.70  2001KSa (41456)2195
                                          B3=15.98
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.02M U  I                      1982PNa (41467)2196
                                          K(Ni+HL)=6.31
In 36% dioxan/H2O: K(Ni+HL)=6.35
-------------------------------------------------------------------------
Ni++       gl  oth/un 24°C 0.27M U                         1958MUa (41468)2197
                                          K(Ni+2HL=Ni(HL)2)=8.6
                                          K(Ni(HL)2=H+NiHL2)=-2.5
                                          K(NiHL2=H+NiL2)=-11.8
*************************************************************************
C5H12N2O                L                        (3046)
Sarcosine dimethylamide; CH3.NH.CH2.CO.N(CH3)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.01M U        K1=3.80   B2=7.29   1959DLb (41472)2198
*************************************************************************
C5H12N2O                L    Valinamide        CAS 3474-22-1  (5977)
Valinamide; NH2.CH(CH(CH3)2).CO.NH2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C        K1=2.77   B2= 4.93  1997DFb (41484)2199
                                          B(NiH-2L2)=-11.60
*************************************************************************
C5H12N2OS2              HL                     CAS 54887-93-3  (8360)
N-(2-Aminoethyl)-N-2-(hydroxyethyl)dithiocarbamic acid;
```

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 0.10M C                        1978SHa (41486)2200
                                        K(Ni+2HL=Ni(HL)2)=12.8
NTA used as a competitive ligand.
********************************************************************************
C5H12N2O2              HL    Ornithine        CAS 1069-31-4  (46)
2,5-Diaminopentanoic acid; H2N.CH2.CH2.CH2.CH(NH2)COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                   2002NNa (41536)2201
                                        B(NiHLA)=18.67
                                        K(NiHL+A)=3.78
HA is 6-aminopenicillanic acid.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                   2000NNa (41537)2202
                                        B(NiAHL)=19.05
                                        B(NiAL)=11.06
                                        K(NiHL+A)=4.16
                                        K(NiA+L)=7.48
HA is ampicillin. K(NiL+A)=3.68.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                   1998NAa (41538)2203
                                        B(NiHAL)=18.22
                                        B(NiA2L)=13.64
                                        K(NiHL+A)=3.33
                                        K(NiA2+L)=7.94
K(NiL+2A)=6.26. A is imidazole.  B(NiHCL)=17.78, B(NiCL)=10.47,
K(NiHL+C)=2.89, K(NiC+L)=7.45, K(NiL+C)=2.44. C is benzimidazole.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                   1998NAb (41539)2204
                                        B(NiH2LA)=27.18
                                        B(NiHLA)=20.46
                                        B(NiLA)=13.31
                                        K(NiA+L)=6.95
K(NiL+A)=5.93. A is histamine. HL is DL-ornithine.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                   1998NAb (41540)2205
                                        B(NiH2L(his))=28.53
                                        B(NiHL(his))=23.45
                                        B(NiL(his))=15.87
                                        K(Ni(his)+L)=7.03
K(NiL+his)=8.49.  HL is DL-ornithine.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M C    M   K1=7.38   B2=13.33  1995NAb (41541)2206
                                        B(NiHL)=14.89
                                        B(NiH2L2)=29.13
Data for ternary complexes with cysteine, cysteic acid and penicillamine.
```

```
------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=6.83   B2=11.68  1981FGb (41542)2207
                                          B(NiHL)=15.04
                                          B(NiHL2)=20.95
                                          B(NiH2L2)=29.35
                                          B(NiH3L3)=42.71
B(NiH2L3)=33.45
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=7.11   B2=12.03  1976BPb (41543)2208
                                          B3=14.36
                                          B(NiHL)=15.26
                                          B(NiH2L2)=29.78
                                          B(NiH3L3)=43.29
B(NiH2L3)=34.09, B(NiHL3)=24.53, B(NiHL2)=21.46
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U  I     K1=7.04   B2=11.93  1970CMc (41544)2209
                                          K(Ni+HL)=4.72
                                          K(NiHL+HL)=4.34
                                          K(NiL+H)=8.69
                                          K(NiHL2+H)=8.10
I=1.0 M, K(Ni+HL)=4.44, K(NiHL+HL)=3.68
------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.02M U                       1954REa (41545)2210
                                          K(Ni+HL)=4.85
                                          K(Ni+2HL)=8.74
------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U                       1952ALa (41546)2211
                                          K(Ni+HL)=8.3
******************************************************************************
C5H12N2O2              HL                      CAS 36207-49-5  (834)
2-Amino-N-hydroxypentanamide; CH3.CH2.CH2.CH(NH2).CO.NH.OH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M C        K1=6.825  B2=13.95  1986LEb (41589)2212
                                          B(NiH-1L2)=5.620
******************************************************************************
C5H12N2O2S             HL    Met-hydroxamic   CAS 19253-87-3  (5992)
2-Amino-4-(methylthio)butanehydroxamic acid, Methionine hydrox.a.;
CH3.S.CH2.CH2.CH(NH2).CO.NHOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M M    M   K1=6.55   B2=13.46  2003MYa (41601)2213
                                          B(NiH-1L)=-0.06
                                          B(NiH-1L2)=4.29
                                          B(NiLA)=11.00
                                          B(NiHLA)=16.67
B(NiLA2)=13.45, B(NiH-1L2A)=7.74. HA is glycylglycine.
------------------------------------------------------------------------------
```

```
Ni++       gl  KCl    25°C 0.20M C        K1=6.53   B2=13.55  1996OGa (41602)2214
                                          B(NiH-1L2)=5.15
-------------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M M    M   K1=6.84   B2=14.03  1992MMd (41603)2215
                                          B(NiH-1L)=0.41
                                          B(NiH-1L2)=5.76
B(NiCuL2)=22.77, B(NiCuH-2L2)=10.94, B(NiCuH-3L3)=11.44.
B(NiZnH-1L2)=10.96, B(NiZnH-2L2)=4.09, B(NiZnH-3L3)=19.73.
*******************************************************************************
C5H12N2O2S             HL                        (1737)
3-(2-Aminoethyl)thio-L-alanine; H2N.CH2.CH2.S.CH2.CH(NH2)COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C                      1974NBb (41612)2216
                                          K(Ni+HL)=4.38
                                          K(NiL+HL)=3.71
                                          K(NiHL=NiL+H)=-5.57
                                          K(NiHL2=NiL2+H)=-9.04
*******************************************************************************
C5H12N4O3              HL    Canavanine       CAS 543-38-4  (5565)
Canavanine; H2N.CH(COOH).CH2.CH2.O.NH.C(:NH)-NH2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=6.00   B2=10.69  1991APa (41638)2217
                                          B3=13.77
*******************************************************************************
C5H13NO                 L                      CAS 108-16-7  (947)
1-Dimethylaminopropan-2-ol; CH3.CH(OH).CH2.N(CH3)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 1.00M U        K1=2.33   B2=3.58   1982RMa (41723)2218
                                          K3=1.42
*******************************************************************************
C5H13N2O4P            H2L                        (7122)
(S,S)-Alanyl-1-aminoethylphosphonic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=3.956  B2=7.17   1995HLa (41784)2219
                                          B(NiHL)=9.53
                                          B(NiH-1L)=-4.48
For the (S,R) isomer, K1=3.767, B2=6.50, B(NiHL)=9.86, B(NiH-1L)=-4.89
*******************************************************************************
C5H13N3                 L                        (1866)
cis-3,5-Diaminopiperidine; C5H9N(NH2)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

```
------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C        K1=11.33  B2=21.22  2000PSb (41791)2220
******************************************************************************
C5H13N3O              HL                        (6983)
3-(Dimethylamino)propanamidoxime; (CH3)2N.CH2.CH2.C(:NOH)NH2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.10M C                      1996OSa (41798)2221
                                      B(0,1,1)=2.74
                                      B(-9,5,4)=-54.1
                                      B(-8,5,4)=-44.62
B(p,q,r): pH+qNi+r(HL)=(H)p(Ni)q(HL)r.
******************************************************************************
C5H13N5O               L                      CAS 53644-71-4  (3048)
1-(2-Methoxyethyl)biguanide; CH3O.CH2.CH2.NH.C(:NH).NH.C(:NH).NH2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       sp  KCl    30°C 0.20M U        B2=11.96       1960SRa (41801)2222
******************************************************************************
C5H13N5O              HL                        (3047)
1-(3-Hydroxypropyl)biguanide; HO.CH2.CH2.CH2.NH.C(:NH).NH.C(:NH).NH2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       sp  KCl    30°C 0.20M U        B2=12.32       1960SRa (41804)2223
******************************************************************************
C5H13OPS2             HL                      CAS 1000-64-2  (4339)
O-Butyl hydrogen-P-methylphosphonodithioate;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       ISE alc/w  25°C  90%  U        K1=2.57   B2=4.57   1972TCa (41807)2224
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
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.62   B2=6.27   1996RLa (41816)2225
                                      B3=8.45
                                      B(NiH-1L)=-5.18
                                      B(NiH-2L)=-14.80
******************************************************************************
C5H14NO5P            H2L                      CAS 5994-60-5  (1302)
N,N'-Bis(2-hydroxyethyl)aminomethylphosphonic acid; (HO.CH2.CH2)2N.CH2.PO3H2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

Ni++ gl NaClO4 20°C 0.10M U K1=6.69 B2=9.46 1970KMa (41842)2226
****
C5H14N2 L CAS 7328-91-8 (3029)
2,2-Dimethyl-1,3-diaminopropane; H2N.CH2.C(CH3)2.CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 25°C U K1=6.28 B2=10.44 1972NBa (41870)2227

Ni++ gl KNO3 30°C 1.0M U T H K1=6.59 B2=11.00 1956HFb (41871)2228
DH(K1)=-33.5 kJ mol-1, DS=12.6; DH(K2)=-29.3, DS(K2)=-12.6. 0 C: K1=7.22,
K2=4.99; 50 C: K1=6.23, K2=4.15
****
C5H14N2 L CAS 111-33-1 (938)
2,6-Diazaheptane, N,N'-Dimethyl-1,3-diaminopropane; CH3.NH.CH2.CH2.CH2.NH.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.50M U K1=5.1 1974KZa (41880)2229
****
C5H14N2 L CAS 19522-62-7 (3031)
N-Isopropylethylenediamine; (CH3)2.CH2.NH.CH2.CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M U T K1=5.17 B2=8.64 1952BMa (41897)2230
0 C: K1=5.62, K2=3.84

Ni++ gl KNO3 var 0.50M U H 1952BMb (41898)2231
0-25 C. At 0 C: DH(K1)=-28.0 kJ mol-1,DS=4.6 J K-1 mol-1; DH(K2)=-23.0,
DS=-10.9
****
C5H14N2 L CAS 111-39-7 (3030)
N-n-Propylethylenediamine; CH3.CH2.CH2.NH.CH2.CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M U T K1=6.60 B2=11.76 1952BMa (41903)2232
K3=2.00
0 C: K1=7.10, K2=5.82, K3=2.26

Ni++ gl KNO3 var 0.50M U H 1952BMb (41904)2233
0-25 C. At 0 C: DH(K1)=-31.4 kJ mol-1,DS=21.3 J K-1 mol-1; DH(K2)=-1.4,
DS=-39.7; DH(K3)=-16.3,DS=-16.7
****
C5H14N2O L CAS 36753-44-3 (3050)
N-(2-Hydroxypropyl)ethylenediamine; H2N.CH2.CH2.NH.CH2.CH(OH).CH3

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

```
------------------------------------------------------------------------------
Ni++       gl  KCl    25°C  1.0M U        K1=7.36   B2=13.41  1950EDa (41913)2234
******************************************************************************
C5H14N2O                L                       CAS 36753-45-4  (3051)
N-(3-Hydroxypropyl)ethylenediamine; H2N.CH2.CH2.NH.CH2.CH2.CH2.OH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KCl    25°C  1.0M U        K1=8.50   B2=13.75  1953EDa (41916)2235
                                        B3=15.61
******************************************************************************
C5H14N2S                L                       CAS 56973-49-0  (1855)
1,6-Diamino-3-thiahexane;H2N.CH2.CH2.S.CH2.CH2.CH2.NH2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=5.989  B2=9.85   1979HGb (41923)2236
                                       K(NiL+H)=6.9
                                       K(NiL2+H)=8.2
------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.50M C   H                   1979HGd (41924)2237
DH(K1)=-39.0 kJ mol-1, DS(K1)=-16.2 J K-1 mol-1; DH(K2)=-38.9, DS(K2)=-56;
DH(Ni+HL)=-21.3, DS=-18; DH(NiL+HL)=-29.7, DS=-63.
******************************************************************************
C5H14N2S                L                       CAS 53204-43-6  (1853)
1-Amino-3-aza-6-thiaheptane;H2N.CH2.CH2.NH.CH2.CH2.S.CH3
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M C   H    K1=7.063  B2=12.92  1977HGa (41929)2238
DH(K1)=-36.3 kJ mol-1,  DS(K1)=13.4 J K-1 mol-1
DH(K2)=-44.4 kJ mol-1   DS(K2)=-36.8 J K-1 mol-1
******************************************************************************
C5H14N2S                L                         (1299)
2-Aza-5-thia-7-amino-heptane; CH3.NH.(CH2)2.S.(CH2)2.NH2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=6.759  B2=10.89  1981HGa (41934)2239
******************************************************************************
C5H15NO7P2            H4L    AMOK            CAS 63132-39-8  (1350)
1-Hydroxy-3-N,N-dimethylaminopropane-1,1-diphosphonic acid;
Me2N.CH2.CH2.C(OH)(PO3H2)2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=8.73         1979KBa (41948)2240
                                       K(Ni+HL)=7.52
******************************************************************************
C5H15N3                 L                       CAS 15995-42-3  (153)
```

1,1,1-Tris(aminomethyl)ethane; (H2N.CH2)3C.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	cal	KNO3	25°C	0.50M	C	H			1980SVa	(41969)2241

DH1=-44.6 kJ mol-1, DS1=44.7, DH(K2)=-45.9, DS(K2)=-18, + NiHL and NiHL2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	EMF	KNO3	20°C	0.10M	U		K1=10.76		1970KAd	(41970)2242
							K(Ni+HL)=5.65			
							K(Ni+H2L)=1.79			

****

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
Ni++	cal	KNO3	25°C	0.50M	U	H			1974BFb	(41991)2243

DH(K1)=-56.6, DH(K2)=-57.4 and DH(M+HL=MHL)=-32.6 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=11.0	B2=18.00	1973AHc	(41992)2244
Ni++	gl	KNO3	25°C	0.50M	U		K1=11.23	B2=18.29	1973BFa	(41993)2245
							K(Ni+HL)=5.86			
Ni++	gl	KCl	25°C	0.50M	U		K1=10.7	B2=17.8	1970WBa	(41994)2246

****

C5H16N4 L (3614)

Tetrakis(aminomethyl)methane; C(CH2.NH2)4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=10.7	B2=18.80	1968ZBa	(42009)2247
							K(NiL+H)=7.6			
							K(NiL2+H)=8.0			
							K(NiHL2+H)=7.6			
Ni++	gl	KNO3	25°C	0.10M	U		K1=10.8		1966ZBa	(42010)2248
							K(Ni+HL)=8.5			

****

C5H17NO13P4 H5L ADOPPH CAS 82372-37-0 (228)

1-Hydroxy-3-(N,N-bis(methylenephosphonic)-aminopropylydene-1,1-diphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	1.0M	U		K1=12.7		1982SBa	(42016)2249
							K(Ni+HL)=10.8			
							K(Ni+H2L)=7.7			
							K(Ni+H3L)=5.6			

****

C6H2O4Cl2 H2L Chloranilic acd CAS 87-88-7 (1281)

3,6-Dichloro-2,5-dihydroxy-1,4-benzoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	oth/un	35°C	0.15M	U	T H	K1=3.95	1967CAa	(42048)2250

K1=4.08(15 C),4.02(25 C); DH(K1)=-6.9 kJ mol-1, DS=-53(?) J K-1 mol-1

****

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
Ni++	sp	oth/un	21°C	0.40M	U		B2=2.89	1955BKa	(42079)2251

Medium:0.2-0.6(some EtOH)

****

C6H4NO2Cl HL CAS 39825-15-5 (3709)
4-Chloro-2-nitrosophenol; HO.C6H3.(2-N:O)(4-Cl)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	25°C	50%	U		K1=6.08	1961SHa	(42175)2252

Medium: 50% dioxan, 0.1 M KNO3

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C	H	K1=1.23	1979HMa	(42182)2253

DH(K1)=-4.6 kJ mol-1

Ni++	sp	NaNO3	24°C	1.0M	U		K1=1.45	1964MWa	(42183)2254

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	10°C	100%	U	T M		1976CUa	(42188)2255

K(NiA+2L)=3.83

Medium: chlorobenzene. H2A=biacetyl-bis-a-hydroxybenzylidenehydrazone
K=2.59(16 C); 2.34(22 C); 2.11(28 C)

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	vlt	alc/w	20°C	25%	U		K1=0.6	1967CEb	(42217)2256

Medium: 25 % EtOH, 0.3 M acetate buffer

```
-------------------------------------------------------------------------------
Ni++       sp  oth/un 21°C 0.40M U        B2=2.68        1955BKa (42218)2257
Medium: 0.2-0.6 (some EtOH)
*******************************************************************************
C6H4N2O6              H2L                       CAS 7659-29-2  (2694)
1,2-Dihydroxy-3,5-dinitrobenzene; (HO)2.C6H2(NO2)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M M        K1=6.84   B2=11.94  1986HAd (42258)2258
                                          B3=15.3
*******************************************************************************
C6H4N4O                HL                       CAS 900-47-0  (3083)
4-Hydroxypteridine;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=4.4    B2=7.8    1954AHb (42273)2259
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=3.7    B2=6.5    1953ALa (42284)2260
*******************************************************************************
C6H4O4                H2L                       CAS 615-94-1  (1280)
2,5-Dihydroxy-1,4-benzoquinone;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KCl    30°C  25%  M TIH    K1=5.81   B2= 9.36  1991GDe (42299)2261
Medium: 35% Dioxan/H2O, 0.1 M NaClO4. Other solvents and backgrounf concs.
*******************************************************************************
C6H4O5                H2L    Comenic acid     CAS 499-78-5  (2544)
3-Hydroxypyran-4-one-6-carboxylic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M M  I     K1=5.03        1985PRa (42315)2262
*******************************************************************************
C6H5NO                  L    Picolinaldehyde  CAS 1121-60-4  (1186)
2-Pyridinecarboxaldehyde; C5H4N.CHO
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=1.98   B2= 3.90  1999NDa (42374)2263
Data for ternary complexes with histidine.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M                  1999NMb (42375)2264
```

```
                                        B(Ni(val)L)=11.48
                                        B(Ni(val)L2)=13.73
                                        B(Ni(val)2L2)=18.46
                                        K(NiL+val)=9.50
K(Ni(val)+L)=6.22, K(Ni(val)L+L)=2.25.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M                  1999NMb (42376)2265
                                        B(Ni(phe)L)=11.30
                                        B(Ni(phe)L2)=13.56
                                        B(Ni(phe)2L2)=18.25
                                        K(NiL+phe)=9.32
K(Ni(phe)+L)=6.15, K(Ni(phe)L+L)=2.26.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M                  1999NMb (42377)2266
                                        B(Ni(trp)L)=11.39
                                        B(Ni(trp)L2)=13.87
                                        B(Ni(trp)2L2)=18.35
                                        K(NiL+trp)=9.41
K(Ni(trp)+L)=6.34, K(Ni(trp)L+L)=2.48.
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.50M U    M                  1979EDa (42378)2267
                                        K(Ni+H-1L)=7.27
                                        K(Ni+2(H-1L))=14.26
                                        K(Ni+H-1L+malonate)=11.88
                                        B(NiL(malonate))=7.89
B(NiHL(oxalate))=13.82; B(NiL2(oxalate))=10.28
-------------------------------------------------------------------------------
Ni++       sp  KCl    30°C 0.50M U     K1=1.23   B2=1.73   1977EEa (42379)2268
                                        B(NiH-1L)=-5.34
                                        B(NiH-2L)=-13.85
                                        B(NiH-3L)=-24.74
                                        B(NiH-2L2)=-10.99
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T      K1=4.88        1988NSc (42450)2269
At 40 C, K1=4.69.
-------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  var  U T                     1974DKa (42451)2270
                                        K1=84.11/D+5.486
                                        K2=32.88/D+5.654
D=Dielectric constant of the 1-PrOH/H2O mixture. Also at 0 and 40 C
-------------------------------------------------------------------------------
Ni++       ISE NaNO3  20°C 0.10M U     K1=6.80   B2=12.58  1960ANb (42452)2271
                                        K3=4.64
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  0.0  U     K1=7.63   B2=12.45  1957LUa (42453)2272
```

```
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=6.4    B2=11.90  1957SYa (42454)2273
------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C .001M U        K1=6.68   B2=12.66  1956GTa (42455)2274
                                          K3=5.12
------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.02M U  I     K1=5.9    B2=11.3   1955HCa (42456)2275
In 50% dioxan K1=6.1, K2=6.1
******************************************************************************
C6H5NO2                HL    Nicotinic acid   CAS 59-67-6  (419)
3-Pyridine-carboxylic acid; C5H4N.COOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.10M U        K1=2.48        2001DSb (42652)2276
------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U        K1=6.32   B2=11.70  1999NNa (42653)2277
------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U    M   K1=2.03        1989BBg (42654)2278
                                          K(NiA+L)=2.41
                                          B(NiAL)=11.44
H2A is 8-hydroxyquinoline-5-sulfonic acid.
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U    M   K1=2.93        1986KRa (42825)2279
                                          K(NiA+L)=4.87
HA=6-methylpicolinic acid
------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U  I     K1=2.93   B2=4.82   1986SRc (42826)2280
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U T      K1=3.56   B2=6.48   1981RRb (42827)2281
Temp range 25-50. K1 at 50 C = 3.30; K2 at 50 C = 2.81
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M M        K1=8.21   B2=13.90  1986HAb (42849)2282
                                          B3=17.4
******************************************************************************
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
------------------------------------------------------------------------------
```

```
Ni++       gl  KNO3   25°C 0.10M C    M   K1=7.55   B2=12.87  1989DAa (42891)2283
                                          K(NiA+L)=6.25
                                          B(NiAL)=15.27
H2A: 8-hydroxyquinoline-5-sulfonic acid.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.20M U    M   K1=6.16   B2=11.14  1989RVa (42892)2284
                                          K(NiA+L)=5.71
A=bis(imidazol-2-yl)methane
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.05M U TIH    K1=9.10   B2=16.67  1986NDa (42893)2285
I=0.1, 40 C: K1=7.46, B2=13.59; 50 C: K1=7.31, B2=13.40
I=0.1, 30 C:K1= 7.86, B2=14.31; I=0.2, 30 C:K1=7.79, B2=13.80
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M M        K1=7.90   B2=13.20  1984HAc (42894)2286
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=7.89   B2=13.39  1972JWa (42895)2287
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U        K1=7.82   B2=13.09  1964MTb (42896)2288
                                          K3=3.81
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U T      K1=3.92   B2=6.42   1982RRa (42966)2289
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=2.01   B2=3.61   1981LMb (42985)2290
                                          B3=4.82
*******************************************************************************
C6H5N4Cl                L                       CAS 2346-74-9  (5786)
2-Chloro-9-methylpurine;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 1.00M U        K1=0.9         1985AOa (42993)2291
*******************************************************************************
C6H5N4Cl                L                       CAS 2436-75-0  (5790)
8-Chloro-9-methylpurine;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 1.00M U        K1=1.0         1985AOa (42996)2292
*******************************************************************************
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
Ni++	gl	KNO3	25°C	0.10M	U		K1=8.38	B2=13.85	1972JWa (43078)	2293
Ni++	gl	KNO3	30°C	0.10M	U		K1=7.90 K3=4.16	B2=12.90	1964MTb (43079)	2294

****

C6H5O3Cl HL CAS 7599-81-1 (2689)
5-Hydroxy-2-(chloromethyl)-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	M	I	K1=4.79	1985PRa (43091)	2295

****

C6H5O3I HL CAS 16065-34-2 (2690)
5-Hydroxy-2-(iodomethyl)-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	M	I	K1=4.92	1985PRa (43097)	2296

****

C6H5O4Br L CAS 40838-32-2 (1084)
6-Bromo-5-hydroxy-2-(hydroxymethyl)-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	M	I	K1=4.48	1985PRa (43102)	2297

****

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
Ni++	gl	diox/w	25°C	75%	U		K1=9.22	B2=16.64	1960KFc (43123)	2298

****

C6H5O4I L (1085)
6-Iodo-5-hydroxy-2-hydroxymethyl-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	M	I	K1=4.61	1985PRa (43145)	2299

****

C6H6NBr L (8782)
5-Bromo-2-methylpyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.50M	C		K1=0.01	2002KSb (43188)	2300

```
**************************************************************************
C6H6NCl                 L                       CAS 10445-91-7  (8781)
4-(Chloromethyl)pyridine;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M C        K1=1.84        2002KSb (43204)2301
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C        K1=1.59        1988MSa (43237)2302
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=1.48   B2=2.48   1974WAb (43254)2303
                                          B3=3.04
--------------------------------------------------------------------------
Ni++       oth none    0°C    ?  U        K1=1.74   B2=2.94   1971KAc (43255)2304
Method: freezing point depression
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 1.00M C        K1=4.19   B2=7.62   1989OSa (43279)2305
                                          B3=10.42;   B(NiH-1L2)=2.80
                                          B(NiH-2L2)=-3.68
                                          B(NiH-1L3)=5.58
                                          B(NiH-2L3)=-0.70
B(NiH-3L3)=-8.42
--------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U                      1976GMa (43280)2306
                                          K(NiA2+L)=6.18
In benzene.  A = O,O-diethylphosphorodithioate.
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.30M U    M   K1=9.4    B2=16.50  1966BEa (43281)2307
                                          K3=5.5
Ternary complexes with NTA
--------------------------------------------------------------------------
Ni++       gl  KNO3   24°C 0.10M U        K1=8.1    B2=14.20  1962BEa (43282)2308
                                          K3=5.0
**************************************************************************
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
Ni++	gl	KNO3	25°C	0.50M	U		K1=2.75	B2=5.10	1976WAa	(43310)2309
Ni++	oth	none	0°C	0.00	U		K1=3.11	B2=5.44	1971KAc	(43311)2310
							K3=1.28			

Method: freezing point depression

Ni++	vlt	KNO3	25°C	0.20M	U		K1=1.0	B2=1.90	1971KAc	(43312)2311
							K3=0.7			
							K4=0.5			
							K5=0.3			
							K6=0.2			

****

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
Ni++	gl	KNO3	15°C	0.10M	U		K1=1.54		1990BSa	(43326)2312
Ni++	gl	KNO3	25°C	0.50M	U		K1=1.23	B2=1.91	1981LRa	(43327)2313
							B3=2.05			
Ni++	EMF	NaNO3	25°C	0.50M	U		K1=1.34	B2=1.93	1977BNb	(43328)2314
Ni++	sp	oth/un	25°C	var	U	M			1973FDa	(43329)2315
							K(Ni(Gly)+L)=0.91			
							K(Ni(Gly)2+L)=0.74			
Ni++	oth	none	0°C	?	U		K1=1.49	B2=3.05	1971KAc	(43330)2316

Method: freezing point depression

Ni++	sp	NaNO3	24°C	1.0M	U		K1=3.40		1964MWa	(43331)2317

****

C6H6N2O2 HL Aminonicotinic CAS 5345-47-1 (903)

2-Aminopyridine-3-carboxylic acid; H2N.C5H4N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	35°C	0.15M	U	T H	K1=2.92		1980SKb	(43346)2318

Temperature range is 25-45C. At 35C, DH1=-11.67 kJ mol-1;
DS1=18.83 J mol-1 K-1

Ni++	gl	diox/w	35°C	50%	U		K1=3.42		1980SKb	(43347)2319

****

C6H6N2O2 HL (8281)

3-Hydroxy-2-amidocarboxypyridine, Hydroxypicolinamide;

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=6.59   B2=12.63  1990ARa (43367)2320
                                          K(NiL2+L)=5.52
********************************************************************************
C6H6N2O2               HL                     CAS 31888-72-9  (2051)
Isonicotinoylhydroxamic acid; C5H4N.CO.NH.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.10M U    M   K1=4.69   B2=8.34   1977ASd (43410)2321
                                          K(NiL+bpy)=4.55
                                          K(NiL+Oxine-5-sulph)=3.96
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.10M U    M   K1=4.92   B2=8.77   1977ASd (43434)2322
                                          K(NiL+bpy)=4.79
                                          K(NiL+Oxine-5-sulph.)=4.20
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U        K1=4.10   B2=7.26   1966VMa (43442)2323
Medium: 50% dioxan, 0.1 M NaClO4
********************************************************************************
C6H6N2O3             H2L                    CAS 2504-83-8  (1141)
Imidazolylpyruvic acid; C3H3N2.CH2.CO.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=5.6    B2=9.20   1975SDa (43450)2324
********************************************************************************
C6H6N2O3S            H2L                    CAS 342778-78-3  (8834)
2-(4-Methylthiazol-2-yl)-2-(hydroxyimino)ethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        B2=11.83       2002MSa (43455)2325
                                          B(NiH2L2)=25.45
                                          B(NiHL2)=20.06
********************************************************************************
C6H6N2O4               L    Methyl orotate   CAS 6153-44-2  (2612)
2,4-Dihydroxypyrimidine-6-caboxylic acid methyl ether
```

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaCl   19°C 0.15M U        K1=4.50        1979DZc (43456)2326
********************************************************************************
C6H6N2O4               HL    Methylorotic     CAS 706-36-2  (2611)
3N-Methyl-2,4-dihydroxypyrimidine-6-caboxylic acid, methylorotic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  oth/un 20°C 0.10M C        K1=7.77        1981LGc (43463)2327
Medium: acetate (0.1 M) or phosphate (0.1 M) buffers.
--------------------------------------------------------------------------------
Ni++       gl  NaCl   20°C 0.15M U        K1=7.41        1979DZc (43464)2328
                                          K(Ni+HL)=2.59
********************************************************************************
C6H6N4                  L    Biimidazole      CAS 492-98-8  (1007)
2,2'-Biimidazole; C3H3N2-C3H3N2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C        K1=4.87   B2= 8.86  1998TSa (43479)2329
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.30M C T      K1=3.82        1996DAa (43480)2330
Data for 15-35 C.
********************************************************************************
C6H6N4                  L    9-Methylpurine   CAS 20427-22-9  (2480)
9-Methylpurine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 0.10M C        K1=1.61        1985ALa (43486)2331
Method: distribution of ligand into organic phase (CCl4) determined by LC.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U        K1=1.56        1983ALa (43487)2332
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.18M U   H    K1=1.50   B2=1.76   1983ALb (43488)2333
DH(K1)=-19.5 kJ mol-1
--------------------------------------------------------------------------------
Ni++       kin KNO3   25°C 0.10M U        K1=1.95        1971KKc (43489)2334
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=2.53   B2=5.11   1966OCa (43496)2335
********************************************************************************
C6H6N4S                 L                     CAS 33426-53-8  (3093)
6-Mercapto-9-methylpurine;
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	50%	U		K1=6.76	B2=12.54	1959CFb (43505)	2336

****

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
Ni++	gl	KNO3	30°C	0.10M	U		K1=7.67		1994RSa (43663)	2337
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=8.48	B2=15.08	1989DAa (43664)	2338
							K(NiA+L)=7.75			
							B(NiAL)=16.77			

H2A: 8-hydroxyquinoline-5-sulfonic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	35°C	0.20M	U	M	K1=7.60	B2=13.78	1989RVa (43665)	2339
							K(NiA+L)=7.42			

A=bis(imidazol-2-yl)methane

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	35°C	0.10M	U	M	K1=4.56		1989SRe (43666)	2340
							K(NiL+Cytosine)=4.60			
Ni++	gl	NaClO4	30°C	0.10M	M	TIH	K1=7.59	B2=13.63	1986DNa (43667)	2341

Data for 0.05-0.20 M NaClO4. Extrap. to I=0.0, K1=7.70, B2=14.06.
Data for 30-50 C. DH(K1)=-12.7 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	35°C	0.10M	C				1985RRh (43668)	2342
							K(Ni+HL)=4.57			
Ni++	gl	KNO3	30°C	0.10M	C	T HM	K1=7.39		1983RKa (43669)	2343
							B(NiAL)=7.66			

HA is thiazolidine-4-carboxylic acid. DH(K1)=-26.7 kJ mol-1, DS(K1)=95
J K-1 mol-1; DH(NiAL)=-14.4, DS(NiAL)=102

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C	M			1979KGa (43670)	2344
							B(NiHLA)=25.52			
							B(NiLA)=15.10			

H2A=dopamine.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	U	M			1975JBc (43671)	2345
							K(Ni(bpy)+L)=7.68			
Ni++	gl	NaClO4	30°C	0.20M	U	M			1974MJa (43672)	2346
							K(Ni(His)+L)=6.82			
Ni++	gl	KNO3	25°C	0.10M	U		K1=8.93	B2=14.49	1972JWa (43673)	2347
Ni++	gl	NaClO4	25°C	0.10M	U		K1=8.89	B2=15.04	1971GSb (43674)	2348

```
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U        K1=7.65   B2=13.24  1971PBb (43675)2349
--------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.10M U        K1=9.34        1968OOa (43676)2350
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  1.0M U    M                  1968TMa (43677)2351
                                        K(Ni+H2L=NiL+2H)=-13.511
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U        K1=8.36   B2=13.51  1966APb (43678)2352
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=8.74   B2=13.84  1966JNa (43679)2353
********************************************************************************
C6H6O2S                HL                          (3683)
2-Acetyl-3-hydroxythiophene; C4H2S(CO.CH3)OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U    M   K1=5.44        1967SIb (43903)2354
                                        K(Ni(bpy)+L)=5.39
Medium: 50% dioxan, 0.1 M NaClO4
--------------------------------------------------------------------------------
Ni++       sp  diox/w 25°C  10%  U        K1=4.38        1966PSb (43904)2355
Medium: 10% dioxan, 0.1 M NaClO4. By glass electrode, K1=4.34
********************************************************************************
C6H6O2S                HL                       CAS 36448-58-5  (3684)
3-Acetyl-4-hydroxythiophene; C4H2S(CO.CH3)OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  diox/w 25°C  10%  U        K1=3.2         1966PSb (43915)2356
Medium: 10% dioxan, 0.1 M NaClO4
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M M TIH                   1986DNa (43939)2357
                                        K(Ni+HL)=7.40
                                        K(Ni+2HL)=12.75
Data for 0.05-0.20 M NaClO4. Extrap. to I=0.0, K(Ni+HL)=8.03,
K(Ni+2HL)=13.45. Data for 30-50 C. DH(Ni+HL)=-11.6 kJ mol-1.
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U    M                  1975JBc (43940)2358
                                        K(Ni(bpy)+L)=6.75
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U        K1=5.69        1974MJa (43941)2359
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U                       1971PBb (43942)2360
                                        K(Ni+HL)=7.25
```

****
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
---
Ni++ sp none 25°C 0.0 C 1983EEa (44010)2361
K(Ni+H2L)=6.67
Medium pH 7.1. 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
---
Ni++ gl KCl 25°C 0.10M M I K1=5.60 1985PRa (44060)2362

Ni++ gl NaClO4 25°C 2.00M U H K1=5.41 B2=9.64 1978GHa (44061)2363
K3=2.52
DH(K1)=-14.11 kJ mol-1, DH(K2)=-16.51, DH(K3)=-18.83

Ni++ gl NaClO4 20°C 2.0M U K1=5.48 B2= 9.80 1975MRc (44062)2364
B3=12.50

Ni++ gl diox/w 30°C 50% U K1=7.95 B2=13.78 1957CWa (44063)2365
****
C6H6O3 HL Allomaltol CAS 644-46-2 (2688)
5-Hydroxy-2-methyl-4H-pyran-4-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.10M M I K1=5.26 1985PRa (44123)2366
****
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
---
Ni++ gl diox/w 25°C 40% C K1=4.62 B2= 8.17 1990SHb (44162)2367
Medium: 40% v/v dioxane/H2O, 0.03 M KCl.

Ni++ gl KCl 25°C 0.10M M I K1=5.01 1985PRa (44163)2368

Ni++ gl NaClO4 25°C 2.00M U H K1=4.86 B2=8.81 1978GHa (44164)2369
K3=2.81
DH(K1)=-9.62 kJ mol-1, DH(K2)=-10.52, DH(K3)=-16.76

Ni++ gl NaClO4 25°C 2.00M C T H K1=4.86 B2=8.81 1975GHa (44165)2370
B3=11.62
DH(K1)=-10.0 kJ mol-1; DS(K1)=59.8 J K-1 mol-1; DH(K2)=-9.6; DS(K2)=43.0;

DH(K3)=-17.1; DS(K3)=-4.2. 20 C, K1=4.91, B2=8.90, B3=11.17; 40 C, K1=4.79

Ni++ gl diox/w 30°C 75v% U K1=9.72 B2=17.29 1960KFc (44166)2371

Ni++ EMF KCl 21°C 0.10M U K1=4.9 B2=8.7 1959OKb (44167)2372

Method: H electrode

Ni++ gl diox/w 30°C 50% U K1=7.44 B2=20.32 1957CWa (44168)2373

Ni++ gl diox/w 30°C 50% U K1=7.1 B2=12.6 1954BFa (44169)2374

****

C6H6O5S H2L (8129)

2,3-Dihydroxybenzenesulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=8.25	B2=14.35	1989DAa	(44269)2375
							K(NiA+L)=7.22			
							B(NiAL)=16.24			

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
Ni++	gl	KNO3	30°C	0.10M	U		K1=8.85	B2=14.41	1963MNc	(44275)2376
							K3=4.73			

****

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
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=7.87	B2=13.45	1989DAa	(44369)2377
							K(NiA+L)=6.38			
							B(NiAL)=15.40			

H2A: 8-hydroxyquinoline-5-sulfonic acid.

Ni++ gl NaClO4 30°C 0.05M U TIH K1=9.82 B2=17.27 1986NDa (44370)2378

I=0.1, 40 C: K1= 9.19, B2=16.50; 50 C: K1= 9.13, B2=16.35

I=0.1, 30 C:K1= 9.66, B2=17.00; I=0.2, 30 C:K1= 8.00, B2=16.23

Ni++	gl	KNO3	25°C	0.10M	C	M	K1=9.76	B2=16.73	1983OZa	(44371)2379
							B(NiH-1L2)=5.23			
							B(NiL(bpy))=18.89			
							K(NiH-1L(bpy))=7.08			

Ni++ sp oth/un 25°C 0.10M U K1=9.40 1968OOa (44372)2380

```
Ni++       gl  KCl    20°C 0.10M U        K1=9.96        1964PCa (44373)2381
                                          K(Ni+HL)=3.00
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  1.0M U        K1=8.56   B2=14.90  1960NAf (44374)2382
                                          K(NiL+H)=5.3
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  0.0  U        K1=11.24       1959NAa (44375)2383
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C        K1=4.40        1984MMg (44530)2384
                                          K(NiL+H)=3.37
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       sp  non-aq  0°C 100%  U        K1=4.82   B2=9.19   1981KSb (44544)2385
                                          K3=3.94
                                          K4=4.08
*******************************************************************************
C6H7N                   L    Picoline         CAS 109-06-8  (320)
2-Methylpyridine; C5H4N.CH3
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M C        K1=0.20        2002KSb (44566)2386
-------------------------------------------------------------------------------
Ni++       cal non-aq 25°C 100%  C   H    K1=0.76        2000KKb (44567)2387
Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-34.2 kJ mol-1, DS=-100 J K-1 mol-1.
-------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U    M                  1992NDa (44568)2388
                                          K(Ni2A(S)4+2L=Ni2AL2+4S)=-0.52
Medium(S): methanol. A is 3,7,15,19-tetraaza-11,23-dimethyltricyclo[19.3.1.1
(9,13)]hexacosa-1(25),9,11,13(26),21,23-hexaene-25,26-diol.
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U T H                  1984RCa (44569)2389
                                          K(NiA(Cl)+L=NiAL+Cl)=1.67
Medium: DMSO. A=methyl-2-(B-aminoisopropylamino)cyclopent-1-enedithiocarboxy
late
-------------------------------------------------------------------------------
Ni++       cal non-aq 30°C 100%  U   H    K1=1.1         1978AGa (44570)2390
In chlorobenzene. DH(K1)=-34 kJ mol-1. Ni=bis(diphenyldithiophosphinato)-
nickel(II).
-------------------------------------------------------------------------------
Ni++       sp  non-aq  9°C 100%  U T  M                  1976CUa (44571)2391
```

```
                                        K(NiA+2L)=1.48
Medium: chlorobenzene. H2A=biacetyl-bis-a-hydroxybenzylidenehydrazone
K=1.34(12 C); 1.15(17 C); 1.00(21 C)
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=0.35        1972TPc (44572)2392
--------------------------------------------------------------------------------
Ni++       dis non-aq 20°C 100%  U    M                  1971ADa (44573)2393
                                        K(NiA2+2L)=4.44
Medium: CHCl3. HA=thenoyltrifluoroacetone
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.20M U        K1=2.91   B2=5.34   1971SBb (44574)2394
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=<1          1964KSb (44575)2395
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M C        K1=2.00        2002KSb (44641)2396
--------------------------------------------------------------------------------
Ni++       cal non-aq 25°C 100%  C   H    K1=4.15   B2= 7.51  2000KKb (44642)2397
                                        2.43
                                        1.67
Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-36.8 kJ mol-1, DS=-44 J K-1 mol-1;
DH(K2)=-32.6, DS=-45; DH(K3)=-30, DS=-55; DH(K4)=-24, DS=-49.
--------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U    M                  1992NDa (44643)2398
                                        K(Ni2A(S)4+2L=Ni2AL2+4S)=1.19
Medium(S): methanol. A is 3,7,15,19-tetraaza-11,23-dimethyltricyclo[19.3.1.1
(9,13)]hexacosa-1(25),9,11,13(26),21,23-hexaene-25,26-diol.
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U   HM                 1984CGa (44644)2399
                                        K(NiA2+L)=0.24
                                        K(NiA2+2L)=0.93
In 1,2-Dichloroethane, HA=N,N-diethyl-N'-benzoylthiourea
When HA=piperidyl-N'-benzoylthiourea, K values are 0.36, 1.39
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U   HM                 1984ISa (44645)2400
                                        K(NiA2+2L)=0.127
In benzene, HA=S-methyl-N-(4-methoxyphenylidene)hydrazine-carbodithioic acid
Data also for other related HA ligands
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U T H                 1984RCa (44646)2401
                                        K(NiA(Cl)+L=NiAL+Cl)=1.76
                                        K(NiA(Br)+L=NiAL+Br)=2.73
Medium: DMSO. A=methyl-2-(B-aminoisopropylamino)cyclopent-1-enedithiocarboxy
late
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=2.07   B2=3.45   1978LRb (44647)2402
```

B3=4.32
B4=4.65

Ni++ sp non-aq 14°C 100% U T M 1976CUb (44648)2403
K(NiA+2L)=4.07
Medium: chlorobenzene. H2A=biacetyl-bis-a-hydroxybenzylidenehydrazone
K=3.75(22 C); 3.52(28 C); 3.34(33 C)

Ni++ gl none 25°C 0.0 U T H K1=1.92 1974VSa (44649)2404

Ni++ gl KNO3 25°C 0.10M U K1=1.89 1972TPc (44650)2405

Ni++ gl NaClO4 35°C 0.20M U K1=2.82 B2=5.19 1971SBb (44651)2406

Ni++ gl oth/un 25°C 0.61M U K1=1.97 B2=3.21 1967SBd (44652)2407
B3=3.9

Ni++ con oth/un 25°C ? U 1966GJb (44653)2408
B4=4.03

Ni++ sp non-aq 20°C 100% U HM 1965NSb (44654)2409
K(NiL2I2+2L)=3.98
Medium: CHCl3. By calorimetry: DH(K1)=-90.7 kJ mol-1,DS=-234 J K-1 mol-1

Ni++ gl NaClO4 25°C 0.10M U K1=1.85 1964KSb (44655)2410
****
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
---
Ni++ cal non-aq 25°C 100% C H K1=4.81 B2= 8.71 2000KKb (44745)2411
2.78
1.98
Medium: MeCN, 0.10 M Et4NClO4. DH(K1)=-37.0 kJ mol-1, DS=-32 J K-1 mol-1;
DH(K2)=-32.6, DS=-35; DH(K3)=-31, DS=-51; DH(K4)=-30, DS=-62.

Ni++ sp alc/w 25°C 100% U M 1992NDa (44746)2412
K(Ni2A(S)4+2L=Ni2AL2+4S)=1.29
Medium(S): methanol. A is 3,7,15,19-tetraaza-11,23-dimethyltricyclo[19.3.1.1
(9,13)]hexacosa-1(25),9,11,13(26),21,23-hexaene-25,26-diol.

Ni++ sp non-aq 25°C 100% U HM 1984CGa (44747)2413
K(NiA2+L)=0.62
K(NiA2+2L)=1.34
In 1,2-Dichloroethane, HA=N,N-diethyl-N'-benzoylthiourea
When HA=piperidyl-N-benzoylthiourea, K values are 0.80, 1.32

Ni++ sp non-aq 25°C 100% U HM 1984ISa (44748)2414
K(NiACl+2L)=2.85

K(NiABr+2L)=2.56
K(NiAI+2L)=2.23
K(NiA(NCS)+2L)=3.38
In benzene, HA=S-methyl-N-(2-pyridyl)methylenehydrazine-carbodithioic acid
Data also for other related HA ligands

Ni++ sp non-aq 25°C 100% U T H 1984RCa (44749)2415
K(NiA(Br)+L=NiAL+Br)=2.90
K(NiA(Cl)+L=NiAL+Cl)=1.91
Medium: DMSO. A=methyl-2-(B-aminoisopropylamino)cyclopent-1-enedithiocarboxy
late

Ni++ sp non-aq 25°C 100% U I M 1982HYa (44750)2416
K(NiA2+L)=1.80
Medium: CCl4. HA=diphenylthiocarbazone. Data also in other media
---
Ni++ cal non-aq 30°C 100% U H K1=3.00 B2=4.70 1978AGa (44751)2417
In chlorobenzene. DH(K1)=-35 kJ mol-1; DH(B2)=-76. Ni=bis(diphenyldithio-
phosphinato)nickel(II).

Ni++ sp non-aq 19°C 100% U 1978GSa (44752)2418
K(NiA2+L)=1.54
K(NiA2L+L)=0.84
Medium: C2H4Cl2. HA=dithizone. By calorimetry DH(NiA2+L)=-26 kJ mol-1;
DH(NiA2L+L)=+7

Ni++ sp non-aq 12°C 100% U T M 1976CUb (44753)2419
K(NiA+2L)=4.83
Medium: chlorobenzene. HA=biacetyl-bis-a-hydroxybenzylidenehydrazone
K=4.59(17 C); 4.31(31 C); 4.00(30 C)

Ni++ cal non-aq 30°C 100% U H 1976GSb (44754)2420
K(NiA2+L)=0.80
In CH3CN. A2 = BF2-bridged methylethylglyoxime. DH=-25.0 kJ mol-1; DS=-67
Also data for methylpropyl-, diphenyl- and phenyl-glyoximes and nioxime.

Ni++ cal non-aq 30°C 100% U H 1974GPa (44755)2421
K(NiA2+2L)=3.21
In benzene. A=O-isopropylxanthate. DH = -70.6 kJ mol-1, DS = -171

Ni++ gl none 25°C 0.0 U T H K1=2.08 1974VSa (44756)2422

Ni++ ISE alc/w 25°C 50% U I K1=1.89 B2=3.23 1973NBa (44757)2423
B3=4.08
Medium: 0-96% EtOH, 0.5 M LiNO3
K1(0%)=2.07,K1(96%)=2.19,B2(0%)=3.59,B2(96%)=3.67,B3(0%)=4.34,B4(0%)=4.70

Ni++ ISE mixed 25°C 50% U I K1=1.75 B2=2.79 1973NBa (44758)2424
B3=3.70
B4=3.84

Medium: 50-90% propanol, 0/5 M LiNO3
K1(75%)=1.75,K1(90%)=2.01,B2(75%)=2.84,B2(90%)=3.34,B3(75%)=3.26

Ni++ ISE mixed 25°C 50% U I K1=1.93 B2=3.24 1973NBa (44759)2425
B3=4.07
B4=4.44

Medium: 50-90% acetone, 0.5 M LiNO3
K1(75%)=2.08,K1(90%)=2.42,B2(75%)=3.54,B2(90%)=4.15,B3(75%)=4.20

Ni++ gl KNO3 25°C 0.10M U K1=2.11 1972TPc (44760)2426

Ni++ dis non-aq 20°C 100% U M 1971ADa (44761)2427
K(NiA2+2L)=5.70

Medium: CHCl3. HA=thenoyltrifluoroacetone

Ni++ ISE oth/un 25°C 0.10M U K1=2.25 B2=4.60 1971HBa (44762)2428
B3=5.44

Range of ionic strength 0.1-0.3

Ni++ gl NaClO4 35°C 0.20M U K1=3.10 B2=5.61 1971SBb (44763)2429

Ni++ gl KNO3 25°C 1.00M U K1=2.15 B2=3.83 1969LWc (44764)2430
B3=4.81

Ni++ sp non-aq 21°C 100% U M 1968GMa (44765)2431
K(NiA2+L)=1.67
K(NiB2+L)=0.98
K(NiC2+L)=0.81
K(NiA2L+L)=0.08

Medium:toluene. HA=2-hydroxy-5-methylbenzophenone, HB=2-hydroxypropiophenone
HC=ethyl-2-hydroxybenzoate. K(NiB2L+L)=-0.38, K(NiC2L+L)=-0.85 plus others

---

Ni++ gl KNO3 25°C 0.61M U K1=2.09 B2=3.51 1967SBd (44766)2432
B3=4.3

Ni++ gl diox/w 25°C 50% U M K1=2.03 1967SIb (44767)2433
K(Ni(bpy)+L)=1.83

Medium: 50% dioxan, 0.1 M NaClO4

Ni++ con oth/un 25°C ? U 1966GJb (44768)2434
B4=4.03

Ni++ gl NaClO4 25°C 0.10M U K1=2.11 1964KSb (44769)2435

****

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

---

Ni++ gl diox/w 30°C 50% U M 1990DSc (44912)2436

```
                                        B(NiL(NTA))=4.38
                                        B(NiL(IMDA))=4.75
------------------------------------------------------------------------------
Ni++       dis alc/w  30°C  20%  U                      1989SBa (44913)2437
                                        Keff=4.67
At pH 7.24 using HPLC and 20% methanol-water-ammonium acetate mobile phase
------------------------------------------------------------------------------
Ni++       gl  none   20°C  0.0  U        K1=5.4         1959SIb (44914)2438
------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=6.10   B2=10.97  1952FCa (44915)2439
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.16M U        K1=2.90   B2=5.26   1967SBd (44957)2440
                                        B3=7.04
                                        B4=7.1
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U  I     K1=2.79   B2=5.39   1965MTa (44958)2441
------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.01M U        K1=9.0         1955LFa (44959)2442
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=1.86   B2=3.12   1981LRa (44978)2443
                                        B3=3.80
                                        B4=3.90
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.61M U        K1=1.85   B2=2.99   1967SBd (44979)2444
******************************************************************************
C6H7NO                  L                      CAS 586-95-8  (1476)
4-(Hydroxymethyl)pyridine; C5H4N.CH2OH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=2.00   B2=3.39   1987KLb (45001)2445
                                        B3=4.17
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.61M U        K1=1.97   B2=3.02   1967SBd (45002)2446
******************************************************************************
C6H7NO2                HL                       (4362)
3-Cyanoacetylacetone; CH3.CO.CH(CN).CO.CH3
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
```

Ni++ gl diox/w 25°C 75% U I K1=3.97 B2=7.52 1968CSa (45032)2447
K3=3.10
Medium: 75% dioxan, 0.08 M KCl
I=0.04: K1=4.09, K2=3.63, K3=3.12; I=0.15: K1=3.87, K2=3.47, K3=3.06
****
C6H7NO3S HL CAS 88-21-1 (7102)
2-Aminobenzenesulfonic acid, Aniline-2-sulfonic acid; H2N.C6H4.SO3H

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sol oth/un 25°C 0.1M C 1983KPc (45059)2448
Kout(Ni(phen)3+L)= 1.35
Kout(Ni(phen)3+2L)=2.21
Medium:NaF; for I=0.25 M K1out=1.31, B2out=2.14; B3out=2.49;
for I=0.75 K1out=1.20, B2out=1.91, B3out=2.15; phen=phenantroline
---
Ni++ sol oth/un 25°C 0.1M C 1983KPd (45060)2449
Kout(Ni(bipy)3+L)= 1.04
Kout(Ni(bipy)3+2L)1.59
Medium:NaF; for I=0.25 M K1out=1.06, B2out=1.62; B3out=1.76;
for I=0.75 K1out=1.01, B2out=1.49, B3out=1.64;
****
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
---
Ni++ gl NaClO4 25°C 0.10M U K1=5.13 B2=8.68 1964BGa (45074)2450
****
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
---
Ni++ gl NaClO4 25°C 0.10M U K1=7.67 B2=14.39 1964BGa (45079)2451
****
C6H7N3O HL CAS 71933-05-6 (5375)
Pyridine-2-carboxamide oxime;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaCl 25°C 0.10M C 1996OSa (45094)2452
K(Ni+HL)=4.93
K(NiHL+HL)=4.59
K(NiH2L2+HL)=4.40
K(Ni+2HL=NiHL2+H)=1.76
K(Ni+2HL=NiL2+2H)=6.84, K(Ni+3HL=NiH2L3+H)=5.69, K(Ni+3HL=NiHL3+2H)=-3.99,
K(Ni+3HL=NiL3+3H)=-14.89.
****
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
Ni++	gl	oth/un	20°C	0.01M	U		K1=10.7	B2=20.2	1956ARd (45097)	2453

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
Ni++	gl	oth/un	20°C	0.01M	U		K1=6.0	B2=10.7	1956ARd (45104)	2454

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
Ni++	sp	mixed	25°C		C	I	K1=3.96	B2= 5.91	2000BSc (45118)	2455
							K(Ni+HL)=2.31			

In 0.68 mol parts DMSO in H2O; Also data for 0.06; 0.1 and 0.2 mol parts
Also for 100%H2O K1=2.68; B2=5.22; K(Ni+HL)=1.54;K(Ni+L+HL)=4.75

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	20°C	0.01M	U		K1=5.5	B2=9.8	1956ARd (45119)	2456

C6H7N3O2I2 HL (7181)

2,5-Diiodo-histidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.50M	C		K1=4.99		1994WCa (45136)	2457
							B(NiH-1L)=-1.09			
							B(NiH-1L2)=3.14			
							B(NiH-2L2)=-4.7			
							B(Nih-3L2)=-15.83			

C6H7N3O4 H2L CAS 54784-33-7 (6082)

1,3-Dimethyl-5-nitroso-barbituric acid; 1,3-Dimethylvioluric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.50M	C		K1=3.76	B2= 7.12	1984HNb (45146)	2458
Ni++	gl	NaNO3	25°C	0.50M	C		K1=3.76	B2=7.11	1977VNa (45147)	2459

C6H7N5 L CAS 5752-48-9 (5785)

2-Amino-9-methylpurine;

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

Ni++ dis NaClO4 25°C 1.00M U K1=1.45 1985AOa (45156)2460
****
C6H7N5 L CAS 84602-80-2 (5789)
8-Amino-9-methylpurine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ dis NaClO4 25°C 1.00M U K1=1.6 1985AOa (45164)2461
****
C6H7N5 HL 9-Methyladenine CAS 700-00-5 (4347)
9-Methyl-6-aminopurine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ dis NaClO4 25°C 1.00M U K1=0.7 1985AOa (45171)2462
****
C6H7N5O HL 9-Methylguanine CAS 5502-78-3 (6661)
9-Methyl-2-amino-6-hydroxypurine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.10M M K1=3.46 1999SSb (45175)2463
K(Ni+HL)=1.81
*K(NiHL)=-7.91
****
C6H7O4P H2L CAS 701-64-4 (5866)
Phenyl phosphoric acid; C6H5O.PO(OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.10M C K1=1.91 1988MSa (45222)2464
****
C6H8NO4P H2L (3713)
2-Pyridylmethanephosphoric acid (1'-picolyl phosphate)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M U K1=2.85 1968MTd (45243)2465
****
C6H8N2 L CAS 95-54-5 (2899)
1,2-Diaminobenzene, 1,2-Phenylenediamine; C6H4(NH2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 20°C 0.10M C T H K1=3.21 1980OMa (45266)2466
DH(K1)=-89.0 kJ mol-1; DS=-250 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
-------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M C T H    K1=3.25        1980OMa (45274)2467
DH(K1)=-83.1 kJ mol-1; DS=-220 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
-------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M C T H    K1=3.33        1980OMa (45278)2468
DH(K1)=-38.2 kJ mol-1; DS=-66.1 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
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M C        K1=3.00   B2= 5.50  2000KGc (45282)2469
                                          B3=7.50
                                          B4=9.20
                                          B5=10.20
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       cal NaCl   25°C 0.15M C   H    K1=7.128  B2=13.359 1987ENa (45317)2470
                                          B3=18.345
DH(K1)=-41.3 kJ mol-1, DS=-2 J K-1 mol-1; DH(B2)=-82.2, DS=-20;
DH(B3)=-112.4, DS=-50
-------------------------------------------------------------------------
Ni++       EMF NaNO3  20°C 0.10M U        K1=7.24   B2=13.59  1971ANa (45318)2471
                                          K3=5.31
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=7.11   B2=13.52  1971GEa (45319)2472
                                          K3=5.14
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.30M C   H    K1=7.17   B2=13.13  1967HWa (45320)2473
                                          K3=4.42
By calorimetry DH(K1)=-36.9 kJ mol-1, DH(K2)=-35.7, DH(K3)=35.7
-------------------------------------------------------------------------
Ni++       vlt diox/w 25°C  50%  U   H    B2=13.15       1966WRb (45321)2474
Medium: 50% dioxan, 0.1 M KNO3. By calorimetry, DH(B2)=-85.7 kJ mol-1,
DS=-35.9 J K-1 mol-1
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=7.1         1964LMb (45322)2475
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=7.1         1964LMb (45323)2476
```

```
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C .015M U        K1=7.3    B2=13.6   1960HJa (45324)2477
                                          B3=19.4
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C  ->0  U T H    K1=7.32   B2=13.64  1959GFa (45325)2478
                                          K3=5.07
DH(K1)=-34.9 kJ mol-1,DS=21; DH(K2)=-38.7,DS=-13; DH(K3)=-35.3,DS=-25
10 C: K1=7.49,K2=6.56,K3=5.31; 30 C:7.09,6.08,4.95; 40 C:6.86,5.87,4.66
********************************************************************************
C6H8N2                  L                      CAS 2851-95-8  (4349)
2-Methyl-1-vinylimidazole;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M C        K1=1.68   B2= 2.91  2000KGa (45371)2479
********************************************************************************
C6H8N2O2                HL                     CAS 1074-59-5  (3099)
3-(4-Imidazolyl)propanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M U        K1=3.32        1963CCb (45391)2480
********************************************************************************
C6H8N2O3S               HL                     CAS 20349-92-2  (4399)
d-Tetranorbiotin;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  oth/un 26°C 0.01M U        K1=3.03   B2=6.02   1970GWa (45403)2481
********************************************************************************
C6H8N2O4               H2L                      (3100)
Cyanomethyliminodiethanoic acid; NC.CH2.N(CH2.COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=6.2    B2=11.2   1955SAa (45410)2482
********************************************************************************
C6H8N2O6               H2L                      (6576)
Oxamide-N,N'-diethanoic acid; HOOC.CH2.NH.CO.CO.NH.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C                      1992LSb (45422)2483
                                          K(Ni+H2L)=1.93
                                          K(2Ni+H2L=Ni2L+2H)=-11.09
                                          B(Ni2L)=13.1
********************************************************************************
C6H8N2S                 HL                     CAS 22325-27-5  (8521)
4,6-Dimethyl-2-mercaptopyrimidine;
--------------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M   K1=5.14        1996RRa (45424)2484
                                          B(NiAL)=8.69
                                          B(NiBL)=7.87
                                          B(Ni(bpy)L)=11.15
                                          B(Ni(phen)L)=12.04
B(Ni(en)L)=10.11. 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
-------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M C        K1=7.12   B2=13.09  1994WCa (45429)2485
                                          B(NiH-1L2)=3.33
                                          B(NiH-2L2)=-7.2
*************************************************************************
C6H8N4B-                L                         (7237)
Bis(pyrazol-1-yl)borate; (C3H3N2)2BH2-
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       dis non-aq 25°C 100%  U                        1996KSa (45435)2486
                                          K(Ni+2HL=NiL2(org)+2H)=-0.46
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
-------------------------------------------------------------------------
Ni++       gl  alc/w  30°C   5%  U    M                   1995RRb (45447)2487
                                          K(NiA+L)=5.91
                                          B(NiAL)=12.19
Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. H2A is thioglycolic acid.
-------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U   HM   K1=3.82   B2= 7.26  1994RSa (45448)2488
                                          B(Ni(ala)L)=8.95
                                          B(Ni(val)L)=8.91
                                          B(Ni(en)L)=10.99
                                          B(Ni(bpy)L)=10.61
DH(K1)=-15.8 kJ mol-1, DS(K1)=21.1 J K-1 mol-1. B(NiAL)=8.51, B(NiBL)=
11.01, K(Ni(bpy)+L)=3.48, K(NiA+L)=3.23. H2A=oxalic acid, H2B=catechol.
*************************************************************************
C6H8O2                  L                       CAS 765-87-7  (4348)
Cyclohexane-1,2-dione; C6H8(:O)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
```

```
Ni++       sp  oth/un 20°C 1.00M U        K1=11.94  B2=22.68  1969AIc (45454)2489
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=2.46        1975IPa (45459)2490
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.34   B2=3.34   1969PJb (45496)2491
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=2.20        1966OCb (45497)2492
**************************************************************************
C6H8O4Se              H2L                         (3691)
cis-Tetrahydroselenophene-2,5-dicarboxylic acid; C4H6Se(COOH)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=3.0    B2=5.90   1968SNa (45525)2493
**************************************************************************
C6H8O6                H3L    Tricarballylic   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
--------------------------------------------------------------------------
Ni++       gl  NaClO4 20°C 0.10M U        K1=2.65        1964COb (45550)2494
                                         K(Ni+HL)=1.66
                                         K(Ni+H2L)=1.07
--------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.15M U        K1=2.70        1964PCa (45551)2495
                                         K(Ni+HL)=1.56
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M C    M                   1984BPc (45604)2496
                                            K(Ni(phen)+L)=5.20
                                            K(Ni(bpy)+L)=5.95
                                            K(Ni(en)+L)=5.35
                                            K(Ni(baea)+L)=6.08
K(Ni(dipropylenetriamine)+L) = 4.70; baea=bis(aminoethyl)amine
--------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 2.00M C                       1981BHa (45605)2497
```

```
                                        K(Ni+HL)=0.18
                                        K(Ni+HL=NiL+H)=-5.72
------------------------------------------------------------------------------
Ni++       EMF NaClO4 20°C 1.00M U       K1=4.01   B2=5.52   1981MOc (45606)2498
Ascorbic acid treated as HL. Antimony electrode used
------------------------------------------------------------------------------
Ni++       gl  mixed  25°C  80%  U                          1980KKd (45607)2499
                                        K(Co+HL)=1.9
Medium: 80% DMF
******************************************************************************
C6H8O6S               H3L                     CAS 99-68-3  (3692)
(Carboxymethylthio)butanedioic acid; HOOC.CH(S.CH2.COOH).CH2.COOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U       K1=4.32        1977CAd (45678)2500
                                        K(Ni+HL)=2.99
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.05M M       K1=4.15        1975DPb (45679)2501
******************************************************************************
C6H8O7                H3L    Citric acid      CAS 77-92-9  (95)
2-Hydroxypropane-1,2,3-tricarboxylic acid; HOOCCH2.CH(OH)(COOH).CH2COOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       dis NaCl   25°C 0.30M C  I                     2000BCc (45881)2502
                                        K1eff=4.91
Medium: 0.3 M NaCl, pH=6.0. Also data for 1.0-5.0 M NaCl.
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M   K1=4.536       1993AHa (45882)2503
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.25M C T H    K1=5.46   B2= 8.52  1984DOa (45883)2504
                                        B(NiHL)=9.38
                                        B(NiHL2)=13.90
                                        B(Ni2H-2L2)=-4.35
Data for 10-45 C. DH(K1)=15.5 kJ mol-1, DS=160, DH(B2)=14.3, DS=210,
DH(NiHL)=11.8, DS=218, DH(NiHL2)=30.2, DS=370, DH(Ni2H-2L2)=101, DS=256.
------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C       K1=5.51   B2=7.84   1980HLa (45884)2505
                                        K(Ni+HL)=3.36
                                        K(Ni+H2L)=1.54
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C       K2=2.85        1980SWa (45885)2506
                                        B(NiHL)=8.75
                                        K(4NiL=Ni4H-4L3+4H)=-28.3
K for tetramer from spectrophotometry.
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M                 1978DAa (45886)2507
                                        B(NiL(gly))=9.93
                                        B(NiL(malonate))=6.5
```

Ni++ gl KNO3 25°C 0.10M U M K1=5.30 1978DOa (45887)2508
B(NiHL)=8.84
B(NiL(bpy))=12.36

Ni++ gl KNO3 25°C 0.10M C M K1=5.30 1976DOd (45888)2509
B(NiHL)=8.84
B(NiH-2L2)=-4.71
B(NiHL(His))=17.33; B(NiL(His))=12.70; B(NiHL(histamine))=17.54;
B(NiL(histamine))=11.81

Ni++ gl KNO3 25°C 0.10M C K1=5.40 1975FCc (45889)2510
B(NiHL)=9.04

Ni++ ix NaNO3 ? 0.50M U K1=4.25 1972KCb (45890)2511
K(Ni+HL)=2.90
K(Ni+H2L)=1.55

Ni++ oth KNO3 ? 0.70M U 1970BBe (45891)2512
K(Ni+H3L=NiH2L+H)=-1.4
K(NiH2L=NiH-1L+3H)=-12.9
Method: zone electrophoresis

Ni++ sol oth/un 35°C ? U 1965PPb (45892)2513
K(NiH-1L+H)=7.9

Ni++ gl NaClO4 20°C 0.10M U K1=5.40 1964COb (45893)2514
K(Ni+HL)=3.30
K(Ni+H2L)=1.75

Ni++ gl oth/un 25°C 0.15M U K1=5.11 1959LLa (45894)2515
K(Ni+HL)=3.19

Ni++ ix oth/un 25°C ? U K1=4.47 1958HFa (45895)2516
K(Ni+H-1L)=11.22

Ni++ gl KNO3 25°C 2.0M U K1=4.99 1958MSb (45896)2517
K(Ni+H-1L)=5.27

Ni++ gl KNO3 32°C 0.25M U 1957PPa (45897)2518
K(Ni+H3L=NiHL+2H)=-4.1
K(NiL+H)=3.7
K(NiH-1L+H)=7.9

Ni++ gl oth/un 33°C .025M U K1=5.10 1957PPb (45898)2519
K(Ni+HL)=3.37
K(NiH-2L+H)=7.87

****

C6H8O7P2 H3L CAS 101378-64-7 (7666)
Phenyldiphosphoric acid;

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M        K1=3.51        1999SSa (46339)2520
********************************************************************************
C6H9NO6               H3L                    CAS 41035-84-1  (4367)
N-Carboxymethyl-L-aspartic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  1.0M U        K1=9.02   B2=13.48  2004GKc (46369)2521
                                        B(NiHL)=13.71
                                        K(Ni(OH)+L)=10.47
For 0.5 mol/L KNO3 K1=9.37; B2=13.81; B(NiHL)=13.84; K(Ni(OH)+L)=10.67
For 0.1 mol/L KNO3 K1=10.25; B2=15.20; B(NiHL)=14.26; K(Ni(OH)+L)=10.96
********************************************************************************
C6H9NO6               H3L    NTA             CAS 139-13-9  (191)
Nitrilotriethanoic acid; N(CH2.COOH)3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M        K1=10.61       1996KSc (46520)2522
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  1.0M C T  M                  1994CBa (46521)2523
                                        K(NiL+H)=2.40
                                        K(NiL+bpy)=2.75
                                        K(NiL+phen)=3.016
Data for 20-35 C.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=11.50       1990DAb (46522)2524
                                        K(NiL+A)=4.50
                                        B(NiLA)=16.00
H2A: salicylaldoxime
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=11.50       1990DAc (46523)2525
                                        K(NiL+A)=3.75
                                        B(NiAL)=15.25
HL: benzohydroxamic acid
--------------------------------------------------------------------------------
Ni++       oth NaClO4 35°C 0.10M C    M   K1=11.42       1986SRb (46524)2526
Exp. method: paper electrophoresis.   Data also for NTA ternary complexes
--------------------------------------------------------------------------------
Ni++       oth NaClO4 35°C 0.10M C        K1=11.42       1986SYa (46525)2527
Method: paper electrophoresis. Medium pH 8.5.
--------------------------------------------------------------------------------
Ni++       dis NaClO4 35°C 0.10M U    M   K1=11.42       1985SRa (46526)2528
                                        K=(Ni(NTA)+Leu)=5.34
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=11.50       1983FSa (46527)2529
--------------------------------------------------------------------------------
```

```
Ni++       gl  KNO3   20°C 0.10M C      R K1=11.54  B2=16.42  1982ANa (46528)2530
Evaluation of literature data
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M                   1981BKb (46529)2531
                                        K(NiL+py)=2.18
                                        K(NiL+A)=3.02
                                        K(NiL+NH3)=2.54
                                        K(NiL+CH3COO)=0.37
A=1,3-diazole. K(NiL+HB)=<0.4, H3B=H3PO4
K(NiL+NH3)=2.54 in 0.5M NaClO4, by spectrophotometry.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T  M                   1981SVa (46530)2532
                                        K(NiL+Gly)=4.50
At 20 C: K(NiL+Gly)=4.57; 30 C: 4.42; 40 C: 4.25
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M                   1980MCc (46531)2533
                                        B(NiL(bpy))=12.0
                                        K(NiL(bpy)+en)=2.5
                                        K(NiL(bpy)+pn)=2.7
                                        B(NiL(phen))=12.4
K(NiL(phen)+en)=2.5, K(NiL(phen)+pn)=3.1.  pn=1,2-diaminopropane
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  2.5M M        K1=11.44       1979FLc (46532)2534
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M   K1=11.54       1979KNa (46533)2535
                                        K(NiL+CN)=4.72
                                        K(NiLCN+CN)=3.00
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M                   1975VSa (46534)2536
                                        B(NiH-1L(Gly))=4.55
                                        B(NiH-1L(Ala))=4.31
                                        B(NiH-1L(Val))=3.93
                                        B(NiH-1L(Leu))=4.28
-------------------------------------------------------------------------------
Ni++       oth NaClO4 25°C 0.20M U    M                   1973CBa (46535)2537
                                        K(NiL+Gly)=4.88
                                        K(NiL+Ala)=4.72
                                        K(NiL+beta-Ala)=3.76
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T  M                   1971ICa (46536)2538
                                        K(NiL+Pro)=4.99
                                        K(NiL+Gly)=4.41
At 15 C: K(NiL+Pro)=5.11; 70 C, K=4.27
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T  M                   1971ICb (46537)2539
                                        K(NiL+A)=4.12
HA=piperidine-2-carboxylic acid. 15 C, K=4.16; 70 C, K=3.64
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T  M                   1971ICc (46538)2540
                                        K(Ni(OH)L+H)=10.86
```

```
                                        K(NiL+A)=4.03
HA=1-aminocyclopentanecarboxylic acid
K(Ni(OH)L+H)(15 C)=11.00, (70 C)=10.32; K(NiL+A)(15 C)=4.12, (70 C)=3.56
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T  M                  1971IVb (46539)2541
                                        K(NiL+Sar)=4.23
15 C, K=4.40, 70 C, K=3.81
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M                  1971TSh (46540)2542
                                        K(NiL+Ala)=4.24
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M                  1970STd (46541)2543
                                        K(NiL+A)=3.92
                                        K(NiL+B)=6.76
H3A=sulphoslicylic acid. H4B=Tiron
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M                  1969AIa (46542)2544
                                        K(NiL+Trp)=4.12
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M                  1969BIa (46543)2545
                                        K(NiL+histamine)=4.89
                                        K(NiL(histamine)+H)=7.38
-------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 1.50M U    M   K1=11.26       1969FDa (46544)2546
                                        B(NiLpy)=12.47
                                        B(NiLpy2)=13.21
                                        B(NiL(NH3))=13.76
                                        B(NiL(NH3)2)=14.76
Medium: NH4NO3. B(NiL(py)(NH3))=14.15
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.05M U    M                  1968HAa (46545)2547
                                        K(NiL+Gly)=4.95
                                        K(NiL+A)=2.03
A=ethyl valinate
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.08M U    M                  1968HAa (46546)2548
                                        K(NiL+A)=2.03
                                        K(NiL+Gly)=4.95
A=ethylvalinate
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M                  1968ICa (46547)2549
                                        K(NiL+Arg)=4.20
                                        K(NiL+Gly)=4.41
                                        K(NiL+Ser)=4.14
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M                  1968ICa (46548)2550
                                        K(NiL+A)=3.04
                                        K(NiLA=NiLA(OH)+H)=-11.30
                                        K(NiL=NiL(OH)+H)=-10.86
HA=glycylglycine
```

```
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M                  1968ICb (46549)2551
                                        K(NiL+Asp)=4.20
                                        K(NiL+Glu)=4.04
--------------------------------------------------------------------------------
Ni++       sp  KCl    25°C 0.50M U    M                  1967JMa (46550)2552
                                        K(NiL+NH3)=2.54
In 0.5 M NaClO4: K(NiL+en)=7.20; 0.5 M NaCl: K(NiL+Gly)=4.89; 0.5 M KNO3:
K(NiL+A)=2.17, H2A=oxalic acid
--------------------------------------------------------------------------------
Ni++       cal KNO3   20°C 0.10M U   H                  1964HDa (46551)2553
DH(K1)=-10.6 kJ mol-1, DS=184.3 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       gl  NaNO3    ?  0.50M U    M                  1963ISb (46552)2554
                                        K(NiL+A)=3.02
                                        K(NiL+Gly)=4.41
                                        K(NiL+B)=5.18
H2As=salicylic acid, B=pyridine aldoxime
--------------------------------------------------------------------------------
Ni++       dis NaClO4 20°C 0.10M U      T K1=11.54       1963STc (46553)2555
--------------------------------------------------------------------------------
Ni++       vlt KNO3   20°C 0.10M U      T K1=11.54       1956SGa (46554)2556
--------------------------------------------------------------------------------
Ni++       vlt KNO3   20°C 0.10M U      T K1=11.53       1955SAa (46555)2557
--------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=11.26       1951SFa (46556)2558
--------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=>10    K2=4.7    1948SBa (46557)2559
                                        K(NiLOH+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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=8.30        1999AAa (47346)2560
                                        K(NiL+A)=3.76
                                        B(NiLA)=12.06
                                        K(NiL+B)=3.58
                                        B(NiLB)=11.88
K(NiHL+C)=3.99, K(NiL+D)=3.68, B(NiLD)=11.98.
HA=MOPSO, HB=MOPS, HC=DIPSO, HD=TAPSO.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=8.70        1999BIa (47347)2561
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M                  1999NNa (47348)2562
                                        B(NiHAL)=20.02
                                        B(NiAL)=15.19
                                        K(NiA+L)=8.87
                                        K(NiL+A)=6.35
```

K(NiHL+A)=6.94. HA is nicotinic acid.

Ni++ gl NaClO4 37°C 0.15M U M 1999NNb (47349)2563
B(NiH2AL)=22.99
B(NiHAL)=16.73
B(NiAL)=12.49
K(NiA+L)=9.22

K(NiL+A)=3.65. A is 6-aminopenicillanic acid.

Ni++ gl NaClO4 37°C 0.15M U M 1995NAc (47350)2564
B(NiLZn)=11.75
B(NiL2Zn)=19.82
B(NiH-1L2Zn)=13.06
B(NiH-1LZn)=5.28

Ni++ gl NaNO3 25°C 0.50M C K1=8.11 B2=14.78 1994WCa (47351)2565
B(NiH-1L2)=4.69

Ni++ gl NaClO4 37°C 0.15M C M K1=8.84 B2=15.94 1993NAa (47352)2566
B(NiHL)=13.08
B(NiHL2)=21.04

Also data for ternary complexes with cysteine, cysteic acid and penicill-
amine.

Ni++ gl NaCl 25°C 0.20M U B2=15.57 1992TSa (47353)2567
B(NiH-1LA)=4.84

HA=Asp-Ala-His-methylamide

Ni++ nmr KNO3 25°C 1.0M U H K1=3.58 B2=15.62 1992ZSa (47354)2568
B3=15.95

Also methods used: potentiometry, spectrophotometry

Ni++ gl NaClO4 30°C 0.20M U M K1=8.68 B2=16.25 1990MBa (47355)2569

Ni++ gl KNO3 35°C 0.10M U M K1=8.85 1989RSb (47356)2570
B(NiL(thiodipropanoate))=19.60
K(Ni(TDPA)+L)=8.10

Ni++ gl KNO3 35°C 0.20M U M K1=8.35 1989RVa (47357)2571
K(NiA+L)=7.58

A=bis(imidazol-2-yl)methane

Ni++ gl NaCl 37°C 0.15M U M K1=8.315 B2=14.86 1985CFb (47358)2572
B(NiL(Ala))=12.60
B(NiL(Ala)2)=14.51

Ni++ gl KNO3 35°C 0.10M C M K1=8.42 1985RRc (47359)2573
B(NiL(cytidine))=13.48

Ni++ gl KNO3 35°C 0.10M C K1=8.42 1985RRh (47360)2574

```
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M                 1984KDb (47361)2575
                                       K(Ni(DOPA)+L)=7.33
                                       B(NiHL(DOPA))=27.23
                                       K(Ni(Dopamine)+L)=7.43
                                       B(NiHL(Dopamine))=26.80
K(NiA+L)=7.45, B(NiHLA)=26.39; K(NiB+L)=7.55, B(NiHLB)=25.71
A=Noradrenaline, B=Adrenaline
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C TIH  R K1=8.67   B2=15.50  1984PEa (47362)2576
IUPAC evaluation. DH(B2)=-69.1 kJ mol-1
37 C and 0.15 mol dm-3: K1(tentative)=8.43, B2=15.14
-------------------------------------------------------------------------------
Ni++       sp  KCl    25°C  1.0M U        K1=8.69   B2=15.52  1983FAa (47363)2577
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M   K1=8.85        1983KSc (47364)2578
                                       K(Ni+HA+L)=12.50
                                       K(Ni+HB+L)=12.32
A is adenine; HB is cytosine.
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.15M U        K1=8.533  B2=15.100 1982ESa (47365)2579
                                       B(NiHL)=12.913
                                       B(NiHL2)=20.869
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.15M U    M                 1982ESa (47366)2580
                                       B(NiHL(pyridoxamine))=23.044
                                       B(NiH2L(pyridoxamine))=32.317
                                       B(NiH3L(pyridoxamine))=37.936
                                       B(NiH4L(pyridoxamine))=41.309
B(NiH4L2(pyridoxamine))=50.298, B(NiH4L2(pyridoxamine)2)=54.027
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M C    M   K1=8.57   B2=15.57  1982GSe (47367)2581
                                       B(NiH-1L2)=4.8
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M C        K1=8.57   B2=15.57  1982GSe (47368)2582
-------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.10M U   H    K1=8.67   B2=15.52  1981AAc (47369)2583
DH(K1)=-33.4 and DH(B2)=-70.1 kJ mol-1.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=8.70   B2=15.34  1980DMa (47370)2584
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M                 1979ADa (47371)2585
                                       B(CuNiL2)=21.20
                                       B(CuNiHL2)=25.56
                                       B(CuNiH-1L2)=14.00
                                       B(CuNiH-2L2)=5.45
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.20M U TIH    K1=8.40   B2=15.20  1979KKc (47372)2586
                                       B3=17.40
-------------------------------------------------------------------------------
```

```
Ni++       gl  KNO3   25°C 0.10M C    M T                1978DOc (47373)2587
                                        B(NiLA)=14.47
                                        B(NiHLA)=20.28
A=Imidazole-5-ethylamine
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M M        K1=8.69   B2=15.52  1978MSi (47374)2588
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U    M   K1=8.52   B2=15.30  1978SKa (47375)2589
B(NiL(Gly))=13.43, B(NiL(en))=14.84
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=8.67   B2=15.52  1976DOd (47376)2590
B(NiHL(citrate))=17.33; B(NiL(citrate))=12.70;
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C      T K1=8.64   B2=15.46  1976PSb (47377)2591
                                        B(NiHL)=12.28
                                        B(NiHL2)=20.49
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=8.63   B2=15.47  1976PSb (47378)2592
                                        B(NiHL)=12.21
                                        B(NiHL2)=20.49
Ligand: D-His
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C      T K1=8.656  B2=15.497 1976RIa (47379)2593
                                        K(Ni(DL-His))=8.645
                                        B(Ni(DL-His)2)=15.703
-------------------------------------------------------------------------------
Ni++       gl  none   21°C  0.0  M        K1=7.89   B2=14.83  1974YAa (47380)2594
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 1.00M U    M   K1=8.36   B2=15.40  1973BJd (47381)2595
                                        B(NiL(Asp))=14.60
                                        B(NiL(Glu))=13.78
                                        B(NiL(Met))=13.40
                                        B(NiL(Trp))=13.20
B(NiL(Lys))=10.00
-------------------------------------------------------------------------------
Ni++       EMF NaCl   25°C 0.12M U        K1=8.48   B2=15.24  1972IBa (47382)2596
-------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=8.48   B2=15.24  1972IBa (47383)2597
-------------------------------------------------------------------------------
Ni++       gl  oth/un   ?     ?  U        B2=14.78       1972KPd (47384)2598
DL-histidine: B=15.76
-------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.10M C   H                   1971BPi (47385)2599
DH(B1)=-69.03 kJ mol-1,  For D-His: DH=-69.12, for rac-His: DH=-70.91
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U      T K1=8.69   B2=15.58  1970MMf (47386)2600
DL-histidine: K1=8.69, K2=7.15
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 3.00M U      T K1=9.20   B2=16.65  1970WIa (47387)2601
-------------------------------------------------------------------------------
```

Ni++ gl KNO3 25°C 0.10M U T K1=8.66 B2=15.50 1969RGc (47388)2602
DL-histidine: K1=8.65, K2=7.06

Ni++ gl KNO3 25°C 0.20M U T K1=8.92 B2=16.05 1969RMb (47389)2603
K1(15 C)=9.09, K1(40 C)=8.69, K2(15 C)=7.30, K2(40 C)=6.88

Ni++ gl KNO3 37°C 0.15M U K1=8.43 B2=15.14 1967PSd (47390)2604

Ni++ cal KNO3 22°C 0.10M U H 1967SSl (47391)2605
DH(B2)=-69.4 kJ mol-1, DS=62.3 J K-1 mol-1

Ni++ EMF oth/un 25°C ? U K1=8.7 B2=15.30 1966PAa (47392)2606

Ni++ gl KCl 40°C 0.25M U T H K1=8.30 B2=14.70 1965AZa (47393)2607
K1=9.28(0 C),8.79(15 C),8.50(25 C); K2=7.71(0 C),7.08(15 C),6.69(25 C)
At 15 C: DH(K1)=-47.7 kJ mol-1, TDS=0.8 kJ mol-1, DH(K2)=-57.3

Ni++ gl KCl 15°C 0.25M U T HM 1965AZa (47394)2608
DH(NiA+L=NiL+A)=-19.2 kJ mol-1; DH(NiA3+2L=NiL2+3A)=100.7 A= His-Me ester
---
Ni++ gl KNO3 25°C 0.20M U K1=8.62 1963CCb (47395)2609

Ni++ gl oth/un 25°C 0.01M U K1=8.69 B2=15.52 1959LRa (47396)2610

Ni++ gl oth/un 25°C 0.20M U K1=8.79 B2=15.84 1957LDa (47397)2611

Ni++ gl oth/un 25°C 0.01M U B2=15.9 1952ALa (47398)2612
****
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
---
Ni++ gl NaClO4 25°C 0.10M U K1=9.31 B2=15.68 1982TSb (47635)2613
****
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
---
Ni++ gl KNO3 25°C 0.50M U K1=0.64 1983LWa (47645)2614
****
C6H9O3Cl HL CAS 609-15-4 (3101)
Ethyl-2-chloroacetoacetate; CH3.CO.CH(Cl)CO2.C2H5

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 30°C 99% U K1=10.6 B2=16.80 1953UFc (47650)2615
****
C6H9O6P H3L CAS 4408-72-4 (7015)

Phosphinotriethanoic acid; P(CH2.COOH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U	I	K1=3.77	B2=6.41	1980POa (47653)	2616
							B(NiHL)=10.44			
In 50% v/v Dioxan/H2O: K1=6.13; B2=19.61; B(NiHL)=10.44										
Ni++	gl	NaClO4	25°C	0.10M	U	I	K1=3.77	B2=6.41	1979POa (47654)	2617
							B(NiHL)=7.18			
Also data for 50% v/v dioxan/H2O										

****

C6H10N2 L CAS 35203-44-2 (2054)
1-Propylimidazole; C3H3N2.CH2.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		K1=3.06	B2=5.56	1979LBa (47676)	2618
							B3=7.60			
							B4=9.18			
							B5=10.33			
							B6=11.00			

****

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
Ni++	sol	NaClO4	20°C	1.00M	U		K1=11.94	B2=22.68	1969AIc (47697)	2619
Ni++	dis	NaClO4	25°C	0.10M	U		K1=11.0	B2=21.60	1964SAe (47698)	2620
Ni++	gl	diox/w	25°C	75%	U	I	K1=11.1	B2=22.5	1963BAb (47699)	2621
							Kso=-28.39			
Medium: 75% dioxan. B2=17.3(0%)										
Ni++	gl	oth/un	25°C	.001M	U	T			1958BBb (47700)	2622
							Kso=-28.39			
40 C, Kso=26.96										

****

C6H10N2O4 H2L (8064)
1-Acetyl-2,3-butanedione dioxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U	I		1976LUa (47714)	2623
							K(Ni+HL)=6.60		
							K(NiHL+HL)=8.30		
							K(Ni+H2L=NiHL+H)=-3.15		
							K(Ni+2H2L=Ni(HL)2+2H)=-4.65		

Data for 25, 50 and 75% v/v dioxan/H2O. At 50%, K(Ni+HL)=8.50,
K(NiHL+HL)=10.55, K(Ni+H2L=NiHL+H)=-3.30, K(Ni+2H2L=Ni(HL)2+2H)=-4.55

****

C6H10N2O4 H2L (3695)
N-(Iminomethyl)-2-aminopentanedioic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=5.94	B2=10.75	1965NCa (47717)	2624

****

C6H10N2O4 H2L (7336)
N-Pyruvoylalanine oxime; CH3.C(:NOH).CONH.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=5.43	B2=10.31	1997SJb (47722)	2625
							B(NiH-1L2)=0.06			
							B(NiH-2L2)=-11.01			

****

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
Ni++	gl	KNO3	25°C	0.10M	C		K1=4.52	B2=7.28	1995KLa (47774)	2626
							B(NiH-1L)=-4.52			
Ni++	gl	NaCl	25°C	0.12M	U		K1=4.44	B2=7.02	1972IBa (47775)	2627

****

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
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=6.70		2003AHa (47801)	2628
							K(NiL+A)=3.64			
HA is 3-amino-5-mercapto-1,2,4-triazole.										
Ni++	gl	NaNO3	25°C	0.10M	C		K1=7.15		2000KHb (47802)	2629
Ni++	gl	alc/w	25°C	20%	M	M	K1=6.73		1998ABa (47803)	2630
							K(NiL+oxine)=8.38			
Medium: 20% w/w EtOH/H2O, 0.1 M KNO3.										
Ni++	gl	KNO3	25°C	0.10M	M	M	K1=6.73		1996AEa (47804)	2631
Data for ternary complexes with dipicolinic acid										
Ni++	gl	alc/w	25°C	20%	C				1994IMa (47805)	2632
							K(NiL+bpy)=3.81			
							K(NiL+phen)=4.68			

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=8.02		1989MAd (47806)	2633
Ni++	gl	KNO3	25°C	0.10M	C		K1=7.86	B2=11.61	1983LRc (47807)	2634
Ni++	gl	KNO3	25°C	0.10M	C		K1=7.86		1979NAb (47808)	2635
Ni++	gl	KCl	20°C	0.10M	U		K1=8.02	B2=11.90	1955SAa (47809)	2636

C6H10N2O6P2 H4L (6893)
N-(2-Pyridyl)aminomethylenedi(phosphonic acid); C5H4N.NH.CH(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=9.04	1990GKa (47866)	2637
							K(Ni+HL)=7.08		
							K(Ni+H2L)=4.12		

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
Ni++	EMF	KNO3	25°C	0.50M	U		K1=0.54	1976LWa (47874)	2638

Ag(Hg)/Ag+ cell, competitive measurement. K1 by spectrophotometry=0.49-0.58

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=4.80	1986KKa (47886)	2639

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
Ni++	gl	NaClO4	25°C	0.10M	U		B2=16.99	1990KBb (47902)	2640
							B(NiHL)=15.68		
							B(NiH2L2)=29.89		
							B(NiHL2)=23.77		
							B(NiL2(OH))=6.80		
Ni++	gl	NaCl	25°C	0.15M	M		K1=10.494 B2=18.795	1988ESa (47903)	2641
							B(NiHL)=15.779		
							B(NiH-1L)=3.744		
							B(NiHL2)=25.199		
							B(NiH-1L2)=12.038		

Ni++ gl KCl 25°C 0.50M C K1=9.27 B2=15.644 1987LEa (47904)2642
B(NiHL)=15.009
B(NiH2L2)=28.821
B(NiHL2)=22.793
B(NiH-1L2)=4.961
Two methods of refinement reported
****
C6H10N8O L (8205)
Bis(5-tetrazolylethylene)oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 20°C 0.1M U K1=6.8 1979ESa (47912)2643
****
C6H10N8S L (8206)
Bis(5-tetrazolylethane)sulphide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 20°C 0.1M U K1=7.16 1979ESa (47918)2644
****
C6H10O2 HL CAS 3002-24-2 (2742)
2,4-Hexanedione; CH3.CO.CH2.CO.CH2.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 75% U K1=9.60 B2=17.90 1953UFd (47925)2645
****
C6H10O2 HL CAS 815-57-6 (2261)
3-Methyl-pent-2,4-dione; CH3.CO.CH(CH3).CO.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 75% U K1=9.60 1962MMb (47943)2646
****
C6H10O3 HL CAS 16841-19-3 (3649)
1-Hydroxycyclopentanecarboxylic acid; HO.C5H8.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U K1=1.82 B2=3.12 1967PRb (47981)2647
****
C6H10O3 HL CAS 141-97-9 (3068)
Ethyl acetoacetate; CH3.CO.CH2.CO2.C2H5

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 75% U K1=9.45 1973AAa (48006)2648

Ni++ gl alc/w 30°C 99% U K1=12.3 B2=19.5 1953UFc (48007)2649
****
C6H10O4 H2L Adipic acid CAS 124-04-9 (401)
1,6-Hexanedioic acid; HOOC.(CH2)4.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ oth NaClO4 40°C 0.10M U K1=3.2 1981SSe (48045)2650
Method: Paper electrophoresis.

Ni++ gl oth/un 25°C 0.10M U K1=1.6 1960YYa (48046)2651
****
C6H10O4S H2L CAS 42715-54-8 (986)
2,2'-Thiodipropanic acid; HOOC.CH(CH3).S.CH(CH3).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 30°C 0.10M U K1=1.61 1978JSc (48120)2652

Ni++ gl KNO3 25°C 0.10M C K1=3.59 1975LPa (48121)2653
K(Ni+HL)=1.7
****
C6H10O4S H2L CAS 111-17-1 (139)
3,3'-Thiodipropanoic acid; HOOC.CH2.CH2.S.CH2.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 35°C 0.10M C M K1=3.14 1999DSb (48155)2654
B(NiAL)=5.41
A is thiamine hydrochloride.

Ni++ gl NaClO4 25°C 0.10M U TIH K1=3.36 1984DBa (48156)2655
Data for 35 and 45 C and I=0.2 and 0.3 M. At I=0, K1=3.23.
DH(K1)=-5.60 kJ mol-1, DS(K1)=44.0 J K-1 mol-1.

Ni++ gl KNO3 25°C 0.05M M K1=3.17 1975DPb (48157)2656

Ni++ gl KNO3 25°C 0.10M C K1=2.15 1975LPa (48158)2657
K(Ni+HL)=1.76

Ni++ gl NaClO4 25°C 2.00M U K1=1.2 1972ANa (48159)2658

Ni++ gl NaClO4 25°C 0.10M U K1=1.6 1968SKd (48160)2659
****
C6H10O4S2 H2L CAS 7244-02-2 (438)
1,2-Bis(carboxymethylthio)ethane; HOOC.CH2.S.CH2.CH2.S.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ vlt KNO3 25°C 0.10M C K1=4.20 1988ECa (48218)2660

Method: differential pulse polarography, using anodically generated Hg++
as indicator ion. Medium pH 4.8.

Ni++ gl NaClO4 25°C 2.00M U K1=4.58 1974AHa (48219)2661
K(Ni+HL)+2.95

Spectrophotometry also used

Ni++ gl KNO3 25°C 0.10M U K1=4.31 1971FPa (48220)2662

Ni++ gl NaClO4 25°C 0.10M U K1=4.49 B2=5.9 1971PPb (48221)2663
K(Ni+HL)=3.00

K2 by solubility at I=2.0 M

Ni++ oth oth/un 25°C 0.10M U K1=4.5 1964PCa (48222)2664

****

C6H10O4S2 H2L CAS 1119-62-6 (3697)
3,3'-Di(thiopropanoic acid); HOOC.CH2.CH2.S.S.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	20°C	0.10M	U T H		K1=3.58	B2= 6.82	1984SGd	(48264)2665

K values by Bjerrum's method. By least squares, K1=3.59, K2=3.25.
Also data for 30 and 40 C. DH(B2)=-95.6 kJ mol-1, DS(B2)=-176 J K-1 mol-1.

****

C6H10O4Se H2L CAS 80030-00-8 (987)
2,2'-Selenodipropanic acid; HOOC.CH(CH3).Se.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=2.73	1975LPa	(48278)2666
							K(Ni+HL)=1.8		

****

C6H10O4Se H2L CAS 2168-88-9 (982)
3,3'-Selenodipropanic acid; HOOC.CH2.CH2.Se.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=1.83	1975LPa	(48289)2667
							K(Ni+HL)=1.56		

****

C6H10O4Te 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
Ni++	gl	KNO3	25°C	0.10M	C		K1=3.0	1975LPa	(48300)2668
							K(Ni+HL)=2.8		

****

C6H10O5 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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=1.39        1975LPa (48310)2669
********************************************************************************
C6H10O6              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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=1.79        1975MTc (48324)2670
********************************************************************************
C6H10O7               HL    Galacturonic     CAS 685-73-4  (290)
D-Galacturonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.10M C                         1994ESa (48378)2671
                                        B(NiH-2L)=-15.2
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U        K1=1.04        1990DGb (48379)2672
********************************************************************************
C6H10O7               HL    Glucuronic acid  CAS 6556-12-3  (599)
D-Glucuronic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.10M C                         1994ESa (48408)2673
                                        B(NiH-2L)=-15.0
********************************************************************************
C6H10O8              H2L    Mucic acid       CAS 526-99-8  (3650)
2,3,4,5-Tetrahydroxyhexanedioic acid, Galactaric acid; HOOC.(CHOH)4.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.05M C        K1=3.22   B2= 6.19  2002SFa (48432)2674
                                        B(NiH-1L)=-4.61
                                        B(NiH-2L)=-11.33
                                        B(NiH-1L2)=-0.9
                                        B(NiH-2L2)=-7.68
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C  1.0M U                        1968BOa (48433)2675
                                        K(Ni+L=NiH-1L+H)=-9.34
                                        K(Ni+L=NiH-2L+2H)=-18.08
********************************************************************************
C6H10O8              H2L    Saccharic acid   CAS 87-73-0  (1191)
D-2,3,4,5-Tetrahydroxy-1,6-hexanedioic acid, Glucaric acid; HOOC.(CHOH)4.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Ni++       gl  NaClO4 25°C 0.10M U        K1=3.35        1997PPa (48455)2676
                                         K(Ni+H2L=NiL+2H)=-4.02
                                         *K(NiL)=-7.33
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M   K1=3.70        1997PPc (48456)2677
                                         K(Ni(edta)+L)=3.39
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 1.00M U                       1976VOa (48457)2678
                                         K(Ni+H2L=NiH-1L+3H)=-8.64
-------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C  1.0M C                       1975VOa (48458)2679
                                         K(Ni+H-1L)=8.64
Authors assume that K(H-1L+H)=14.0.
*******************************************************************************
C6H11NO                 L    Caprolactam      CAS 105-60-2  (405)
Aza-2-cycloheptanone, 6-Caprolactam;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=4.5         1987MTb (48495)2680
-------------------------------------------------------------------------------
Ni++       vlt KNO3   30°C 0.10M U        K1=0.18   B2= 1.69  1984KPe (48496)2681
                                         B3=2.18
Method: polarography using Cd competition ('indicator ion method').
Medium pH 6.2
*******************************************************************************
C6H11NO2                HL                     CAS 52-52-8  (3105)
1-Aminocyclopentanecarboxylic acid; H2N.C5H8.COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=5.60   B2=10.23  1963IPa (48500)2682
*******************************************************************************
C6H11NO2                HL                     CAS 16258-05-2  (1128)
2-Amino-hex-5-enoic acid; CH2:CH.CH2.CH2.CH(NH2).COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=5.38   B2=9.89   1975IPb (48508)2683
*******************************************************************************
C6H11NO2                HL                     CAS 37910-65-9  (6018)
2-Aminocyclopentane-1-carboxylic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.50M C        K1=3.946       1986GGa (48515)2684
                                         B(NiH-1L)=-4.89
cis isomer.
*******************************************************************************
C6H11NO2                HL    Pipecolinic acd  CAS 3105-95-1  (1125)
```

2-Piperidine carboxylic acid; C5H10N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	30°C	0.10M	U	M	K(Ni(Gly)+L)=4.41 B(Ni(Gly)L)=10.22 K(Ni(Ala)+L)=4.28 B(Ni(Ala)L)=9.63	1986RRc (48529)	2685

Values for other ternary complexes: Phe: 4.49,9.66. Pro: 4.26,10.49.
picolinic acid: 4.58,10.98. phen: 4.94,13.89 plus others

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	30°C	0.10M	U	H	K1=5.47 B2=10.04	1985RRe (48530)	2686

DH(K1)=-152 kJ mol-1, DS=398 J K-1 mol-1, DH(K2)=-72, DS=150

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	EMF	none	20°C	0.0	U		K1=5.2 B2=9.60	1978CUa (48531)	2687

Additional constants given for derivatives of pipecolic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	alc/w	25°C	var	U	T	K1=53.70/D+4.690 K2=44.08/D+4.057	1974DKa (48532)	2688

D=Dielectric constant for the 1-PrOH/H2O mixture. Also at 0 and 40 C

****

C6H11NO3S H2L CAS 52574-90-0 (1270)
2-Mercaptopropanoyl-beta-alanine; CH3.CH(SH).CO.NH.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	20°C	0.10M	U		K1=4.56 B(NiH-1L)=-2.81	1976SHb (48553)	2689

****

C6H11NO3S H2L CAS 65134-68-1 (1325)
3-Mercaptopropanoyl-beta-alanine; HS.CH2.CH2.CO.NH.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	20°C	0.10M	U		K1=4.15 B(NiH-1L)=-3.86	1976SHb (48556)	2690

****

C6H11NO3S2 H2L (2160)
2-Mercaptopropanoyl-cysteine; CH3.CH(SH).CO.NH.CH(CH2.SH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	20°C	0.10M	U		K1=11.38 K(NiH-1L+H)=6.16	1977SHa (48561)	2691
Ni++	gl	KNO3	20°C	0.10M	U		K1=11.38 K(NiH-1L+H)=8.59	1976SHb (48562)	2692

****

C6H11NO4 H2L (1232)
2,2'-Iminodipropanoic acid; HN(CH(CH3)COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=7.6	B2=13.50	1987AKa (48569)	2693
Ni++	gl	KNO3	25°C	0.10M	U		K1=7.6	B2=13.50	1987BKa (48570)	2694

****
C6H11NO4 H2L (3106)
Iminodipropanoic acid; HN(CH2.CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	30°C	0.10M	U		K1=6.16	B2=9.93	1952CMa (48587)	2695

****
C6H11NO4 H2L CAS 103954-11-6 (5805)
N-(1-Carboxyethyl)-alanine; HOOC.CH(CH3).NH.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=8.24	B2=14.34	1984FVa (48593)	2696

****
C6H11NO4 H2L CAS 5336-17-4 (345)
N-Ethyliminodiethanoic acid; C2H5.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=8.86	B2=16.12	1976JPa (48598)	2697

****
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
Ni++	gl	KCl	20°C	0.10M	U		K1=13.75	B2=17.90	1955SAa (48604)	2698
							K(Ni+HL)=7.93			

****
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
Ni++	cal	NaNO3	37°C	0.20M	C		K1=5.62	B2=10.10	1987ARa (48618)	2699
							K3=2.65			

DH(K1)=-13.4 kJ mol-1, DS(K1)=62 J K-1 mol-1; DH(K2)=-18, DS(K2)=25;
DH(K3)=-24, DS(K3)=-30.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	2.0M	U		K1=5.65	B2=10.10	1976AHc (48619)	2700
							K3=2.67			

****

C6H11NO5 H2L CAS 50825-12-2 (5806)
N-(1-Carboxyethyl)-N-hydroxy-alanine; HOOC.CH(CH3).N(OH).CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=6.07 B2=11.13	1984FVa (48624)	2701

****

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
Ni++	gl	KNO3	25°C	0.10M	U		K1=9.33	1983FSa (48655)	2702
Ni++	gl	NaClO4	25°C	0.10M	U		K1=9.15 B2=14.18 K(NiH-1L+H)=10.79	1976JPa (48656)	2703
Ni++	gl	R4N.X	25°C	1.50M	U	M	K1=9.54 B(NiL(py))=10.01 B(NiL(py)2)=11.26 B(NiL(NH3))=11.79 B(NiL(NH3)2)=12.71 B(NiL(NH3)(py))=12.19. Medium: NH4NO3	1969FDa (48657)	2704
Ni++	oth	KNO3	20°C	0.10M	U		K1=10.2 B2=15.50 Method: electrophoresis	1965JMa (48658)	2705
Ni++	gl	KCl	20°C	0.10M	U		K1=9.28 B2=14.25 K(NiLOH+H)=10.83	1955SAa (48659)	2706
Ni++	gl	KCl	30°C	0.10M	U		K1=9.54 B2=14.69	1952CCa (48660)	2707

****

C6H11NO5 H2L (1233)
N-Hydroxyimino-2,2'-dipropanoic acid; HO.N(CH(CH3)COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=5.7 B2=10.70	1987AKa (48831)	2708
Ni++	gl	KNO3	25°C	0.10M	U		K1=5.7 B2=10.70	1987BKa (48832)	2709

****

C6H11NS2 L CAS 98-99-7 (3108)
Piperidine-1-carbodithioic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	dis	oth/un	25°C	0.01M	U		B2=13.9	1973SSa (48852)	2710
Ni++	vlt	KCl	25°C	1.00M	U		B2=12.1	1973SSa (48853)	2711

```
**************************************************************************
C6H11N3                 L                     CAS 34392-54-6  (4350)
4-(2-Methylaminoethyl)imidazole;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=5.86   B2=9.42   1973BDb (48862)2712
                                          B(Ni2L3)=18.15
**************************************************************************
C6H11N3                 L                     CAS 16227-10-4  (8351)
4-Butyl-4H-1,2,4-triazole;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U TIH    K1=2.75   B2= 5.06  1981RPb (48867)2713
Medium: KClO4. Also data for 35 C and for 0.05 M KClO4.
Also DH and DS values.
**************************************************************************
C6H11N3O4              HL    Gly-Asn          CAS 1999-33-3  (283)
Glycyl-asparagine; H2N.CH2.CO.NH.CH(CH2.CO.NH2).COOH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       cal KNO3   25°C  0.5M U                        2005ZKa (48881)2714
                                          DH(K1)=-20.3 kJ mol-1
                                          DH(Ni+2L)=-47.4
For 1.0 mol/l KNO3 DH(K1)=-19.2; DH(Ni+2L)=-49.7
For 1.5 mol/l KNO3 DH(K1)=-18.1; DH(Ni+2L)=-52.2
--------------------------------------------------------------------------
Ni++       EMF NaCl   25°C 0.12M U        K1=4.27   B2=7.36   1972IBa (48882)2715
**************************************************************************
C6H11N3O4              HL    Gly-Gly-Gly      CAS 556-33-2  (415)
Glycyl-glycyl-glycine; H2N.CH2.CO.NH.CH2.CO.NH.CH2.COOH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=3.75   B2= 6.77  2003AMb (48942)2716
                                          B(NiH-1L)=-5.45
                                          B(NiH-2L)=-12.85
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.800  B2=6.88   1975BPa (48943)2717
                                          B(NiH-1L)=-4.75
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.72   B2= 6.51  1975KMe (48944)2718
                                          K(Ni+HL)=2.86
                                          K(NiL+H)=6.58
                                          *K(NiL)=-8.91
                                          K(NiH-2L+H)=7.83
K(NiH-2L+2H)=16.74
--------------------------------------------------------------------------
```

```
Ni++       gl  KNO3   25°C 0.10M C        K1=3.72   B2=6.51   1974KMc (48945)2719
                                          K(Ni+HL)=2.86
                                          K(NiH-1L+H)=8.91
                                          K(NiH-2L+H)=7.83
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=3.69   B2=6.73   1971LNa (48946)2720
                                          K(NiH-2L+2H)=16.44
-------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.10M U        K1=3.69   B2=6.73   1971LNa (48947)2721
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.16M U        K1=3.71   B2=6.81   1970BMb (48948)2722
                                          K(NiH-1L+H)=8.8
                                          K(NiH-2L+H)=7.7
-------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 0.16M U                  1970BMb (48949)2723
                                          K(NiH-2L(OH)+H=NiH-2L)=12.8
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=3.76   B2=6.86   1967KMa (48950)2724
                                          K(NiH-2L+2H)=16.9
                                          K(NiH-2LOH+H)=10.5
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.16M U        K1=3.70   B2=6.60   1960MCa (48951)2725
                                          K3=1.6
                                          K(NiH-1L+H)=8.25
                                          K(NiH-2L+H)=8.45
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.15M U        K1=3.72        1958LCb (48952)2726
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C .058M U T      B2=7.30        1957LYa (48953)2727
B2=8.20(0 C)
-------------------------------------------------------------------------------
Ni++       EMF none   25°C  0.0  U        K1=3.99   B2=7.08   1955EMa (48954)2728
*******************************************************************************
C6H11N9                 L                        (7008)
Di(2-(5-tetrazolyl)ethyl)amine; ((CHN4)CH2.CH2)2NH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.10M U        K1=6.55        1981ESa (48998)2729
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C  0.1M U        K1=6.55        1979ESa (48999)2730
*******************************************************************************
C6H11O4P              H2L                    CAS 85931-58-4  (5652)
Ethylphosphinediethanoic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        B2=9.06        1983NPa (49007)2731
                                          B(NiHL2)=12.69
                                          B(NiH2L2)=16.21
```

Additional method: spectrophotometry.

****

C6H12N2O2 HL CAS 4437-52-9 (3700)

Hexan-3,4-dione dioxime (diethylglyoxime); CH3CH2.C(:NOH).C(:NOH)C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	75%	U	I	K1=12.4	B2=23.7	1963BAb (49043)	2732
							Kso=-24.12			

Medium: 75% dioxan, 0.1 M. B2=17.2(0% dioxan)

****

C6H12N2O2S2 L (2821)

N,N'-Dihydroxyethyl-dithiooxamide; HO.C2H4.NH.CS.CS.NH.C2H4.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	none	25°C	0.0	U		K1=4.98		1976AMc (49049)	2733

****

C6H12N2O3 HL B-Ala-B-Ala CAS 34322-87-7 (2118)

3-Alanyl-3-alanine; H2N.CH2.CH2.CO.NH.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=3.70	B2= 6.15	2003AMb (49058)	2734
							B(NiH-1L)=-6.02			
							B(NiH-1L2)=-3.76			
							B(NiH-2L2)=-13.38			
Ni++	gl	NaCl	25°C	0.12M	U		K1=3.94	B2=6.49	1977PNa (49059)	2735

****

C6H12N2O3 HL B-Ala-Ala (8030)

3-Alanyl-alanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C	H	K1=4.03	B2= 7.20	2001CFb (49063)	2736
							B3=9.4			
							B(NiH-1L)=-4.8			
							B(NiH-1L2)=-2.3			

DH(K1)=-21 kJ mol-1, DS(K1)=4 J K-1 mol-1, DH(B2)=-45, DS(B2)=-15, DH(B3)=-67, DS(B3)=44.

****

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
Ni++	gl	KNO3	25°C	0.10M	C	T			2000RNa (49094)	2737
							K(Ni+HL=NiL+H)=3.91			

Data for 35 and 45 C.

```
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=4.14   B2=7.02   1977KMb (49095)2738
                                          K(Ni+HL)=2.89
                                          K(NiL+H)=6.90
                                          K(NiH-1L+H)=8.67
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=3.51   B2=6.56   1977PNa (49096)2739
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=3.61   B2= 6.77  1976PNa (49097)2740
L=DL-alpha-alanyl-DL-alpha-alanine
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=3.51   B2= 6.56  1976PNa (49098)2741
L=L-alpha-alanyl-L-alpha-alanine
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=3.94   B2= 6.49  1976PNa (49099)2742
L=beta-alanyl-beta-alanine
--------------------------------------------------------------------------------
Ni++       EMF oth/un 25°C 0.10M U        K1=3.61   B2=6.77   1970PBb (49100)2743
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=3.90   B2=6.92   1977KMb (49114)2744
                                          K(Ni+HL)=2.04
                                          K(NiL+H)=6.42
                                          K(NiH-1L+H)=9.06
********************************************************************************
C6H12N2O3              HL    DL-Ala-DL-Ala    CAS 2867-20-1  (67)
DL-Alanyl-DL-alanine; H2N.CH(CH3).CO.NH.CH(CH3).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.20M U        K1=3.65   B2=6.57   1982KRd (49123)2745
                                          B3=8.84
                                          B(NiH-1L2)=-2.41
                                          B(NiH-2L2)=-12.31
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=3.61   B2=6.77   1977PNa (49124)2746
********************************************************************************
C6H12N2O3              HL                     CAS 32595-87-7  (4380)
Glycyl-4-aminobutanoic acid; H2N.CH2.CO.NH.(CH2)3.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.10M U        K1=4.11   B2=7.49   1971LNa (49136)2747
********************************************************************************
C6H12N2O3              HL                     CAS 627-74-7  (3110)
Glycylglycine ethyl ester; H2N.CH2.CO.NH.CH2.CO.OCH2.CH3
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.16M	U		K1=3.65 K3=2.0 K(NiH-1L+H)=9.2 K(NiH-1LOH+H)=9.8	B2=6.63	1960MCa (49140)	2748

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
Ni++	gl	oth/un	25°C	0.01M	U		K1=4.38	B2=8.42	1959DLb (49149)	2749

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
Ni++	gl	KCl	25°C	0.20M	U		B2=15.08 B(NiH-1L)=1.76 B(NiH-1L2)=6.48 B(Ni2H-2L2)=7.43		1990CRa (49154)	2750

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
Ni++	gl	KNO3	25°C	0.10M	U		K1=13.65		1983FSa (49194)	2751
Ni++	gl	NaClO4	25°C	0.10M	U	M	K1=13.8 K(NiL+CN)=5.08 K(NiLCN+CN)=3.11		1979KNa (49195)	2752
Ni++	gl	KNO3	25°C	0.10M	U	M	K1=13.78		1975ITa (49196)	2753
Ni++	vlt	NaClO4	25°C	0.30M	U		K1=13.20		1974KOb (49197)	2754
Ni++	gl	KNO3	25°C	0.10M	U	M	K(NiL+Gly)=4.24		1972IVb (49198)	2755
Ni++	gl	KNO3	25°C	0.10M	U	M	K1=13.65 K(NiL+en)=6.31		1970DNa (49199)	2756
Ni++	sp	NaClO4	25°C	0.50M	U	M	K(NiL+NH3)=2.00		1967JMa (49200)	2757
Ni++	gl	KCl	30°C	0.10M	U		K1=13.5		1952CMc (49201)	2758

****

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
Ni++	gl	KCl	20°C	0.10M	U		K1=13.73 B2=19.64	1955SAa	(49292)2759
							K(Ni+HL)=5.80		

****

C6H12N2O4 HL DL-Ala-DL-Ser CAS 3062-19-9 (3701)
DL-Alanyl-DL-serine; H2N CH(CH3).CO.NH.CH(CH2.OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	EMF	NaClO4	25°C	0.10M	U		K1=3.41 B2=7.23	1967SMd	(49311)2760

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C			1993KNa	(49325)2761
							B(NiHL)=14.60		
							B(Ni2L2)=17.85		
Ni++	gl	NaNO3	25°C	0.10M	C		K1=7.63	1989EHa	(49326)2762
							B(NiHL)=14.43		

****

C6H12N2O4S2 H2L Cystine CAS 923-32-0 (1404)
DL-Dithio-bis(2-amino-3-propanoic acid); (HOOC.CH(NH2).CH2.S)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.50M	M T H		K1=5.30 B2=10.55	1988MAa	(49356)2763

Data for 25-40 C. DH(K1)=-9.62 kJ mol-1, DS(K1)=-134 J K-1 mol-1.
DH(K2)=24.1, DS(K2)=-20.4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaCl	37°C	0.15M	U	T	B2=11.73	1985CFb	(49357)2764
							B(Ni2L2)=17.54		
							B(NiHL)=13.51		
							B(Ni2L)=10.21		

****

C6H12N2S2 HL (1211)
2-Butylhydrazone-S-methyldithicarboxylate; (CH3)(C2H5)C:N.NH.CS.SCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	NaClO4	25°C	0.10M	U	M		1976IDa	(49372)2765
							K(NiL2+py)=0.11		
							K(NiL2+3-Me-py)=0.15		

K(NiL2+4-Me-py)=0.23
K(NiL2+Isoquinoline)=-0.03
****
C6H12N2S2 L CAS 35840-78-9 (2824)
Tetramethyl-dithiooxamide; (CH3)2N.CS.CS.N(CH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp none 25°C 0.0 U K1=6.62 1976AMc (49374)2766
****
C6H12N4O3 HL CAS 35790-47-7 (1135)
Glycyl-glycyl-glycinamide; H2N.CH2.CO.NH.CH2.CO.NH.CH2.CO.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U K1=3.47 B2=6.29 1975DBa (49389)2767
B(NiH-3L)=-20.37
****
C6H12N4O4 HL (6028)
Triglycine hydroxamic acid; H2N.CH2.CO.NH.CH2.CO.NH.CH2.CO.NHOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.20M C K1=5.20 B2=9.37 1989BMc (49392)2768
B(Ni2L)=8.93
B(Ni2H2L3)=32.23
B(NiH2L2)=22.76
B(NiH-2L2)=-7.18
B(NiH-3L3)= -14.10
****
C6H12N4O6 H3L (2677)
Nitrilotriacetohydroxamic acid; N(CH2.CO.NH.OH)3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.10M M K1=13.32 B2=19.71 1980LSa (49398)2769
B(NiH3L)=31.21
B(NiH2L)=25.05
B(NiHL)=19.85
B(NiHL2)=28.23
****
C6H12O2S2 HL CAS 35088-67-6 (2829)
1-Ethylthio-2-thiocarboxymethylethane; C2H5.S.CH2.CH2.S.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 1.0M C K1=2.10 B2= 4.58 1980PPd (49450)2770
By spectrophotometry, K1=2.05
****
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
Ni++	gl	NaNO3	20°C	0.10M	C			1994ESa	(49672)2771
							B(NiH-1L)=-4.95		
							B(NiH-2L)=-8.33		
							B(NiH-1L3)=-1.27		
Ni++	gl	KCl	25°C	0.20M	U		K1=2.45	1981FDb	(49673)2772
Ni++	gl	KNO3	25°C	0.12M	U			1965JPa	(49674)2773
							B(Ni2(OH)4L)=29.4		

pH < 7 ?. By spectrophotometry, pH 7-9: K1=1.82, Kso(Ni2(OH)3L)=-27

****

C6H13N L CAS 108-91-8 (314)

Cyclohexylamine; C6H11.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	C		K1=5.94 B2=8.18	1974MWb	(49798)2774

****

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
Ni++	gl	alc/w	25°C	40%	C		K1=11.40 B2=15.60	2003DKa	(49867)2775
							B(NiHL)=6.36		

Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.

Ni++	gl	KNO3	25°C	0.20M	U T HM		K1=5.31	1996JLd	(49868)2776
							K(Ni(bpy)+L)=4.70		

Data for 25-45 C. DH(K1)=-15.9 kJ mol-1, DS(K1)=49 J K-1 mol-1; DH(Ni(bpy)L)=-36.8, DS(Ni(bpy)L)=37.

Ni++	gl	alc/w	20°C	50%	M	M	K1=5.44	1995AMb	(49869)2777
							K(NiA+L)=4.71		

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

Ni++	gl	NaClO4	25°C	0.20M	U T	M	K1=5.43 B2= 9.92	1993PPa	(49870)2778
							K(NiA+L)=5.09		

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Ni++	gl	NaClO4	27°C	0.20M	U	M	K1=5.43 B2= 9.92	1988PPc	(49871)2779
							K(NiA+L)=4.95		

A is 2,2'-dipyridylamine.

Ni++	gl	oth/un	30°C	?	U		K1=4.55 B2=9.06	1977JOa	(49872)2780

```
Ni++       gl  KCl    25°C 0.50M U    M T K1=5.22   B2=9.45   1966LHc (49873)2781
                                          K(NiL+A)=0.99
                                          B(NiAL)=6.2
                                          B(NiAL2)=11.1
                                          B(NiA2L2)=13.05
HA=pyruvic acid
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U         K1=5.48   B2=9.69   1966MMc (49874)2782
                                          B3=13.03
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  40%  C         K1=11.12  B2=14.74  2003DKa (49998)2783
                                          B(NiHL)=6.16
Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U         K1=5.70         1997ISd (49999)2784
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M U T HM    K1=5.36         1996JLd (50000)2785
                                          K(Ni(bpy)+L)=4.81
Data for 25-45 C. DH(K1)=-8.8 kJ mol-1, DS(K1)=75 J K-1 mol-1;
DH(Ni(bpy)L)=-35.2, DS(Ni(bpy)L)=26.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M                   1993BCf (50001)2786
                                          K(NiA+(S)-L)=18.19
                                          K(NiA+(R)-L)=18.52
A: N,N'-bis[(2S)-pyrrolidine-2-yl]propane-1,3-diamine.
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U T  M   K1=5.54   B2=10.09  1993PPa (50002)2787
                                          K(NiA+L)=5.38
A is 2,2'-bipyridylamine. Also data for 35 and 45 C.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U  I     K1=5.33   B2=8.71   1990RAb (50003)2788
Data also for 10% w/w EtOH/H2O (B1=5.68; B2=9.86) and 25% (6.10; 10.84)
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=6.06         1989MAc (50004)2789
                                          K(NiA+L)=5.62
H4A is adenosine-5'-triphosphoric acid.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.20M U    M   K1=5.47   B2=9.90   1989RVa (50005)2790
                                          K(NiA+L)=4.87
A=bis(imidazol-2-yl)methane
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 27°C 0.20M U    M   K1=5.54   B2=10.09  1988PPc (50006)2791
                                          K(NiA+L)=5.24
A is 2,2'-dipyridylamine.
-------------------------------------------------------------------------------
```

```
Ni++       dis NaClO4 35°C 0.10M U    M   K1=5.50   B2=9.90   1985SRa (50007)2792
                                          K=(Ni(NTA)+Leu)=5.34
Method - paper electrophoresis
--------------------------------------------------------------------------------
Ni++       gl  oth/un 30°C    ?  U    M                  1977JOa (50008)2793
                                          K(Ni(His)+L)=4.57
                                          K(NiA+L)=4.34
H2A=iminodiethanoic acid
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=5.71   B2=10.26  1966MMc (50009)2794
                                          B3=14.97
With D-leucine:K1=5.68,B2=10.02,B3=14.27. L-Leucine:K1=5.53,B2=9.46,B3=14.38
--------------------------------------------------------------------------------
Ni++       oth KNO3   20°C 0.10M U        K1=6.3    B2=10.30  1964JOa (50010)2795
                                          K3=2.5
Method: paper electrophoresis
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.01M U      T K1=5.58   B2=10.14  1959DLb (50011)2796
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C      T K1=5.40   B2=10.01  1975IPb (50144)2797
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U   H    K1=5.27   B2= 9.61  1975SGc (50145)2798
By calorimetry: DH(K1)=-16.7 kJ mol-1, DS(K1)=44.8 J K-1 mol-1;
DH(B2)=-32.7, DS(B2)=74.5. Ligand is the DL-amino acid.
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U   H    K1=5.27   B2= 9.61  1974SGb (50146)2799
By calorimetry, DH(K1)=-16.7 kJ mol-1, DS(K1)=44.8 J K-1 mol-1;
DH(K2)=-32.7, DS(K2)=74.5.
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.05M U    M T K1=5.43   B2=9.88   1972GSc (50147)2800
                                          B(NiL(Phe))=10.07
                                          B(NiL(Ser))=10.21
                                          B(NiL(Thr))=10.31
                                          K(Ni+L+HTyr)=10.08
B(NiL(Gly))=10.62; B(NiL(Ala))=10.26; B(NiLA)=10.18; B(NiLB)=10.22.
HA=2-aminobutanoic acid, HB=norvaline
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=5.51   B2=9.67   1966MMc (50148)2801
                                          B3=13.86
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        B2=11.1         1950ALa (50149)2802
********************************************************************************
C6H13NO2               HL                    CAS 4312-93-0  (4386)
Hexanohydroxamic acid; CH3.CH2.CH2.CH2.CH2.CO.NH.OH
--------------------------------------------------------------------------------
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=5.15	B2= 9.06 B(NiH-1L2)=-0.4	2000FEc (50224)	2803

C6H13NO2 HL CAS 1606-01-5 (2907)
N,N'-Diethylglycine; (C2H5)2N.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=4.21		1954BCb (50234)	2804

C6H13NO2 HL CAS 3182-81-8 (3112)
N-Butylglycine; CH3.CH2.CH2.CH2.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=4.76	B2=8.38	1954BCb (50239)	2805

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
Ni++	gl	NaClO4	25°C	0.50M	M	M	K1=4.98	B2=9.46	1984MCa (50254)	2806

B(NiLA)=9.50; B(NiHLA)=12.07. HA=methionine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	M	M	K1=4.97	B2=9.24	1984MCb (50255)	2807

K(NiL2+A)=3.68. HA=2-Aminoethanesulfonic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=6.15	B2=11.33	1964LMa (50256)	2808

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
Ni++	gl	KNO3	25°C	0.50M	U		K1=2.08		1985WTa (50271)	2809

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
Ni++	gl	KNO3	25°C	0.50M	U		K1=2.10		1985WTa (50275)	2810

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

```
--------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 1.00M U    M   K1=6.02        1992CSb (50311)2811
                                           K(Ni(ATP)+L)=5.44
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=6.42   B2=10.74  1991KNa (50312)2812
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U    M   K1=6.12        1984GHb (50313)2813
                                           K(Ni(phen)+L=5.50
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 20°C 0.10M U        K1=6.5         1967SKb (50314)2814
                                           K(NiH-1L2+H)=11.9
By paper electrophoresis
--------------------------------------------------------------------------------
Ni++       oth KNO3   20°C 0.10M U        K1=7.7    B2=12.70  1964JMa (50315)2815
Method: paper electrophoresis
--------------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        K1=6.37   B2=10.77  1957FCa (50316)2816
--------------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        K1=6.38   B2=10.78  1953CCa (50317)2817
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        B2=6.11        1990KBa (50437)2818
                                           B(NiH-1L2)=-2.49
                                           B(NiH-2L2)=-11.08
--------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C 0.15M C        K1=3.20   B2= 5.85  1990UKb (50438)2819
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
--------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C 0.15M C        K1=2.95   B2= 5.62  1988UKa (50455)2820
Method: d.c. polarography.
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M U        B2=6.73        1986LDc (50456)2821
                                           B(NiH-2L2)=-11.58
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U  I     K1=2.65   B2=5.61   1984GMa (50457)2822
********************************************************************************
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
--------------------------------------------------------------------------------
```

```
Ni++       gl  NaCl   25°C 0.15M U        K1=3.16   B2=5.96   1988RKb (50471)2823
                                          B(NiH-1L2)=-3.08
                                          B(NiH-2L2)=-12.45
--------------------------------------------------------------------------------
Ni++       vlt NaClO4 25°C 0.15M C        K1=2.70   B2= 5.05  1988UKa (50472)2824
Method: d.c. polarography.
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U TIH    K1=5.72        2004EAa (50485)2825
Data for 5-45 C. DH(K1)=-42.51 kJ mol-1, DS=-33.1 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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=5.51        2003AHa (50486)2826
                                          K(NiL+A)=3.50
HA is 3-amino-5-mercapto-1,2,4-triazole.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U    M   K1=5.45        1987TGb (50487)2827
                                          K(Ni(phen)+L)=5.16
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U    M   K1=5.43        1985TGa (50488)2828
                                          K(Ni(bpy)+L)=4.52
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=5.31   B2= 9.72  2000KAa (50521)2829
                                          B3=12.56
                                          B(NiH-1L)=-3.27
                                          B(NiH-2L2=-10.27
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M C    M   K1=6.54   B2=12.33  1991DGa (50522)2830
                                          B(NiH-1L2)=4.99
                                          B(NiH-2L2)=-2.65
                                          B(NiH-3L2)=-11.86
                                          B(NiAL)=9.48
B(Ni2AL)=11.98.  HA=D-galacturonic acid.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U        K1=5.6    B2=10.00  1966MSa (50523)2831
********************************************************************************
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
--------------------------------------------------------------------------------
```

Ni++ gl KNO3 25°C 0.10M U K1=5.10 B2=9.10 1970CMc (50563)2832
****
C6H13O3N HL (7070)
NN-Dimethylthreonine; (CH3)2N.CH(CH(OH)CH3)COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.10M C K1=3.49 1994BPb (50595)2833
B(NiH-1L)=-5.64
****
C6H14NO2P HL (6465)
Piperidinemethylphosphinic acid; C5H10N.CH2.PO2H2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M C K1=4.45 B2=8.65 1992LBa (50630)2834
B3=12.84
****
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
---
Ni++ gl KCl 25°C 0.20M U K1=4.87 B2=9.0 1982FGa (50639)2835
K(Ni+2(H-1L))=15.43
****
C6H14N2 L (4351)
1,1-Di(aminomethyl)cyclobutane; C4H6(CH2.NH2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 25°C dil U K1=6.36 B2=10.43 1972NBa (50646)2836
****
C6H14N2 L (6517)
1,5-Diazacyclooctane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp NaNO3 25°C 0.10M U B2=13.1 1990HNa (50649)2837
****
C6H14N2 L CAS 7154-73-6 (3078)
2,2'-Aminoethylpyrrolidine; C4H8N.CH2.CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 30°C ->0 U K1=5.36 B2=8.52 1961RFa (50652)2838
****
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
--------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=7.12   B2=13.83  1970ABc (50665)2839
meso isomer
--------------------------------------------------------------------------
Ni++       gl  oth/un 20°C  ->0  U T H    K1=7.28   B2=13.22  1958BFa (50666)2840
DH(K1)=-32.2 kJ mol-1,DS=29 J K-1 mol-1; DH(K2)=-26.4,DS=25. 10 C: K1=7.50,
K2=6.10; 30 C: 7.12, 5.80; 40 C: 6.91, 5.65
--------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=7.41   B2=13.54  1956SBa (50667)2841
                                         K3=2.94
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.00  C  I M   K1=7.88   B2=14.62  1979TIa (50684)2842
                                         B3=19.16
--------------------------------------------------------------------------
Ni++       gl  oth/un 20°C  ->0  U T H    K1=7.93   B2=14.77  1958BFa (50685)2843
                                         K3=4.90
DH(K1)=-35.6 kJ mol-1,DS=29; DH(K2)=-33.1,DS=21; DS(K3)=-38.1,DS=38. 10 C:
K1=8.22,K2=7.08,K3=5.14; 30 C: 7.82, 6.71, 4.67; 40 C: 7.60, 6.49, 4.45
--------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=7.99   B2=14.98  1956SBa (50686)2844
                                         K3=5.09
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=8.4    B2=15.70  1995DDa (50702)2845
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=8.05   B2=15.90  1990CCa (50703)2846
--------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=8.49   B2=15.69  1986TSa (50704)2847
--------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.01M U        K1=8.59   B2=15.86  1982HTa (50705)2848
**************************************************************************
C6H14N2O               L                      CAS 2038-03-1  (3115)
4,2'-Aminoethylmorpholine; C4H8ON.CH2.CH2.NH2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 1.00M U        K1=3.78         1956HFb (50717)2849
**************************************************************************
C6H14N2O               L                      CAS 10466-61-2  (3116)
L-Leucine amide; H2N.CH(CH2.CH(CH3)2).CO.NH2
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.01M	U		K1=2.98	B2=5.53	1959DLb (50722)	2850

C6H14N2O2 HL Lysine CAS 56-87-1 (41)
2,6-Diaminohexanoic acid; H2N.(CH2)4.CH(NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=5.80		1999BIa (50791)	2851
Ni++	gl	NaClO4	25°C	0.10M	C		B2=9.96 B(NiHL)=15.60 B(NiH2L2)=30.47 B(NiH3L3)=43.95 B(NiHL2)=20.68		1987LMa (50792)	2852
Ni++	gl	NaCl	37°C	0.15M	U		K1=5.6 B(NiHL)=15.08 B(NiHL2)=20.12 B(NiH2L2)=29.50 B(NiH-1L)=-3.26	B2=9.76	1985CFb (50793)	2853
Ni++	gl	KCl	25°C	0.20M	C		B3=12.31 B(NiHL)=15.50 B(NiHL2)=20.38 B(NiH2L2)=30.22 B(NiHL3)=23.18; B(NiH2L3)=33.55; B(NiH3L3)=43.67		1981FGb (50794)	2854
Ni++	gl	KNO3	25°C	0.10M	C		K1=5.75 B(NiHL)=15.60 B(NiH2L2)=30.49 B(NiH3L3)=44.05 B(NiH2L3)=34.26 B(NiHL2)=20.43	B2=10.34	1976BPb (50795)	2855
Ni++	gl	NaNO3	25°C	1.00M	U	M	K1=5.47 B3=10.98 B(NiL(Met))=10.00	B2=9.00	1973BJd (50796)	2856
Ni++	gl	oth/un	20°C	0.01M	U		B2=8.8		1952ALa (50797)	2857

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
Ni++	gl	KCl	25°C	0.50M	C		K1=6.90	B2=14.28	1993LEb (50843)	2858

B(NiH-1L2)=6.06

****

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
Ni++	gl	KCl	25°C	0.50M	C		K1=6.571	B2=13.90	1988LEa	(50849)2859
							B(NiH-1L2)=6.17			

****

C6H14N2O2 HL (5984)
Leucinehydroxamic acid; NH2.CH(CH2.CH(CH3)2).CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=6.18	B2=13.150	1990KBb	(50859)2860
							B(NiL2(OH))=4.70			

****

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
Ni++	gl	NaNO3	25°C	0.15M	C	T H	K1=5.70	B2=9.88	1989DZa	(50867)2861
							B3=11.7			
							B(NiHL)=14.393			
							B(NiH2L)=19.1			
							B(NiHL2)=19.42			

Also B(NiH2L2)=28.14; B(Ni2L2)=13.96; B(Ni2H-2L2)=-4.80; B(Ni3H-2L2)=-0.92.
Also data at 18, 37 and 47 C and derived DH and DS values.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=4.76	B2=8.74	1965NCa	(50868)2862

****

C6H14N2S L (5635)
1-Thia-4,7-diazacyclononane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=11.09	B2=21.10	1992WLb	(50880)2863
Ni++	gl	NaNO3	25°C	0.10M	U		K1=10.82	B2=20.77	1987HDa	(50881)2864
Ni++	gl	NaNO3	25°C	0.10M	U		K1=10.45	B2=20.05	1983HBb	(50882)2865

****

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
Ni++	gl	diox/w	25°C	50%	C	I	K1=4.133	B2= 6.35	1992BRb	(50899)2866

B(NiHL2)=9.351
Data for 10-60% v/v dioxane/H2O and 10-60% DMF/H2O. In 50% DMF/H2O, K1=4.052, B(NiHL)=5.694, B(NiHL2)=10.306.

Ni++ gl NaNO3 25°C 0.20M U K1=2.56 B2=4.96 1974FSa (50900)2867
B3=6.56

****

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
Ni++	gl	KNO3	25°C	0.10M	U		K1=5.04		1984MDc (50918)	2868
							K(NiL=NiH-2L+2H)=-16.06			
Method: batch technique.										
Ni++	kin	NaClO4	25°C	0.10M	U				1978PPa (50919)	2869
							K(NiH-2L+H)=11.54			
Ni++	gl	KCl	25°C	0.50M	U		K1=5.32		1971KAb (50920)	2870
							K(NiH-2L+2H)=16.46			
Ni++	gl	KCl	25°C	1.00M	U		K1=5.65	B2=8.81	1970BMa (50921)	2871
							K(NiH-2L+2H)=16.50			
Ni++	gl	KNO3	25°C	0.10M	U		K1=5.38	B2=8.50	1969BMc (50922)	2872
							K(NiH-2L+2H)=16.04			
Ni++	gl	KCl	25°C	1.0M	U		K1=5.42		1953CGa (50923)	2873
							K(NiH-1L+H)=7.04			
							K(NiH-2L+H)=8.94			

****

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
Ni++	gl	NaNO3	25°C	0.10M	U		K1=4.88	B2= 8.89	1991APa (50975)	2874
							B3=12.04			
Ni++	gl	KNO3	25°C	0.10M	C				1976BPb (50976)	2875
							B(NiHL)=17.06			
							B(NiH2L2)=33.15			
							B(NiH3L3)=48.38			
							B(NiH2L3)=37.62			
Ni++	gl	KNO3	25°C	0.10M	U		K1=5.18	B2=9.49	1970CMc (50977)	2876
Ni++	gl	oth/un	25°C	?	U	T	K1=4.92	B2=9.12	1960PEd (50978)	2877
							K3=3.08			

17 C: K1=4.98, K2=4.32, K3=3.21; 30 C: 4.86, 4.14, 3.03; 35 C: 4.83, 4.10, 2.93; 40 C: 4.77, 4.04, 2.85

Ni++ gl oth/un 20°C 0.01M U B2=9.2 1952ALa (50979)2878

****

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
Ni++	gl	KCl	25°C	0.20M	C		1992FKa	(51030)	2879
							B(NiHL)=17.15		
							B(Ni2L2)=27.79		
Ni++	gl	KCl	25°C	0.50M	C		B2=13.83	1990LEa	(51031) 2880
							B(Ni2HL)=31.26		
							B(Ni3L4)=42.34		

****

C6H14O8P2 H4L CAS 36011-96-8 (4391)

trans-1,2-Cyclohexanediol diphosphate; C6H10(OPO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	R4N.X	20°C	0.10M	U		K1=4.72	1969HRa	(51113) 2881
							K(Ni+HL)=2.42		

Medium: (C3H7)4NI

****

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
Ni++	ISE	R4N.X	25°C	2.00M	U		K1=2.79 B2=4.97	1969MPd	(51144) 2882
							K3=1.74		
							K4=1.31		
							K5=0.65		

Medium: NH4NO3

****

C6H15N L Triethylamine CAS 121-44-8 (1340)

N,N,N-Triethylamine; (C2H5)3N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	oth/un	20°C	?	U	T M		1979CDb	(51171) 2883
							K(NiA+L)=2.25		

Method: GLC. K=1.81 (40 C), 1.61 (50 C), 1.55 (59 C), 1.24 (79 C)

A=7,7,11,11-tetramethylheptadecane-8,10-dionate

****

C6H15NO L CAS 100-37-8 (3117)

N,N-Diethyl-2-aminoethanol; (CH3.CH2)2N.CH2.CH2.OH

```
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  0.0  M  I     K1=1.50        1987AAb (51193)2884
Extrapolated from data at I=1.0 M KNO3.
*******************************************************************************
C6H15NO2                L                      CAS 110-97-4  (944)
Di-isopropanolamine; CH3.CH(OH).CH2.NH.CH2.CH(OH).CH3
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 1.00M U        K1=3.50   B2=5.61   1982RMa (51205)2885
                                         K3=0.99
*******************************************************************************
C6H15NO3                     Triethanolamine  CAS 102-71-6  (447)
Tris-(2-hydroxyethyl)amine;                                              L
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U   H    K1=2.99        1989KRb (51252)2886
Medium: dimethylformamide
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=2.76   B2=6.36   1984HNa (51253)2887
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.50M C  I     K1=2.85   B2=2.99   1982ABd (51254)2888
                                         K(2NiL=Ni2(OH)2L2+2H)=-14.8
Medium: 0.5 M triethanolamine-HClO4
-------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U        K1=2.90        1975KDa (51255)2889
Medium: MeOH
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 1.00M U        K1=2.92   B2=4.74   1972BSd (51256)2890
                                         B(Ni2L2)=7.45
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.43M U        K1=3.43   B2=5.63   1966SKe (51257)2891
                                         K3=1.37
Medium: CH2OHCH2.NH3NO3
-------------------------------------------------------------------------------
Ni++       EMF NaClO4   ?   2.0M U        K1=2.95        1963CAc (51258)2892
                                         B(Ni2L2(OH)2)=18.2
                                         B(Ni4L4(OH)6)=47.8
By spectrophotometry: K1=3.06, K(Ni4L4(OH)6+2L+2OH)=-1.7
K(Ni2L3(OH)4+4OH=2NiL(OH)4+3L)=-2.4
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.50M U        K1=2.27   B2=3.09   1963SGc (51259)2893
*******************************************************************************
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
```

```
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.05M U        K1=3.13        1986VGa (51334)2894
                                          B(NiH-1L)=-2.32
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.05M U T      K1=3.13        1986VGb (51335)2895
                                          B(NiHL)=5.45
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 20°C 0.10M U TI     K1=7.26   B2=13.20  1986NDb (51349)2896
********************************************************************************
C6H15N3                 L                      CAS 26150-46-9  (149)
1,3,5-cis,cis-Triaminocyclohexane; C6H9.(NH2)3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       cal NaClO4 25°C 0.10M U   H                    1980FMa (51364)2897
DH1 = -36.8 kJ mol-1, DS1 = 73.6, DH(K2)=-36.0, DS(K2)=-2.1
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=9.88        1971CWa (51365)2898
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M        K1=16.2        1976YZa (51390)2899
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=13.6   B2=25.40  1973AHc (51391)2900
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        B2=16.12       1996OGa (51419)2901
                                          B(NiHL)=16.73
                                          B(NiH2L2)=34.56
                                          B(NiHL2)=26.40
                                          B(NiH-1L2)=5.43
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M C                       1993LEa (51420)2902
                                          B(NiHL)=16.93
                                          B(NiH2L2)=34.87
                                          B(NiHL2)=27.70
********************************************************************************
C6H15N3O2              HL    DTMA              CAS 55682-20-7  (2334)
```

N,N-Bis(2-aminoethyl)glycine; (H2N.CH2.CH2)2N.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=14.37 K(NiL+H)=4.65	1975MMe (51433)	2903

****

C6H15N3O3 L (6613)

1,3,5-Triamino-1,3,5-trideoxy-cis-inositol,5-Amino-5-deoxy-streptamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=12.37 B2=20.94	1992HGa (51443)	2904

****

C6H15N5O L (3118)

Methoxypropylbiguanide; CH3O.NH.C(:NH).NH.C(:NH).NH.CH2.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	KCl	30°C	0.20M	U		B2=11.75	1960SRa (51463)	2905

****

C6H15N5O2 L CAS 5699-67-2 (6357)

2-Amino-5-((Aminoiminomethyl)amino)-N-hydroxypentanamide, Arginine hydroxamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=5.90 B2=13.30 B(NiH-1L2)=5.52	1996OGa (51468)	2906
Ni++	gl	KCl	25°C	0.50M	C		K1=5.81 B2=13.093 B(NiH-1L2)=4.87 B(Ni2H-1L2)=9.73	1991LNa (51469)	2907

****

C6H15ON3 HL (2937)

N,N-Diethyl-2-aminoacetamidoxime; (C2H5)2N.CH2.C(:NOH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaCl	25°C	1.00M	C		K1=2.21 K(2Ni+2L=Ni2H-2L2+2H)=-8.34 K(4Ni+4L=Ni4H-6L4+6H)=-28.96	1989SOa (51477)	2908

****

C6H15O2PS2 HL (2059)

O,O'-Dipropyl dithiophosphoric acid; (C3H7O)2P(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	ISE	alc/w	25°C	90%	U		K1=2.33 B2=4.24	1972TCa (51480)	2909

Medium: 90% EtOH, 0.3 M NaClO4

```
Ni++       cal non-aq 30°C 100%  U    M                  1971DGb (51481)2910
                                       K(NiL2+py)=1.18
                                       K(NiL2(py)+py)=1.43
Medium: benzene
------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U    M                  1970NYa (51482)2911
                                       K(NiL2+py)=1.40
                                       K(NiL2+bpy)=6.37
                                       K(NiL2+2py)=3.46
Medium: benzene
******************************************************************************
C6H15O2PS2             HL                     CAS 25134-38-7  (4401)
Phosphorodithioic acid O,O-diisopropyl ester; (CH3.CH(CH3)O)2PS.SH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U    M                  1977FMa (51493)2912
                                       K(NiL2+A)=2.51
                                       K(NiL2A+A)=2.72
Medium: toluene. A=4-picoline
------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C  75%  U        B2=5.24        1970BPd (51494)2913
Medium: 75% MeOH, 0.4 M NaClO4
------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U    M                  1970NYa (51495)2914
                                       K(NiL2+py)=1.23
                                       K(NiL2+bpy)=6.82
                                       K(NiL2+2py)=2.84
Medium: benzene
******************************************************************************
C6H15O3P                L                      CAS 122-52-1  (1723)
Triethylphosphite; (C2H5O)3P
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U                       1974TSa (51507)2915
                                       K4<10
Medium: benzene
------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U    M                  1973GTc (51508)2916
                                       K(NiBr2+4L)=10.76
                                       K(NiI2+4L)=11.94
Medium: EtOH
******************************************************************************
C6H15P                  L                      CAS 554-70-1  (166)
Triethylphosphine; (C2H5)3P
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U                       1974TSa (51545)2917
```

K4=1.9
Medium: benzene

Ni++ sp alc/w 20°C 100% U TI M 1969RGb (51546)2918
K(NiL2(CN)2+L)=1.13
Medium: EtOH. Temperature range 0-30C.K(0 C)=1.73, K(30 C)=0.88
Medium: dichloroethane: K(0 C)=1.01, K(20 C)=0.28
****
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
---
Ni++ ISE alc/w 25°C 90% U K1=2.75 1972TCa (51551)2919
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
---
Ni++ gl NaNO3 25°C 0.10M M K1=1.75 2002FGb (51567)2920
****
C6H16N2 L CAS 20485-44-3 (3667)
2,3-Dimethyl-2,3-diaminobutane; (CH3)2.C(NH2).C(NH2)(CH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp KNO3 39°C 0.50M U T H B2=14.32 1954BCa (51590)2921
B2=14.87(15 C),14.68(25 C). By calorimetry, 0 C:DH(B2)=-58.9 kJ mol-1,DS=84
****
C6H16N2 L CAS 19764-59-1 (6276)
3,3-Dimethyl-1,2-diamino-butane; NH2.CH2.CH(NH2).C(CH3)2.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M C K1=8.00 B2=14.67 1974YKa (51595)2922
****
C6H16N2 L CAS 111-74-0 (970)
N,N'-Diethyl-1,2-diaminoethane; C2H5.NH.CH2.CH2.NH.C2H5

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp NaClO4 25°C 0.10M U K1=5.67 1972TRb (51606)2923

Ni++ kin NaClO4 25°C 0.10M U K1=5.81 1972TRb (51607)2924

Ni++ gl NaClO4 25°C var U 1965NKe (51608)2925
K1=5.50+1.112I-1.078I^(3/2)+0.380I^(2)
K2=2.36+1.168I-1.318I^(3/2)+0.536I^(2)

Ni++ cal KNO3 25°C 0.50M U H K1=5.62 B2=8.9 1954BMa (51609)2926
DH(B2)=-32.6 kJ mol-1, DS=113 J K-1 mol-1. At 0 C: K1=7.42, K2=4.76, K3=2.0
****
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
---
Ni++ sp NaClO4 25°C 0.10M U K1=3.57 1972TRb (51637)2927

Ni++ gl KNO3 25°C 0.50M U B2=14.68 1954BCa (51638)2928
****
C6H16N2 L CAS 100-36-7 (3081)
N,N-Diethyl-1,2-diaminoethane; H2N.CH2.CH2.N(CH2.CH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp NaClO4 25°C 0.10M U K1=4.57 1972TRb (51659)2929

Ni++ kin NaClO4 25°C 0.10M U K1=4.80 1972TRb (51660)2930
****
C6H16N2 L CAS 19522-69-1 (3080)
N-Butylethylenediamine; CH3.CH2.CH2.CH2.NH.CH2.CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 0°C 0.50M U T H K1=7.25 B2=13.22 1952BMa (51665)2931
K3=2.79
DH(K1)=-31.4 kJ mol-1,DS=21 J K-1 mol-1; DH(K2)=-41.4,DS=-40; DH(K3)=-16.3,
DS=-17. 25 C: K1=6.73, K2=5.56, K3=2.20

Ni++ gl KNO3 13°C 0.50M U H 1952BMb (51666)2932
0-25 C: At 0 C: DH(K1)=-32.6 kJ mol-1, DS=20.1 J K-1 mol-1; DH(K2)=-25.5,
DS=21.3; DH(K3)=-36.8, DS=-81.1
****
C6H16N2OS L (3128)
3-Oxa-6-thiaoctane-1,8-diamine; H2N.CH2.CH2.O.CH2.CH2.S.CH2.CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl none 20°C 0.0 U T H K1=6.38 1959LBb (51669)2933
K1=6.61(10 C); 6.17(30 C), 6.01(40 C). DH(K1)=-34.3 kJ mol-1, DS=4
****
C6H16N2O2 L CAS 3197-06-6 (7963)
2-Amino-N,N-bis(2-hydroxyethyl)ethylamine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaCl 25°C 0.16M U K1=6.89 2001SRa (51673)2934

K(Ni+HL)<2
*K(NiL)=-9.7
*K(NiH-1L)=-10.9

****

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
Ni++	gl	oth/un	25°C	0.50M	U		K1=6.67 B2=10.87	1960HDa (51683)	2935

****

C6H16N2O4P2 H2L (6466)
Piperazine-1,4-diylbis(methylene)bis(phosphinic acid); H2O2P.CH2.C4H8N2.CH2.PO2H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	C		K1=3.16	1992LBa (51705)	2936
							B(NiH2L2)=17.98		

****

C6H16N2S L CAS 82971-05-9 (1867)
1,4-Diaza-7-thianonane; H2N.CH2.CH2.NH.CH2.CH2.S.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U	H	K1=7.063 B2=12.92	1979HGa (51713)	2937

DH1=-37.7 kJ mol-1 DS1=11.8 J K-1 mol-1 DH(K2)=-45.6 kJ mol-1
DS(K2)=-45 J K-1 mol-1

****

C6H16N2S L (1869)
1,5-Diaza-8-thianonane; H2N.CH2.CH2.CH2.NH.CH2.CH2.S.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U	H	K1=6.881	1979HGa (51716)	2938

DH1=-34.0 kJ mol-1 DS1=17 J K-1 mol-1

****

C6H16N2S L (1297)
2-Aza-2'-methyl-5-thia-7-amino-heptane; CH3.N(CH3).(CH2)2.S.(CH2)2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		K1=4.52	1981HGa (51729)	2939
							K(Ni+HL)=2.40		
							K(Ni+L+HL)=6.17		

****

C6H16N2S L (1298)
2-Aza-5-thia-8-amino-octane; CH3.NH.(CH2)2.S.(CH2)3.NH2

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

```
Ni++       gl  KNO3   25°C 0.50M U        K1=5.26        1981HGa (51734)2940
                                          K(Ni+HL)=2.73
                                          K(NiHL+HL)=2.5
                                          K(Ni+L+HL)=7.17
**************************************************************************
C6H16N2S                L                          (6464)
5-Thia-2,8-diazanonane;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=5.91        1992WLb (51737)2941
**************************************************************************
C6H16N2S2               L                          (3120)
3,6-Dithiaoctane-1,8-diamine; H2N.CH2.CH2.S.CH2.CH2.S.CH2.CH2.NH2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=7.41        1977ASg (51751)2942
--------------------------------------------------------------------------
Ni++       gl  KCl    30°C  1.0M U T H    K1=7.90        1954GFa (51752)2943
K1=8.86(0 C), 7.38(50 C). DH(K1)=-50 kJ mol-1, DS=-13 J K-1 mol-1
**************************************************************************
C6H16N10                L                          (4261)
Ethylenebisbiguanide; (H2N.C(:NH).NH.C(:NH).NH.CH2.)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       sp  none   25°C 0.00  U        K1=19.5        1969LMa (51766)2944
--------------------------------------------------------------------------
Ni++       gl  oth/un 32°C 0.05M U        B2=15.16       1956SRb (51767)2945
**************************************************************************
C6H16O6P2             H4L                     CAS 4721-22-6  (3708)
Hexane-1,6-diphosphonic acid; H2O3P(CH2)6PO3H2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=3.71        1967KLa (51786)2946
**************************************************************************
C6H16P2                 L    DMPE               CAS 23936-60-9  (1722)
1,2-Bis(dimethylphosphino)ethane; (CH3)2P.CH2.CH2.P(CH3)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U                       1974TSa (51796)2947
                                          K4>10
Medium: benzene
**************************************************************************
C6H17NO6P2                                    CAS 5995-28-8  (1339)
N-t-Butyliminobis(methylenephosphonic) acid; (CH3)3CN(CH2PO3H2)2        H4L
--------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 1.00M M                         1982BGb (51809)2948
                                      K(Ni+HL)=4.05
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=9.14         2001DSa (51815)2949
                                      K(NiL+H)=4.5
                                      K(NiL+OH)=3.0
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=9.14         2001DSa (51816)2950
                                      K(NiL+H)=4.5
                                      K(NiL+OH)=3.0
*************************************************************************
C6H17N3                 L                       CAS 54473-27-7  (171)
1,1,1-Tris(aminomethyl)propane; (H2N.CH2)3C.CH2.CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.50M C   H                    1980SVa (51833)2951
DH1=-42.3 kJ mol-1,DS1=58.5, DH(K2)=-46.3,DS(K2)=-12, also NiHL, NiHL2
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M C        K1=10.468 B2=17.97  1977MSc (51834)2952
*************************************************************************
C6H17N3                 L                       CAS 35513-87-2  (292)
1,4,9-Triazanonane, 3-Azaheptane-1,7-diamine; H2NCH2CH2NHCH2CH2CH2CH2NH2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M C        K1=7.81   B2=11.89  1975BPd (51846)2953
                                      K(Ni+HL)=6.026
                                      K(Ni+2HL)=10.60
                                      K(Ni+L+HL)=11.62
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M U    M                    1996UBa (51876)2954
                                      B(Ni(catecholate)L)=16.69
                                      B(Ni(oxalate)L)=11.55
                                      B(Ni(malonate)L)=10.50
                                      B(Ni(gly)L)=13.56
B(Ni(beta-Ala)L)=12.50, B(Ni(en)L)=15.04, B(Ni(1,3-pn)L)=14.16,
```

B(Ni(2-aminophenol)L)=12.26.

Ni++ gl diox/w 30°C 50% U M K1=10.14 1987PCb (51877)2955
K(CuA+L)=9.71
K(CuB+L)=9.20
K(Cu(bpy)+L)=8.02
K(Cu(phen)+L)=8.04
K(Cu(dipyridylamine)+L)=8.06; K(Cu(2-(2'-pyridyl)imdazoline)+L)= 7.74
A=5-nitrophenanthroline, B=2-(2'-pyridyl)benzimidazole

Ni++ gl KNO3 25°C 0.10M U K1=9.2 B2=13.10 1973AHc (51878)2956

Ni++ cal KCl 25°C 0.10M U H 1966PNa (51879)2957
DH(K1)=-44.1 kJ mol-1, DS=27.6 J K-1 mol-1, DH(K2)=-29.7, DS=-31

Ni++ gl KCl 25°C 0.10M U K1=9.19 B2=12.74 1966VAa (51880)2958

Ni++ gl KNO3 30°C 1.0M U T H K1=9.09 1956HFb (51881)2959
DH(K1)=-42 kJ mol-1, DS=38 J K-1 mol-1. K1=10.25(0 C), 8.88(50 C)
****
C6H17N3O L CAS 58145-14-5 (7964)
2-Hydroxy-N,N-bis(2-aminoethyl)ethylamine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaCl 25°C 0.16M U K1=10.65 2001SRa (51921)2960
K(Ni+H2L)<2
K(Ni+HL)=6.27
*K(NiL)=-9.03
****
C6H18N2O4P2 H2L (7261)
1,2-Diaminoethane-N,N'-bis-(dimethylenemethylphosphinic acid); (CH2NHCH2PO(OH)CH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl R4N.X 25°C 0.10M M K1=8.35 1996BCa (51926)2961
Medium: 0.1 M Me4NNO3.
****
C6H18N2O6P2 H4L CAS 85416-96-2 (1364)
Diaminoethane-N,N'-diethylphosphonic acid; (H2O3P.CH2.CH2.NH.CH2.)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 25°C 0.10M U K1=12.99 1976MDa (51932)2962
K(Ni+HL)=10.64
K(Ni+H2L)=5.48
****
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
Ni++	gl	KNO3	25°C	0.10M	C		K1=13.96 K(NiL+H)=5.70 K(NiL+OH)=1.8 K(NiHL+H)=4.7	2001DSa	(51938)2963
Ni++	gl	KNO3	25°C	0.10M	C		K1=13.96 K(NiL+H)=5.70 K(NiHL+H)=4.7 K(NiL+OH)=1.8	2001DSa	(51939)2964
Ni++	gl	oth/un	25°C	0.10M	U		K1=14.67 K(Ni+HL)=9.19 K(Ni+H2L)=5.96	1976MDa	(51940)2965

****

C6H18N2O6P2 H4L (7487)
N,N-Dimethyldiaminoethane-N',N'-dimethyldiphosphonic acid;
(CH3)2N.CH2CH2.N(CH2PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=13.79 K(NiL+H)=5.75 K(NiL+OH)=1.3 K(NiHL+H)=4.5	2001DSa	(51959)2966
Ni++	gl	KNO3	25°C	0.10M	C		K1=13.79 K(NiL+H)=5.75 K(NiHL+H)=4.5 K(NiL+OH)=1.3	2001DSa	(51960)2967

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	1.00M	C	H	K1=14.45 B(NiHL)=19.95	1982ABc	(52035)2968
Ni++	gl	NaCl	25°C	0.15M	C		K1=14.34 B2=20.64 B(NiH2L2)=37.28 B(Ni2L3)=40.05 B(Ni2HL3)=49.20 B(Ni2H2L3)=55.02	1979LPa	(52036)2969
Ni++	gl	alc/w	25°C	65%	U	I	K1=13.13	1972RBa	(52037)2970

By calorimetry: DH1=-56.9 kJ mol-1, DS1=86.2

Medium: 40-99% MeOH, 0.1 M NaClO4. K1(40%)=14.62, K1(99%)=13.84

Results questionable because of slow formation kinetics

Ni++ gl oth/un 25°C 0.10M U M 1972SBa (52038)2971
K(Ni(phen)+L)=13.60
K(Ni(phen)+HL)=8.22

Ni++ gl KNO3 25°C 0.10M U T M 1971IVa (52039)2972
K(NiL+Gly)=4.34
K(NiL+Gly)(15 C)=4.41, (50 C)=3.90, (70 C)=3.69

Ni++ sp KNO3 20°C 0.10M U K1=13.93 1971MAl (52040)2973
K(Ni+HL)=8.73

Ni++ gl KCl 25°C 0.50M U K1=14.4 B2=18.6 1970WBa (52041)2974
B(Ni2L3)=36.9

Ni++ cal KNO3 25°C 0.10M U HM 1965WHa (52042)2975
DH(K1)=-58.1 kJ mol-1, DS=75.2 J K-1 mol-1. Ternary complexes with oxalate

---

Ni++ kin NaClO4 25°C 0.10M U K1=13.82 1963MRa (52043)2976
K(Ni+HL)=8.7
K(NiL+H)=4.7

Ni++ cal KCl 25°C 0.10M U H 1961SPb (52044)2977
DG(K1)=-78.78 kJ mol-1, DH=-58.6, DS=66.9 J K-1 mol-1

Ni++ gl KCl 25°C 0.10M U K1=14.1 1957RSb (52045)2978

Ni++ gl KNO3 40°C 1.0M U T H 1952JHa (52046)2979
B(Ni3L2)=5.41
Medium: 1 M (KNO3+KCl). B(Ni3L2)=5.63(30C), DH=-37.6 kJ mol-1; DH(K1)=-54.3

Ni++ gl oth/un 30°C 1.0M U T K1=14.34 B2=19.97 1952JHa (52047)2980
40 C: K1=14.01, B2=19.42

Ni++ gl KCl 20°C 0.10M U K1=14.0 1950SCa (52048)2981
K(Ni+HL)=8.9

****

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

---

Ni++ gl NaClO4 25°C 1.00M C K1=14.95 1994AGa (52159)2982

Ni++ gl oth/un 25°C 0.10M C K1=14.6 1982MMb (52160)2983
K(NiLOH+H)=9.8

Ni++ gl KNO3 25°C 0.10M U K1=14.50 1975APc (52161)2984

```
Ni++       gl  R4N.X  25°C 0.10M C        K1=14.44       1975JTa (52162)2985
-------------------------------------------------------------------------------
Ni++       sp  KCl    20°C 0.50M U        K1=14.81       1970MAh (52163)2986
                                          K(Ni+HL)=9.85
-------------------------------------------------------------------------------
Ni++       cal KCl    25°C 0.10M U   H                   1960PCa (52164)2987
DG(K1)=-83.18 kJ mol-1, DH=-63.4, DS=67 J K-1 mol-1
-------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=14.8        1950PSa (52165)2988
                                          K(Ni+H2L)=4
                                          K(Ni+HL)=9
*******************************************************************************
C6H19N2O9P3           H6L                        (8063)
N-Methylethylenediamine-N,N',N'-trimethylenetris(phosphonic acid);
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=15.88       2001DSa (52231)2989
                                          K(NiL+H)=7.42
                                          K(NiH2L+H)=4.41
                                          K(NiHL+H)=5.46
                                          K(NiH3L+H)=3.1
K(NiL+OH)=2.4
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=15.88       2001DSa (52232)2990
                                          K(NiL+H)=7.42
                                          K(NiHL+H)=5.46
                                          K(NiH2L+H)=4.41
                                          K(NiH3L+H)=3.1
K(NiL+OH)=2.4
*******************************************************************************
C6H20N2O8P4           H4L                     CAS 938-16-3  (4402)
Ethylenediaminetetra(methylenephosphonous acid);
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=8.44        1971MMh (52244)2991
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=16.64       2001DSa (52279)2992
                                          K(NiL+H)=8.92
                                          K(NiH2L+H)=5.43
                                          K(NiHL+H)=7.32
                                          K(NiH3L+H)=4.3
K(NiL+OH)=1.4
-------------------------------------------------------------------------------
```

```
Ni++       gl  KNO3   25°C 0.10M C        K1=16.64       2001DSa (52280)2993
                                          K(NiL+H)=8.92
                                          K(NiHL+H)=7.32
                                          K(NiH2L+H)=5.43
                                          K(NiH3L+H)=4.3
K(NiL+OH)=1.4
-------------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M C        K1=11.76       1995JWa (52281)2994
                                          K(NiL+H)=8.80
                                          K(NiH2L+H)=5.68
                                          K(NiHL+H)=7.77
                                          K(NiH3L+H)=4.09
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=16.38       1976MMa (52282)2995
                                          K(NiL+H)=8.94
                                          K(NiHL+H)=7.40
                                          K(NiH2L+H)=5.48
                                          K(NiH3L+H)=4.33
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U                       1971MMb (52283)2996
                                          K(NiL+H)=9.03
                                          K(NiHL+H)=7.47
                                          K(NiH2L+H)=5.51
                                          K(NiH3L+H)=4.57
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=15.30       1967KDa (52284)2997
                                          K(Ni+HL)=12.00
                                          K(Ni+H2L)=9.12
                                          K(Ni+H3L)=6.77
                                          K(Ni+H4L)=4.72
K(Ni+H5L)=2.34
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       kin oth/un 25°C  0.3M U T                     1994SWa (52436)2998
                                          K(Ni+HL)=2.74
At 15 C: K=2.68, 30 C: 2.77, 35 C: 2.80. Data at pH 6.0
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U    M   K1=3.60        1992ASa (52437)2999
                                          K(NiL+ser)=5.20
                                          K(NiL+thr)=5.60
                                          K(NiL+asp)=9.30
                                          K(NiL+HA)=4.53
HA is lysine
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C  0.3M U        K1=3.84        1987DSc (52438)3000
                                          K(Ni+HL)=0.60
```

```
--------------------------------------------------------------------------------
Ni++       sp  none   25°C  0.0  C        K1=4.13        1983SGd (52439)3001
--------------------------------------------------------------------------------
Ni++       EMF NaClO4 30°C 0.10M U    M   K1=4.11        1978JSa (52440)3002
                                          B(NiLA)=7.54
                                          B(NiL(Glu))=9.21
H2A=thiodipropanoic acid
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U    M                  1978JSc (52441)3003
                                          B(NiAL)=12.86
                                          K(NiA+L)=3.46
                                          K(NiL+A)=8.75
H2A is 5-hydroxysalicylic acid.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U        K1=4.11        1978JSc (52442)3004
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M C        K1=4.05        1975CTb (52443)3005
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C  0.0  C T H    K1=5.29        1975DNd (52444)3006
DH(K1)=17.23 kJ mol-1, DS=159.0 J mol-1 K-1. Calculated from 0.1 M KCl by
the Davies equation. Values also at 35 and 45 C
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U        K1=4.11        1975JKa (52445)3007
--------------------------------------------------------------------------------
Ni++       EMF NaClO4 30°C 0.10M U        K1=4.11        1972JKa (52446)3008
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M U        K1=4.80        1970DDa (52447)3009
********************************************************************************
C7H4N4O4                L                      CAS 50365-37-2  (7762)
5,6-Dinitrobenzimidazole;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M M        K1=1.23        1999KSa (52514)3010
                                          K(Ni+H-1L)=3.31
                                          *K(NiL)=-6.84
********************************************************************************
C7H4O2Cl2              HL                     CAS 90-60-8  (3743)
2-Hydroxy-3,5-dichlorobenzaldehyde (3,5-dichlorosalicylaldehyde)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF diox/w 20°C  50%  U        K1=3.0         1963CCa (52522)3011
Medium: 50% dioxan, 0.3 M NaClO4
********************************************************************************
C7H4O3Br2              H2L                    CAS 3147-55-5  (1116)
3,5-Dibromosalicylic acid; C6H2(OH)(Br)2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Ni++       gl  NaClO4 30°C 0.10M U      T K1=6.10        1975JKa (52538)3012
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U      T K1=5.98        1975JKa (52551)3013
**************************************************************************
C7H5NOS                HL                      CAS 7405-23-4  (3177)
4-Hydroxybenzothiazole;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=7.35   B2=13.46  1960FFa (52586)3014
**************************************************************************
C7H5NO4               H2L    Quinolinic acid  CAS 89-00-9  (567)
2,3-Pyridinedicarboxylic acid; C5H3N.(COOH)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=4.5    B2=7.5    1958YYa (52613)3015
**************************************************************************
C7H5NO4               H2L                      CAS 499-80-9  (566)
2,4-Pyridinedicarboxylic acid; C5H3N.(COOH)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=4.6    B2=7.8    1958YYa (52642)3016
**************************************************************************
C7H5NO4               H2L                      CAS 100-26-5  (2528)
2,5-Pyridinedicarboxylic acid, Isocinchomeronic acid; C5H3N.(COOH)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U T H    K1=4.56   B2=8.80   1983PSd (52661)3017
30 C: K1=4.45, K2=4.14; 40 C: K1=4.34, K2=4.03
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M   K1=5.15        1999DSb (52715)3018
                                          B(NiAL)=8.60
A is thiamine hydrochloride.
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M   K1=5.60        1996AEa (52716)3019
Data for ternary complexes with aspartic acid, serine, asparagine and
N-(2-acetamido)iminodiacetic acid
```

Ni++ gl NaClO4 25°C 0.20M C M 1990UBc (52717)3020
B(Ni(Gly)L)=12.20
B(Ni(Ala)L)=11.90
B(Ni(Phe)L)=11.78
B(Ni(HTyr)L)=11.90
B(Ni(Trp)L)=12.89; B(Ni(en)L)=14.36, B(Ni(1,3-pn)L)=13.42, B(Ni(oxalate)L)=
10.35, B(Ni(catecholate)L)=14.82 plus many others

Ni++ gl NaClO4 25°C 0.20M U M K1=7.05 B2=13.72 1984PRa (52718)3021
B(NiL(en)) = 14.232

Ni++ gl diox/w 25°C 50% U B2=17.88 1977MSe (52719)3022

Ni++ EMF NaNO3 20°C 0.10M U K1=6.95 B2=13.50 1960ANb (52720)3023

Ni++ gl KCl 30°C 0.10M U K1=8 B2=14.1 1957TBb (52721)3024
****
C7H5NO4 HL CAS 97-51-8 (1887)
5-Nitrosalicylaldehyde; O2N.C6H3(OH).CHO

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 50% U T K1=3.80 B2=6.93 1973CGc (52931)3025
Medium: 50% dioxan, 0.3 M NaClO4. Temperature range 15-50 C
K1(15 C)=4.10, K1(50 C)=3.21, K2(15 C)=3.44, K2(50 C)=2.81
****
C7H5NO4S2 H2L (3178)
4-Hydroxybenzothiazole-7-sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 50% U K1=8.1 B2=14.0 1962FFa (52946)3026
****
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
---
Ni++ sp none 25°C 0.0 C K1=5.89 1983SGd (52962)3027

Ni++ gl NaClO4 30°C 0.10M U T K1=5.96 1975JKa (52963)3028

Ni++ EMF NaClO4 30°C 0.10M U K1=5.96 1972JKa (52964)3029

Ni++ oth diox/w 30°C 25% U K1=6.22 B2=12.22 1972KAe (52965)3030
Medium: 25% dioxan, 0.1 M NaClO4
****
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
--------------------------------------------------------------------------------
Ni++       sp  none   25°C  0.0  C        K1=5.46        1983SGd (52984)3031
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       kin NaNO3  25°C 0.30M U    M                  1993HWa (53017)3032
                                        K(NiA+L)=3.69
H2A: diaminoethane-N,N-diethanoic acid.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=6.68        1980MSa (53018)3033
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.15M U                       1980YAa (53019)3034
                                        K(Ni+HL=NiL+H)=0.02
                                        K(Ni+H2L=NiL+2H)=-3.92
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.10M U    M   K1=5.35   B2= 9.91  1978ABd (53020)3035
                                        K(Ni(bpy)+L)=5.46
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U T H    K1=5.87        1975DNb (53021)3036
DH(K1)=20.9 kJ mol-1 and DS(K1)=198.5 J mol-1 K-1.
Values also available at 35 and 45 C
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U        K1=5.86        1975JKa (53022)3037
--------------------------------------------------------------------------------
Ni++       sp  NaNO3  25°C 0.30M U    M   K1=5.62        1974HKa (53023)3038
                                        K(NiA+L)=3.38
H5A=triphosphoric acid
--------------------------------------------------------------------------------
Ni++       oth diox/w 30°C  75%  U        K1=6.12   B2=11.92  1973KAc (53024)3039
Medium: 75% dioxan, 0.1 M NaClO4
--------------------------------------------------------------------------------
Ni++       EMF NaClO4 30°C 0.10M U        K1=5.36        1972JKa (53025)3040
********************************************************************************
C7H5NO5              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
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.10M U        K1=9.2    B2=17.3   1963ANd (53066)3041
                                        K(NiL+H)=5.67
                                        K(NiL2+H)=6.08
                                        K(NiHL2+H)=5.38
********************************************************************************
C7H5N3O               HL                    CAS 35252-03-0  (3142)
2-Hydroxypyrido[3',4'-b]pyrazine;
```

```
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=6.1    B2=11.3   1954AHb (53088)3042
*******************************************************************************
C7H5N3O                HL                     CAS 37538-67-3  (3140)
4-Hydroxypyrido[2,3-e]pyrimidine;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=6.1    B2=11.5   1954AHb (53092)3043
*******************************************************************************
C7H5N3O                HL                     CAS 35252-45-8  (3141)
8-Hydroxypyrido[2,3-b]pyrazine;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=5.9    B2=11.0   1954AHb (53094)3044
*******************************************************************************
C7H5N3O2                L                     CAS 94-52-0  (7761)
5-Nitrobenzimidazole;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M M        K1=1.63        1999KSa (53097)3045
                                         K(Ni+H-1L)=4.1
                                         *K(NiL)=-8.1
*******************************************************************************
C7H5O2Br               HL                     CAS 4584-68-3  (2691)
3-Bromotropolone;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U        K1=6.5    B2=12.1   1954BFd (53110)3046
*******************************************************************************
C7H5O2Br               HL                     CAS 1761-61-1  (1886)
5-Bromosalicylaldehyde; Br.C6H3(OH).CHO
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U T      K1=4.28   B2=7.64   1973CGc (53128)3047
Medium: 50% dioxan, 0.3 M NaClO4.  Temperature range 15-50 C
K1(15 C)=4.44, K1(50 C)=4.01, K2(15 C)=3.46, K2(50 C)=3.14
*******************************************************************************
C7H5O2Cl               HL                       (3747)
2-Hydroxy-6-chlorobenzaldehyde (6-chlorosalicylaldehyde)
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=5.81   B2=10.22  1978RJa (53152)3048
```

```
--------------------------------------------------------------------------------
Ni++       EMF diox/w 20°C  50%  U        K1=4.5         1963CCa (53153)3049
Medium: 50% dioxan, 0.3 M NaClO4
********************************************************************************
C7H5O2Cl               HL                      CAS 1927-94-2  (3143)
3-Chlorosalicylaldehyde; HO.C6H3(Cl).CHO
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=5.57        1978RJa (53183)3050
--------------------------------------------------------------------------------
Ni++       EMF diox/w 20°C  50%  U        K1=3.8         1963CCa (53184)3051
Medium: 50% dioxan, 0.3 M NaClO4
********************************************************************************
C7H5O2Cl               HL                      CAS 635-93-8  (3145)
5-Chlorosalicylaldehyde; HO.C6H3(Cl).CHO
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U T      K1=4.56   B2=8.08   1973CGc (53219)3052
Medium: 50% dioxan, 0.3 M NaClO4.  Temperature range 15-50 C
K1(15 C)=4.68, K1(50 C)=4.20, K2(15 C)=3.67, K2(50 C)=3.23
********************************************************************************
C7H5O2I                HL                      CAS 60032-63-5  (6282)
5-Iodo-salicylahdehyde; I(OH)C6H3.CHO
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=5.54        1978RJa (53267)3053
********************************************************************************
C7H5O3As               HL                      CAS 50722-40-2  (8008)
2-Arsenosobenzoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  alc/w  35°C  20%  U        K1=3.40        1973SPf (53275)3054
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U      T K1=6.68        1975JKa (53286)3055
********************************************************************************
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
--------------------------------------------------------------------------------
```

```
Ni++       sp  none   25°C  0.0  C        K1=6.48        1983SGd (53303)3056
-------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.15M U      T                1980YAa (53304)3057
                                         K(Ni+HL=NiL+H)=0.59
                                         K(Ni+H2L=NiL+2H)=-3.94
-------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.10M U    M   K1=6.52   B2=11.13  1978ABd (53305)3058
                                         K(Ni(bpy)+L)=6.82
*************************************************************************
C7H5O3Cl              H2L                     CAS 321-14-2  (1113)
5-Chlorosalicylic acid; Cl.C6H3(OH).COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       sp  none   25°C  0.0  C        K1=6.49        1983SGd (53328)3059
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U      T K1=6.36        1980MSa (53329)3060
-------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.15M U      T                1980YAa (53330)3061
                                         K(Ni+HL=NiL+H)=0.63
                                         K(Ni+H2L=NiL+2H)=-3.98
-------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.10M U    M   K1=6.55   B2=11.17  1978ABd (53331)3062
                                         K(Ni(bpy)+L)=6.80
-------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U      T K1=7.82        1975JKa (53332)3063
*************************************************************************
C7H6NO2Cl              HL                      CAS 7120-43-6  (3782)
5-Chloro-2-hydroxybenzaldehyde oxime (5-chlorosalicylaldoxime)
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  diox/w 20°C  75%  U        K1=6.6    B2=13.70  1965BEb (53384)3064
Medium: 75% dioxan, 0.1 M NaClO4
*************************************************************************
C7H6NO3Br             H2L                     CAS 87353-69-3  (207)
4-Bromosalicylhydroxamic acid; Br.C6H3(OH).CO.NH.OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       EMF diox/w 30°C  50%  U        K1=3.99        1977DJa (53392)3065
Medium: 50% dioxan, 0.1 M NaClO4
*************************************************************************
C7H6NO3Br             H2L                     CAS 5798-94-7  (206)
5-Bromosalicylhydroxamic acid; Br.C6H3(OH).CO.NH.OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       EMF diox/w 30°C  50%  U        K1=3.99        1977DJa (53403)3066
Medium: 50% dioxan, 0.1 M NaClO4
```

****

C7H6NO3Cl H2L (205)

3-Chlorosalicylhydroxamic acid; Cl.C6H3(OH).CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	EMF	diox/w	30°C	50%	U		K1=4.63	1977DJa	(53412)3067

Medium: 50% dioxan, 0.1 M NaClO4

****

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

Benzimidazole; C7H6N2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	C	M	K1=3.07 B(NiAL)=10.11 B(NiH-1AL)=1.33 B(Ni2A2L)=20.41 B(Ni2H-1A2L)=14.50	2000MSa	(53449)3068

H2A is aspartic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiAL)=8.67 B(NiAL2)=9.64 K(NiA+L)=2.35 K(NiL+A)=6.30	1999NNa	(53450)3069

K(NiL2+A)=5.53. HA is nicotinic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	B(NiAL)=6.39 B(NiAL2)=9.27 K(NiA+L)=3.12 K(NiL+A)=4.02	1999NNb	(53451)3070

K(NiAL+L)=2.88. A is 6-aminopenicillanic acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	35°C	0.10M	C	M	K1=2.84 K(NiL+A)=6.20	1997PSb	(53452)3071

H2A is thiamine orthophosphoric acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U		B2=2.35	1984DPa	(53453)3072

Medium: DMSO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		K1=2.02 B2=3.62 B3=4.86	1981LMb	(53454)3073

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	20°C	100%	U	M	K(NiL2Cl2+2L)=2.34 K(NiL2Br2+2L)=2.72 K(NiL2I2+2L)=3.19	1967GGc	(53455)3074

Medium: acetone. In nitromethane: K(NiL2Br2+2L)=4.10, K(NiL2I2+2L)=5.28

****

C7H6N2O HL (1926)
8-Hydroxyimidazo[1,2-a]-pyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	50%	U		K1=6.59	B2=11.40	1991SYa (53478)	3075

****

C7H6N2OS HL CAS 26278-79-5 (3179)
2-Amino-4-hydroxybenzothiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	50%	U		K1=8.1	B2=15.3	1962FFa (53484)	3076

****

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
Ni++	gl	diox/w	20°C	75%	U		K1=6.5	B2=13.80	1965BEb (53489)	3077

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
Ni++	gl	KNO3	20°C	0.10M	U		K1=8.18	B2=15.52	1965ABa (53497)	3078

****

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
Ni++	EMF	diox/w	30°C	50%	U		K1=3.24		1977DJa (53519)	3079

Medium: 50% dioxan, 0.1 M NaClO4

****

C7H6N4 L CAS 5318-52-9 (3726)
1-Phenyltetrazole; CHN4.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U		K1=0.6	B2=3.54	1963GBa (53536)	3080

Medium: THF

****

C7H6OS HL Thiobenzoic CAS 98-91-9 (6294)
Thiobenzoic acid; C6H5.COSH

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

---
Ni++ gl diox/w 30°C 60% U K1=4.3 B2=8.2 1972OTc (53552)3081
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
---
Ni++ gl KNO3 30°C 0.10M U M K1=3.80 B2= 6.45 1991RSc (53592)3082
B(Ni(val)L)=10.42
B(Ni(val)2L)=13.50
B(Ni(val)2L2)=17.35
B(Ni(phe)L)=10.25
B(Ni(phe)2L)=13.30, B(Ni(phe)2L2)=17.10.
Evidence for formation of Schiff base in ternary complexes.

Ni++ gl KNO3 30°C 0.10M U M 1991RSc (53593)3083
B(Ni(trp)L)=10.15
B(Ni(trp)2L)=13.15
B(Ni(trp)2L2)=17.10
Evidence for formation of Schiff base in ternary complexes.

Ni++ gl diox/w 30°C 75% U K1=6.43 B2=11.39 1978RJa (53594)3084

Ni++ gl diox/w 25°C 75% U K1=18.39 1978SRa (53595)3085

Ni++ gl KCl 25°C 0.50M U M K1=3.58 B2=6.5 1968LBa (53596)3086
B(NiL(Gly))=10.75
B(NiL(Gly)2)=15.62
B(NiL2(Gly)2)=18.89

Ni++ gl diox/w 30°C 75% U K1=5.36 B2=9.11 1964JVa (53597)3087
Medium: 75% dioxan, 0.1 M NaClO4

Ni++ EMF diox/w 20°C 50% U K1=4.5 1963CCa (53598)3088
Medium: 50% dioxan, 0.3 M NaClO4

Ni++ gl alc/w ? 50% U B2=9.03 1957HSa (53599)3089

Ni++ gl diox/w 30°C 75% U K1=8.25 B2=14.50 1954UFa (53600)3090

Ni++ gl diox/w 25°C 50% U K1=5.22 B2=9.19 1949MMa (53601)3091
****
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
---
Ni++ gl diox/w 30°C 50% U M K1=11.82 B2=18.24 1980KSa (53651)3092

B(Ni(bpy)+L)=6.39

Ni++ sp NaClO4 25°C 0.10M U K1=5.97 1968OWa (53652)3093

Ni++ gl diox/w 30°C 50% U K1=7.7 B2=13.8 1954BFb (53653)3094
K3=4.0

****

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
Ni++	gl	NaClO4	25°C	1.00M	U	T H	K1=0.60	1991BAa	(53791)3095

K1 also at 30, 35 and 40C. DH=10.5 kJ mol-1, DS=47 J K-1 mol-1.

Ni++ sol oth/un 25°C 0.1M C 1983KPc (53792)3096
Kout(Ni(phen)3+L)= 1.0
Kout(Ni(phen)3+2L)=1.51
Medium:NaF;Also for I=0.25 M K1out=0.87, B2out=1.2,for I=0.50 M K1out=0.77
for I=0.75 K1out=0.71, B2out=0.95; phen=phenantroline

Ni++ sol oth/un 25°C 0.1M C 1983KPd (53793)3097
Kout(Ni(bipy)3+L)=0.82
Kout(Ni(bipy)3+2L)=1.16
Medium:NaF;Also for I=0.25 M K1out=0.64, B2out=0.8,for I=0.50 M K1out=0.56
for I=0.75 K1out=0.45, B2out=0.53;

Ni++ gl diox/w 25°C 70% U I K1=2.87 1980SSb (53794)3098
In 70% EtOH/H2O: K1=2.52

Ni++ gl NaClO4 25°C 0.00 U I K1=1.86 1979TPa (53795)3099

Ni++ gl KNO3 30°C 0.40M U K1=0.55 1970BTa (53796)3100

Ni++ gl oth/un 25°C 0.10M U K1=0.9 1960YYa (53797)3101

****

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
Ni++	gl	alc/w	25°C	50%	M T	H	K1=7.33	1992MSf	(53885)3102

B(Ni(en)L)=13.47
Medium: 50% v/v MeOH/H2O, 0.10 M NaClO4. Data for 40 and 55 C.
DH(K1)=48.8 kJ mol-1, DS(K1)=304 J K-1 mol-1.

Ni++ sp NaClO4 25°C 0.3M U K1=4.53 1987DSc (53886)3103

Ni++ sp NaClO4 20°C 0.10M U K1=3.5 B2=7.15 1977LSb (53887)3104

```
Ni++       gl  diox/w 25°C 0.10M U        K1=8.09   B2=16.00  1977WVa (53888)3105
--------------------------------------------------------------------------------
Ni++       gl  alc/w  17°C  50%  U        K1=6.77   B2=13.14  1970RBc (53889)3106
Medium: 50% EtOH, 0.05 M NaClO4
--------------------------------------------------------------------------------
Ni++       gl  alc/w  50°C  45%  U T H    K1=7.64   B2=12.44  1968RSh (53890)3107
Medium: 45% EtOH, 0.15 M. K1=7.08(30 C),7.34(40 C); K2=4.46(30 C),4.64(40 C)
DH(K1)=48 kJ mol-1, DS=292 J K-1 mol-1; DH(K2)=33, DS=196
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=8.1    B2=13.35  1964LSe (53891)3108
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C 0.10M U        K1=10.06  B2=20.79  1977WVa (53926)3109
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=8.59   B2=15.42  1978RJa (53935)3110
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U                      1969VMa (53936)3111
                                      K(Ni+HL)=3.90
                                      K(NiHL+HL)=2.85
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
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U                      1969VMa (53945)3112
                                      K(Ni+HL)=4.50
                                      K(NiHL+HL)=3.15
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
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=8.65   B2=13.30  1998KRa (54082)3113
                                         B(NiLA)=13.75
HA: Inosine
--------------------------------------------------------------------------------
Ni++       gl  alc/w  24°C  20%  C    M                  1996MIa (54083)3114
```

```
                                        K(Ni(ada)+L)=2.92
Medium: 20% w/w EtOH/H2O, 0.10 M KNO3.
ada: N-(acetamido)-iminodiethanoic acid.
-------------------------------------------------------------------------------
Ni++       cal alc/w  25°C 100%  U   H                    1990PJa (54084)3115
Medium: MeOH. DG(K1)=-28.0 kJ mol-1, DH=22; DG(B2)=-43.5; DH=42
-------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C 100%  M                        1988LTa (54085)3116
                                        K(Ni+HL)=4.9
                                        K(Ni+2HL)=7.6
Medium: MeOH
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  35°C 0.10M U    M T K1=6.80          1985KSc (54086)3117
                                        K(NiL+CMP)=0.84
H2CMP=cytidine-5'-monophosphoric acid
-------------------------------------------------------------------------------
Ni++       sp  none   25°C  0.0  C        K1=8.17         1983SGd (54087)3118
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.50M U    M T K1=6.73   B2=13.73  1981EKa (54088)3119
                                        B(NiH3L(pyridoxamine))=39.29
                                        B(NiH2L(pyridoxamine)2)=37.59
                                        B(NiH3L(pyridoxamine)2)=46.20
                                        B(NiH4L(pyridoxamine)2)=53.73
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.15M U      T                  1980YAa (54089)3120
                                        K(Ni+HL=NiL+H)=0.63
                                        K(Ni+H2L=NiL+2H)=-3.65
-------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C 0.10M U                         1979MPa (54090)3121
                                        K(NiL+H)=5.96
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U      T K1=6.961  B2=11.78  1976ABb (54091)3122
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U        K1=8.92         1975JKa (54092)3123
-------------------------------------------------------------------------------
Ni++       gl  alc/w  17°C  50%  U        K1=4.52   B2=8.80   1970RBc (54093)3124
Medium: 50% EtOH, 0.05 M NaClO4
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U    M   K1=8.41   B2=15.45  1964JVa (54094)3125
Medium: 75% dioxan, 0.1 M NaClO4. Ternary complexes with NTA
-------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=6.95   B2=11.75  1958PEe (54095)3126
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=5.2          1954UFa (54096)3127
*******************************************************************************
C7H6O3                H2L                     CAS 139-85-5  (881)
3,4-Dihydroxybenzaldehyde, protocatechuic aldehyde; C6H3(OH)2.CHO
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
```

Ni++ sp oth/un 25°C 0.10M U K1=7.80 1969HAd (54352)3128
****
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
---
Ni++ gl alc/w 30°C 10% C K1=7.50 B2=16.39 1986IGc (54442)3129
Medium: 10% v/v EtOH/H2O, 0.1 M KNO3

Ni++ gl diox/w 25°C 0.10M U K1=10.53 B2=21.53 1977WVa (54443)3130
****
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
---
Ni++ gl alc/w 25°C 50% M M K1=7.50 1983ADb (54506)3131
K(Ni(phen)+L)=7.26
Medium: 50% v/v EtOH/H2O, 0.10 M NaNO3.

Ni++ gl NaClO4 30°C 0.10M U K1=10.62 1975JKa (54507)3132
B(NiHL)=10.62

Ni++ gl diox/w 30°C 50% U 1971VMa (54508)3133
K(Ni+HL)=9.08
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
---
Ni++ EMF NaClO4 30°C 0.10M U M T K1=9.40 1978JSa (54573)3134
B(NiL(Malate))=8.66
B(NiL)Thiodipropanoate))=7.39
B(NiL(Thiodiglycolate))=8.16

Ni++ gl NaClO4 30°C 0.10M U K1=9.40 1978JSc (54574)3135

Ni++ gl NaClO4 30°C 0.10M U T K1=9.40 1975JKa (54575)3136

Ni++ gl diox/w 30°C 50% U 1971VMa (54576)3137
K(Ni+HL)=8.76
Medium: 50% dioxan, 0.1 M NaClO4
****
C7H6O4 H3L g-Resorcylic ac CAS 303-07-1 (1624)
2,6-Dihydroxybenzoic acid; C6H3(OH)2.COOH

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

```
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C  0.3M U        K1=7.30        1987DSc (54602)3138
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.10M U        K1=8.19        1969HAd (54642)3139
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  30°C 0.10M U        K1=7.92   B2=11.57  1968JHa (54643)3140
                                         K3=3.10
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M U        K1=8.96   B2=14.34  1966APb (54644)3141
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U        K1=8.27   B2=12.98  1963MNc (54645)3142
                                         K3=3.89
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.11M U  I     K1=3.63   B2=6.15   1972MSa (54790)3143
Range of ionic strength 0-0.60. K1(I=0)=4.42, K1(I=0.60)=3.23, B2(I=0)=6.99,
B2(I=0.60)=5.74
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U                       1972MSa (54791)3144
                                         B3=8.4
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=3.79   B2=6.56   1948CMa (54792)3145
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=6.35   B2=10.17  1998KRa (54904)3146
                                         B(NiLA)=11.33
HA: Inosine
--------------------------------------------------------------------------------
Ni++       nmr KNO3   25°C 1.00M U        K1=5.68   B2=9.3    1993POa (54905)3147
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U    M   K1=7.18        1992ASa (54906)3148
                                         K(NiL+ser)=5.60
                                         K(NiL+thr)=5.10
                                         K(NiL+asp)=9.40
                                         K(NiL+A)=4.80
K(NiL+gln)=4.60, K(NiL+HB)=4.60. HA is asparagine, HB is lysine.
--------------------------------------------------------------------------------
```

```
Ni++       sol oth/un 25°C  0.1M C                        1983KPc (54907)3149
                                      Kout(Ni(phen)3+L)= 1.24
                                      Kout(Ni(phen)3+2L)=2.23
Medium:NaF; for I=0.25 M K1out=1.27, B2out=2.07; B3out=2.39;
for I=0.75 K1out=1.16, B2out=1.85, B3out=2.06;  phen=phenantroline
-------------------------------------------------------------------------------
Ni++       sp  none   25°C  0.0  C        K1=6.14        1983SGd (54908)3150
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=6.70        1980MSa (54909)3151
-------------------------------------------------------------------------------
Ni++       ix  oth/un 25°C 0.10M U        K1=6.4    B2=10.24  1979CPa (54910)3152
                                      K(NiL+H)=6.4
                                      K(NiL+2H)=9.0
-------------------------------------------------------------------------------
Ni++       ix  oth/un 80°C 0.50M U        K1=6.15   B2=11.3   1968GIa (54911)3153
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=6.61   B2=10.81  1962NAa (54912)3154
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=6.42   B2=10.24  1960BSb (54913)3155
-------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=6.30   B2=10.20  1958PEe (54914)3156
*******************************************************************************
C7H7N                   L                     CAS 100-69-6  (299)
2-Vinylpyridine; C5H4N.CH:CH2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=1.2         1974ILa (55112)3157
*******************************************************************************
C7H7N                   L                     CAS 100-43-6  (294)
4-Vinylpyridine; C5H4N.CH:CH2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       kin alc/w  25°C  55%  U        K1=2.84        1983OEa (55119)3158
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.09        1974ILa (55120)3159
*******************************************************************************
C7H7NO                  L                     CAS 1112-62-9  (497)
2-Acetylpyridine; C5H4N.CO.CH3
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       kin oth/un 25°C 0.10M C        K1=2.69        1974COa (55129)3160
*******************************************************************************
C7H7NO                  L                     CAS 350-03-8  (1479)
3-Acetylpyridine; C5H4N.CO.CH3
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
```

Ni++ gl KNO3 25°C 0.50M U K1=1.45 B2=2.19 1986BLa (55135)3161
****
C7H7NO L CAS 1122-54-9 (494)
4-Acetylpyridine; C5H4N.CO.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M U K1=1.50 B2=2.43 1983LRa (55143)3162
B3=2.79
****
C7H7NO2 HL Anthranilic CAS 118-92-3 (1589)
2-Aminobenzoic acid, Anthranilic acid; H2N.C6H4.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 24°C 20% C M 1996MIa (55188)3163
K(Ni(ada)+L)=2.96
Medium: 20% w/w EtOH/H2O, 0.10 M KNO3.
ada: N-(acetamido)-iminodiethanoic acid.

Ni++ gl KNO3 30°C 0.10M U M K1=2.19 1989BBg (55189)3164
K(NiA+L)=3.08
B(NiAL)=12.11
H2A is 8-hydroxyquinoline-5-sulfonic acid.

Ni++ gl oth/un 25°C 0.0 U 1960LUa (55190)3165
Kso=-11.72

Ni++ gl oth/un 25°C ->0 U K1=2.12 B2=3.59 1958LUa (55191)3166

Ni++ gl diox/w 35°C 50% U K1=3.2 1958YSa (55192)3167
****
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
---
Ni++ gl KNO3 25°C 0.10M C M K1=6.51 B2=11.37 1990DAb (55290)3168
Also ternary complexes with bpy, ida, mida, ada and nta.

Ni++ gl KNO3 25°C 0.10M C K1=6.51 B2=11.37 1990DAb (55291)3169

Ni++ sp non-aq 20°C 100% U M 1968MRa (55292)3170
K(NiL2+2py)=3.70
K(NiL2+2A)=3.84
K(NiL2+2B)=4.28
A=3-methyl pyridine, B=4-methyl pyridine

Ni++ gl diox/w 20°C 75% U 1965BEb (55293)3171
K(Ni+HL)=6.9

```
                                        K(NiHL+HL)=7.4(?)
Medium: 75% dioxan, 0.1 M NaClO4
--------------------------------------------------------------------------------
Ni++       sp  oth/un   ?     ?  U                        1956BJa (55294)3172
                                        K(Ni+2HL)=3.77
********************************************************************************
C7H7NO2                HL    Salicylamide     CAS 65-45-2  (3155)
2-Hydroxybenzamide; HO.C6H4.CO.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=5.65        1964JVa (55323)3173
Medium: 75% dioxan, 0.1 M NaClO4
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.50M U        K1=3.55   B2=6.77   1971FLa (55341)3174
--------------------------------------------------------------------------------
Ni++       gl  diox/w 35°C  50%  U T      K1=4.89   B2=8.84   1966WRb (55342)3175
Medium: 50% dioxan, 0.1 M KNO3. K2=6.47(15 C), 6.06(25 C)
********************************************************************************
C7H7NO2                HL                    CAS 39825-16-6  (3756)
4-Methyl-2-nitrosophenol; CH3.C6H3(N:O).OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=7.03        1961SHa (55402)3176
Medium: 50% dioxan, 0.1 M KNO3
********************************************************************************
C7H7NO2                HL                    CAS 3222-47-7  (3154)
6-Methylpyridine-2-carboxylic acid; CH3.C5H3N.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U    M   K1=4.98        1986KRa (55415)3177
                                        K(Ni(Gly)+L)=6.17
                                        K(Ni(Pro)+L)=5.77
                                        K(Ni(hydroxyproline)+L)=5.56
                                        K(Ni(Ala)+L)=5.15
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.10M U        K1=5.15   B2=9.50   1960ANb (55416)3178
                                        K3=3.0
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.02M U        K1=5.1    B2=9.2    1955HCb (55417)3179
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=7.4    B2=13.2   1955HCb (55418)3180
********************************************************************************
```

C7H7NO2 HL CAS 495-18-1 (184)
Benzohydroxamic acid; C6H5.CO.NH.OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=4.92 B2= 8.73 B3=10.7 B(NiH-1L2)=-2.7	2000FEc (55466)	3181
Ni++	gl	NaNO3	25°C	0.10M	M	M	K1=4.95 B2= 8.80 K(Ni(nta)+L)=3.24 K(Ni(ida)+L)=4.02 K(Ni(ada)+L)=3.78	1996KSc (55467)	3182
Ni++	gl	diox/w	30°C	50%	U		K1=10.38 B2=18.79	1994JBb (55468)	3183
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=5.45 B2= 9.51	1990DAc (55469)	3184
Ni++	gl	KNO3	25°C	0.10M	C		K1=5.45 B2= 9.51	1990DAc (55470)	3185
Ni++	gl	KNO3	25°C	0.10M	C	M	B(NiA+L)=5.30 B(NiB+L)=5.66 B(NiC+L)=5.25	1989DAc (55471)	3186
Ni++	gl	NaClO4	25°C	0.10M	U	M	K1=5.14 B2=9.24 K(NiL+oxinate)=4.44 K(Ni(bpy)+L)=5.02	1976ABb (55472)	3187
Ni++	gl	diox/w	35°C	50%	U		K1=7.18 B2=12.32	1972ATa (55473)	3188
Ni++	gl	diox/w	25°C	70%	U		K1=6.35 B2=11.46	1969JSa (55474)	3189

H2ada: N-(2-acetamido)iminodiethanoic acid.
Medium: 50% v/v dioxane/H2O, 0.10 M NaClO4.
Also ternary complexes with bpy, ida, mida, ada and nta.
A: 2,2'-dipyridylamine; B: 5-nitro-1,10-phenanthroline;
C: 5-methyl-1,10-phenanthroline.
Medium: 50% dioxan, I=0 corr.

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C7H7NO3 H2L CAS 89-73-6 (204)
2-Hydroxybenzohydroxamic acid (salicylhydroxamic acid); HO.C6H4.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	C		K1=6.07	2000KHa (55573)	3190
Ni++	gl	NaNO3	25°C	0.10M	M	M	K1=6.04 B2= 9.99 K(Ni(nta)+L)=3.47 K(Ni(nta)+H+L)=11.11 K(Ni(ida)+L)=4.76	1996KSc (55574)	3191

K(Ni(ida)+H+L)=12.35
K(Ni(ada)+L)=4.42, K(Ni(ada)+H+L)=12.11
H2ada: N-(2-acetamido)iminodiethanoic acid.

Ni++ EMF diox/w 30°C 50% U K1=4.55 1977DJa (55575)3192
Medium: 50% dioxan, 0.1 M NaClO4

****

C7H7NO3 HL CAS 548-93-6 (3156)
3-Hydroxyanthranilic acid (2-Amino-3-hydroxybenzoic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	20°C	?	U		K1=5.1	B2=8.7	1959SIb	(55623)3193

****

C7H7NO3 HL CAS 1197-10-0 (3759)
6-(Hydroxymethyl)pyridine-2-carboxylic acid; HO.CH2.C5H3N.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	oth/un	25°C	?	U		K1=5.21	B2=10.05	1962GOa	(55646)3194

****

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
Ni++	gl	KNO3	30°C	0.10M	U	HM	K1=3.10	1986DRb	(55657)3195
							B(Ni(gly)L)=5.60		
							B(Ni(ala)L)=5.11		
							B(Ni(pro)L)=5.85		
							B(Ni(hyp)L)=5.80		

Data for 30-50 C. DH(K1)=-29.0 kJ mol-1, DS=37.1 J K-1 mol-1. DH(Ni(gly)L)
=-23.4, DS=-41; DH(Ni(ala)L)=-16.9; DH(Ni(pro)L)=-18.0; DH(Ni(hyp)L)=-28.1

Ni++	gl	KNO3	30°C	0.10M	U	M	K1=3.07	1986KRa	(55658)3196
							K(NiA+L)=2.48		
							K(NiB+L)=7.47		

HA=picolinic acid, HB=6-methylpicolinic acid

Ni++	gl	NaClO4	30°C	0.10M	U	T	K1=3.98	B2=6.54	1982RRa	(55659)3197

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	35°C	0.01M	U		K1=2.88	B2=5.23	1956HSb	(55671)3198

****

C7H7NO5S H3L CAS 38191-13-8 (4463)
Salicylaldoxime-5-sulfonic acid; HO3S.C6H3(OH).CH:N.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF NaClO4 25°C 0.50M U I B2=13.4 1972SAb (55683)3199
I=0: K(Ni+HL)=5.83, K(Ni+2HL)=10.83, K(Ni+L+HL)=14.89
****
C7H7N2OCl L (7853)
4-Chlorobenzoic acid hydrazide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp mixed 25°C C K1=3.35 B2= 5.69 2000BSc (55707)3200
In 0.68 mol parts DMSO in H2O; Also for 0.1 mol parts K1=2.75; B2=4.81
****
C7H7N2O2F3S HL CAS 73255-69-3 (559)
2-(Trifluoromethanesulfonamidomethyl)pyridine; C5H4NCH2S(:O)2NHCF3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 45% U K1=8.34 B2=15.08 1982MYb (55710)3201
Medium: 45% v/v dioxan/H2O, 0.01 M KNO3
****
C7H7N3 L CAS 934-32-7 (8240)
2-Aminobenzimidazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M U K1=1.49 1990LGb (55722)3202
****
C7H7N3 L (6358)
7-Methyl-4-azabenzimidazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M C K1=2.13 B2=3.84 1992RKa (55728)3203
Data also by spectrophotometry: B1=2.63
****
C7H7N3O2 H2L CAS 4463-97-2 (1654)
2,6-Pyridinedialdoxime;C5H3N.(CH:NOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U K1=8.6 B2=15.70 1963BFb (55737)3204
By spectrophotomertry: K1=8.4
****
C7H7N3O3 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
---

```
Ni++       sp  NaClO4 25°C 0.10M U        K1=3.47   B2=6.63   1981BPc (55745)3205
                                          B3=9.45
**************************************************************************
C7H7N3O3                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
--------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U        K1=3.35   B2=6.28   1981BPc (55750)3206
                                          B3=8.54
**************************************************************************
C7H7N3O3                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
--------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U        K1=3.26   B2=6.13   1981BPc (55755)3207
                                          B3=8.47
**************************************************************************
C7H7N3O4              H2L                      CAS 15658-59-0  (8571)
Pyridine-2,6-dihydroxamic acid;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=9.80   B2=18.29  2002SGa (55760)3208
                                          B(NiH-1L2)=10.35
**************************************************************************
C7H7O2NS              H2L                      CAS 60587-83-9  (5449)
3-(2-Pyrrole)-2-mercaptopropenoic acid; C4H4N.CH:C(SH).COOH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  diox/w 25°C 0.10M U        K1=10.36  B2=20.89  1977WVa (55769)3209
**************************************************************************
C7H8NCl                 L                      CAS 615-65-6  (5522)
4-Chloro-2,6-dimethylpyridine;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M U        K1=1.3         1983BEb (55791)3210
**************************************************************************
C7H8N2O                HL                      CAS 5451-39-8  (3157)
2-Acetylpyridine oxime; C5H4N.C(:N.OH).CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.10M C                        1998SOd (55795)3211
                                          B(0,1,1)=4.98
                                          B(0,1,2)=9.39
                                          B(0,1,3)=12.88
```

B(-1,1,2)=4.57
B(-2,1,2)=-3.55; B(-1,1,3)=7.28; B(-2,1,3)=-0.09; B(-3,1,3)=-9.31
B(-3,2,3)=-1.33. B(p,q,r): pH+qNi+rHL=(H)p(Ni)q(HL)r.
****
C7H8N2O L CAS 3724-16-1 (1948)
3-Acetamidopyridine; C5H4N.CH2.CO.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M U K1=1.72 B2=2.87 1974WAb (55802)3212
B3=3.6
****
C7H8N2O L (2035)
3-N-Acetylaminoazine; C5H4N.NH.CO.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M U K1=1.58 B2=2.85 1981LRa (55807)3213
B3=3.81
****
C7H8N2O HL CAS 1195-40-0 (5749)
6-Methylpyridine-2-carboxaldehyde oxime;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaCl 25°C 0.10M C 1998SOd (55813)3214
B(0,1,1)=1.94
B(0,1,2)=3.86
B(-2,1,2)=-7.43
B(-3,2,3)=-7.28
B(-5,3,3)=-20.11. B(p,q,r): pH+qNi+rHL=(H)p(Ni)q(HL)r.
****
C7H8N2O HL CAS 88-68-6 (4438)
Benzamide oxime; C6H5.C(:N.OH)NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl mixed 22°C 70% U K1=7.78 B2=16.25 1978MGd (55818)3215
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
---
Ni++ sp NaNO3 20°C 0.10M U K1=2.18 1985BBe (55829)3216
Medium: 0.14 ppm DMSO in H2O

Ni++ gl NaNO3 25°C 0.20M U K1=2.59 B2=3.96 1974FSa (55830)3217
B3=6.53

Ni++ gl oth/un 20°C 0.01M U K1=6.3 1956ARd (55831)3218
****
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
---
Ni++ gl KNO3 25°C 0.50M U K1=1.45 B2=2.34 1987KLb (55837)3219
B3=2.86
****
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
---
Ni++ gl mixed 28°C 20% U I K1=4.602 B2=7.86 1987RRa (55845)3220
B(NiHL)=10.628
In 20% DMF. In 40% DMF, K1=4.975, K2=3.580, B(NiHL)=11.308;
in 60% DMF, K1=5.398, K2=3.856, B(NiHL)=11.729
****
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
---
Ni++ gl KNO3 30°C 0.10M U M K1=4.32 1993RDa (55864)3221
Also data for ternary complexes with alanine, phenylalanine, bipyridyl,
catechol, oxalate and 1,2-diaminoethane.

Ni++ sp NaClO4 25°C 0.10M U K1=9.18 B2=17.36 1981BPc (55865)3222
B3=24.46
K(Ni+H-1L)=14.75

Ni++ gl diox/w 25°C 25% U K1=5.35 B2=9.45 1975GSb (55866)3223
****
C7H8N2O2 L CAS 15513-52-7 (5516)
3-Nitro-2,6-dimethylpyridine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.50M U K1=1.7 1983BEb (55894)3224
****
C7H8N2O2 L CAS 4913-57-9 (5517)
4-Nitro-2,6-dimethylpyridine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.50M U K1=1.6 1983BEb (55914)3225
****

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
---
Ni++ gl KNO3 25°C 0.50M U K1=1.41 B2=2.34 1974WAb (55923)3226
****
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
---
Ni++ gl KCl 25°C 0.10M U 1961TDb (55930)3227
K(Ni+HL)=2.70
****
C7H8N3OCl HL CAS 5756-04-1 (4465)
1-(2'-Chloro)phenyl-3-methyl-3-hydroxytriazene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF diox/w 25°C 70% U K1=7.26 B2=13.08 1969DSa (55949)3228
Medium: 70% dioxan, 0.1 M KCl
****
C7H8N3OCl HL CAS 5756-73-0 (4466)
1-(4'-Chloro)phenyl-3-methyl-3-hydroxytriazene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF diox/w 25°C 70% U K1=7.00 B2=12.63 1969DSa (55950)3229
Medium: 70% dioxan, 0.1 M KCl
****
C7H8N4 L CAS 85180-62-7 (2481)
2,9-Dimethylpurine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ dis NaClO4 25°C 0.10M C K1=1.38 1985ALa (55953)3230
Method: distribution of ligand into organic phase (CCl4) determined by LC.

Ni++ gl NaClO4 25°C 1.00M U K1=1.26 1983ALa (55954)3231

Ni++ sp NaClO4 25°C 0.18M U H K1=1.23 1983ALb (55955)3232
DH(K1)=-20.8 kJ mol-1
****
C7H8N4 L (2641)
4,4'-(5,5')-Bisimidazolylmethane; C3H3N2.CH2.C3H3N2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 30°C 0.16M U K1=7.33 B2=13.63 1965DFa (55961)3233

****
C7H8N4 L CAS 14675-46-8 (2484)
6,9-Dimethylpurine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 1.00M U K1=<0.2 1983ALa (55968)3234
****
C7H8N4 L CAS 85180-61-6 (2482)
8,9-Dimethylpurine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ dis NaClO4 25°C 0.10M C K1=1.27 1985ALa (55974)3235
Method: distribution of ligand into organic phase (CCl4) determined by LC.

Ni++ gl NaClO4 25°C 1.00M U K1=1.28 1983ALa (55975)3236

Ni++ sp NaClO4 25°C 0.18M U H K1=1.25 1983ALb (55976)3237
DH=-14.2 kJ mol-1
****
C7H8N4 L (1928)
Bis(imidazol-2-yl)methane; C3H3N2.CH2.C3H3N2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 35°C 0.20M U M 1990RMa (55985)3238
K(CoL2+Gly)=4.72
K(CoL2+Ala)=4.40
K(CoL2+Val)=4.52
K(CoL2+norVal)=4.72
K(CoL2+Leu)=4.44, K(CoL2+norLeu)=4.23, K(CoL2+Phe)=4.27
K(CoL2+Trp)=4.84, K(CoL2+Ser)=4.26, K(CoL2+Thr)=4.31

Ni++ gl KNO3 35°C 0.20M U M K1=6.85 B2=12.78 1989RVa (55986)3239
Ternary complexes with amino acids
****
C7H8N4O L CAS 79069-17-3 (5787)
2-Methoxy-9-methylpurine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ dis NaClO4 25°C 0.10M C K1=1.52 1985ALa (55999)3240
Method: distribution of ligand into organic phase (CCl4) determined by LC.

Ni++ dis NaClO4 25°C 1.00M U K1=1.38 1985AOa (56000)3241
****
C7H8N4O L CAS 86433-80-9 (5791)
8-Methoxy-9-methylpurine;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 0.10M C        K1=1.33        1985ALa (56003)3242
Method: distribution of ligand into organic phase (CCl4) determined by LC.
-------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 1.00M U        K1=1.36        1985AOa (56004)3243
*************************************************************************
C7H8N4O2              H2L    Theophylline     CAS 58-55-9  (1749)
1,3-Dimethylxanthine, 2,6-Dihydroxy-1,3-dimethylpurine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.01M U        K1=3.26   B2=6.26   1973KWa (56011)3244
*************************************************************************
C7H8N4S                L                     CAS 24851-45-4  (5788)
9-Methyl-2-(methylthio)purine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 1.00M U        K1=1.33        1985AOa (56026)3245
*************************************************************************
C7H8N4S                L                     CAS 1127-75-9  (5792)
9-Methyl-8-(methylthio)purine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 1.00M U        K1=1.31        1985AOa (56029)3246
*************************************************************************
C7H8O2                HL    Salicyl alcohol  CAS 90-01-7  (3727)
2-Hydroxybenzyl alcohol; HO.C6H5.CH2.OH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=6.82        1964JVa (56089)3247
Medium: 75% dioxan, 0.1 M NaClO4
*************************************************************************
C7H8O3S               H2L    FMPA              (6145)
3-(2-Furyl)-2-mercaptopropanoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  10%  C        K1=6.02   B2=13.38  1986IGc (56107)3248
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
-------------------------------------------------------------------------
Ni++       sp  diox/w 25°C  10%  U        K1=4.35        1965CSa (56112)3249
```

Medium: 10% dioxan, 0.1 M NaClO4

****

C7H8O4 HL Methyl kojic CAS 1506-07-8 (2686)
3-Hydroxy-6-(hydroxymethyl)-2-methyl-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	M	I	K1=5.56		1985PRa	(56121)3250

****

C7H8O5 HL CAS 2029-29-4 (2687)
3-Hydroxy-2,6-bis(hydroxymethyl)-4H-pyran-4-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	M	I	K1=5.12		1985PRa	(56140)3251

****

C7H8O8P2 H4L (6892)
1,2-((Phenylenedioxo)methylene)diphosphonic acid); C6H4O2C(PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	R4N.X	25°C	0.50M	U		K1=7.21		1985GMb	(56161)3252
							K(Ni+HL)=3.73			

Medium: 0.5 M Me4NCl

****

C7H8S HL p-Thiocresol CAS 106-45-6 (884)
4-Mercaptotoluene; CH3.C6H4.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	non-aq	0°C	100%	U		K1=3.45	B2=6.70	1981KSb	(56174)3253
							K3=2.93			
							K4=2.94			

****

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
Ni++	sp	non-aq	12°C	100%	U T	M			1976CUa	(56187)3254
							K(NiA+2L)=1.84			

Medium: chlorobenzene. H2A=biacetyl-bis-a-hydroxybenzylidenehydrazone
K=1.68(16 C); 1.58(20 C)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	35°C	0.10M	U T		K1=3.26	B2=5.93	1973SBc	(56188)3255
K1(45 C)=3.14, K2(45 C)=2.56										
Ni++	oth	KNO3	?	0.50M	U		K1=3.63		1971LWb	(56189)3256

****

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
Ni++	sp	non-aq	25°C	100%	U	T H			1984RCa (56208)	3257
							K(NiA(Cl)+L=NiAL+Cl)=1.56			
Medium: DMSO. A=methyl-2-(B-aminoisopropylamino)cyclopent-1-enedithiocarboxylate										
Ni++	gl	NaNO3	25°C	0.50M	U		K1=1.6		1983BEb (56209)	3258
Ni++	gl	oth/un	35°C	?	U	T	K1=3.32	B2=6.09	1973SBc (56210)	3259
K1(45 C)=3.25, K2(45 C)=2.70										

****

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
Ni++	sp	non-aq	25°C	100%	C	M			1989ANb (56247)	3260
							K(Ni(OAc)2+L)=0.45			
Medium: CCl4 + 10% acetic acid										
Ni++	gl	KNO3	25°C	0.50M	U		K1=2.10	B2=3.71	1979LRa (56248)	3261
							B3=4.83			
							B4=5.49			
							B5=5.69			
Ni++	gl	KNO3	25°C	0.61M	U		K1=2.26	B2=3.2	1967SBd (56249)	3262
							B3=5.21			

****

C7H9N L 3,5-Lutidine (323)

3,5-Dimethylpyridine; C5H3N.(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.50M	C		K1=2.12		2002KSb (56268)	3263
Ni++	gl	KNO3	25°C	1.00M	U		K1=1.85	B2=3.24	1978LRb (56269)	3264
							B3=4.16			
Ni++	sp	non-aq	11°C	100%	U	T M			1976CUa (56270)	3265
							K(NiA+2L)=4.30			
Medium: chlorobenzene. H2A=biacetyl-bis-a-hydroxybenzylidenehydrazone										
K=4.10(16 C); 3.85(22 C); 3.64(28 C)										
Ni++	gl	KNO3	25°C	0.61M	U		K1=2.13	B2=3.1	1967SBd (56271)	3266
							B3=4.87			

****

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
Ni++	gl	KNO3	25°C	0.50M	U		K1=1.87 B2=3.32 B3=4.36 B4=4.97	1981LRa (56292)	3267

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
Ni++	vlt	KNO3	25°C	0.10M	U		K1=2.30	1972TPc (56314)	3268
Ni++	sp	KNO3	25°C	1.00M	U		K1=1.90 B2=3.32 K3=0.66	1971LWa (56315)	3269
Ni++	EMF	KNO3	25°C	1.00M	U		K1=1.91 B2=3.34 K3=0.68	1971LWa (56316)	3270

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
Ni++	gl	diox/w	25°C	85%	C		K1 < 1.3	1983HBa (56384)	3271

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
Ni++	gl	NaClO4	25°C	0.10M	U		K1=5.12 B2=9.06	1982MSa (56454)	3272

C7H9NO4S H2L (3784)

Hydroxy(6-methyl-2-pyridyl)methanesulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=4.27 B2=7.11	1964BGa (56461)	3273

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
Ni++	gl	diox/w	25°C	50%	U	M	K1=1.97 K(Ni(bpy)+L)=1.69	1967SIb (56480)	3274

Medium: 50% dioxan, 0.1 M NaClO4

Ni++ gl NaClO4 25°C 0.10M U K1=2.06 1964KSb (56481)3275

****

C7H9N3O HL CAS 5156-69-4 (4440)

1-Phenyl-3-methyl-3-hydroxytriazene; C6H5.N:N.N(OH)CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	EMF	diox/w	25°C	70%	U		K1=8.34 B2=15.39	1969DSa	(56487)3276

Medium: 70% dioxan, 0.1 M KCl

****

C7H9N3O HL CAS 261735-05-1 (5422)

Pyridine-2-acetamid oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaCl	25°C	0.10M	C		K(Ni+HL)=3.59 K(NiHL+HL)=3.27 K(Ni+2HL=NiHL2+H)=-1.56 K(2Ni+2HL=Ni2H-1L2+3H)=-13.82	1996OSa	(56489)3277

****

C7H9N3O2 HL Spinacine CAS 59981-63-5 (4441)

Spinacine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	U		K1=5.33 B2=9.32 B(NiHL)=11.61	1973BDc	(56495)3278

****

C7H9N3O2S2 L (6945)

1-Ethoxycarbonyl-3-thiazole-2-ylthiourea; C3H2NS.NHCSNHCOOC2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	alc/w	25°C	60%	U		K1=5.11	1994KEa	(56498)3279

Medium: 60 % EtOH/H2O, 0.1 M NaNO3

****

C7H9N5 L CAS 938-55-6 (5793)

2,9-Dimethyladenine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	dis	NaClO4	25°C	1.00M	U		K1=0.6	1985AOa	(56507)3280

****

C7H9N5 L CAS 87578-82-3 (5794)

8,9-Dimethyladenine;

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

---
Ni++ dis NaClO4 25°C 1.00M U K1=<0.1 1985AOa (56510)3281
****
C7H9N5O HL 9-Ethylguanine CAS 879-08-3 (6679)
9-Ethyl-2-amino-6-hydroxypurine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.10M M K1=3.48 1999SSb (56517)3282
K(Ni+HL)=1.76
*K(NiHL)=-7.85
****
C7H9N5O4 HL CAS 215525-73-8 (7724)
N-(4-Amino-1,6-dihydro-1-methyl-5-nitroso-6-oxo-pyrimidin-2-yl)glycine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 35°C 0.10M C K1=3.44 B2= 7.04 1998ALa (56520)3283
B(NiH-1L)=-5.39
****
C7H10NO2P HL (7267)
Aminomethyl(phenylphosphinic acid); H2NCH2PO(OH)C6H5

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M C K1=2.39 B2=5.20 1996RLa (56537)3284
B(NiH-1L)=-5.82
B(NiH-2L)=-15.18
****
C7H10NO6ClP2 H4L (6895)
N-(4-Chlorphenyl)aminomethylenedi(phosphonic acid); ClC6H4.NH.CH(PO3H2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M U K1=9.1 1990GKa (56551)3285
K(Ni+HL)=5.3
****
C7H10N2 L CAS 13173-22-3 (8012)
1-Allyl-2-methylimidazole ;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M C K1=1.80 B2= 3.20 2001KGa (56559)3286
****
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
---
Ni++ gl KNO3 25°C 0.50M U K1=5.37 B2=8.74 1971GEa (56585)3287

Ni++ gl NaClO4 25°C 0.30M C H K1=5.42 B2=8.81 1967HWa (56586)3288
K3=2.35
By calorimetry DH(K1)=-28.9 kJ mol-1, DH(K2)=-29.3, DH(K3)=29.2

Ni++ gl KNO3 25°C 0.10M U K1=5.2 1964LMb (56587)3289

Ni++ gl oth/un 25°C 0.10M U K1=5.2 1964PCa (56588)3290

Ni++ gl oth/un 25°C .015M U K1=5.2 B2=8.5 1960HJa (56589)3291

Ni++ gl oth/un 20°C ->0 U T H K1=5.25 B2=8.53 1959GFa (56590)3292
DH(K1)=-29.9 kJ mol-1, DS=0 J K-1 mol-1; DH(K2)=-17, DS=8 (at 10 C)
10 C: K1=5.45, K2=3.59; 30 C: 5.14, 3.20; 40 C: 4.90, 3.30
****
C7H10N2 L CAS 42088-91-5 (3134)
2-(Methylaminomethyl)pyridine (2-Picolylmethylamine)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M U K1=6.91 B2=12.44 1971GEa (56599)3293

Ni++ cal diox/w 25°C 50% U H 1966WRb (56600)3294
Medium: 50% dioxan, 0.1 KNO3. DH(B2)=-70.6 kJ mol-1

Ni++ gl oth/un 20°C ->0 U T H K1=6.93 B2=12.41 1959GFa (56601)3295
K3=2.88
DH(K1)=-37.8 kJ mol-1, DS=4 J K-1 mol-1; DH(K2)=-35.3, DS=-17; DH(K3)=-15.7,
DS=4. 10 C: K1=7.15,K2=5.75,K3=3.17; 30 C:6.66,5.30,2.79; 40 C:6.50,5.12,2.9
****
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
---
Ni++ gl KNO3 25°C 0.50M U K1=1.81 B2=3.21 1981LRa (56619)3296
B3=4.19
B4=4.75
****
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
---
Ni++ gl KNO3 25°C 0.10M C H K1=2.70 B2= 5.34 1979HMa (56626)3297
DH(K1)=-25 kJ mol-1
****
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
-------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M C T H    K1=3.73        1980OMa (56638)3298
DH(K1)=-59.1 kJ mol-1; DS=-130 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
-------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M C T H    K1=3.16        1980OMa (56642)3299
DH(K1)=-46.2 kJ mol-1; DS=-98.7 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
-------------------------------------------------------------------------
Ni++       EMF NaNO3  20°C 0.10M U        K1=5.15   B2=8.80   1971ANa (56647)3300
                                         K3=2
-------------------------------------------------------------------------
Ni++       vlt diox/w 25°C  50%  U   H    B2=8.43        1966WRb (56648)3301
Medium: 50% dioxan, 0.1 M KNO3. By calorimetry: DH(B2)=-37.6 kJ mol-1,
DS=34.7 J K-1 mol-1
*************************************************************************
C7H10N2O                L                        (7890)
1-Propyl-2-imidazolecarboxaldehyde;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C  0.5M C        K1=1.53   B2= 2.29  1999BKa (56659)3302
                                         B3=4.19
*************************************************************************
C7H10N2OS               HL                     CAS 51-52-5  (4468)
6-Propyl-2-thiouracil  (6-propyl-4-hydroxy-2-mercaptopyrimidine);
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  oth/un 26°C 0.01M U        K1=1.35   B2=4.86   1970GWa (56673)3303
*************************************************************************
C7H10N2O2S              HL                       (560)
2-(Methanesulfonamidomethyl)pyridine; C5H4N.CH2S(:O)2NHCH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  45%  U        K1=8.30   B2=15.59  1982MYb (56680)3304
Medium: 45% v/v dioxan/H2O, 0.01 M KNO3
*************************************************************************
C7H10N2O3S              HL                     CAS 71691-06-0  (1247)
2-(N-Pyrrolideneimino)ethane sulfonic acid; C4H4N.CH:N.CH2.CH2.SO3H
```

```
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U T      K1=9.75   B2=16.30  1979GSa (56689)3305
******************************************************************************
C7H10N2O4             H3L                        (3769)
4-Carboxycyclohexane-1,2-dione dioxime; HOOC.C6H7(:N.OH)2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C  9.0M U        K1=28.7   B2=29.50  1962BLa (56696)3306
                                         K3=3.7(?)
Medium: KOH
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  70%  C                        1985HWa (56715)3307
                                       B(NiHL)=18.99
                                       B(Ni2L2)=24.66
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=2.08        1972RVh (56726)3308
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=2.48        1975IPa (56741)3309
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=1.90        1983WKa (56752)3310
                                       B(NiHL)=6.30
                                       B(NiH2L)=9.89
******************************************************************************
C7H11NO2               HL                      CAS 54162-90-2  (6019)
2-Aminocyclohexene(4)-1-carboxylic acid;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

```
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.50M C        K1=4.674  B2=7.812  1986GGa (56766)3311
                                         B(NiH-1L)=-4.5
cis isomer. For trans isomer, K1=4.676, B2=7.812, B(NiH-1L)=-4.48
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.50M C        K1=4.83        1996HPa (56774)3312
                                         K(NiL+H)<0.3
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=8.58   B2=15.39  1975IPa (56780)3313
------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=8.55   B2=15.30  1966SIb (56781)3314
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 1.00M U        K1=9      B2=17     1974MIb (56791)3315
******************************************************************************
C7H11NO4             H2L                      CAS 499-82-1  (3163)
Piperidine-2,6-dicarboxylic acid; C5H9N(COOH)2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        K1=6.8    B2=11.6   1957TBb (56798)3316
******************************************************************************
C7H11NO5             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
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=7.43   B2=12.70  1965AUa (56820)3317
Previously published as K1=7.32, K2=5.29
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=7.4    B2=12.6   1963ANa (56821)3318
******************************************************************************
C7H11NO6             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
```

```
--------------------------------------------------------------------------------
Ni++       vlt KNO3   25°C 0.10M U        K1=11.37       1967UKa (56863)3319
--------------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        K1=11.4        1953CMa (56864)3320
********************************************************************************
C7H11NO6              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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=11.21       1983FSa (56893)3321
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=11.92       1974RMf (56894)3322
********************************************************************************
C7H11NO6P2            H4L    DPHP              (226)
2,6-bis(Dioxyphosphorylmethyl)pyridine; C5H3N.(CH2.PO3H2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U         K1=6.80        1988KPa (56925)3323
                                          K(Ni+HL)=3.74
                                          K(Ni+H2L)=2.10
********************************************************************************
C7H11NO6P2            H4L                    CAS 4712-06-5  (4470)
Amino(phenyl)methylenediphosphonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U         K1=12.39       1969DMd (56933)3324
                                          K(Ni+HL)=8.07
                                          B(Ni2L)=16.71
********************************************************************************
C7H11N3                L                  CAS 63763-86-0  (6062)
2,6-Di(aminomethyl)pyridine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C    1M C        K1=10.9   B2=20.70  1992CPb (56954)3325
Constant confirmed by spectrophotometry
********************************************************************************
C7H11N3O2              L                  CAS 7389-87-9  (3162)
Histidine methyl ester
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=6.1    B2=10.9   1971HMc (56987)3326
--------------------------------------------------------------------------------
Ni++       EMF oth/un 25°C    ?  U        K1=6.8    B2=12.10  1966PAa (56988)3327
--------------------------------------------------------------------------------
Ni++       gl  KCl    40°C 0.25M U T H    K1=5.95   B2=10.29  1965AZa (56989)3328
```

K3=2.11
K1=7.32(0 C),6.65(15 C),6.02(25 C); K2=5.88(0 C),5.14(15 C),4.30(25 C)
K3=3.59(0 C),2.76(15 C),2.50(25 C). DH(K1)=DH(K2)=-70 kJ mol-1, DH(K3)=-72

Ni++ gl KNO3 25°C 0.16M U M K1=6.19 B2=11.10 1965CMa (56990)3329
K3=2.90
Ternary complexes with histidine

Ni++ gl oth/un 25°C 0.20M U K1=6.73 B2=11.84 1957LDa (56991)3330
****
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
---
Ni++ gl KCl 25°C 0.10M C K1=8.551 B2=15.049 1976RIa (57013)3331
K(Ni(DL-N-Me-His))=8.536
B(Ni(DL-N-Me-His)2)=15.559
****
C7H11N3O4 HL CAS 73260-55-6 (8728)
Glycyl-2,3-didehydroalanylglycine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M C 2002SBa (57019)3332
B(NiH-1L2)=1.27
B(NiH-2L2)=-6.66
****
C7H12N2 L CAS 4316-42-1 (8409)
1-Butyl-1H-imidazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.50M M K1=3.30 B2= 5.88 1977LBc (57036)3333
B3=7.96
****
C7H12N2 L (7888)
1-Propyl-2-methylimidazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.5M C K1=2.05 B2= 3.41 1999BKa (57040)3334
B3=4.19
****
C7H12N2O L (7889)
1-Propyl-2-Hydroxymethylimidazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.5M C K1=2.54 B2= 4.83 1999BKa (57048)3335

B3=6.25
B4=7.50
****
C7H12N2O L CAS 5700-58-3 (3166)
N-(2-Furylmethyl)ethylenediamine; C4H3O.CH2.NH.CH2.CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 20°C 0.10M U K1=6.38 B2=11.61 1958HOc (57055)3336
K3=2.68
****
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
---
Ni++ gl diox/w 20°C 75% U K1=12.53 B2=24.80 1981HFa (57060)3337

Ni++ sol NaClO4 20°C 0.10M U K1=10.77 B2=21.16 1964ASb (57061)3338

Ni++ dis NaClO4 25°C 0.10M U K1=11.2 B2=21.88 1964SAe (57062)3339

Ni++ gl diox/w 25°C 75% U I K1=12.3 B2=24.7 1963BAb (57063)3340
Kso=-26.64
Medium: 75% dioxan, 0.1 M. B2=19.4(0% dioxan)

Ni++ gl oth/un 25°C 0.0 U T H 1958BBb (57064)3341
Kso=26.64
Medium: 0.001 M, DH(so)=-105 kJ mol-1, DS=151 J K-1 mol-1. Kso=25.74(40 C)
****
C7H12N2O2 HL (6181)
2-(N-2-Pyrrolidimino)propanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U TIH B2=20.20 1988GRb (57070)3342
35 C:B2=20.32, 45 C:20.45. DH(B2)=22.7 kJ mol-1, DS=462.7 kJ mol-1
****
C7H12N2O2 HL CAS 18310-18-4 (3167)
3-Methylcyclohexane-1,2-dione dioxime; CH3.C6H7(:NOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 75% U I K1=11.3 B2=23.52 1963BAb (57077)3343
Kso=-27.62
Medium: 75% dioxan, 0.1. B2=18.28(0% dioxan)

Ni++ gl oth/un 25°C 0.0 U T H 1958BBb (57078)3344
Kso=27.62
Medium: 0.001, DH(so)=-109 kJ mol-1, DS=155 J K-1 mol-1. Kso=26.68(40 C)

****

C7H12N2O2 HL CAS 18310-19-5 (3168)
4-Methylcyclohexane-1,2-dione dioxime; CH3.C6H7(:NOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	75%	U	I	K1=10.8	B2=23.0	1963BAb	(57080)3345
							Kso=-28.25			

Medium: 75% dioxan, 0.1. B2=17.9(0% dioxan)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	25°C	.001M	U	T H			1958BBb	(57081)3346
							Kso=28.25			

Kso=27.20(40 C). At 25 C: DH(Kso)=-121 kJ mol-1, DS=121 J K-1 mol-1

****

C7H12N2O2S L Cyclo-Met-Gly CAS 97605-73-7 (8135)
Cyclo-(L-methionyl-L-glycine), 3-[2-(Methylthio)ethyl]-2,5-piperazine dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	NaClO4	20°C	1.0M	C		K1=-0.6		1982BBe	(57083)3347

pH 3.0

****

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
Ni++	gl	KCl	20°C	0.20M	U		K1=4.86	B2=8.83	1982KRd	(57109)3348
							B3=11.90			
Ni++	gl	KNO3	25°C	0.10M	C		K1=4.757	B2=8.645	1975BPa	(57110)3349
							B3=11.46			
Ni++	gl	KNO3	25°C	0.16M	U		K1=4.62	B2=8.42	1960MCa	(57111)3350
							K3=2.5			
							K(NiLOH+H)=10.7			

****

C7H12N2O3 HL Pro-Gly CAS 2578-97-6 (262)
Prolyl-glycine; C4H8N.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	20°C	0.20M	U		K1=4.36	B2=8.10	1982KRd	(57143)3351
							B3=10.22			
							B(NiH-1L2)=-0.95			
							B(NiH-2L2)=-10.48			

****

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
--------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=9.34   B2=14.05  1980BBc (57165)3352
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M        K1=2.26        1999BHb (57194)3353
                                         K(Ni+HL)=0.6
                                         K(NiL+H)=5.3
**************************************************************************
C7H12N4                 L                    CAS 18102-76-6  (3732)
1-Cyclohexyltetrazole;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U        K1=1.1    B2=2.05   1963GBa (57204)3354
Medium: EtOH
**************************************************************************
C7H12N4O                L                      (6725)
Glycyl-histamine
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C        K1=4.20   B2=7.73   1995GHa (57210)3355
                                         B(NiHL)=10.46
                                         B(NiH-1L)=-2.69
                                         B(NiH-2L)=-12.22
                                         B(NiH-1L2)=-0.16
**************************************************************************
C7H12O2                HL                    CAS 1540-34-7  (3730)
3-Ethylpentan-2,4-dione; CH3.CO.CH(CH2.CH3).CO.CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       sp  non-aq 30°C 100%  U                      1968AGa (57217)3356
                                         K(Ni3L6=3NiL2)=-1.23
Medium: toluene.
**************************************************************************
C7H12O2                HL                    CAS 7307-03-1  (3135)
5-Methylhexane-2,4-dione; CH3.CO.CH2.CO.CH(CH3)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=9.55   B2=18.15  1953UFd (57224)3357
**************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=6.68   B2=12.53  1973AHb (57238)3358
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  diox/w 24°C  50%  U        K1=7.0         1979ACa (57283)3359
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=1.20        1975LPa (57301)3360
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=2.66        1975IPa (57324)3361
------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  0.0  U  I     K1=3.424       1962BNa (57325)3362
In NaClO4: K1=3.412(I=0),2.829(I=0.03),2.709(I=0.05),2.49(I=0.10),
2.414(I=0.15),2.347(I=0.20)
******************************************************************************
C7H12O4               H2L                      CAS 510-20-3  (482)
Diethylpropanedioic acid (Diethylmalonic acid); HOOC.C(C2H5)2.COOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=2.37        1970OVa (57350)3363
******************************************************************************
C7H12O4S2             H2L                        (1094)
1,3-Dithiopropane-S,S'-diethanoic acid; (HOOC.CH2.S.CH2)2.CH2
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 2.00M U        K1=2.70        1974AHa (57381)3364
                                        K(Ni+HL)=1.55
Potentiometric methods also used
******************************************************************************
C7H13NO2               HL                         (3170)
1-Aminocyclohexanecarboxylic acid; H2N.C6H10.COOH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

Ni++ gl KCl 20°C 0.10M U K1=5.50 B2=10.05 1963IPa (57427)3365
****
C7H13NO2 HL CAS 103067-99-4 (1127)
2-Amino-hept-6-enoic acid; CH2:CH.CH2.CH2.CH2.CH(NH2).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M U K1=5.32 B2=9.72 1975IPb (57433)3366
****
C7H13NO2 HL CAS 5691-19-0 (4449)
2-Aminocyclohexanecarboxylic acid; H2N.C6H10.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.50M C K1=4.504 1986GGa (57442)3367
B(NiH-1L)=-4.506
cis isomer. For trans isomer K1=3.560, B(NiH-1L)=-5.35

Ni++ gl oth/un 25°C 0.10M U K1=4.41 B2=7.72 1972KSa (57443)3368
Constants for cis isomer. For trans isomer, K1=3.74, K2=2.71
****
C7H13NO2 HL CAS 99571-58-1 (6223)
6-Methylpiperidine-2-carboxylic acid; CH3.C5H9N.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 30°C 0.10M U H K1=5.33 1985RRe (57448)3369
DH(K1)=-120 kJ mol-1, DS=294 J K-1 mol-1
****
C7H13NO2 HL CAS 3235-67-4 (3772)
Piperidine-N-ethanoic acid; C5H10N-CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF KCl 20°C 0.10M U K1=3.7 B2=7 1963IPb (57455)3370
Method: H electrode
****
C7H13NO2S HL (6377)
2-Propylthiazolidine-4-carboxylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 30°C 0.10M U TIH K1=3.61 B2= 6.33 1983RKb (57462)3371
At I=0.0, K1=3.74, K2=2.84. Data for 25-50 C. DH(K1)=-14.0 kJ mol-1,
DS(K1)=16.4 J K-1 mol-1; DH(K2)=-11.7, DS(K2)=11.3.
****
C7H13NO3 HL (7175)
3,3'-Dimethylglutaramide; HOOCCH2C(CH3)2CH2CONH2

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        B2=4.20        1995MWb (57468)3372
*************************************************************************
C7H13NO4              H2L                      CAS 5394-32-1  (340)
N-(1-Methylethyl)iminodiethanoic acid; (CH3)2.CH.N(CH2.COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=8.41   B2=15.68  1976JPa (57508)3373
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=8.78   B2=15.86  1976JPa (57518)3374
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=8.78   B2=15.65  1975IPa (57519)3375
-------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=8.80   B2=15.60  1966SIb (57520)3376
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U T H    K1=10.30       1976OMa (57532)3377
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=10.00  B2=15.00  1955SAa (57539)3378
*************************************************************************
C7H13NO5              H2L                      (334)
N-(1-Methyl-2-hydroxyethyl)iminodiethanoic acid; HOCH2CH(CH3)N(CH2COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=9.85   B2=13.21  1976JPa (57560)3379
                                        K(NiH-1L+H)=10.67
*************************************************************************
C7H13NO5              H2L                      CAS 59881-61-0  (336)
N-(2-Hydroxypropyl)iminodiethanoic acid; CH3.CH(OH).CH2.N(CH2.COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
```

Ni++ gl NaClO4 25°C 0.10M U K1=9.31 B2=13.39 1976JPa (57561)3380
K(NiH-1L+H)=10.97
****
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
---
Ni++ gl KCl 20°C 0.10M U K1=9.39 B2=14.85 1955SAa (57566)3381
****
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
---
Ni++ gl NaClO4 25°C 0.10M U K1=9.28 B2=15.20 1976JPa (57582)3382

Ni++ gl KCl 30°C 0.10M U K1=9.1 B2=14.8 1954CMa (57583)3383
****
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
---
Ni++ EMF KNO3 20°C 0.10M U K1=9.21 B2=14.27 1968MRb (57591)3384
****
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
---
Ni++ gl KNO3 20°C 0.10M U K1=9.09 B2=13.56 1980MRc (57601)3385
****
C7H13NS2 HL (4455)
Hexamethylenedithiocarbamic acid; (CH2)6N.CSSH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ dis oth/un 25°C 0.01M U B2=14.3 1973SSa (57627)3386

Ni++ vlt KCl 25°C 1.0M U B2=14.7 1973SSa (57628)3387
****
C7H13N3 L CAS 673-46-1 (4424)
4-(2-Dimethylaminoethyl)imidazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.10M U K1=3.88 1973BDb (57636)3388
****
C7H13N3O3S HL CAS 60198-01-8 (916)

N-2-(4-Sulfonyl)-pyrrylmethyl-ethylenediamine; HO3S.C4H3N.CH2NH(CH2)2NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	1.00M	U		K1=6.52 B2=11.58 K(NiL=NiH-1L+OH)=-9.19 K(NiH-1L=NiH-1L(OH)+H)=-10.5 K(NiL2+NiH-1L2+H)=-9.14 K(NiH-1L2=Ni(H-1L)2+H)=-11.2	1976SAa	(57641)3389

****

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
Ni++	gl	NaCl	20°C	0.15M	U		K1=3.73 B2=6.34 K(NiH-1L2+H)=8.43	1989DKa	(57645)3390

D/L-Ala-D/L-Asn stereoisomer

****

C7H13N3O4 HL Gly-b-Ala-Gly CAS 42538-54-5 (9058)

Glycyl-beta-alanylglycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=4.18 B2= 7.34 B(NiH-1L)=-5.26 B(NiH-2L)=-12.45	2003AMb	(57659)3391

****

C7H13N3O4 HL Gly-Gly-b-Ala CAS 42538-53-4 (4453)

Glycylglycyl-beta-alanine; H2N.CH2.CO.NH.CH2.CO.NH.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=3.82 B2= 6.90 B(NiH-1L)=-5.03 B(NiH-2L)=-12.34	2003AMb	(57678)3392

****

C7H13N3O4 HL b-Ala-Gly-Gly CAS 42538-55-6 (4452)

beta-Alanylglycylglycine; H2N.CH2.CH2.CO.NH.CH2.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=3.53 B(NiH-1L)=-5.25 B(NiH-2L)=-12.47	2003AMb	(57693)3393

****

C7H13N3O4S H2L Gly-Gly-Cys CAS 95416-30-1 (2549)

Glycyl-glycyl-cysteine; H2N.CH2.CO.NH.CH2.CO.NH.CH(CH2.SH).COOH

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

```
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C                      1987KBa (57696)3394
                                        B(NiHL)=13.67
                                        B(NiH-2L)=-5.36
********************************************************************************
C7H14N2O3              L    Ala-Ala-OMe      CAS 105328-90-3  (2551)
Alanyl-alanine methyl ester; H2N.CH(CH3).CO.NH.CH(CH3).CO2.CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        B2=7.41        1988VKa (57709)3395
                                        B(NiL2H-2)=-7.69
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M   K1=4.28        2001PSb (57740)3396
                                        B(NiH-1L)=-0.44
                                        B(NiAL)=6.06
                                        B(NiAH-1L)=-0.35
                                        B(Ni2AL2)=20.57
A is imidazole. B(Ni2H-1AL2)=13.40,
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U    M   K1=4.28        1999PGa (57741)3397
                                        B(NiAL)=6.06
                                        B(NiBL)=6.48
                                        B(NiCL)=6.48
A=imidazole, B=2-methylimidazole, C=2-ethylimidazole.
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=4.28   B2=7.84   1977PNa (57742)3398
With Gly-D-Val, K1=4.20, K2=3.54
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=4.28   B2= 7.84  1976PNa (57743)3399
with L=glycyl-DL-valine K1=4.20, K2=3.54
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=4.31   B2=7.79   1975BPa (57744)3400
                                        B3=10.38
                                        B(NiH-1L)=-5.13
                                        B(NiH-1L2)=-2.21
--------------------------------------------------------------------------------
Ni++       EMF oth/un   ?     ?  U        K1=4.21   B2=7.77   1970PBb (57745)3401
Gly-DL-Valine: K1=4.20, K2=3.54
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.16M U                          1960MCa (57746)3402
                                        K(NiH-1L+H)=10.4
                                        K(NiH-1LOH+H)=11.0
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.16M U        K1=4.05   B2=7.40   1960MCa (57747)3403
```

B3=9.5

****

C7H14N2O3 HL Val-Gly CAS 686-43-1 (3174)
Valylglycine; H2N.CH(CH(CH3)2).CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.16M	U		K1=3.00	B2=5.20	1960MCa (57763)	3404
							K3=0.9			
							K(NiH-1L+H)=9.0			
							K(NiH-1LOH+H)=9.6			

****

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
Ni++	gl	KCl	25°C	0.20M	C		K1=4.14	B2=7.56	1987SPa (57785)	3405
							B(NiH-1L)=-4.77			
							B(NiH-1L2)=-2.82			
							B(NiH-2L2)=-12.40			
Ni++	gl	NaCl	25°C	0.12M	U		K1=4.15	B2=7.67	1977PNa (57786)	3406
Ni++	gl	NaCl	25°C	0.12M	U		K1=4.15	B2= 7.67	1976PNa (57787)	3407
Ni++	EMF	NaClO4	25°C	0.10M	U		K1=4.44	B2=8.32	1967SMd (57788)	3408
Ni++	gl	KCl	25°C	.058M	U	T	B2=7.56		1957LYa (57789)	3409
B2=8.32(0 C)										

****

C7H14N2O3S HL Met-Gly CAS 14486-03-4 (727)
Methionyl-glycine; H2N.CH(CH2.CH2.S.CH3).CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=3.33	B2=5.88	1987SPa (57810)	3410
							B(NiH-1L)=-4.92			
							B(NiH-2L2)=-12.64			

****

C7H14N2O4 HL CAS 38937-65-4 (1661)
Pimelyldihydroxamic acid; HONH.CO.(CH2)5.CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.15M	C		K1=7.453	B2=11.41	1986BGc (57819)	3411
							B(NiH2L)=21.36			
							B(NiH1.5L)=18.792			

****

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
Ni++	gl	KCl	25°C	0.10M	U		K1=8.66 B2=12.98 B(NiHL)=14.10	1981BLa (57824)	3412

****

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
Ni++	gl	NaNO3	25°C	0.10M	M		K1=1.75	2003FHa (57836)	3413

****

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
Ni++	gl	NaNO3	20°C	0.10M	C		B(NiH-2L2)=-11.83 B(NiH-3L2)=-17.16	1994ESa (57894)	3414

****

C7H15NO2 HL (6264)
4-(2-Hydroxyethylimino)pentane-2-one; CH3.CO.CH2.CH(NH.CH2.CH2.OH)CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w 30%	30°C	50%	U	M	K1=10.32 K(Ni(bpy)+L)=9.66 K(Ni(phen)+L)=9.20	1977DBc (57914)	3415

Data also for 2-hydroxypropyl analogue

****

C7H15NO4 HL CAS 41244-51-3 (4459)
N,N-Bis(2'-hydroxyethyl)alanine; (HO.CH2.CH2)2.N.CH(CH3)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	EMF	KNO3	20°C	0.10M	U		K1=5.98 B2=9.81	1968MRb (57927)	3416

****

C7H15NO4S HL MOPS CAS 1132-61-2 (2792)
3-(N-Morpholino)propanesulfonic acid; C4H8ON-CH2.CH2.CH2.SO3H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=3.45	2001AOa (57956)	3417
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=3.45 K(Ni(Gly)+2L)=6.39	1999AAa (57957)	3418

K(Ni(Ser)+2L)=6.44
K(Ni(Met)+2L)=6.32
K(Ni(Asp)+2L)=6.53
K(Ni(Glu)+2L)=6.45, K(Ni(His)+2L)=6.46.

****

C7H15NO5 L (6007)
1-Methoxy-D-glucosamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaCl	25°C	0.15M	U		K1=3.10		1987PDa (57966)	3419
							B(NiH-1L2)=-2.59			
							B(NiH-2L2)=-12.13			

****

C7H15NO5 L CAS 3329-30-4 (564)
2-Methylamino-2-deoxyglucose;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	30°C	0.10M	U		K1=3.1		1979MNa (57970)	3420

****

C7H15NO5S HL MOPSO CAS 68399-77-9 (1967)
3-(N-Morpholino)-2-hydroxypropane sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=3.50		2001AAa (57987)	3421

Also data for ternary complexes with 5'-GMP, 5'-IMP and 5'-CMP.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=3.68		2000ADa (57988)	3422
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=3.43		1999AAa (57989)	3423
							K(Ni(Gly)+2L)=7.15			
							K(Ni(Ser)+2L)=7.58			
							K(Ni(Met)+2L)=7.30			
							K(Ni(Asp)+2L)=7.33			

K(Ni(Glu)+2L)=7.32, K(Ni(His)+2L)=7.73.

****

C7H15NO7 HL (6519)
2-Amino-2-deoxy-D-glycero-D-gulo-heptonic acid;HOOC.CH(NH2).(CHOH)4.CH2OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=4.93	B2=14.43	1992DGa (58000)	3424
							B(NiH2L2)=21.73			

****

C7H15NO7 HL (7135)
2-Amino-2-deoxy-D-glycero-L-glucoheptonic acid; HOOCCH(NH2)(CHOH)4CH2OH

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

```
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=5.06   B2=9.59   1995DFc (58006)3425
                                         B(NiH2L2)=23.42
********************************************************************************
C7H15NS2               HL                     CAS 25179-61-7  (3175)
N,N-Di-n-propyldithiocarbamic acid; (CH3.CH2.CH2)2.N.CS.SH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       ix  NaClO4 22°C 0.10M U        B2=>14         1956BFa (58015)3426
********************************************************************************
C7H16N2                L                      CAS 38932-72-8  (4426)
1,1-Di(aminomethyl)cyclopentane; C5H8(CH2.NH2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  dil  U        K1=6.60   B2=10.90  1972NBa (58033)3427
********************************************************************************
C7H16N2                L                      CAS 55666-99-4  (3137)
2,2'-Aminoethylpiperidine; C5H10N.CH2.CH2.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  none   20°C  0.0  U T H    K1=5.28   B2=9.59   1963HGa (58038)3428
DH(K1)=-4 kJ mol-1, DS=88 J K-1 mol-1; DH(K2)=-16, DS=21
30 C, K1=5.28, K2=4.42; 40 C, K1=5.37, K2=4.55
--------------------------------------------------------------------------------
Ni++       gl  oth/un 40°C  ->0  U        K1=4.30        1961RFa (58039)3429
********************************************************************************
C7H16N2                L                      CAS 86849-08-3  (3136)
trans-Cycloheptane-1,2-diamine; C7H12(NH2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  oth/un 10°C  ->0  U        K1=7.77   B2=14.41  1958BFa (58042)3430
                                         K3=3.83
********************************************************************************
C7H16N2O               L                        (6586)
1-Oxa-4,8-diazacyclodecane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=6.48   B2=11.1   1990CCa (58051)3431
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=5.28        1990HWa (58052)3432
********************************************************************************
C7H16N2S               L                        (6463)
1-Thia-4,8-diazacyclodecane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

Ni++ gl KNO3 25°C 0.10M C K1=10.1 1992WLb (58063)3433
****
C7H16N4O2 L (934)
1,9-Diamino-3,7-diaza-2,8-nonanedione; (H2N.CH2.CO.NH.CH2)2.CH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.50M U K1=5.43 1971KAb (58072)3434
K(NiH-2L+2H)=14.93
****
C7H16N4O2 L (135)
1,9-Diamino-3,7-diazanonane-4,6-dione; H2N(CH2)2.NHCO.CH2.CONH.(CH2)2NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 35°C 0.20M U 1981KKa (58079)3435
B(NiH-2L)=-12.00

Ni++ sp oth/un 60°C 0.10M U M 1970OYa (58080)3436
K(NiA+L=NiL+A)=2.06
A=N,N'-bis(2-pyridinecarbonyl)diaminoethane. Medium: NaOH
****
C7H16N4O2 L CAS 20144-45-6 (4461)
3,7-Diazanonanediamide; H2N.CO.CH2.NH.CH2.CH2.CH2.NH.CH2.CO.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.50M U K1=8.55 1974KZa (58086)3437
K(NiH-2L+2H)=17.82
****
C7H16N4O2 L IsoLactulose CAS 26451-47-8 (8500)
R-N,N'-Diglycyldiaminopropane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M U K1=5.46 B2= 9.77 1984MDc (58088)3438
K(NiL=NiH-2L+2H)=-15.64
Method: batch technique.
****
C7H17NO5S HL AMPSO CAS 68399-79-1 (1968)
3-[1,1-Dimethyl-2-hydroxyethylamino]-2-hydroxypropanesulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M C K1=3.62 2001AOa (58115)3439
****
C7H17NO6S HL DIPSO (1097)
3-[N,N-Bis(2-hydroxyethyl)amino]-2-hydroxypropane sulfonic acid;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.76        2000ADa (58128)3440
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.68        1999AAa (58129)3441
*************************************************************************
C7H17NO7P2             HL                    CAS 220491-02-1  (7714)
N-2-Methyltetrahydrofuryliminodi(methylenephosphonic acid);
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=9.35   B2=12.78  2000KKa (58147)3442
                                          B(NiHL)=15.79
                                          B(NiH2L)=20.16
                                          B(NiH2L2)=30.18
                                          B(NiHL2)=24.43
*************************************************************************
C7H17NO7S              HL    TAPSO           CAS 68399-81-5  (167)
3-[N-(Tris(hydroxymethyl)methyl)amino]-2-hydroxypropane sulfonic acid
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=3.55        2001AAa (58164)3443
Also data for ternary complexes with 5'-GMP, 5'-IMP and 5'-CMP.
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.70        2000ADa (58165)3444
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.48        1999AAa (58166)3445
*************************************************************************
C7H17N2O3P             HL                      (7919)
(Glycylamino)methyl(t-butylphosphinic acid);
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=4.09   B2= 7.40  2001LKa (58186)3446
                                          B(NiHL)=9.38
*************************************************************************
C7H17N2O4P            H2L    Leu-Gly(P)       CAS 60668-11-3  (7119)
Leucylaminomethylphosphonic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.786  B2=6.90   1995HLa (58193)3447
                                          B(NiH-1L)=-4.68
                                          B(NiHL)=9.57
*************************************************************************
C7H17N2O4PS           H2L                      CAS 82611-22-1  (7392)
Methionyl-1-aminoethylphosphonic acid;                          H2L
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

Ni++ gl KNO3 25°C 0.10M C K1=3.923 B2=7.07 1997LBa (58198)3448
B(NiHL)=10.06
B(NiH-1L)=-5.02
Data are for (S,S)-isomer. For (S,R)-isomer K1=3.685, B2=6.19, B(NiHL)=10.01
B(NiH-1L)=-4.81

****

C7H17N3 L (101)
1,4,7-Triazacyclodecane; cyclo(.NHCH2CH2NHCH2CH2NHCH2CH2CH2.)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	M		K1=14.58	1978ZOa	(58218)3449

****

C7H17N3 L (4909)
N-(2-Aminoethyl)-1,4-diazacycloheptane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=6.50	1977PBb	(58228)3450

****

C7H18N2 L CAS 10061-68-4 (4427)
2,2-Diethyl-1,3-diaminopropane; NH2.CH2.C(C2H5)2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	dil	U		K1=6.54 B2=10.60	1972NBa	(58238)3451

****

C7H18N2 H2L CAS 104-79-0 (2662)
N,N-Diethyl-N'-methyldiaminoethane; (C2H5)2N.CH2.CH2.NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.50M	C	I	K1=3.88	1975OTa	(58246)3452

****

C7H18N2 L CAS 72662-72-1 (2933)
N-Isopropyl-2-methyl-1,2-diaminopropane; H2N.CH2.C(CH3)2NH.CH(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	1.03M	C	I	K1=5.13 B2=10.37	1983ATa	(58249)3453

****

C7H18N2O2 L (2670)
N,N-Di(2-hydroxyethyl)-1,3-propanediamine; (HO.CH2.CH2)2N.CH2.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	C	I	K1=6.91	1976OAa	(58251)3454

****

C7H18N2S L (1300)

2-Aza-2'-methyl-5-thia-8-amino-octane; CH3.N(CH3).(CH2)2.S.(CH2)3.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		K1=3.48	1981HGa (58256)	3455

****

C7H18N2S L (1301)

2-Aza-2'-methyl-6-thia-8-amino-octane; CH3.N(CH3).(CH2)3.S.(CH2)2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U			1981HGa (58261)	3456
							K(Ni+HL)=2.50		
							K(Ni+L+HL)=5.78		

****

C7H19NO6P2 H4L (7464)

N-(3-Methylbutyl)imino-bis(methylenephosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=8.21	2000KKa (58267)	3457
							B(NiHL)=15.27		
							B(NiH2L)=19.76		
							B(NiH-1L)=-3.10		

****

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
Ni++	gl	none	20°C	0.0	U	T H	K1=7.39 B2=11.19	1959GFb (58318)	3458

30 C, K1=7.05; 40 C, K1=7.04, K2=2.85
DH(K1)=-32.8 kJ mol-1, DS=30 J K-1 mol-1

****

C7H20N2O4P2 H2L (7263)

1,3-Diaminopropane-N,N'-bis(methylenemethylphosphinic acid);
CH2(CH2NHCH2PO(OH)CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	R4N.X	25°C	0.10M	M		K1=7.85	1996BCa (58326)	3459

Medium: 0.1 M Me4NNO3.

****

C7H20N4 L CAS 4741-99-5 (12)

1,4,8,11-Tetraazaundecane; H2N.CH2.CH2.NH.CH2.CH2.CH2.NH.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	NaClO4	25°C	0.10M	C	T H		1977AFb (58344)	3460
							K(NiL(H2O)2=NiL+2H2O)=-0.54		

From data for 19-49 C, DH(K)=14 kJ mol-1, DS(K)=38 J K-1 mol-1.

Ni++ gl oth/un 25°C ? U K1=16.15 1976NGa (58345)3461

Ni++ gl NaClO4 25°C ? U K1=16.15 1976NGe (58346)3462

Ni++ cal KCl 25°C 0.10M U H K1=15.4 1974HMb (58347)3463
DH=-70.3 kJ mol-1 and DS=58 J K-1 mol-1.

Ni++ gl KCl 25°C 0.50M U K1=16.4 B2=20.1 1970WBa (58348)3464

****

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
Ni++	gl	KCl	25°C	0.10M	C		K1=14.17 B(NiHL)=19.78 K(Ni+HL)=9.56	2003KDa	(58364)3465

****

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
Ni++	gl	NaCl	25°C	0.10M	U		K1=12.94 B(NiHL)=23.80 B(NiH2L)=32.10 B(NiH3L)=38.74 B(NiH4L)=44.34	1987KMb	(58381)3466

B(NiH5L)=48.46; B(NiH6L)=51.91;B(Ni2L)=22.07. Calculated assuming literature values are Natural log values

****

C8H5NO2 HL Isatin CAS 91-56-5 (7844)
2,3-Indolinedione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	alc/w	30°C	5%	U	M	K(NiA+L)=5.76 B(NiAL)=12.04	1995RRb	(58403)3467

Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. H2A is thioglycolic acid.

Ni++ gl alc/w 30°C 5% M M K1=4.75 B2= 8.67 1994RRa (58404)3468
Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. K(NiA+L)=4.45 (A=Gly), 4.43 (Ala), 4.40 (Val), 4.47 (en), 4.51 (bpy), 4.26 (oxalate), 4.32 (catecholate).

****

C8H5NO2 HL Phthalimide CAS 85-41-6 (4496)
Phthalimide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	alc/w	?	100%	U			1971MSc	(58416)3469
							B4=6.58		

Medium: MeOH

****

C8H5NO3 L CAS 524-38-9 (8323)
N-Hydroxyphthalimide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	alc/w	30°C	5%	U	M		1995RRb	(58420)3470
							K(NiA+L)=4.08		
							B(NiAL)=10.36		

Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. H2A is thioglycolic acid.

****

C8H5NO6 H2L CAS 603-11-2 (1171)
3-Nitro-phthalic acid; O2N.C6H3(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	35°C	dil	U		K1=3.24	1970NPb	(58429)3471
Ni++	gl	KNO3	25°C	0.10M	U		K1=1.72	1956YSa	(58430)3472

****

C8H5NO6 H2L CAS 610-22-5 (1172)
4-Nitro-phthalic acid; O2N.C6H3(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.40M	U		K1=3.02	1971NPc	(58442)3473
Ni++	gl	KNO3	25°C	0.10M	U		K1=1.65	1956YSa	(58443)3474

****

C8H5N5O6 H3L Murexide (453)
Purpuric acid (Murexide is ammonium salt);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	TIH	K1=4.17	B2=9.85	1995GSa	(58457)3475

Medium: 10% w/w MeCN/DMSO. DH(K=117 kJ mol-1, DS=473 J K-1 mol-1
DH(K2)=-59.3, DS=-90

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	KNO3	25°C	0.10M	U	H		1993SVa	(58458)3476
							K(Ni+HL)=3.11		
							K(NiL+H)=6.18		

Method: T-jump. DH calculated

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	KNO3	25°C	0.10M	U		K1=6.34	1984OWa	(58459)3477

```
                                        B(NiHL)=12.25
--------------------------------------------------------------------------------
Ni++       sp  none   25°C  0.0  U                      1979FKa (58460)3478
                                        K(Ni+H2L)=3.58
                                        *K(NiH2L)=-5.74
--------------------------------------------------------------------------------
Ni++       sp  KNO3   12°C 0.10M U                      1965GEa (58461)3479
                                        K(Ni+H2L)=3.36
--------------------------------------------------------------------------------
Ni++       sp  oth/un  rt  0.10M U                      1949SGa (58462)3480
                                        K(Ni+H2L)=4.6
********************************************************************************
C8H5O2F3S              HL    TTA              CAS 326-91-0  (165)
4,4,4-Trifluoro-1-(2-thienyl)butane-1,3-dione; F3C.CO.CH2.CO.C4H3S
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  75%  U        K1=10.64  B2=17.28  1995UFa (58575)3481
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.20M C                      1988HKb (58576)3482
                                        K(Ni+HL=NiL+H)=-2.0
Medium: 0.20 M Na2SO4.
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=6.77   B2=12.22  1977AHb (58577)3483
--------------------------------------------------------------------------------
Ni++       dis NaClO4 20°C 0.10M U        B2=10.03       1971ADa (58578)3484
--------------------------------------------------------------------------------
Ni++       dis non-aq 20°C 100%  U    M                 1971ADa (58579)3485
                                        K(NiL2+A)=3.18
                                        K(NiL2+B)=4.67
                                        K(NiL2+2C)=5.70
                                        K(NiL2+2D)=4.44
Temperature range: 19-21 C. Medium: CHCl3. A=piperidine, B=dihexylamine,
C=4-Me-pyridine, D=2-Me-pyridine. K(NiL2+2E)=5.40, E=pyridine
--------------------------------------------------------------------------------
Ni++       EMF oth/un 25°C  1.0M U                      1971JFa (58580)3486
                                        K(Ni+HL=NiL+H)=-3.08
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=7.93   B2=15.23  1965RGa (58581)3487
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        B2=16.0        1953UFe (58582)3488
--------------------------------------------------------------------------------
Ni++       gl  diox/w 20°C  75%  U        B2=10.0        1951UFa (58583)3489
Medium: 75% dioxan, corr to H2O, I=0.1 M
********************************************************************************
C8H5O3F3               HL                    CAS 15788-03-1  (3215)
1,1,1-Trifluoro-3-2'-furoylacetone; F3C.CO.CH2.CO.C4H3O
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

Ni++ gl diox/w 30°C 75% U B2=14.2 1953UFe (58712)3490

Ni++ gl diox/w 20°C 75% U B2=8.6 1951UFa (58713)3491
****
C8H5O4Br H2L CAS 116-69-8 (1169)
3-Bromo-phthalic acid; Br.C6H3(COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M U K1=2.10 1956YSa (58721)3492
****
C8H5O4Br H2L CAS 6968-78-1 (3216)
4-Bromophthalic acid; Br.C6H3(COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M U K1=2.05 1956YSa (58725)3493
****
C8H5O4Cl H2L CAS 27563-65-1 (1168)
3-Chloro-phthalic acid; Cl.C6H3(COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M U K1=2.02 1956YSa (58728)3494
****
C8H6N2O HL CAS 5423-54-1 (3217)
4-Hydroxy-1,5-naphthyridine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 20°C 0.01M U K1=5.8 B2=10.5 1954AHb (58736)3495
****
C8H6N2O HL CAS 17056-99-4 (3220)
5-Hydroxyquinoxaline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 20°C 0.01M U K1=7.6 1954AHb (58742)3496

Ni++ gl diox/w 20°C 50% U K1=7.79 B2=14.81 1954IRa (58743)3497
Medium: 50% dioxan, 0.3 M NaClO4
****
C8H6N2O HL CAS 17057-00-0 (3218)
8-Hydroxy-1,6-naphthyridine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 20°C 0.01M U K1=5.9 B2=10.9 1954AHb (58751)3498
****
C8H6N2O HL CAS 70730-36-8 (3219)

8-Hydroxy-1,7-naphthyridine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 20°C 0.01M U K1=6.7 B2=12.4 1954AHb (58756)3499
****
C8H6N2O HL (6290)
8-Hydroxycinnoline, (2-Hydroxybenzo)pyrimidine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 20°C 0.01M U K1=7.8 B2=14.9 1954AHb (58763)3500

Ni++ gl diox/w 20°C 50% U K1=8.25 B2=15.48 1954IRa (58764)3501
Medium: 50% dioxan, 0.3 M NaClO4
****
C8H6N2O HL 8-Quinazolinol CAS 7757-02-2 (3221)
8-Hydroxyquinazoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 20°C 0.01M U K1=7.6 B2=14.4 1954AHb (58774)3502
****
C8H6N2OF6 L CAS 64139-77-1 (5452)
N-(2-Pyridyl)-bis(trifluoromethyl)aminomethanol; C5H4N.NH.C(CF3)2.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 25°C 0.10M U B2=9.65 1977CWa (58782)3503
****
C8H6N2O2 HL (6681)
9-Hydroxy-pyrido(1,2-a)pyrimidin-4-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M C K1=7.50 B2=14.19 1993YDa (58785)3504
Data also in 50% v/v dioxan/water. Electrolyte: 0.1M KNO3.
B1= 8.50, B2= 14.98.
****
C8H6N2S L (3814)
2-(2'-Pyridyl)-1,3-thiazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ dis oth/un 25°C 0.10M U K1=5.10 B2=9.97 1968EHa (58793)3505
B3=14.09
****
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
-------------------------------------------------------------------------
Ni++       ISE oth/un 25°C 0.10M U        K1=5.93   B2=12.19  1968EHa (58799)3506
                                          B3=17.52
*************************************************************************
C8H6N2S                 L                    CAS 53911-40-3  (3816)
5-(2'-Pyridyl)-1,3-thiazole;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U        K1=1.35        1965KSc (58806)3507
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=3.26   B2= 5.18  1998KRa (58907)3508
                                          B(NiLA)=8.64
HA: Inosine
-------------------------------------------------------------------------
Ni++       gl  alc/w  24°C  20%  C    M                 1996MIa (58908)3509
                                          K(Ni(ada)+L)=4.77
Medium: 20% w/w EtOH/H2O, 0.10 M KNO3.
ada: N-(acetamido)-iminodiethanoic acid.
-------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=2.32        1989SCa (58909)3510
In 60% v/v EtOH/H2O: K1 = 3.29
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M        K1=3.38        1980MMf (58910)3511
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.50M C TIH    K1=1.719       1975LKb (58911)3512
-------------------------------------------------------------------------
Ni++       EMF oth/un 25°C  0.0  U T H    K1=2.952       1962DNa (58912)3513
Method: H electrode. 0-45 C. DH(K1)=7.4 kJ mol-1, DS=81.1 J K-1 mol-1
-------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=2.1         1960YYa (58913)3514
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.14        1956YSa (58914)3515
*************************************************************************
C8H7NO                  L                    CAS 95-21-6  (4497)
2-Methylbenzoxazole;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       sp  alc/w    ?  100%  U                      1972ACa (59087)3516
                                          K(Ni(NO3)2+2L)=1.83
Medium: MeOH
*************************************************************************
C8H7NOS                 L                    CAS 2942-13-4  (4553)
```

2-Hydroxymethylbenzothiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	alc/w	?	100%	U	M			1971ACc	(59089)3517
							K(Ni(NO3)2+3L)=2.62			

Medium: MeOH

****

C8H7NO2Cl2 HL CAS 13538-26-6 (6286)
3,5-Dichloro-2-hydroxyacetophenone oxime; Cl2(HO)C6H2.C(CH3):NOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	alc/w	27°C	75%	U	I	K1=7.65	B2=13.77	1976LGa	(59113)3518

Data in 75% EtOH. Data also in 75% acetone and 75% dioxan

****

C8H7NO2S H2L (5450)
3-(2-Pyridyl)-2-mercaptopropenoic acid; C5H4N.CH:C(SH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	0.10M	U		K1=12.61	B2=19.56	1977WVa	(59122)3519

****

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
Ni++	sp	diox/w	40°C	50%	U		K1=3.57		1975PSa	(59139)3520

****

C8H7NSe L CAS 2818-88-4 (4502)
2-Methylbenzoselenazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	non-aq	?	100%	U	M			1972ACa	(59170)3521
							K(Ni(NO3)2+2L)=2.41			

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
Ni++	gl	KNO3	25°C	0.10M	C		K1=6.06	B2=12.61	1992RKa	(59175)3522
							B3=17.98			
							B4=19.63			
Ni++	EMF	KNO3	25°C	0.10M	U		K1=6.39	B2=12.61	1967EHc	(59176)3523
							B3=17.80			

****
C8H7N3 L CAS 16576-78-6 (3793)
4-(2'-Pyridyl)imidazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ ISE KNO3 25°C 0.10M U K1=7.20 B2=13.95 1967EHb (59187)3524
B3=19.82
****
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
---
Ni++ gl diox/w 40°C 50% U K1=5.37 1975PPa (59210)3525
****
C8H7O2Cl HL CAS 7035-09-8 (3817)
5-Chloro-2-hydroxy-4-methylbenzaldehyde, 5-chloro-4-methylsalicylaldehyde;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF diox/w 20°C 50% U K1=4.1 1963CCa (59226)3526
Medium: 50% dioxan, 0.3 M NaClO4
****
C8H8NOCl HL (4568)
N-Methyl-5-chlorosalicylideneimine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ cal non-aq 30°C 100% U M 1973DGb (59256)3527
K(NiL2+2py)=3.37
Medium: benzene
****
C8H8NO2Cl HL CAS 6961-49-5 (658)
N-(2-Chlorophenyl)aminoethanoic acid; Cl.C6H4.NHCH2COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M C K1=2.84 1985CLa (59259)3528
****
C8H8NO2Cl HL CAS 10242-05-4 (629)
N-(3-Chlorophenyl)aminoethanoic acid; Cl.C6H4.NHCH2COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U K1=2.93 1983CLb (59264)3529

Ni++ gl NaClO4 25°C 0.10M U M K1=2.93 1983CLc (59265)3530
K(Ni(bpy)+L)=3.46
****

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
Ni++	gl	NaClO4	25°C	0.10M	U	M	K(Ni(phen)+L)=3.88	1984CMa (59271)	3531
Ni++	gl	NaClO4	25°C	0.10M	U		K1=2.99	1979CXa (59272)	3532

C8H8NO2Cl HL CAS 61756-69-2 (4569)
N-Acetyl-N-(4-chlorophenyl)hydroxamine; Cl.C6H4.N(CO.CH3).OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	25°C	70%	U		K1=6.16 B2=11.08	1968JSb (59278)	3533

Medium: 70% dioxan, 0.1 M KCl

C8H8NO2F3S HL CAS 50790-31-3 (211)
Trifluoromethanesulfonamidomethylbenzene; C6H5.CH2.S(:O)2.NH.CF3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	30°C	45%	M		K1=4.5(9) B2=7.5(7)	1984MYa (59288)	3534

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U		K2=2.35	1984DPa (59292)	3535

Medium: DMSO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	alc/w	35°C	60%	U	I	K1=3.16	1984MLa (59293)	3536

value at I=0.1 M KNO3; I=0.04, K=3.06, I=0.18, K=3.31, I=0.26, K=3.41

C8H8N2 L CAS 615-15-6 (8241)
2-Methylbenzimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		K1=0.78	1990LGb (59298)	3537

C8H8N2 L CAS 39965-81-6 (5519)
4-Cyano-2,6-dimethylpyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.50M	U		K1=1.2	1983BEb (59302)	3538

C8H8N2O L CAS 4856-97-7 (3820)
2-(Hydroxymethyl)benzimidazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp non-aq ? 100% U 1970ACa (59308)3539
K(Ni+3HL)=4.32
Medium: MeOH
****
C8H8N2O2 H2L (3821)
1-(2'-Hydroxyphenyl)-4-oxo-2,3-diazabut-1-ene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp alc/w 19°C 40% U K1=11.2 1966SSe (59321)3540
K(Ni+HL)=6.4
K(Ni+H2L)=3.8
B(NiL(OH))=14
Medium: 40% EtOH, 0.05 M NaClO4
****
C8H8N2O2 HL Phenylglyoxime (3222)
Phenylglyoxime; C6H5.C(:N.OH).CH:N.OH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 50% U K1=9.9 B2=19.3 1958PBa (59330)3541
****
C8H8N2O4 HL CAS 10242-06-5 (630)
N-(3-Nitrophenyl)aminoethanoic acid; O2N.C6H4.NHCH2COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U M 1983CLc (59359)3542
K(Ni(bpy)+L)=3.09
****
C8H8N2O6S H2L CAS 15054-42-9 (3843)
N-(2'-Nitrobenzenesulfonyl)aminoethanoic acid; O2N.C6H4.SO2.NH.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.10M C M K1=5.99 2000SIa (59369)3543
B(NiHL)=12.90
B(NiH2L2)=25.67
B(NiHL(bpy))=21.02
B(NiL(bpy))=13.71
B(NiHL(bpy)2)=27.49, B(NiL(bpy)2)=20.38.
****
C8H8N2S HL CAS 7152-24-1 (6200)
2-(Methylmercapto)benzimidazole;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M M    M                  1995RMa (59387)3544
                                        K(Ni(bpy)+L)=7.80
                                        K(Ni(phen)+L)=7.59
                                        K(NiA+L)=7.44
A is 1,2-diaminobenzene.
--------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M M        K1=9.39        1995RMa (59388)3545
**************************************************************************
C8H8O2                 HL    2-Acetylphenol   CAS 118-93-4  (1888)
2-Hydroxyacetophenone; HO.C6H4.CO.CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  75%  U        K1=18.39       1978SRa (59449)3546
--------------------------------------------------------------------------
Ni++       gl  diox/w 40°C  50%  U        K1=5.37        1975PPa (59450)3547
--------------------------------------------------------------------------
Ni++       gl  diox/w 27°C  75%  U        K1=11.26  B2=19.81  1973KDc (59451)3548
Medium: 75% dioxan, 0.1 M NaClO4
**************************************************************************
C8H8O2                 HL                     CAS 613-84-3  (3189)
5-Methylsalicylaldehyde  (5-Methyl-2-hydroxybenzaldehyde)
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=6.18   B2=10.84  1978RJa (59507)3549
**************************************************************************
C8H8O2                 HL    Phenylacetic     CAS 103-82-2  (1361)
Phenylethanoic acid; C6H5.CH2.COOH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       nmr none   20°C  0.0  U                       1992MCa (59533)3550
                                        K(NiA+L)=2.00
                                        K(NiAL+L)=3.08
A=carboxypeptidase A. Measured at pH 7.  At pH 8, K(NiAL)=2.18, K(NiAL2)=
2.81
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 2.00M U        K1=0.653  B2=0.896  1979NTa (59534)3551
**************************************************************************
C8H8O2                 HL                     CAS 1004-72-4  (3190)
alpha-Methyltropolone;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U        K1=8.4    B2=15.1   1954BFb (59576)3552
                                        B3=18.8
**************************************************************************
```

C8H8O2 HL CAS 583-80-2 (3191)
beta-Methyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	30°C	50%	U		K1=8.4	B2=15.0 B3=19.1	1954BFb	(59587)3553

C8H8O2S HL CAS 103-04-8 (3223)
(Phenylthio)ethanoic acid; C6H5.S.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	alc/w	25°C	50%	U		B2=16.72	B(Ni2L3)=28.82 B(Ni3L4)=40.44	1985CFd	(59616)3554

Medium: 50% EtOH, 1.0 M NaClO4

Ni++	gl	oth/un	25°C	0.10M	U		K1=0.7		1962SYa	(59617)3555

C8H8O2S HL 2-Thenoylaceton CAS 3151-27-2 (3224)
2-Thenoylacetone, 1-(2'-Thienyl)butane-1,3-dione; C4H3S.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=9.38	B2=17.60	1953UFe	(59633)3556
Ni++	gl	diox/w	20°C	75%	U		K1=6.99	B2=12.82	1951UIa	(59634)3557

Medium: 75% dioxan, corr to H2O, I=0.1

C8H8O2S HL 3-Thenoylaceton CAS 21808-13-9 (2736)
3-Thenoylacetone, 1-(3'-Thienyl)butane-1,3-dione; C4H3S.CO.CH2.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=10.73	B2=19.23	1965RGa	(59643)3558

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
Ni++	ISE	KNO3	25°C	0.10M	C		K1=0.30		1972FGb	(59649)3559

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

```
Ni++       gl  diox/w 40°C  50%  U        K1=4.72        1975PPa (59672)3560
********************************************************************************
C8H8O3                H2L    o-Cresotic acid  CAS 83-40-9  (2338)
2-Hydroxy-3-methylbenzoic acid; CH3.C6H3(OH).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  50%  M    M   K1=6.82        1983ADb (59694)3561
                                          K(Ni(phen)+L)=6.60
Medium: 50% v/v EtOH/H2O, 0.10 M NaNO3.
********************************************************************************
C8H8O3                H2L    p-Cresotic acid  CAS 89-56-5  (3797)
2-Hydroxy-5-methylbenzoic acid, (5-methylsalicylic acid)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.10M U    M   K1=7.1    B2=12.34  1978ABd (59707)3562
                                          K(Ni(bpy)+L)=7.65
********************************************************************************
C8H8O3                 HL    Mandelic Acid    CAS 611-72-3  (80)
2-Phenyl-2-hydroxyethanoic acid; C6H5.CH(OH).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  2.0M U        K1=1.31   B2= 2.48  1985MFa (59788)3563
By quinhydrone electrode, K1=1.35, B2=2.40.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T      K1=1.82        1984JSa (59789)3564
--------------------------------------------------------------------------------
Ni++       kin KNO3   25°C 0.50M U        K1=1.65        1981CKc (59790)3565
--------------------------------------------------------------------------------
Ni++       sp  oth/un   ?     ?  U        K1=6.8         1976SCb (59791)3566
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 30°C 0.10M U        K1=2.60   B2=4.40   1975KAd (59792)3567
--------------------------------------------------------------------------------
Ni++       EMF NaClO4 30°C 0.10M U        K1=2.55   B2=4.37   1972KAf (59793)3568
--------------------------------------------------------------------------------
Ni++       vlt NaClO4 20°C  2.0M U        K1=1.38   B2=2.04   1968FLa (59794)3569
                                          B3=2.95
--------------------------------------------------------------------------------
Ni++       EMF NaClO4 25°C  2.0M U        K1=1.41   B2=2.26   1968FLa (59795)3570
                                          B3=2.90
********************************************************************************
C8H8O3                 HL    m-Anisic acid    CAS 586-38-9  (2804)
3-Methoxybenzoic acid; CH3O.C6H4.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=0.8         1960YYa (59905)3571
********************************************************************************
```

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
Ni++	gl	diox/w	30°C	75%	U		K1=5.05	B2=7.70	1967KBb	(59974)3572

Medium: 75% dioxan, 0.1 M NaClO4

****

C8H8O3 H2L m-Cresotic acid CAS 50-85-1 (1244)
4-Methylsalicylic acid; CH3.C6H3(OH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	alc/w	25°C	50%	M	M	K1=6.95		1983ADb	(59990)3573
							K(Ni(phen)+L)=6.73			
Ni++	gl	NaClO4	25°C	0.15M	U	T			1980YAa	(59991)3574
							K(Ni+HL=NiL+H)=1.22			
							K(Ni+H2L=NiL+2H)=-4.03			

Medium: 50% v/v EtOH/H2O, 0.10 M NaNO3.

****

C8H8O3 HL Phenoxyacetic CAS 122-59-8 (1153)
Phenoxyethanoic acid; C6H5.O.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	U		K1=0.3		1962SYa	(60029)3575

****

C8H8O4 H3L CAS 102-32-9 (1826)
3,4-Dihydroxyphenylethanoic acid; C6H3(OH)2.CH2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	30°C	0.10M	U		K1=8.04	B2=12.39	1966APb	(60065)3576

****

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
Ni++	gl	diox/w	35°C	50%	U		K1=3.53	B2=6.72	1971MAa	(60075)3577

Medium: 50% dioxan, 0.1 M NaClO4

Ni++	gl	oth/un	20°C	0.10M	U		K1=4.1		1956ARb	(60076)3578

****

C8H8O4 H2L CAS 2612-02-4 (1245)
5-Methoxysalicylic acid; CH3O.C6H3(OH)COOH

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

```
Ni++       gl  NaClO4 25°C 0.15M U      T                1980YAa (60115)3579
                                        K(Ni+HL=NiL+H)=0.65
                                        K(Ni+H2L=NiL+2H)=-3.74
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=1.7         1974ILa (60142)3580
**************************************************************************
C8H9NO                   HL                     CAS 3117-65-5  (3824)
N-(Salicylidene)aminomethane; HO.C6H4.CH:N.CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       cal non-aq 30°C 100%  U    M                   1973DGb (60150)3581
                                        K(NiL2+2py)=2.85
Medium: benzene
**************************************************************************
C8H9NOS                  HL                     CAS 4822-44-0  (3240)
N-(Mercaptoacetyl)aniline (thioglycolanilide); C6H5.NH.CO.CH2.SH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       oth diox/w 30°C  70%  U        B2=16.08       1973BSa (60153)3582
Medium: 0.1 M KCl
--------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=8.83   B2=16.65  1961MAe (60154)3583
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M        K1=4.98   B2=9.08   1990SMa (60168)3584
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  diox/w 35°C  50%  U        K1=5.2    B2=9.3    1958YSa (60177)3585
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  diox/w 40°C  50%  U        K1=5.90        1975PPa (60185)3586
```

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
Ni++	gl	NaClO4	20°C	0.10M	U		K1=7.2	B2=14.70	1965BEb (60192)	3587

****

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
Ni++	gl	diox/w	30°C	50%	U		K1=6.77		1982UVa (60203)	3588
Ni++	gl	diox/w	30°C	75%	U		K1=7.80		1976IKa (60204)	3589

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)

Ni++	gl	diox/w	30°C	75%	U		K1=7.55	B2=14.80	1958KVa (60205)	3590

Medium: 75% dioxan, 0.1 M NaClO4

****

C8H9NO2 L CAS 1849-49-6 (5907)

5'-Deoxypyridoxal

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	M		K1=3.39		1990SMa (60242)	3591
							K(NiL+H)=6.66			

****

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
Ni++	gl	diox/w	40°C	70%	U		K1=3.10		1980SSb (60259)	3592

In 70% EtOH: K1=2.59

Ni++	gl	diox/w	35°C	50%	U		K1=3.0	B2=5.6	1958YSa (60260)	3593

****

C8H9NO2 HL (2591)

N-Phenyl-N-acetohydroxamic acid; CH3.CO.N(OH)C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=4.68	B2= 8.28	2000FEc (60277)	3594
							B3=10.16			
							B(NiH-1L2)=-2.42			

****

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
Ni++	gl	NaClO4	25°C	0.10M	U		K1=3.10	1985CLa	(60298)3595
Ni++	gl	NaClO4	25°C	0.10M	U	M	K(Ni(phen)+L)=4.14	1984CMa	(60299)3596
Ni++	gl	alc/w	21°C	50%	M		K1=3.02 B2=5.87 B(NiH-1L)=-4.08	1984LOc	(60300)3597
Ni++	gl	alc/w	21°C	50%	M		K1=4.68 B2=8.51	1984LOd	(60301)3598
Ni++	gl	NaClO4	25°C	0.10M	U		K1=3.10	1983CLb	(60302)3599
Ni++	gl	NaClO4	25°C	0.10M	U	M	K1=3.10 K(Ni(bpy)+L)=3.66	1983CLc	(60303)3600
Ni++	gl	oth/un	25°C	0.10M	U		K1=2.7	1959SYc	(60304)3601

****

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
Ni++	gl	NaClO4	30°C	0.10M	U	T H		1981RSc	(60320)3602

Data for 30-50 C. DH(K1)=-20.1 kJ mol-1, DS(K1)=37 J K-1 mol-1.
K(Ni(bpy)+L)=5.20, DH=-18.2, DS=40. K(Ni(phen)+L)=5.23, DH=-19.2, DS=37.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	30°C	0.10M	U	M	K1=5.38 B2=9.46 K(Ni(phen)+L)=5.23	1980RSb	(60321)3603
Ni++	gl	KNO3	30°C	0.10M	U	M	K1=5.38 K(Ni(His)+L)=4.53	1980RSc	(60322)3604
Ni++	gl	NaClO4	30°C	0.10M	U	T H		1980RSe	(60323)3605

DH(K1)=-20.1 kJ mol-1, DS(K1)=37 J K-1 mol-1; DH(K2)=-20.7, DS(K2)=9.7.

****

C8H9NO2 L CAS 2524-52-9 (4514)
Pyridine-2-carboxylic acid ethyl ester; C5H4N.CO.OC2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	oth	oth/un	0°C	?	U		K1=1.71 B2=2.93	1971KAc	(60359)3606

Method: freezing point depression

****

C8H9NO2 L Et-nicotinate CAS 614-18-6 (1590)
Pyridine-3-carboxylic acid ethyl ester; C5H4N.COOC2H5

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ oth oth/un 0°C ? U K1=1.58 B2=2.76 1971KAc (60362)3607
Method: freezing point depression
****
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
---
Ni++ gl KNO3 25°C 0.05M M K1=3.25 1975DPb (60366)3608
****
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
---
Ni++ oth alc/w 20°C 50% U K1=6.38 B2=11.48 1972KPc (60380)3609
Medium: 50% v/v 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
---
Ni++ gl diox/w 27°C 60% U I K1=6.05 B2=10.40 1974SRa (60393)3610
In 60% acetone: K1=5.90, B2=10.00; 60% 2-EtOEtOH: 3.35, 6.50

Ni++ gl diox/w 30?°C 60% U B2=8.10 1967SRa (60394)3611

Ni++ dis oth/un 30°C ? U 1964BRc (60395)3612
K(Ni+HL=NiL+H)=-10.74
KH phthalate buffer
****
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
---
Ni++ gl NaCl 25°C 0.15M M M 1988ESa (60418)3613
B(NiHLA)=22.026
B(NiH3LA)=31.991
B(NiHLA2)=30.532
B(NiH2LA2)=36.512
B(Ni2H2LA2)=41.282. HA=histidine hydroxamate

Ni++ gl KCl 25°C 0.50M U K1=1.82 1976EEa (60419)3614

Ni++ gl KCl 25°C 0.50M U M K1=1.85 1966LHa (60420)3615

B(NiL(Gly))=10.30
B(NiL2(Gly)2)=19.84
K(NiL(Gly)+H)=7.18

****

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
Ni++	EMF	diox/w	30°C	50%	U		K1=4.63		1977DJa	(60434)3616

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
Ni++	gl	KNO3	20°C	0.10M	U		K1=3.32	B2= 6.90	1989SMc	(60442)3617

****

C8H9NO3 HL CAS 676256-92-1 (9133)
N-(2-Furanylmethylene)alanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	1.0M	U		K1=4.91		2003SGa	(60450)3618

****

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
Ni++	gl	KNO3	30°C	0.10M	U	TIH	K1=5.58	B2=10.46	1983RKb	(60455)3619

At I=0.0, K1=5.72, K2=5.04. Data for 25-50 C. DH(K1)=-32.6 kJ mol-1,
DS(K1)=22.1 J K-1 mol-1; DH(K2)=-28.5, DS(K2)=15.1.

****

C8H9NO4 HL CAS 78257-51-9 (887)
4-Ethoxypyridine-2-carboxylic acid N-oxide; C2H5O.C5H3N-O(COOH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	30°C	0.10M	U	M	K1=2.98		1986KRa	(60474)3620
							K(NiA+L)=2.03			
							K(NiB+L)=6.08			

HA=picolinic acid, HB=6-methylpicolinic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	30°C	0.10M	U	T	K1=3.91	B2=6.44	1982RRa	(60475)3621

****

C8H9NO4 H2L (4520)
Dehydroethanoic acid oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	35°C	50%	U				1971MAa	(60482)3622
							K(Ni+HL)=8.61			
							K(Ni+2HL)=16.64			

Medium: 50% dioxan, 0.1 M NaClO4

****

C8H9NO5S H2L (6513)

2-Amino-4-sulfobenzeneethanoic acid; NH2.CH(C6H4HSO3)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	M		K1=5.11	B2=8.83	1990SMa	(60520)3623

****

C8H9NS2 HL (259)

Benzyldithiocarbamic acid; C6H5CH2NH.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	oth/un	25°C	0.1M	U		K1=4.01	B2=8.64	1994GCb	(60524)3624
							K3=3.56			

Medium: 0.1 M diethanolamine. With phenyldithiocarbamic acid K1=4.41,K2=4.40 K3=3.99. With dibutyldithiocarbamic acid K1=4.31, K2=4.19, K3=3.40

****

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
Ni++	gl	diox/w	30°C	45%	M		K1=7.1(7)	B2=9.2(3)	1984MYa	(60527)3625

****

C8H9N3 L CAS 7471-05-8 (3198)

2,2'-Pyridylimidazoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	50%	U		K1=7.5	B2=14.1	1956HFa	(60540)3626
							B3=20.0			

****

C8H9N3 L CAS 5805-57-2 (3800)

2-(Aminomethyl)benzimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	oth/un	25°C	0.30M	U	T HM	K1=6.25	1994DAa	(60547)3627

Also data at 20 C: K1=6.18; 35C: K1=6.16; 40C: K1=6.21. DH(K1)=-0.7 kJ mol-1 K(NiL+sal)=3.04 where H2sal=salicylic acid.

****

C8H9N3OS L (4573)

1-Benzoylthiosemicarbazide; C6H5.CO.NH.NH.CS.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 25°C 80% U TIH K1=8.80 1985BAb (60548)3628
In 0.067 M KCl. When I=0.133: K=8.95; I=0.200, K=9.13. DH=-45.0 kJ mol-1, DS=14 J K-1 mol-1
****
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
---
Ni++ gl KNO3 25°C 0.10M U K1=13.12 1983FSa (60590)3629

Ni++ cal KNO3 25°C 0.1M C H 1981CSb (60591)3630
DH(K1)=-26.8 kJ mol-1, DS=163 K J mol-1

Ni++ gl KNO3 25°C 0.10M U T M 1981SVa (60592)3631
K(NiL+Gly)=4.53
At 20 C: K(NiL+Gly)=4.59; 30 C: 4.41; 40 C: 4.31

Ni++ gl R4N.X 25°C 0.10M C K1=14.19 B2=17.29 1975JTa (60593)3632

Ni++ oth KNO3 25°C 0.10M U K1=13.12 1972FVa (60594)3633

Ni++ gl oth/un 20°C 0.0 U K2=3.3 1948SBa (60595)3634
****
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
---
Ni++ gl KNO3 25°C 0.12M U K1=3.67 1979RZb (60668)3635
****
C8H10NO6P H3L Codecarboxylase CAS 41468-25-1 (2555)
Pyridoxal-5-phosphoric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M M K1=3.99 1990SMa (60696)3636
K(NiL+H)=6.64
K(NiHL+H)=4.3
****
C8H10N2O HL Mandelamidine CAS 700-63-0 (3825)
2-Hydroxy-2-phenylacetamidine; C6H5.CH(OH).C(:NH)NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.10M U K1=7.38 B2=14.40 1963GJa (60712)3637
****

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
Ni++	sp	alc/w	25°C	40%	U		K1=4.59 B2=3.45 K(Ni+HL)=1.60 K(NiHL+HL)=2.23	1970MKd (60717)	3638

Medium: 40% EtOH, I=1.0 M

****

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
Ni++	sp	alc/w	25°C	60%	U		B2=4.08	1971MVb (60720)	3639

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
Ni++	sp	alc/w	25°C	94%	U		K1=5.60 B2=4.90 K(Ni+HL)=0.05	1969MKg (60722)	3640

Medium: 94% EtOH, 1.0 M

****

C8H10N2OS HL (4577)
N-Methylaminothioformyl-N-phenylhydroxylamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	oth	NaClO4	30°C	0.10M	U		K1=7.30 B2=14.10	1972MBe (60726)	3641

****

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
Ni++	gl	KNO3	25°C	0.10M	M		K1=7.06 B2=12.96	1976RNa (60731)	3642

B2=13.90 (racemic ligand)

****

C8H10N2O2 L CAS 21203-55-4 (5518)
3-Nitro-2,4,6-trimethylpyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.50M	U		K1=2.8	1983BEb (60737)	3643

****

C8H10N2O2 HL (3227)

N-(2'-Pyridylmethyl)glycine; C5H4N.CH2.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=10.2		1965LCa (60741)	3644

****

C8H10N2S2 HL CAS 52098-85-8 (6148)
N-Phenyl-N-methylhydrazine-dithiocarboxylic acid; CH3(C6H5)N.NH.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	oth/un	25°C	0.01M	U		K1=5.77	B2=12.61	1985IGb (60779)	3645

****

C8H10N3OCl HL CAS 5756-79-6 (4578)
3-Ethyl-3-hydroxy-1-(2-chlorophenyl)triazene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	70%	U		K1=7.32	B2=13.01	1968DSa (60781)	3646

Medium: 70% dioxan, 0.1 M KCl

****

C8H10N3OCl HL CAS 5756-78-5 (4579)
3-Ethyl-3-hydroxy-1-(4-chlorophenyl)triazene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	70%	U		K1=7.58	B2=13.48	1968DSa (60786)	3647

Medium: 70% dioxan, 0.1 M KCl

****

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
Ni++	gl	KNO3	20°C	0.10M	U		K1=2.73	B2=5.60	1966OCa (60792)	3648

****

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
Ni++	gl	KNO3	20°C	0.10M	U		K1=2.78	B2=5.65	1966OCa (60796)	3649

****

C8H10N4O2 HL Cyclo-Gly-His (1685)
Cyclo-(glycyl-histidyl)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.20M	U		K1=2.55	B2=4.40	1985KIb (60805)	3650

****

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
Ni++	gl	KNO3	30°C	0.10M	U		K1=5.95	1995KFa (60861)	3651

****

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
Ni++	gl	KNO3	30°C	0.10M	U		K1=4.74	1995KFa (60882)	3652

****

C8H10O9 H4L CAS 137172-86-2 (6612)
SS-Oxydisuccinic acid; O(CH(COOH)CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	C		K1=6.77	1992MMa (60897)	3653
							K(NiL+H)=3.10		
							K(NiHL+H)=2.80		
							K(NiH2L+H)=3.06		
							K(Ni+HL)=3.90		

K(Ni+H2L)=1.92, K(Ni+H3L)=1.58

****

C8H10O9 H4L CAS 84852-72-2 (6611)
meso-Oxydisuccinic acid; O(CH(COOH)CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	C		K1=7.62	1992MMa (60909)	3654
							K(NiL+H)=3.78		
							K(Ni+HL)=5.44		

****

C8H10O10 H4L (5894)
1-Hydroxy-3-oxapentane-1,2,4,5-tetracarboxylic acid;
HO.CH(COOH).CH(COOH).O.CH(COOH).CH2(COOH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	C		K1=6.06	1989MMd (60921)	3655
							K(NiL+H)=3.75		
							K(NiHL+H)=3.03		

****

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

```
Ni++       sp  non-aq 25°C 100%  U T H                    1984RCa (60937)3656
                                        K(NiA(Cl)+L=NiAL+Cl)=1.83
                                        K(NiA(Br)+L=NiAL+Br)=2.88
Medium: DMSO. A=methyl-2-(B-aminoisopropylamino)cyclopent-1-enedithiocarboxy
late
--------------------------------------------------------------------------------
Ni++       gl  oth/un 35°C    ?  U T      K1=3.56   B2=6.55   1973SBc (60938)3657
K1(45 C)=3.43, K2(45 C)=2.88
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=1.6         1974ILa (60954)3658
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=2.02   B2=3.60   1975LPc (60970)3659
********************************************************************************
C8H11N                  L                       CAS 104-90-5  (4480)
5-Ethyl-2-methylpyridine; CH3.C5H3N.CH2.CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       vlt KNO3   25°C 0.10M U        K1=0.80        1972TPc (60981)3660
********************************************************************************
C8H11NO                 L                       CAS 20609-07-8  (298)
2-(2'-Hydroxypropyl)pyridine; C5H4N.CH2.CH(OH).CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=1.7         1974ILa (60994)3661
********************************************************************************
C8H11NO                 L                         (5433)
2-(2-Pyridyl)-2-propanol; CH3.C(OH)(C5H4N).CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=2.56        1981CBa (61000)3662
********************************************************************************
C8H11NO                HL                       CAS 6623-41-2  (3229)
2-Amino-4,5-dimethylphenol; H2N.C6H2(CH3)2.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  none   20°C  0.0  U        K1=5.9    B2=10.7   1959SIb (61016)3663
```

```
**************************************************************************
C8H11NO                 L                       CAS 2859-67-8  (2037)
3-(3-Pyridyl)-1-propanol; C5H4N.CH2.CH2.CH2OH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=2.00   B2=3.46   1981LRa (61023)3664
                                          B3=4.42
                                          B4=4.85
**************************************************************************
C8H11NO                 L                       CAS 20819-02-5  (5524)
4-Methoxy-2,6-dimethylpyridine;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.50M U        K1=1.4         1983BEb (61030)3665
**************************************************************************
C8H11NO2              H2L    Dopamine         CAS 579-59-9  (251)
2-(3',4'-Dihydroxyphenyl)ethylamine; (HO)2.C6H3.CH2.CH2.NH2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  1.0M C                        1997GCa (61058)3666
                                          K(Ni+H2L=NiHL+H)=-5.39
                                          K(Ni+H2L=NiL+2H)=-13.05
                                          K(Ni+H2L=NiH-1L+3H)=-22.58
                                          K(Ni+2H2L=NiH-2L2+6H)=-49.4
Ligand defined as H2L. K(NiL=NiH-1L+H)=-9.53, K(NiHL=NiL+H)=-7.65
--------------------------------------------------------------------------
Ni++       gl  NaClO4 37°C 0.15M U    M   K1=9.66        1995NAc (61059)3667
                                          B(NiHL)=18.12
                                          B(NiHL2)=26.07
                                          B(NiLCu)=18.92
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M                  1985KGa (61060)3668
                                          B(NiHL(bpy))=26.77
                                          B(NiL(bpy))=16.31
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=9.42   B2=14.81  1979KGa (61061)3669
                                          B(NiHL)=19.37
                                          B(NiH2L2)=35.66
                                          B(NiHL2)=25.61
--------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.50M U        B2=13.86       1974GSa (61062)3670
                                          B(NiHL)=18.37
                                          B(NiH2L2)=34.05
**************************************************************************
C8H11NO3               HL    Vitamin B6       CAS 65-23-6  (254)
5-Hydroxy-6-methyl-3,4-pyridinedimethanol, Pyridoxine;
--------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.50M U        K1=2.02        1976EEa (61106)3671
--------------------------------------------------------------------------
Ni++       sp  NaCl   27°C 0.50M M                       1975EGa (61107)3672
                                         K(Ni+HL)=1.46
                                         K(NiHL+HL)=0.05
**************************************************************************
C8H11NO3              H2L    Noradrenaline    CAS 138-65-8  (253)
Norepinephrine, 3,4-Dihydroxyphenylethanolamine; (HO)2C6H3.CH(CH2.NH2).OH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=9.07   B2=14.53  1981GKb (61143)3673
                                         B(NiHL)=18.26
--------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.50M U        K1=7.6         1974GSa (61144)3674
                                         B(NiHL)=16.88
                                         B(NiHL2)=21.9
                                         B(NiH2L2)=31.83
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=10.45  B2=18.95  1966JNa (61145)3675
K1 adjusted to give hypothetical microscopic constant
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.06M U T H    K1=5.28   B2=8.00   1962ALa (61146)3676
At 0 C:K1=5.76, K2=3.75, B2=9.50. DH(B2)=-93.6 kJ mol-1, DS=-159 J K-1 mol-1
--------------------------------------------------------------------------
Ni++       gl  KCl     0°C .058M U T      B2=9.50        1957LYa (61147)3677
At 25 C: B2=8.00
**************************************************************************
C8H11NO8P2            H5L                        (6894)
N-(4-Carboxyphenyl)aminomethylenedi(phosphonic acid); HOOC.C6H4.NH.CH(PO3H2)2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=9.52        1990GKa (61223)3678
                                         K(Ni+HL)=4.29
**************************************************************************
C8H11N3O               HL                      CAS 5956-71-8  (4528)
1-(2-Tolyl)-3-methyl-3-hydroxytriazene; CH3.C6H4.N:N.N(OH).CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       EMF diox/w 25°C  70%  U        K1=9.20   B2=16.70  1970DSb (61237)3679
Medium: 70% dioxan, 0.1 M KCl
**************************************************************************
C8H11N3O               HL                      CAS 5956-75-2  (4530)
1-Phenyl-3-ethyl-3-hydroxytriazene; C6H5.N:N.N(OH).CH2.CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

```
------------------------------------------------------------------------------
Ni++       EMF diox/w 25°C  70%  U        K1=8.71   B2=15.93  1969DSa (61238)3680
Medium: 70% dioxan, 0.1 M KCl
******************************************************************************
C8H11N3O               HL                      CAS 5956-70-7  (4529)
3-Hydroxy-3-methyl-1-(4-tolyl)triazene; CH3.C6H4.N:N.N(OH).CH3
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       EMF diox/w 25°C  70%  U        K1=8.48   B2=15.67  1970DSb (61240)3681
Medium: 70% dioxan, 0.1 M KCl
------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  70%  U        K1=9.43   B2=17.39  1970DSb (61241)3682
Medium: 70% dioxan, 0.1 M KCl
******************************************************************************
C8H11N3O2              HL                      CAS 25294-95-5  (4534)
1-(2'-Methoxyphenyl)-3-methyl-3-hydroxytriazene; CH3O.C6H4.N:N.N(OH).CH3
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       EMF diox/w 25°C  70%  U        K1=9.42   B2=18.10  1969DSa (61252)3683
Medium: 70% dioxan, 0.1 M KCl
******************************************************************************
C8H11N3O2              HL                      CAS 5756-72-9  (4533)
3-Hydroxy-3-methyl-1-(4'-methoxyphenyl)triazene; CH3O.C6H4.N:N.N(OH).CH3
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  70%  U        K1=9.57   B2=17.71  1970DSb (61254)3684
Medium: 70% dioxan, 0.1 M KCl
******************************************************************************
C8H11N3O3              HL                      CAS 2497-02-1  (3230)
Acetyl-L-histidine;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=2.96   B2=5.19   1991YNa (61268)3685
                                         B(NiH-1L)=-5.78
------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.16M U        K1=2.85   B2=5.05   1960MEa (61269)3686
                                         K3=1.7
******************************************************************************
C8H11N3O3S            H2L                      CAS 62404-82-4  (2168)
N-Mercaptoacetyl-histidine; C3H3N2.CH2.CH(COOH).NH.CO.CH2.SH
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=6.57        1977SHa (61279)3687
                                         K(NiH-1L+H)=6.53
******************************************************************************
```

C8H11N5 L CAS 702-02-3 (3202)
1-Phenylbiguanide; C6H5.NH.C(:NH).NH.C(:NH).NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	32°C	0.05M	U		B2=11.28	1956SRb	(61285)3688

****
C8H11N5O3 HL Acyclovir CAS 59277-89-3 (8696)
2-Amino-1,9-dihydro-9-[(2-hydroxyethoxy)methyl]-6H-purin-6-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	cal	NaNO3	25°C	0.10M	C	HM	K(Ni+HL)=1.39	2001HCa	(61289)3689

DH(Ni+HL)=-21.5 kJ mol-1, DS(Ni+HL)=-48 J K-1 mol-1.
****
C8H11O2F3 HL CAS 22767-90-4 (1249)
1,1,1-Trifluoro-5,5-dimethyl-2,4-hexanedione; F3C.CO.CH2.CO.CH(CH3)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=7.97 B2=15.40	1972UDa	(61297)3690

Medium: 75% v/v dioxan, 0.01 Me4NClO4
****
C8H11O2PS2 HL CAS 108450-90-4 (7927)
4-Methoxyphenyl-phosphonodithioic acid-o-methylester;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	C	M	K(NiL+A)=3.20 K(NiL+B)=1.88 K(NiL+C)=3.46 K(NiL+D)=4.71	2001AAc	(61307)3691

Medium: CH2Cl2. A=pyridine, B=2-aminopyridine, C=3-aminopyridine,
D=4-aminopyridine.
****
C8H12NO3P H2L Phosphono-Phe CAS 6324-00-1 (6008)
1-Amino-2-phenylethanephosphonic acid; C6H5.CH2.CH(NH2)PO3H2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=5.46 B2=9.36 B(NiHL)=11.17 B3=11.83	1987KBb	(61338)3692

****
C8H12NO4P H3L Phosphono-Tyr CAS 16802-71-4 (6009)
1-Amino-2-(4-hydroxyphenyl)ethanephosphonic acid; HO.C6H4.CH2.CH(NH2)PO3H2

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

```
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        B2=10.10       1987KBb (61342)3693
                                          B(NiHL)=15.54
                                          B(NiH2L2)=29.59
                                          B(NiHL2)=20.10
                                          B(NiH3L3)=42.2
********************************************************************************
C8H12N2                 L                     CAS 100155-73-5  (4482)
2-(2'-Methylaminoethyl)pyridine; C5H4N.CH2.CH2.NH.CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=4.65        1971GEa (61349)3694
********************************************************************************
C8H12N2               H2L                     CAS 6971-57-9  (1099)
6-Methyl-2-(methylaminomethyl)pyridine; (CH3.NH.CH2)(CH3)C5H3N
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=4.74   B2=7.26   1971GEa (61362)3695
--------------------------------------------------------------------------------
Ni++       gl  diox/w 35°C  50%  U T H    K1=4.45   B2=7.71   1966WRb (61363)3696
Medium: 50% dioxan, 0.1 M KNO3. K1=4.76(15 C),4.66(25 C); K2=3.33(15 C),
3.31(25 C), By calorimetry: DH(B2)=-31.4 kJ mol-1, DS=39.3 J K-1 mol-1(25 C)
--------------------------------------------------------------------------------
Ni++       gl  oth/un 10°C  0.0  U T H    K1=5.45   B2=9.05   1961RFa (61364)3697
K1=4.63(20 C),4.58(30 C),4.31(40 C). DH(K1)=-29.7 kJ mol-1, DS=-13 J K-1 m-1
********************************************************************************
C8H12N2O                L                       (3231)
2-Aminomethyl-N-2'-hydroxyethylpyridine; C5H4N.CH2.NH.CH2.CH2.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=7.1         1964LMb (61375)3698
********************************************************************************
C8H12N2O2              HL    Pyridoxamine     CAS 85-87-0  (1175)
4-(Aminomethyl)-5-hydroxy-6-methyl-3-pyridinemethanol;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.15M U    M                  1983ERa (61392)3699
                                          B(NiL(Gly))=11.538
                                          B(NiHL(Gly))=19.170
                                          B(NiHL(Gly)2)=23.669
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  37°C 0.15M U    M                  1983ERa (61393)3700
                                          B(NiHLA)=17.984
                                          B(NiLA3)=15.697
                                          B(NiL2A2)=17.649
                                          B(NiH2L2A2)=34.87
```

A=imidazole

Ni++ gl NaNO3 37°C 0.15M U K1=6.464 B2=10.521 1982ESa (61394)3701
B(NiHL)=14.203
B(NiH2L2)=28.137

Ni++ gl NaNO3 30°C 0.50M M M K1=6.66 B2=11.43 1982MAd (61395)3702
B(NiHL)=14.18
B(NiH2L2)=27.84
B(Ni(en)L)=13.02
B(NiH(en)L)=21.57
B(NiH2(en)L)=28.42, B(Ni(en)L2)=17.39

Ni++ gl KNO3 30°C 0.50M M M K1=6.66 K2=7.52 1979EMa (61396)3703
B(NiHL)=14.18
B(NiH2L2)=27.84
Data for ternary complexes with Gly, DL-Val, DL-Ala and Phe

Ni++ gl KCl 25°C 0.50M U K1=7.20 B2=11.26 1976EEa (61397)3704

Ni++ gl KNO3 25°C 0.10M U K1=6.00 B2=10.92 1957GMa (61398)3705

****

C8H12N2O3S HL CAS 551-16-6 (6858)
6-Aminopenicillanic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U		K1=3.27 B(NiHL)=7.37 B(NiHL2)=9.61	1999NNb (61457)	3706
Ni++	gl	NaNO3	37°C	0.10M	U	M	K1=3.30 B(Ni(gly)L)=9.77 *K(Ni(gly)L)=-7.42 *K(Ni(OH)(gly)L)=-9.95 B(Ni(bpy)L)=10.79 *K(Ni(bpy)L)=-7.05, *K(Ni(OH)(bpy)L)=-9.60. B(NiAL)=6.85, *K(NiAL)=-7.65, *K(Ni(OH)AL)=-8.32. A is imidazole	1994MGc (61458)	3707
Ni++	gl	NaNO3	37°C	0.10M	U		K1=3.30 *K(NiL(H2O)2)=-9.62	1991MGb (61459)	3708

****

C8H12N2O7 H3L CAS 43101-36-6 (669)
Glycylglycine-N,N-diethanoic acid; (HOOC.CH2)2N.CH2.CO.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=8.69 K(NiL+H)=3.00	1974MMb (61474)	3709

****

C8H12N2O8 H4L CAS 35039-85-1 (4537)
1,2-Diaminoethane-N,N'-dimalonic acid; (HOOC)2.CH.NH.CH2.CH2.NH.CH(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=12		1973MAb	(61482)3710
Ni++	gl	KNO3	25°C	0.10M	U		K1=14.47		1973SGa	(61483)3711

Using a Cu/Hg electrode, K1=14.47

****

C8H12N2S L CAS 38585-75-0 (8242)
2-[(2-Pyridinylmethyl)thio]ethanamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	M	H	K1=6.99	B2=12.95	1984HGb	(61536)3712
							K(Ni+HL)=0.8			

By calorimetry: DH(K1)=-43.27 kJ mol-1, DH(K2)=-41, DH(Ni+HL)=-12.

****

C8H12N4B- L (7238)
(Pyrazol-1-yl)dihydro(3,5-dimethylpyrazol-1-yl)borate; C3H3N2.BH2.C3HN2(CH3)2-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	dis	non-aq	25°C	100%	U				1996KSa	(61541)3713
							K(Ni+2HL=NiL2(org)+2H)=1.35			

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
Ni++	gl	KCl	25°C	0.20M	C	M	K1=4.68	B2=9.64	1983FSc	(61577)3714
							B(NiHL)=11.34			
							B(NiH-1L)=-1.35			
							B(NiH-1L2)=2.07			
							B(NiHL(His))=19.57			
B(NiL(His))=12.77; B(NiH-1L(His))=4.52										
Ni++	gl	KNO3	25°C	0.10M	C		K1=3.9	B2=8.82	1975BPb	(61578)3715
							B3=11.57			
							B(NiHL)=11.07			
							B(NiHL2)=15.84			
							B(NiH-1L)=-1.502			
B(NiH-1L2)=0.92										
Ni++	gl	NaCl	25°C	0.12M	U		K1=5.24	B2=9.59	1972IBa	(61579)3716
Ni++	gl	KCl	25°C	0.16M	U				1966BRd	(61580)3717

K(NiH-1L+H)=6.10
K(NiH-1LOH+H)=6.70
K(NiH-1L(OH)2+H)=9.25

****

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
Ni++	gl	KCl	25°C	0.20M	C		K1=6.81 B2=12.30	1983FSc (61616)	3718
Ni++	gl	KNO3	25°C	0.10M	C		K1=6.844 B2=12.386	1975BPb (61617)	3719
Ni++	gl	none	21°C	0.0	M		K1=6.88 B2=12.82	1974YAa (61618)	3720

****

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
Ni++	gl	NaNO3	25°C	0.10M	M	M	K1=1.56	2000KLb (61640)	3721
							K(PtLA+Ni)=1.56		

A=diethylenetriamine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	M		K1=2.41	1992SCa (61641)	3722
							B(NiHL)=7.86		
							K(Ni+HL)=0.96		

****

C8H12O2 HL CAS 874-23-7 (3203)
2-Acetylcyclohexanone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=9.90 B2=17.79	1959MFa (61663)	3723

****

C8H12O2 HL CAS 15506-38-8 (3204)
3-Allylpentane-2,4-dione; CH3.CO.CH(CH2.CH:CH2)CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=9.41 B2=17.84	1959MFa (61682)	3724

****

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
Ni++	gl	NaClO4	25°C	0.10M	U		K1=1.99	1972RVh (61700)	3725

****

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
Ni++	gl	KNO3	25°C	0.10M	C		K1=2.48	1975IPa (61723)	3726

****

C8H13NO3 H3L (4539)

(1-Acetonyl)ethylideneiminopropanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	EMF	oth/un	?	?	U		K1=8.65	1972MGb (61745)	3727

****

C8H13NO6 H3L (5681)

2-Aminobutanoic-N,N-diethanoic acid; CH3CH2CH(COOH)N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	20°C	0.10M	U		K1=11.24	1974RMf (61777)	3728

****

C8H13NO6 H3L (3232)

N-(Carboxymethyl)iminodipropanoic acid; HOOC.CH2.N(CH2.CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	30°C	0.10M	U		K1=9.1	1953CMa (61804)	3729

****

C8H13NO6S H3L (5675)

2-Mercapto-1-aminoethane-N,N,S-triethanoic acid; HOOC.CH2.S.CH2.CH2.N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	vlt	NaClO4	25°C	0.10M	U		K1=13.07	1975POa (61812)	3730
							K(Ni+HL)=3.14		

****

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
Ni++	gl	KCl	25°C	0.10M	C		K1=8.485 B2=12.138	1976RIa (61858)	3731
							K(Ni(DL-L))=8.476		
							B(Ni(DL-L)2)=13.043		

****

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
Ni++	gl	KNO3	25°C	0.10M	C			1981UMa (61865)	3732

K(Ni+H2L)=9.87
*K(NiH2L)=-7.38
K(Ni+HL)=13.0
K(Ni+2HL)=18.4
K(2NiHL=Ni2(HL)2)=3.2

****

C8H13N6O4P H2L (7462)
9-[2-(Phosphonomethoxy)ethyl]-2,6-diaminopurine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	M		K1=2.60		1999BSa (61869)	3733
							K(Ni+HL)=1.30			

****

C8H14N2 L (6727)
1-Butyl-2-methylimidazole

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	C		K1=2.03	B2=3.49	1993BKc (61885)	3734
							B3=4.54			
							B4=5.00			

****

C8H14N2O L (6728)
1-Butyl-2-hydroxymethylimidazole

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	C		K1=2.58	B2=4.67	1993BKc (61890)	3735
							B3=6.44			
							B4=7.43			

****

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
Ni++	gl	diox/w	20°C	75%	U		K1=12.32	B2=24.63	1981HFa (61895)	3736

****

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
Ni++	gl	KCl	25°C	0.10M	C		K1=3.69	B2=7.00	1994JBa (61902)	3737
							B(CoH-1L)=-4.82			
							B(CoH-1L2)=-2.62			
							B(CoH-2L2)=-10.77			

****

C8H14N2O3 HL (6601)

2,3-Dehydro-N-valyl-alanine; NH2.CH(CH(CH3)2)CO.NH.C(COOH):CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	C		K1=2.83 B(NiH-1L)=-3.66 B(NiH-1L2)=-1.58 B(NiH-2L2)=-9.51	1994JBa (61907)3738	

****

C8H14N2O3 HL Ala-Pro CAS 13485-59-1 (256)
Alanyl-proline; H2N.CH(CH3).CO.NC4H7.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	20°C	0.20M	U		K1=3.93 B2=7.12 B3=9.57	1982KRd (61913)3739	

****

C8H14N2O3 HL Pro-Ala CAS 6422-36-2 (263)
Prolyl-alanine; C4H8N.CO.NH.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	20°C	0.20M	U		K1=4.46 B2=8.21 B3=10.65 B(NiH-1L2)=-0.97 B(NiH-2L2)=-11.09	1982KRd (61924)3740	

****

C8H14N2O4 H2L CAS 124099-98-5 (5607)
1,4-Piperazine-N,N'-diethanoic acid; HOOC.CH2.C4H8N2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	EMF	KCl	20°C	0.10M	U		K1=3.64 K(NiL+H)=6.35	1963IPb (61939)3741	

Method: H electrode

****

C8H14N2O6P2 HL (7465)
N-(3-Pyridylmethyl)imino-bis(methylphosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=7.58 B(NiHL)=13.73 B(NiH2L)=18.61 B(NiH3L)=22.70	2000KKa (61963)3742	

****

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

```
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C        K1=4.21   B2= 6.96  1992GHb (61974)3743
                                         B(NiHL)=11.84
                                         B(NiH-1L2)=-2.93
******************************************************************************
C8H14N4O                L                        (6726)
Sarcosyl-histamine
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C        K1=3.86   B2=7.46   1995GHa (61981)3744
                                         B(NiHL)=10.64
                                         B(NiH-1L)=-3.03
                                         B(NiH-2L)=-12.51
                                         B(NiH-1L2)=-0.48
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       kin NaClO4 25°C 0.10M U    M                  1985SVa (62008)3745
                                         K(NiH-3L+H)=4.2
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.63   B2= 6.41  1975KMe (62009)3746
                                         K(Ni+HL)=3.12
                                         K(NiL+H)=6.60
                                         K(NiH-3L+H)=8.1
                                         K(NiH-2L+2H)=15.8
K(NiH-3L+3H)=24.22
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.63   B2=6.41   1974KMc (62010)3747
                                         K(Ni+HL)=3.12
                                         K(NiH-3L+H)=8.1
                                         K(NiH-2L+2H)=15.8
                                         K(NiH-3L+3H)=24.22
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=3.65   B2=6.95   1967KMa (62011)3748
                                         K(NiH-3L+3H)=24.4
                                         K(Ni(OH)H-3L+H)=10.0
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.16M U        K1=3.65   B2=6.55   1960MCa (62012)3749
                                         K(NiH-1L+H)=8.10
                                         K(NiH-2L+H)=8.20
                                         K(NiH-3L+H)=8.25
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.15M U        K1=3.57        1958LCa (62013)3750
******************************************************************************
C8H14O2                HL                     CAS 1187-04-8  (3209)
2-Methylheptane-3,5-dione; CH3.CH(CH3)CO.CH2.CO.CH2.CH3
```

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=9.86   B2=18.89  1953UFd (62034)3751
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U  I     K1=9.31   B2=18.06  1972UDa (62039)3752
Medium: 75% v/v dioxan, 0.01 M Me4NClO4
I=0: K1=9.94, K2=9.19
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=9.94   B2=19.13  1953UFd (62040)3753
********************************************************************************
C8H14O4S3              H2L                       (2526)
3,6,9-Trithiaundecanedioic acid; HOOC.CH2.S.C2H4.S.C2H4.S.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=4.42        1971FPa (62115)3754
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=4.70        1971PPc (62116)3755
                                        K(Ni+HL)=2.42
********************************************************************************
C8H14O5S2              H2L                      CAS 4408-66-6  (8332)
Oxybis(ethylenethio)diethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=3.61        1977CAc (62130)3756
********************************************************************************
C8H14O7                H2L                       (241)
Di(carboxymethoxy)ethyl ether; (HOOC.CH2.O.CH2.CH2)2O
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.39        1975MTc (62142)3757
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=5.33   B2=9.8    1963IPa (62155)3758
********************************************************************************
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
-------------------------------------------------------------------------
Ni++       sp  NaNO3  25°C 0.10M C        B2=11.70       1997NWa (62163)3759
*************************************************************************
C8H15NO4              H2L                      CAS 56004-49-0  (343)
N-(iso-Butyl)iminodiethanoic acid; (CH3)2.CH.CH2.N(CH2.COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=8.08   B2=14.43  1976JPa (62174)3760
*************************************************************************
C8H15NO4              H2L                      CAS 56004-50-3  (344)
N-(tert-Butyl)iminodiethanoic acid; (CH3)3C.N(CH2.COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=8.42   B2=15.85  1976JPa (62178)3761
*************************************************************************
C8H15NO4              H2L                      CAS 33994-68-7  (347)
N-Butyliminodiethanoic acid; C4H9.N(CH2.COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=8.82   B2=15.94  1976JPa (62183)3762
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=8.84   B2=15.88  1975IPa (62184)3763
*************************************************************************
C8H15NO5              H2L                      CAS 5344-77-4  (332)
N-(2-Hydroxy-1,1-dimethylethyl)iminodiethanoic acid; HO.CH2.C(CH3)2.N(CH2.COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=8.48   B2=13.21  1976JPa (62193)3764
                                         K(NiH-1L+H)=10.36
*************************************************************************
C8H15NO5              H2L                      CAS 60345-64-5  (335)
N-(2-Hydroxy-2-methylpropyl)iminodiethanoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=8.03   B2=10.94  1976JPa (62195)3765
                                         K(NiH-1L+H)=11.24
*************************************************************************
C8H15NO5              H2L                        (3234)
N-(2-Hydroxyethyl)iminodipropanoic acid; HO.CH2.CH2.N(CH2.CH2.COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KCl    30°C 0.10M U        K1=5.7         1954CMa (62198)3766
*************************************************************************
```

C8H15NO5 H2L CAS 62117-04-8 (337)
N-(4-Hydroxybutyl)iminodiethanoic acid; HO.(CH2)4.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=8.66	B2=15.65	1976JPa	(62205)3767

****

C8H15NO6 H2L CAS 92511-22-3 (6074)
N-(1,1-Di(hydroxymethyl)ethyl)iminoethanoic acid; (HO.CH2)2C(CH3).N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	1.0M	C		K1=9.07		1981ASb	(62210)3768

****

C8H15NO7 HL CAS 60644-20-4 (6758)
Fructose-glycine; C6H11O5.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	C		K1=4.97	B2=8.97	1993GGb	(62224)3769
							B(NiH-1L2)1.37			
							B(NiH-2L2)=-8.25			

****

C8H15N3O4 HL Gly-Ala-Ala CAS 6491-25-4 (6783)
Glycyl-alanyl-alanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=10.55		1983IMb	(62246)3770
							K(NiL+H)=8.81			
							K(NiHL+H)=5.06			

****

C8H15N3O4 HL (1008)
Glycyl-b-alanyl-b-alanine; H2NCH2CONH(CH2)2CONH(CH2)2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=4.05	B2= 7.44	2003AMb	(62254)3771
							B(NiH-1L)=-4.98			
							B(NiH-2L)=-14.93			

****

C8H15N3O4 HL (1009)
b-Alanyl-glycyl-b-alanine; H2N(CH2)2CONHCH2CONH(CH2)2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=3.54		2003AMb	(62262)3772
							B(NiH-1L)=-4.81			
							B(NiH-2L)=-13.99			

****

C8H15N5O4 H4L Gly4 amide CAS 75790-48-8 (2439)
H-Gly-Gly-Gly-Gly-NH2; H2NCH2CONHCH2CONHCH2CONHCH2CONH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	kin	NaClO4	25°C	1.00M	U		K(NiH-3L+H)=2.4 K(NiH-2L+H)=1.3 K(NiH-1L+H) < 1.0	1980RMa (62264)	3773

****

C8H15N7O2S3 L Famotidine CAS 76824-35-6 (6502)
N'-(Aminosulfonyl)-3-((2-(diaminomethyleneamino)-4-thiazolyl)methylthio)propanamidine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=6.06 B(NiHL)=13.69 B(NiH-2L)=-10.06	2002BKa (62272)	3774
Ni++	gl	KNO3	25°C	0.10M	U		K1=3.46 B(NiH-2L)=-13.20	1992KKa (62273)	3775

****

C8H16N2O2 HL CAS 61050-68-8 (3836)
Octane-4,5-dione dioxime (di-n-propylglyoxime)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	25°C	75%	U	I	K1=13.1 B2=23.9 Kso=-25.14	1963BAb (62280)	3776

Medium: 75% dioxan, 0.1 M. B2=17.1(0% dioxan)

****

C8H16N2O3 HL CAS 39692-70-1 (5505)
2-Methylalanyl-2-methylalanine; H2N.C(CH3)2CO.NH.C(CH3)2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	C		K1=3.51 B2= 6.24 B(NiH-1L2)=-3.5 B(NiH-2L2)=-13.45	1988ABe (62285)	3777

****

C8H16N2O3 HL DL-Ala-DL-Val CAS 1999-46-8 (2122)
DL-Alanyl-DL-valine; H2N.CH(CH3).CO.NH.CH(CH(CH3)2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaCl	25°C	0.12M	U		K1=3.53 B2=6.74	1977PNa (62299)	3778
Ni++	gl	NaCl	25°C	0.12M	U		K1=3.53 B2= 6.74	1976PNa (62300)	3779

L=DL-alpha-alanyl-DL-leucine

Ni++ EMF oth/un ? ? U K1=3.53 B2=6.74 1970PBb (62301)3780
****
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
---
Ni++ gl NaCl 25°C 0.12M U K1=4.24 B2=7.78 1977PNa (62311)3781

Ni++ gl NaCl 25°C 0.12M U K1=4.24 B2= 7.78 1976PNa (62312)3782
L=glycyl-DL-norleucine

Ni++ EMF oth/un ? ? U K1=4.24 B2=7.78 1970PBb (62313)3783
****
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
---
Ni++ gl KCl 20°C 0.20M U K1=4.28 B2=7.77 1982KRd (62369)3784
B3=10.52
B(NiH-1L2)=-2.13

Ni++ gl NaCl 25°C 0.12M U K1=4.16 B2=7.83 1977PNa (62370)3785

Ni++ gl NaClO4 20°C 0.10M U K1=4.25 B2=7.99 1972PGb (62371)3786

Ni++ EMF oth/un ? ? U K1=4.16 B2=7.83 1970PBb (62372)3787
glycyl-L-leucine: K1=4.28, K2=3.68

Ni++ gl KCl 0°C .058M U T B2=8.40 1957LYa (62373)3788
At 25 C: B2=7.70
****
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
---
Ni++ gl KCl 20°C 0.20M U K1=3.39 B2=6.21 1982KRd (62417)3789
B3=8.46
B(NiH-1L2)=-2.41
B(NiH-2L2)=-12.31

Ni++ gl NaClO4 20°C 0.10M U K1=3.44 B2=6.43 1972PGb (62418)3790

Ni++ gl oth/un 25°C 0.01M U K1=3.48 B2=6.62 1959DLb (62419)3791
****
C8H16N2O3 HL Val-Ala CAS 30806-08-7 (975)
Valyl-alanine; H2N.CH(CH(CH3)2).CO.NH.CH(CH3).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=3.47 B2=6.28 B(NiH-1L)=-5.36 B(NiH-1L2)=-2.37	1975BPa (62441)	3792

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
Ni++	gl	KNO3	25°C	0.10M	U		K1=12.2	1983FSa (62458)	3793
Ni++	gl	KCl	20°C	0.10M	U		K1=12.2	1958ISa (62459)	3794

C8H16N2O4 H2L CAS 13288-40-9 (3237)
1,2-Diaminoethane-N,N'-di(3-propanoic acid); (HOOCCH2CH2NHCH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaCl	25°C	0.10M	C		K1=8.89 B(NiH-1L)=-2.15	1999DFa (62484)	3795
Additional method: spectrophotometry.									
Ni++	gl	KNO3	25°C	0.10M	U	M	K(NiL+en)=5.51	1970DNa (62485)	3796
Ni++	gl	KCl	20°C	0.10M	U		K1=12.2	1958ISa (62486)	3797
Ni++	gl	KCl	30°C	0.10M	U		K1=9.3	1953CCb (62487)	3798

C8H16N2O4 H2L (7387)
1,4-Diaminobutane-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	1.00M	C		K1=9.071 B2=12.00 B(NiHL)=14.822 K(Ni+2L+H)=21.713 K(Ni+2L+2H)=29.346	1997AKa (62507)	3799

C8H16N2O4 H2L (266)
N,N'-Dimethylethylenediamine-N,N'-diethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=15.13	1993WLa (62518)	3800

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
Ni++	gl	KCl	25°C	0.10M	C		K1=24.83 B(NiHL)=28.53 B(NiH2L)=31.84 B(Ni(OH)L)=13.44	1996LMa (62544)	3801

****

C8H16N2O4S2 H2L CAS 462-10-2 (527)
DL-4,4'-Dithiobis(2-aminobutanoic acid); (HOOC.CH(NH2).CH2.CH2.S.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	U		K1=7.653 B2=11.745 B(NiHL)=14.324	1981BLb (62560)	3802

****

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
Ni++	gl	KNO3	25°C	0.10M	C		K1=11.83	1982BTb (62565)	3803

****

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
Ni++	EMF	oth/un	20°C	0.10M	U		K1=12.28	1972DKa (62572)	3804
Ni++	gl	KNO3	20°C	0.10M	U		K1=12.23 By spectrophotometry: K1=12.0 in 0.1 NaClO4	1970DKa (62573)	3805

****

C8H16N3O3P H2L CAS 501096-84-0 (8828)
Imidazole-4-methyl(N-butylamino)phosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		B2=16.01 B(NiHL)=16.71 B(NiH2L2)=33.15 B(NiHL2)=24.96	2003SBc (62593)	3806

****

C8H16N4O2 L CAS 99618-54-9 (539)
1,4,7,10-Tetraazacyclododecane-2,6-dione;

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

```
Ni++       gl  NaClO4 25°C 0.10M U        K1=4.38        1986FKa (62598)3807
                                         K(Ni+HL)=2.98
                                         B(NiH-2L)=-11.73
In 0.5 M KNO3 K1=4.38, K(Ni+HL)=2.98, B(NiH-1L)=-11.73
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.20M U                      1981KKa (62599)3808
                                         B(NiH-2L)=-12.96
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.10M U        K1=15.25       1981ESa (62610)3809
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       nmr non-aq 27°C 100%  C        K1=3.05        2000SMg (62643)3810
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
--------------------------------------------------------------------------------
Ni++       gl  oth/un 30°C 0.10M U        K1=6.33   B2=10.15  1957FCa (62778)3811
********************************************************************************
C8H17N3O2              HL                       (5973)
1,4,7-Triazacyclononane-1-ethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M M        K1=17.85       1993CKa (62788)3812
********************************************************************************
C8H17N3O3              HL    Gly-Lys          CAS 31461-63-9  (5419)
Glycyl-lysine; NH2.CH2.CO.NH.CH(CH2.CH2.CH2.CH2.NH2)COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C   H    K1=5.9         2001CFb (62801)3813
                                         B(NiHL)=14.51
                                         B(NiH-1L)=-3.3
                                         B(NiH2L2)=28.29
                                         B(NiHL2)=19.26
B(NiH3L3)=41.3. DH(K1)=-36 kJ mol-1, DS(K1)=-7 J K-1 mol-1, DH(NiHL)=-79,
DS(NiHL)=11, DH(NiH-1L)=0, DS(NiH-1L)=-64, DH(NiH2L2)=-148, DS(NiH2L2)=45.
********************************************************************************
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C8H18N2 L CAS 4441-55-8 (4491)
1,1-Di(aminomethyl)cyclohexane; C6H10(CH2.NH2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 25°C dil U K1=6.61 B2=10.51 1972NBa (62812)3814
****
C8H18N2O L (6585)
4,7-Dimethyl-1-oxa-4,7-diazacyclononane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U K1=8.1 B2=14.90 1995DDa (62817)3815
****
C8H18N2O2 L CAS 60350-13-2 (5708)
1,4-Dioxa-7,10-diazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.10M U K1=5.0 1986TSa (62826)3816
Believed to be unreliable due to low solubility of the ligand
****
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
---
Ni++ gl R4N.X 25°C 0.10M U K1=6.73 1985NSb (62832)3817
B(NiH-1L)=-1.3

Ni++ gl R4N.X 25°C 0.10M C K1=5.91 1983LCa (62833)3818
****
C8H18N2O2 L CAS 122-96-3 (5902)
N,N-Bis(2-hydroxyethyl)piperazine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaCl 25°C 0.10M C K1=2.60 1999HLb (62854)3819
B(NiHL)=9.78
****
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
---
Ni++ gl KNO3 25°C 0.10M C K1=3.39 2001AOa (62884)3820
****
C8H18N2O10P2 H6L EDDADPO CAS 2310-83-0 (2436)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-dimethylphosphonic acid;
(-CH2.N(CH2.COOH)(CH2.PO3H2))2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	U		K1=15.23 K(Ni+HL)=9.49	1965DKb	(62892)3821

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
Ni++	gl	KNO3	25°C	0.10M	U		K(Ni+H2L)=3.70	1976TIa	(62913)3822
Ni++	gl	KNO3	25°C	0.10M	U	M	K1=15.23	1975ITa	(62914)3823

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	C	H	K1=7.691 K(Ni+HL)=3.55	1980HGa	(62930)3824

By calorimetry: DH(K1)=-50.3 kJ mol-1, DS(K1)=-21 J K-1 mol-1;
DH(Ni+HL)=-20, DS(Ni+HL)=-3.

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
Ni++	gl	NaClO4	25°C	0.10M	C		K1=7.90	1985LCb	(62953)3825
Ni++	gl	NaNO3	25°C	0.10M	C		K1=7.92 K(NiH-1L+H)=8.46 K(NiH-2L+H)=9.69	1984LCa	(62954)3826
Ni++	gl	KNO3	25°C	0.10M	U		K1=7.59 K(NiH-2L+2H)=19.24	1983LIa	(62955)3827

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
Ni++	gl	KNO3	25°C	0.10M	C		B(NiH-2L)=-10.17	1996CHe	(62962)3828
Ni++	gl	NaNO3	25°C	0.10M	C	M		1992LJb	(62963)3829

B(NiCuL)=24.9
B(NiCu2L2)=48.7
B(NiCu3L3)=72.3

****

C8H18N4O2 L CAS 90267-23-5 (5956)
N,N'-Dialanyl-1,2-diaminoethane; H2N.CH(CH3).CO.NH.CH2.CH2.NH.CO.CH(CH3).NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=4.52	B2= 4.52	1984MDc (62971)	3830
							K(NiL=NiH-2L+2H)=-15.02			

Method: batch technique. Ligand is S,S stereoisomer.

****

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
Ni++	gl	oth/un	25°C	0.43M	U		K1=3.17	B2=5.20	1966SKe (63031)	3831
							K3=1.47			

Medium: CH2OHCH2NH2.HNO3

****

C8H19NO5 L Bis-tris CAS 6976-37-0 (2827)
Bis-(2-hydroxyethyl)imino-tris(hydroxymethyl)methane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	1.0M	C		K1=3.59	1980SAb (63046)		3832
							K(Ni(ATP)+L)=2.77			

****

C8H19NO6P2 H4L CAS 5995-40-4 (1338)
N-Cyclohexyliminobis(methylenephosphonic) acid; C6H11.N(CH2PO3H2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C			2000KKa (63077)		3833
							B(NiHL)=15.64			
							B(NiH2L)=20.66			
							B(NiH-1L)=-2.51			
Ni++	gl	KNO3	25°C	1.00M	M			1982BGb (63078)		3834
							K(Ni+HL)=2.53			

****

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
Ni++	gl	KCl	25°C	0.10M	U		K1=3.724	B2=7.00	1995HLa (63093)	3835
							B(NiH-1L)=-4.90			

For the (S,R) isomer, K1=3.599, B2=5.92, B(NiHL)=9.60, B(NiH-1L)=-5.03.

****

C8H19N3 L CAS 36532-31-7 (2403)

1,4,8-Triazacycloundecane; cyclo(-NH.C2H4.NH.C3H6.NH.C3H6-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	M		K1=12.88	1978ZOa	(63108)3836

****

C8H19N3O L (4430)

1-Oxa-4,7,10-triazacyclododecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=12.36 B(NiH-1L)=6.05 K(NiL+OH)=7.51	1991ACa	(63124)3837
Ni++	gl	NaNO3	25°C	0.10M	U		K1=12.15	1986TSa	(63125)3838

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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
Ni++	gl	NaClO4	35°C	0.20M	C		K1=9.45	1984KKa	(63142)3839

****

C8H19O2PS2 HL CAS 2253-44-3 (2060)

O,O'-Dibutyl dithiophosphoric acid; (C4H9O)2P(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	ISE	alc/w	25°C	90%	U		K1=2.40 B2=4.32	1972TCa	(63148)3840

Medium: 90% EtOH, 0.3 M NaClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	M	K(NiL2+py)=1.45 K(NiL2+2py)=3.51 K(NiL2+bpy)=6.38	1970NYa	(63149)3841

Medium: benzene

****

C8H19O2PS2 HL CAS 2253-52-3 (4584)

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
Ni++	ISE	alc/w	25°C	90%	U		K1=2.27 B2=6.31	1972TCa	(63161)3842

Medium: 90% EtOH, 0.3 M NaClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	M		1970NYa	(63162)3843

K(NiL2+py)=1.55
K(NiL2+bpy)=6.25
K(NiL2+2py)=3.6

Medium : benzene

****

C8H19O2PS2 HL CAS 107-55-1 (4585)
O,O-Di-sec-butyldithiophosphoric acid; (CH3.CH2.CH(CH3)O)2P(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	M		1970NYa	(63169)3844

K(NiL2+py)=1.09
K(NiL2+bpy)=5.75
K(NiL2+2py)=2.84

Medium : benzene

****

C8H19PS2 HL CAS 32435-51-5 (4552)
Di-n-butyl phosphinedithioic acid; (C4H9)2PSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	ISE	alc/w	25°C	90%	U		K1=2.82 B2=5.15	1972TCa	(63203)3845

Medium: 90% EtOH, 0.3 M NaClO4

****

C8H20N2 L CAS 14165-22-1 (3213)
N,N'-Di-n-propylethylenediamine; (CH3.CH2.CH2.NH.CH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	0°C	0.50M	U	T	K1=5.87 B2=8.87	1954BMa	(63217)3846

At 25 C: K1=5.52, B2=8.02

****

C8H20N2O2 L CAS 82502-45-2 (3239)
N,N'-Di-(2-Hydroxypropyl)ethylenediamine; (CH3.CH(OH).CH2.NH.CH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.50M	U		K1=6.84 B2=10.9	1960HDa	(63222)3847

****

C8H20N2O5 L (7389)
1-(2-Aminoethylamino)-1-deoxy-D-galactitol; NH2.(CH2)2.NH.CH2.(CHOH)4.CH2OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	C		K1=6.81 B2=12.57	1997GGa	(63232)3848

B3=14.77
B(NiHL)=11.79
B(Ni2H-2L2)=-1.37
B(Ni2H-3L2)=-11.03
B(NiH-2L)=-12.31, B(NiH-1L2)=2.97, B(NiH-2L2)=-8.40

```
**************************************************************************
C8H20N2S                L                        (1868)
1,4-Diaza-7-thia-8,8-dimethylnonane; H2N.CH2.CH2.NH.CH2.CH2.S.C(CH3)3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U   H    K1=6.516  B2=11.18  1979HGa (63236)3849
DH1=-36.2 kJ mol-1 DS1=3 J K-1 mol-1 DH(K2)=-36.5 kJ mol-1
DS(K2)=-33 J K-1 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
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C   HM                   1990BBc (63266)3850
                                        K(NiL+oxalate)=4.10
DH=-10.04 kJ mol-1, DS=10.74 J K-1 mol-1, DG=-23.4 kJ mol-1
--------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 2.00M U        K1=16.3        1985KKa (63267)3851
Constant for the octahedral species: NiL(H2O)2, being > 98% of all Ni
(equilibrium with square-planar NiL)
--------------------------------------------------------------------------
Ni++       sp  NaNO3  25°C 0.10M U        K1=16.4        1985THa (63268)3852
**************************************************************************
C8H20N4                 L                        CAS 6531-38-0  (6515)
1,4-Bis(2-aminoethyl)-1,4-diazacyclohexane; NH2.CH2CH2.N(CH2CH2)2N.CH2CH2.NH2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=4.68        1990HNa (63303)3853
**************************************************************************
C8H21N3                 L                        (2496)
1,1,1-Tris(N-methylaminomethyl)ethane; CH3.C(CH2.NH.CH3)3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M C        K1=9.369       1983BMa (63315)3854
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=11.13       1965DKb (63329)3855
                                        K(Ni+HL)=3.84
**************************************************************************
C8H22N2O6P2           H4L    EDDIPH           CAS 13516-59-1  (1355)
Diaminoethane-N,N'-di(isopropylphosphonic)acid;(CH2.NH.C(CH3)2.PO3H2)2
--------------------------------------------------------------------------
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	M		K1=11.23 K(Ni+HL)=7.35 K(Ni+H2L)=3.84	1976MDa	(63349)3856

****

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
Ni++	gl	KNO3	25°C	0.10M	U		K(Ni+HL)=7.07	1977TIa	(63360)3857

****

C8H22N2O6P2 H4L (1365)
N,N'-Dimethyl-diaminoethane-N,N'-diethylphosphonic acid;
(CH3.N(CH2.CH2.PO3H2).CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	U		K1=8.70 K(Ni+HL)=5.43 K(Ni+H2L)=3.55	1976MDa	(63364)3858

****

C8H22N2O8P2 H4L CAS 55703-43-0 (1354)
N,N'-Di-(2-hydroxyethane)ethylenediamine-N,N'-dimethylphosphonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	M		K1=9.60 K(Ni+HL)=8.21 K(Ni+H2L)=4.85	1976MRa	(63368)3859

****

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
Ni++	gl	KNO3	25°C	1.00M	C	H	K1=16.00	1982ABc	(63378)3860

By calorimetry: DH1=-70.7 kJ mol-1, DS1=69.0

****

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
Ni++	gl	NaClO4	25°C	7.00M	C		K1=17.39 K(Ni+HL)=12.06	2004BBb	(63395)3861
Ni++	sp	NaClO4	25°C	0.10M	C	T H		1977AFb	(63396)3862

```
                                        K(NiL(H2O)2=NiL+2H2O)=-1.09
From data for 19-49 C, DH(K)=19 kJ mol-1, DS(K)=63 J K-1 mol-1.
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=14.69       1973PFa (63397)3863
                                        K(Ni+HL)=9.75
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=12.47       1982BTb (63407)3864
                                        K(NiL+H)=5.21
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=15.45       1982BTb (63412)3865
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.10M C                        1982TMd (63436)3866
                                        DH1=-99.1 kJ/mol
-------------------------------------------------------------------------
Ni++       sp  KCl    20°C 0.10M U        K1=17.50       1971MAj (63437)3867
                                        K(Ni+HL)=11.87
                                        K(Ni+H2L)=6.66
-------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.50M U    M                  1967JMa (63438)3868
                                        K(NiL+NH3)=0.83
-------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.10M U   H                   1965WHa (63439)3869
DH(K1)=-76.9 kJ mol-1, DS=83.6 J K-1 mol-1
-------------------------------------------------------------------------
Ni++       cal KCl    25°C 0.10M U   H                   1964PVa (63440)3870
DH(K1)=-79.0 kJ mol-1, DS=69.0 J K-1 mol-1
-------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=17.43       1963PVa (63441)3871
                                        K(Ni+HL)=11.78
                                        K(Ni+H2L)=6.7
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=17.8        1958RHa (63442)3872
-------------------------------------------------------------------------
Ni++       gl  NaClO4 15°C .075M U T      K1=17.63       1957JWa (63443)3873
                                        K(Ni+HL)=13.04
```

K1=17.51(25 C),17.39(35 C); K(Ni+HL)=12.66(25 C),12.20(35 C). I=0.075 KClO4

Ni++ cal none ? 0.0 U H 1957JWb (63444)3874
DH(K1)=-43.6 kJ mol-1(25 C), DS=-189 J K-1 mol-1; DG=-97.28(15 C),-99.96
(25 C), -102.63(35 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
---
Ni++ gl NaNO3 25°C 0.50M M K1=2.42 1998KSa (63499)3875
****
C9H5NOBr2 HL CAS 521-74-4 (3279)
5,7-Dibromo-8-hydroxyquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 35°C 75% U K1=9.92 B2=18.12 1970GMh (63511)3876
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
---
Ni++ gl diox/w 35°C 75% U K1=9.77 B2=17.84 1970GMh (63536)3877
Medium: 75% v/v dioxan, 0.2 M NaClO4
****
C9H5NOI2 HL CAS 83-73-8 (3280)
5,7-Di-iodo-8-hydroxyquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 35°C 75% U K1=9.70 B2=17.90 1971MAb (63552)3878
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
---
Ni++ gl diox/w 35°C 75% U K1=7.72 B2=14.62 1970GMh (63578)3879
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
---

Ni++ gl diox/w 35°C 75% U K1=7.68 B2=14.48 1970GMh (63588)3880
Medium: 75% v/v dioxan, 0.1 M NaClO4
****
C9H5NO4 HL CAS 22308-86-7 (4607)
3-Nitroso-4-hydroxycoumarin (oximidobenzotetronic acid);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 21°C 50% U K1=4.34 B2=8.81 1970MGd (63599)3881
Medium: 50% dioxan, 0.3 M NaClO4

Ni++ dis NaClO4 20°C 0.10M U B2=7.25 1969MBe (63600)3882
****
C9H5N3O5 HL CAS 1084-32-8 (4608)
5,7-Dinitro-8-hydroxyquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 35°C 75% U K1=6.92 B2=12.30 1970GMh (63623)3883
Medium: 75% dioxan, 0.2 M NaClO4
****
C9H5N3O6 HL CAS 21168-36-3 (4609)
5,7-Dinitro-8-hydroxyquinoline-N-oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 35°C 75% U K1=3.22 B2=5.40 1970GMh (63633)3884
Medium: 75% v/v dioxan, 0.2 M NaClO4
****
C9H6NOCl HL CAS 130-16-5 (1268)
5-Chloro-8-hydroxyquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp oth/un 25°C ? U M 1980BRa (63652)3885
K(NiL2+pyridine)=3.90
K(NiL2+(2-picoline))=1.43
K(NiL2+(4-picoline))=4.50
K(NiL2+(2,4-lutidine))=0.87
K(NiL2+(2,4,6-collidine))=2.05, K(NiL2+bpy)=6.83, K(NiL2+en)=7.47,
K(NiL2+phen)=7.07

Ni++ gl diox/w 25°C 60% U K1=10.34 B2=19.89 1973SCd (63653)3886
Medium: 60% dioxan, 0.1 M NaClO4
****
C9H6NO4IS H2L Ferron CAS 547-91-1 (275)
7-Iodo-8-hydroxyquinoline-5-sulfonic acid; (HO)(HO3S)C9H4NI

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

Ni++ gl diox/w 25°C 75% C K1=11.51 B2=17.50 1989FHa (63746)3887
Medium: 75% v/v dioxane/H2O, 0.10 M KNO3.
Also data for 0-50% v/v dioxane/H2O, 0.10 M KNO3.

Ni++ gl KNO3 25°C 0.10M C K1=10.11 B2=18.82 1985ZHa (63747)3888

Ni++ gl NaClO4 35°C 0.10M U K1=8.11 B2=14.97 1983ABb (63748)3889

Ni++ gl oth/un 20°C 0.03M U K1=8.20 1977KCb (63749)3890
K1=8.31 by solubility

Ni++ gl KNO3 28°C 0.10M U K1=7.70 B2=13.96 1967LMb (63750)3891

Ni++ gl KCl 25°C 0.10M U K1=8.2 B2=15.20 1963STa (63751)3892
K3=5.6

****

C9H6N2Br2 L CAS 36107-02-5 (4611)
8-Amino-5,7-dibromoquinoline;

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

---

Ni++ sp diox/w 25°C 50% U K1=1.8 1972YTa (63843)3893

****

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

---

Ni++ sp KCl 20°C 0.50M C K1=4.2 1977MOb (63869)3894

****

C9H6N2O5S H2L CAS 5263-74-1 (2738)
7-Nitroso-8-hydroxyquinoline-5-sulfonic acid;

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

---

Ni++ sp KCl 20°C 0.50M C K1=7.0 1977MOb (63874)3895

****

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

---

Ni++ sp KCl 20°C 0.50M C K1=6.9 1977MOb (63882)3896

****

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

---

Ni++ gl NaClO4 35°C 0.10M U K1=7.07 B2=13.45 1983ABb (63895)3897

```
------------------------------------------------------------------------------
Ni++       sp  KCl    20°C 0.50M C        K1=6.7         1977MOb (63896)3898
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C .005M U        K2=6.2         1963FFa (63897)3899
                                          K3=4.74
------------------------------------------------------------------------------
Ni++       EMF oth/un 25°C  0.0  U        K1=7.05   B2=13.40  1955NUa (63898)3900
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       sp  diox/w 20°C  10%  U                         1970KIa (63918)3901
                                          K(Ni+HL=NiL+H)=6.1
                                          K(NiL+HL=NiL2+H)=5.7
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  alc/w  30°C   5%  U    M                   1995RRb (63947)3902
                                          K(NiA+L)=6.11
                                          B(NiAL)=12.39
Medium: 5% v/v EtOH/H2O, 0.10 M KNO3. H2A is thioglycolic acid.
******************************************************************************
C9H6O6                H3L    Hemimellitic ac  CAS 569-51-7  (1621)
1,2,3-Benzenetricarboxylic acid; C6H3.(COOH)3
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=2.86        1961YAb (63962)3903
******************************************************************************
C9H6O6                H3L    Trimellitic aci  CAS 528-44-9  (1622)
1,2,4-Benzenetricarboxylic acid; C6H3.(COOH)3
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=1.86        1961YAb (63988)3904
******************************************************************************
C9H7N                   L                      CAS 119-65-3  (487)
Isoquinoline;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U  I M                    1982HYa (64014)3905
                                          B(NiA2L)=1.41
Medium: benzene. HA=diphenylthiocarbazone
------------------------------------------------------------------------------
```

```
Ni++       sp  alc/w  25°C 100%  U        K1=1.7         1980CKc (64015)3906
Medium: MeOH. In DMSO: K1=1.4; DMF: 1.96
-------------------------------------------------------------------------------
Ni++       kin oth/un 15°C    u  U T H    K1=1.94        1976CKa (64016)3907
K1=1.89 (20 C); 1.83 (30 C); 1.74 (35 C); 1.65 (45 C)
-------------------------------------------------------------------------------
Ni++       sp  mixed  27°C    ?  U T                     1976USa (64017)3908
                                        K(NiCl2+2L)=-5.82
Also data at 36.8 C. Medium: isoquinoline + chlorobenzene
*******************************************************************************
C9H7N                   L                     CAS 91-22-5  (1538)
Quinoline;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M C    M   K1=2.70        1993BAb (64040)3909
                                        K(Ni(gly)+L)=5.97
                                        K(Ni(ala)+L)=5.93
                                        K(Ni(val)+L)=5.90
                                        K(NiA+L)=5.85
K(Ni(gln)+L)=5.55, K(Ni(glu)+L)=8.20, K(Ni(asp)+L)=8.80. HA is asparagine.
-------------------------------------------------------------------------------
Ni++       sp  non-aq   ?  100%  U  I M                  1971MAg (64041)3910
                                        K(NiA2+L)=1.80
                                        K(NiA2+2L)=1.82
Medium: benzene, HA=benzoylactone. In DMF, K(NiA2+L)=0.26, K(NiA2+2L)=0.83
In CHCl3, K(NiA2+L)=1.34, K(NiA2+2L)=1.48
-------------------------------------------------------------------------------
Ni++       sp  non-aq   ?  100%  U  I                   1971MAh (64042)3911
                                        K(NiCl2+L)=0.89
Medium: benzene. With 5% DMF, K=0.47, 25%, K=0.85, 40%, K=0.18, 50%, K=0.60
*******************************************************************************
C9H7NO                 HL    Oxine            CAS 148-24-3  (504)
8-Hydroxyquinoline (8-quinolinol);
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  20%  M    M   K1=8.45        1998ABa (64154)3912
Medium: 20% w/w EtOH/H2O, 0.1 M KNO3.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=11.67  B2=23.05  1990NAa (64155)3913
                                        K(NiL+furoic acid)=4.38
-------------------------------------------------------------------------------
Ni++       kin alc/w  20°C 100%  U        K1=10.5   B2=20.2   1988BTb (64156)3914
                                        K(Ni+HL=NiL+H)=-3.5
                                        K(Ni+2HL=NiL2+2H)=-7.8
Medium: MeOH, 0.1 M NaClO4.
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C  0.1M U T      K1=9.49   B2=18.59  1986MLb (64157)3915
Also for 60 C K1=9.10; B2=17.43
```

for 80 C K1=8.38; B2=16.33

Ni++ gl KNO3 25°C 0.2M U I K1=9.55 1984VZa (64158)3916
in 0.5 M KNO3 K1=9.26;
in 1.0 M KNO3 K1=9.04;

Ni++ gl diox/w 25°C 50% U K1=10.63 B2=19.68 1984YAa (64159)3917

Ni++ sp oth/un 25°C ? U M 1980BRa (64160)3918
K(NiL2+pyridine)=4.33
K(NiL2+(2-picoline))=1.35
K(NiL2+(4-picoline))=5.16
K(NiL2+(2,4-lutidine))=0.43
K(ML2+(2,4,6-collidine))=1.67

Ni++ sp oth/un 25°C ? U M 1980BRa (64161)3919
K(NiL2+en)=9.00
K(NiL2+bpy)=9.35
K(NiL2+phen)=9.20
K(NiL2+(2,9-neocurroin))=6.88

Ni++ gl NaClO4 25°C 0.10M U M K1=9.10 B2=16.86 1976ABb (64162)3920
K(NiL+benzylhydroxamate)=4.44

Ni++ gl diox/w 25°C 60% U K1=11.08 B2=21.76 1973SCd (64163)3921
Medium: 60% dioxan, 0.1 M NaClO4

Ni++ cal diox/w 25°C 50% U H 1968GFa (64164)3922
Medium: 50% dioxan, 0.1 M NaClO4. DH(K1)=-38.9 kJ mol-1, DS=71 J K-1 mol-1;
DH(B2)=-80.7, DS=117

Ni++ gl diox/w 25°C 50% U K1=10.50 B2=20.27 1967SFa (64165)3923

Ni++ gl diox/w 40°C 50% U T H B2=20.68 1959FFa (64166)3924
B2=22.0(15 C),21.54(25 C). DH(B2)=-79.4 kJ mol-1, DS=146 J K-1 mol-1.
By calorimetry(25 C): DH(B2)=-86.9, DS=121

Ni++ gl diox/w 20°C 50% U K1=10.43 B2=20.40 1954IRa (64167)3925
Medium: 50% dioxan, 0.3 NaClO4

Ni++ gl diox/w 30°C 75% U K1=15.2 1954UFa (64168)3926
K3=7.2

Ni++ gl oth/un 20°C 0.01M U K1=9.9 B2=18.7 1953ALa (64169)3927

Ni++ gl oth/un 25°C 0.0 U K1=9.27 1953NAb (64170)3928

Ni++ gl diox/w 25°C 50% U K1=11.44 B2=21.38 1952JFa (64171)3929

Ni++ gl diox/w 25°C 70% U K1=11.65 B2=22.00 1949MMa (64172)3930

****
C9H7NO L CAS 1613-37-2 (4613)
Quinoline-N-oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp alc/w ? 100% U K1=1.17 B2=2.0 1972RMc (64380)3931
Medium: EtOH

Ni++ sp non-aq ? 100% U K1=0.79 B2=1.34 1972RMc (64381)3932
Medium: isopentanol

Ni++ sp non-aq ? 100% U K1=0.68 B2=1.41 1972RMc (64382)3933
Medium: Dimethylformamide
****
C9H7NO2 HL CAS 10285-97-9 (3257)
2-Hydroxyquinoline 1-oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 20°C 0.10M U K1=5.5 1956ARb (64384)3934
****
C9H7NO2 HL CAS 1477-50-5 (4610)
2-Indolecarboxylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 25°C 0.0 U K1=0.70 1972LPa (64390)3935
****
C9H7NO2 HL CAS 1127-45-3 (4614)
8-Hydroxyquinoline-N-oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 50% U K1=5.90 B2=10.10 1970GMb (64395)3936
Medium: 50% dioxan, 0.3 M NaClO4
****
C9H7NO3S2 H2L CAS 58447-10-2 (4675)
8-Mercaptoquinoline-5-sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp oth/un ? ? U K1=8.6 1968ABa (64420)3937
****
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
---
Ni++ gl NaClO4 35°C 0.10M U K1=9.27 B2=17.52 1983ABb (64488)3938

```
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  60%  U        K1=10.60  B2=19.87  1973SCd (64489)3939
Medium: 60% dioxan, 0.1 M NaClO4
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U  IH    K1=9.11   B2=17.34  1968GFa (64490)3940
                                         B3=23.23
By calorimetry:DH(K1)=-26.7 kJ mol-1, DS=84 J K-1 mol-1, DH(B2)=-61.8,DS=125
DH(B3)=-107.0,DS=84
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U  IH    K1=10.22  B2=19.25  1968GFa (64491)3941
                                         B3=25.55
Medium: 50% dioxan,0.1 M NaClO4.  By calorimetry: DH(K1)=-30.5 kJ mol-1,
DS=92 J K-1 mol-1; DH(B2)=-66.5,DS=146; DH(B3)=-106.1,DS=134
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C .005M U        K1=9.57   B2=18.15  1963FFa (64492)3942
                                         K3=7.42
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=9.02   B2=16.77  1959RGa (64493)3943
                                         K3=6.16
--------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C  0.0  U        K1=9.57   B2=18.5   1954NUa (64494)3944
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=10.0   B2=18.1   1953ALa (64495)3945
********************************************************************************
C9H7NS                  L                     CAS 3319-59-1  (3866)
2-(2'-Pyridyl)thiophene; C4H3S.C5H4N
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=1.91        1964KSb (64603)3946
********************************************************************************
C9H7NS                 HL                     CAS 76076-35-2  (5695)
2-Mercaptoquinoline;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF non-aq 25°C 100%  U        K1=6.3    B2=10.90  1986UBa (64609)3947
Medium: dimethylformamide, LiClO4
********************************************************************************
C9H7NS                 HL    Quinolinethiol   CAS 491-33-8  (1028)
8-Mercaptoquinoline;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       dis NaClO4 25°C 0.10M C                       1987YSb (64627)3948
Method: extraction from 0.10 M NaClO4 solution into CHCl3/HL.
K(Ni+2HL(org)=NiL2(org)+2H)=4.52.
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  C    M                  1987YSb (64628)3949
                                         K(NiL2+phen)=3.92
```

Medium: CHCl3.

Ni++ gl non-aq 25°C 100% U K1=9.5 B2=16.1 1984UBa (64629)3950
Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

Ni++ EMF non-aq 25°C 100% U K1=9.5 B2=16.10 1983UBa (64630)3951
Medium: DMF, 0.1 M LiClO4

Ni++ cal diox/w 25°C 50% U H 1968GFa (64631)3952
Medium: 50% dioxan, 0.1 M NaClO4. DH(K1)=-47.6 kJ mol-1, DS=50 J K-1 mol-1

Ni++ gl diox/w 25°C 50% U K1=11.0 1966KFb (64632)3953
Medium: 50% dioxan, 0.1 M NaClO4

Ni++ sp diox/w 27°C 50% U K1=10.95 1963CFa (64633)3954
****
C9H7N3O2 HL (1328)
4-Oximino-3-phenyl-2-pyrazolin-5-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 20°C 50% U T K1=4.62 B2=8.36 1981SSc (64660)3955
At 30 C: K1=4.48, B2=8.02
****
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
---
Ni++ sp alc/w 25°C 30% U K1=11.08 1987LSb (64680)3956
K(Ni+HL=NiHL)=10.07
B(NiHL)=16.57
Medium: 0.1 M KNO3 in 30% v/v EtOH/H2O

Ni++ sp NaNO3 25°C 0.10M U K1=10.21 1986OHa (64681)3957
K(Ni+HL)=6.12

Ni++ sp NaClO4 ? 0.10M U K1=10.0 B2=17.3 1969MSd (64682)3958
K(Ni+HL)=9.2

Ni++ gl diox/w 25°C 50% U 1966SCd (64683)3959
K(Ni+HL)=12.94
K(NiHL+HL)=11.82
K(NiL+H)=6.84
K(NiOHL+H)=8.55
****
C9H8NO4P H2L CAS 7220-39-5 (1930)
8-Quinolyl-phosphoric acid;

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

```
------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M U        K1=2.34        1989AKa (64753)3960
                                          B(NiH-1L)=-5.46
******************************************************************************
C9H8N2                   L                     CAS 578-66-5  (503)
8-Aminoquinoline;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       sp  diox/w 25°C  50%  U        K1=4.1         1969YOa (64770)3961
Medium: 50% v/v dioxan, 0.5 M NaClO4
------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=4.1    B2=7.7    1964PCa (64771)3962
                                          K3=2.8
------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=4.90   B2=8.54   1957WSa (64772)3963
                                          K3=3.29
******************************************************************************
C9H8N2O                  HL                    CAS 17056-96-1  (3258)
8-Hydroxy-4-methylcinnoline;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  diox/w 20°C  50%  U        K1=8.5    B2=16.7   1954IRa (64788)3964
Medium: 50% dioxan, 0.3 M NaClO4
******************************************************************************
C9H8N2O                  HL                    CAS 34790-24-4  (3259)
8-Hydroxy-4-methylquinazoline;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=7.9    B2=14.7   1954AHb (64793)3965
******************************************************************************
C9H8N2O2                 HL                      (6495)
2-(Imidazo[1,2-a]-pyridine)ethanoic acid
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=5.37   B2=10.07  1991SYa (64796)3966
******************************************************************************
C9H8N2O3                H2L                   CAS 138580-05-9  (6494)
2-(8-Hydroxyimidazo[1,2-a]-pyridine)ethanoic acid;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U  I     K1=8.95        1991SYa (64808)3967
In H2O: K1=6.58
******************************************************************************
C9H8N2O4S2               HL                    CAS 219931-32-5  (8394)
3-Phenylsulfonamidorhodanine;
```

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  alc/w  30°C  20%  C T H    K1=6.57   B2=10.01  1998EGa (64826)3968
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
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.30M C T      K1=2.85        1996DAa (64844)3969
Data for 15-35 C.
********************************************************************************
C9H8N4OS                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
--------------------------------------------------------------------------------
Ni++       gl  alc/w  30°C  60%  M  I     K1=6.09   B2=12.03  1996HTb (64847)3970
Medium: 60% v/v EtOH/H2O, 0.04 M KCl. Data for 60% acetone/H2O, dioxane/
H2O, THF/H2O, DMF/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
--------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  50%  C T H    K1=8.31   B2=14.80  2004JEa (64856)3971
Medium: 50% v/v EtOH/H2O, 0.10 M KCl. DH(K1)=-27.7 kJ mol-1, DS(K1)=
-252 J K-1 mol-1; DH(K2)=-28.7, DS(K2)=-221. Also data for 35 and 45 C
********************************************************************************
C9H8O2S                 H2L                   CAS 5740-34-1  (1065)
3-Phenyl-2-mercaptopropenoic acid; C6H5.CH:C(SH).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=10.96  B2=22.36  1977WVa (64876)3972
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=10.03  B2=17.45  1975TBb (64882)3973
********************************************************************************
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
Ni++	gl	NaCl	25°C	0.10M	U			1992CLa	(64913)3974
							B(NiH-1L)=-3.62		
							B(NiH-2L)=-13.45		
							B(Ni2H-1L)=-1.56		

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
Ni++	sp	NaClO4	?	0.20M	U		K1=6.73	1967GDb	(64927)3975

By glass electrode: K1=6.83,K2=5.22,K3=3.11

****

C9H8O4 H2L CAS 4316-23-8 (4593)
4-Methylphthalic acid; CH3.C6H3(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.03M	U		K1=2.97	1971NPc	(64965)3976
Ni++	gl	KCl	30°C	0.10M	U		K1=2.15	1970NPb	(64966)3977

****

C9H8O4S H2L CAS 135-13-7 (4620)
(2-Carboxyphenylthio)ethanoic acid; HOOC.C6H4.S.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	U		K1=1.9	1962SYa	(64999)3978

****

C9H8O5 H2L CAS 635-53-0 (3246)
2-(Carboxymethoxy)benzoic acid; HOOC.CH2.O.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	U		K1=2.0	1962SYa	(65014)3979
Ni++	gl	diox/w	35°C	50%	U		K1=5.8	1958YSa	(65015)3980

****

C9H8O5 H2L CAS 1885-13-8 (3247)
4-Methoxyphthalic acid; CH3O.C6H3(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=2.27	1956YSa	(65024)3981

****

C9H9NO2 HL CAS 25355-34-4 (6206)
1-Phenyl-prop-1,2-dione monoxime; C6H5.CO.C(:NOH).CH3

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  75%  U        K1=8.9    B2=14.70  1986BTa (65033)3982
Medium: 75% MeOH/H2O, 0.1 M NaClO4
********************************************************************************
C9H9NO3                HL    Hippuric acid    CAS 495-69-2  (1184)
Benzoylaminoethanoic acid, N-benzoylglycine; C6H5.CO.NH.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.15M U        K1=1.25        1976FJa (65051)3983
********************************************************************************
C9H9NO4                HL                      CAS 55805-95-3  (6322)
2-Hydroxy-5-nitropropiophenone; (HO)(NO2)C6H3.CO.CH2.CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  diox/w 40°C  50%  U        K1=3.88        1975PSb (65074)3984
********************************************************************************
C9H9NO4               H2L    Salicylglycine   CAS 487-54-7  (3869)
N-(2-Hydroxybenzoyl)glycine, 2-hydroxyhippuric acid; HO.C6H4.CO.NH.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=2.84        1994BDa (65089)3985
                                         B(NiH-1L)=-5.89
--------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  50%  U        K1=3.36   B2= 6.51  1989MSi (65090)3986
                                         B(NiH-1L)=-4.35
                                         K(Ni+OH+L)=9.65
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=4.45        1973UWb (65101)3987
--------------------------------------------------------------------------------
Ni++       gl  diox/w 35°C  50%  U        K1=6.8    B2=10.9   1958YSa (65102)3988
********************************************************************************
C9H9N2O                                          (3284)
5-Hydroxy-1-methylquinoxalinium ion;
             HL+
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        B2=9.5         1954AHb (65109)3989
********************************************************************************
```

C9H9N2O (3285)
8-Hydroxy-3-methylquinazolinium ion;
HL+

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	20°C	0.01M	U		B2=8.4	1954AHb	(65111)3990

****
C9H9N2O (3286)
8-Hydroxy-6-methyl-1,6-naphthyridinium ion;
HL+

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	20°C	0.01M	U		B2=11	1954AHb	(65113)3991

****
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
Ni++	gl	alc/w	25°C	50%	C		K1=3.35	1999GAa	(65123)3992

Medium: 50% EtOH/H2O, 0.10 M NaNO3.

Ni++	gl	alc/w	30°C	50%	C	M	B(Ni(gly)L)=11.40 B(NiAL)=9.43 B(Ni(met)L)=9.68 B(NiH-1(gly)L)=3.65	1999MBc	(65124)3993

In 50% v/v EtOH/H2O, 0.10 M NaNO3. B(NiH-2(gly)L)=-5.20; B(NiH-1AL)=1.35, B(NiH-2AL)=-8.25; B(NiH-1(met)L)=2.78, B(NiH-2(met)L)=-6.42. A: Beta-ala

Ni++	gl	diox/w	30°C	50%	U		K1=3.57 B2= 6.51 *K(NiL)=-7.75 *K(NiL2)=-6.33 *K(Ni(OH)L2)=-8.15	1993MBc	(65125)3994

Medium: 50% v/v dioxane/H2O, 0.10 M NaNO3.

****
C9H9O2Cl HL CAS 81322-67-0 (3868)
5-Chloro-2-hydroxy-4,6-dimethylbenzaldehyde; Cl(HO).C6H(CH3)2.CHO

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	EMF	diox/w	20°C	50%	U		K1=4.1	1963CCa	(65167)3995

Medium: 50% dioxan, 0.3 M NaClO4

****
C9H10N2 L CAS 7035-68-9 (5669)
1-Ethylbenzimidazole;

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

```
--------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U        B2=2.14        1984DPa (65188)3996
Medium: DMSO
********************************************************************************
C9H10N2                  L                     CAS 582-60-5  (8433)
5,6-Dimethylbenzimidazole;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M   K1=3.05        1997PSb (65192)3997
                                         K(NiL+A)=6.76
H2A is thiamine orthophosphoric acid.
********************************************************************************
C9H10N2O               HL                      (3264)
2,2'-Hydroxyphenylimidazoline;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=8.1         1956ARb (65199)3998
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=9.1    B2=17.7   1958PBa (65253)3999
********************************************************************************
C9H10N2O3              HL                      CAS 62134-49-0  (9110)
N-(2-Pyridyl)-3-carboxypropanamide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=3.43   B2= 5.40  2002GSa (65257)4000
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C        K1=8.46        1983CHa (65282)4001
                                         K(Ni+HL)=4.54
                                         K(NiL+H)=5.68
                                         K(Ni+OH+L)=12.53
                                         *K(NiL)=-9.93
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=8.43   B2=14.70  1983CHb (65283)4002
********************************************************************************
C9H10N2S               L                       CAS 14610-11-8  (8494)
2-Mercaptoethylbenzimidazole;
--------------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M M    M                  1995RMa (65289)4003
                                      K(Ni(bpy)+L)=7.85
                                      K(Ni(phen)+L)=7.63
                                      K(NiA+L)=7.48
A is 1,2-diaminobenzene.
-------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.10M M        K1=8.91        1995RMa (65290)4004
*************************************************************************
C9H10N2S2              HL                     CAS 7487-46-0  (1209)
1-Benzyl-hydrazone-S-methyldithiocarboxylate; C6H5.CH:N.NH.CS.SCH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U    M                  1976IDa (65295)4005
                                      K(NiL2+2py)=0.58
                                      K(NiL2+2(3Me-py))=0.95
                                      K(NiL2+2(4Me-py))=1.62
                                      K(NiL2+2(isoquinoline))=0.50
Other methods used include gl, polarography and nmr.
*************************************************************************
C9H10N6                 L                      CAS 3656-02-8  (8053)
4-Phenylazo-3,5-diaminopyrazole;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  40%  U        K1=6.85        1994AAb (65301)4006
                                      B(Ni2L)=18.45
Medium: 40% EtOH/H2O, 0.10 M NaClO4. Also data for the 4'-methyl
and 4'-carboxy-phenyl derivatives.
*************************************************************************
C9H10N6B               HL                     CAS 18583-60-3  (7936)
Hydrotris(pyrazolyl)borate;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       dis non-aq 25°C 100%  C                       2001KSb (65306)4007
                                      K(Ni+2HL=NiL2(org)+2H)=9.2
Method: solvent extraction into chloroform.
K: Ni+2HL(org)=NiL2(org)+2H.
*************************************************************************
C9H10O2                HL                     CAS 699-91-2  (4594)
2-Hydroxy-3-methylacetophenone; HO(CH3).C6H3.CO.CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  diox/w 27°C  75%  U        K1=10.53  B2=19.09  1973KDc (65318)4008
                                      K3=6.46
Medium: 50% v/v dioxan, 0.5 M NaClO4
```

****
C9H10O2 HL CAS 6921-64-8 (4595)
2-Hydroxy-4-methylacetophenone; HO(CH3).C6H3.CO.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 27°C 75% U K1=9.37 B2=15.93 1973KDc (65324)4009
Medium: 50% v/v dioxan, 0.5 M NaClO4
****
C9H10O2 HL CAS 1450-72-2 (4596)
2-Hydroxy-5-methylacetophenone; HO(CH3).C6H3.CO.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 27°C 75% U K1=8.38 B2=15.39 1970GMe (65331)4010
Medium: 50% v/v dioxan, 0.5 M NaClO4
****
C9H10O2 HL CAS 610-99-1 (4597)
2-Hydroxypropiophenone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 75% U K1=18.74 1978SRa (65340)4011

Ni++ gl diox/w 27°C 75% U K1=9.24 B2=15.86 1973KDc (65341)4012
K3=3.39
Medium: 75% dioxan, 0.1 M NaClO4
****
C9H10O2 HL Benzylacetic CAS 501-52-0 (1362)
3-Phenylpropanoic acid; C6H5.CH2.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ nmr none 20°C 0.0 U 1992MCa (65360)4013
K(NiA+L)=2.78
K(NiAL+L)=3.74
A=carboxypeptidase A.
****
C9H10O2S HL CAS 21101-79-1 (3267)
2-Ethylthiobenzoic acid; CH3.CH2.S.C6H4.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 50% U K1=2.37 B2=5.99 1956IFa (65403)4014
****
C9H10O2S H2L CAS 5219-65-8 (1062)
3-Phenyl-2-mercaptopropanoic acid; C6H5.CH2.CH(SH).COOH

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

```
Ni++       gl  alc/w  25°C  30%  U                        1987FGc (65411)4015
                                        B(NiHL)=11.55
                                        B(NiL2L)=15.21
                                        B(Ni3L4)=37.20
**************************************************************************
C9H10O3               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
--------------------------------------------------------------------------
Ni++       gl  oth/un 27°C  75%  U                        1973KDc (65427)4016
                                        K(Ni+HL)=7.72
                                        K(NiHL+HL)=5.12
Medium: 75% dioxan, 0.1 M NaClO4
**************************************************************************
C9H10O3                HL    Phenyllactic     CAS 828-01-3  (1190)
2-Hydroxy-3-phenylpropanoic acid, b-Phenyllactic acid; C6H5.CH2.CH(OH).COOH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       sp  oth/un   ?     ?  U        K1=6.8          1976SCb (65447)4017
**************************************************************************
C9H10O3                HL                     CAS 118-61-6  (3858)
Salicylic acid ethyl ester; HO.C6H4.CO.OC2H5
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=7.57         1964JVa (65490)4018
Medium: 75% dioxan, 0.1 M NaClO4
**************************************************************************
C9H10O3S               HL                     CAS 18619-21-2  (4637)
(2-Methoxyphenylthio)ethanoic acid; CH3O.C6H4.S.CH2.COOH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       ISE KNO3   25°C 0.10M C        K1=-0.10        1972FGb (65495)4019
By competition with Ag+ using Ag ISE
**************************************************************************
C9H10O3S               HL                     CAS 3996-32-5  (4638)
(3-Methoxyphenylthio)ethanoic acid; CH3O.C6H4.S.CH2.COOH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       ISE KNO3   25°C 0.10M C        K1=0.23         1972FGb (65503)4020
By competition with Ag+ using Ag ISE
**************************************************************************
C9H10O4               H2L                    CAS 3943-89-0  (4600)
3,4-Dihydroxybenzoic acid ethyl ester; (HO)2.C6H3.CO.OC2H5
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

Ni++ sp oth/un 25°C 0.10M U K1=8.05 1969HOc (65551)4021
****
C9H10O4 H3L CAS 39223-40-0 (1825)
3,4-Dihydroxyphenylpropanoic acid; (HO)2.C6H3.CH2.CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 30°C 0.10M U K1=7.45 B2=11.53 1966APb (65560)4022
****
C9H10O5 HL Vanillylmandel. CAS 2394-20-9 (2441)
4-Hydroxy-3-methoxymandelic acid; (CH3O)(OH)C6H3.CH(OH)COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ kin KNO3 25°C 0.50M U K1=1.52 1981CKc (65630)4023
****
C9H10O8 H4L CAS 3724-52-5 (1264)
cis-1,2,3,4-Cyclopentanetetracarboxylic acid; C5H6.(COOH)4

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 30°C 0.19M U K1=6.06 B2=9.92 1985MSb (65633)4024
****
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
---
Ni++ gl KNO3 25°C 0.10M U K1=1.70 1974ILa (65657)4025
****
C9H11NO HL CAS 10229-63-7 (3872)
N-(Salicylidene)aminoethane; HO.C6H4.CH:N.CH2.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp non-aq 25°C 100% C K1=2.3 2002CCc (65666)4026
K(NiL2+Ni)=1.16
K(NiL+NiL2)=3.61
Medium: acetonitrile. K1 by kinetic methods.
****
C9H11NOS HL CAS 34282-30-9 (3287)
N-(Mercaptoacetyl)-4-methylanilide; CH3.C6H4.NH.CO.CH2.SH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 75% U K1=8.84 B2=17.18 1961MAe (65673)4027
****
C9H11NOS HL CAS 36076-50-3 (4680)
N-Phenyl-N-methyl-2-mercaptoacetamide; HS.CH2.CO.N(CH3).C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	oth	diox/w	30°C	70%	U		K1=8.12	B2=15.89	1973BSc (65678)	4028

****

C9H11NO2 HL CAS 89-50-9 (3873)
2-(Ethylamino)benzoic acid; CH3.CH2.NH.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	22°C	0.10M	U		K1=1.9		1960UHa (65687)	4029

****

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
Ni++	gl	alc/w	25°C	40%	C		K1=11.39		2003DKa (65850)	4030
							B(NiHL)=6.20			

Medium: 40% v/v EtOH/H2O, 0.10 M NaCl.

Ni++	gl	KNO3	35°C	0.10M	C	M	K1=5.10		1999DSb (65851)	4031
							B(NiAL)=5.20			

A is thiamine hydrochloride.

Ni++	gl	NaClO4	25°C	0.20M	U	M	K1=5.20	B2= 9.82	1997PJa (65852)	4032
							K(Ni(bpy)+L)=4.49			
							K(Ni(phen)+L)=4.81			
							K(NiA+L)=4.89			
							K(Ni(his)+L)=4.01			

A is 2,2'-bipyridylamine. K(Ni(ida)+L)=3.95.

Ni++	gl	KNO3	35°C	0.10M	C	M	K1=5.20		1997PSb (65853)	4033
							K(NiL+A)=4.78			

H2A is thiamine orthophosphoric acid.

Ni++	gl	KNO3	25°C	0.10M	M	M			1996ABb (65854)	4034
							K(NiL+bipy)=5.38			
							K(NiL+phen)=5.46			
							K(NiL+imidazole)=3.60			

Ni++	gl	NaClO4	25°C	0.20M	U	T M	K1=5.20	B2= 9.82	1993PPa (65855)	4035
							K(NiA+L)=4.92			

A is 2,2'-bipyridylamine. Also data for 35 and 45 C.

Ni++	gl	KNO3	25°C	0.70M	C		K1=4.81	B2= 9.15	1992AAc (65856)	4036
							K(Ni+OH+L)=9.08			

Ni++	gl	NaClO4	30°C	0.20M	U	M	K1=4.91	B2=8.66	1990MBa (65857)	4037
							B(NiL(H2Dopa))=9.88			

```
                                        B(NiL(His))=12.32
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M U        K1=5.10        1990RSe (65858)4038
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U    M   K1=5.56        1989MAc (65859)4039
                                        K(NiA+L)=5.40
H4A is adenosine-5'-triphosphoric acid.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=5.00        1989MAd (65860)4040
                                        K(NiA+L)=4.55
                                        B(NiAL)=12.57
H2A is N-(2-acetamido)imino diethanoic acid.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.20M U    M   K1=5.13   B2=9.15   1989RVa (65861)4041
                                        K(NiA+L)=4.88
A=bis(imidazol-2-yl)methane
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M                  1985KGa (65862)4042
                                        B(NiL(bpy))=11.92
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U    M   K1=4.69        1984PBc (65863)4043
Ternary complexes with 2,2'-bipyridyl and 1,10-phenanthroline
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M M    M   K1=4.99   B2= 9.64  1978MSi (65864)4044
                                        K(Ni(his)+L)=4.01
                                        B(Ni(his)L)=12.70
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.05M U    M T K1=5.15   B2=9.59   1972GSc (65865)4045
                                        B(NiL(Gly))=10.43
                                        B(NiL(Ala))=10.11
                                        B(NiLA)=10.07
                                        B(NiLB)=10.07
B(NiLC)=10.02, B(NiL(Ser))=10.07, B(NiL(Thr))=10.09, K(Ni+L+HD)=9.86.
HA=norvaline, HB=norleucine, HC=2-aminobutanoic acid, H2D=Tyrosine
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  3.0M U      T K1=5.35   B2=10.49  1972WYa (65866)4046
--------------------------------------------------------------------------------
Ni++       gl  oth/un 40°C  0.0  U T H    K1=5.52   B2=9.91   1967AGa (65867)4047
K1=5.61(10 C),5.56(20 C); K2=4.95(10 C),4.66(20 C);
DH(K1)=-5.0 kJ mol-1, DS=90.3 J K-1 mol-1; DH(K2)=-31.8, DS=-18
--------------------------------------------------------------------------------
Ni++       cal oth/un 25°C  0.0  U T H                  1967AGa (65868)4048
DH(K1)=-14.2 kJ mol-1(10 C),-13.4(25 C),-10.9(40 C); DS=58 J K-1 mol-1(10 C)
62(25 C),71(40 C); DH(K2)=-17(10 C),-13.8(25 C),-12.1(40 C);DS=43(25 C)
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.37M U      T K1=5.22   B2=9.69   1966SWa (65869)4049
********************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M U    M   K1=4.83        1988BSc (66003)4050
                                           K(Ni(bpy)+L)=4.61
*************************************************************************
C9H11NO2               HL                      (4648)
3-Methyl-2-hydroxyacetophenone oxime; (CH3)(HO).C6H3.C(:N.OH).CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  diox/w 40°C  75%  U        K1=7.53   B2=14.81  1973PPa (66017)4051
*************************************************************************
C9H11NO2               HL                      (4649)
4-Methyl-2-hydroxyacetophenone oxime; (CH3)(HO).C6H3.C(:N.OH).CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  diox/w 40°C  75%  U        K1=7.50   B2=15.32  1973PPa (66021)4052
*************************************************************************
C9H11NO2               HL                      (4650)
5-Methyl-2-hydroxyacetophenone oxime; (CH3)(HO).C6H3.C(:N.OH).CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  diox/w 40°C  75%  U        K1=7.49   B2=16.21  1973PPa (66025)4053
*************************************************************************
C9H11NO2               HL                    CAS 21911-75-4  (657)
N-(2-Methylphenyl)aminoethanoic acid; CH3.C6H4.NH.CH2.COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=3.08        1985CLa (66030)4054
*************************************************************************
C9H11NO2               HL    N-Tolylglycine   CAS 21911-67-1  (627)
N-(3-Methylphenyl)aminoethanoic acid; CH3.C6H4.NH.CH2.COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=3.16        1983CLb (66035)4055
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M   K1=3.16        1983CLc (66036)4056
                                           K(Ni(bpy)+L)=3.73
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M                   1984CMa (66042)4057
                                           K(Ni(phen)+L)=4.90
```

Ni++ gl NaClO4 25°C 0.10M U K1=3.31 1979CXa (66043)4058
****
C9H11NO3 HL CAS 30321-28-1 (3875)
2-((2'-Hydroxyethyl)amino)benzoic acid; HO.CH2.CH2.NH.C6H4.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 22°C 0.10M U K1=2.4 B2=4.95 1960UHa (66050)4059
****
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
---
Ni++ gl KNO3 25°C 0.10M M K1=5.05 B2=9.20 1990SMa (66053)4060
****
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
---
Ni++ gl KCl 25°C 0.20M U H B2=11.81 1984KGa (66061)4061
B(NiHL)=15.69
B(NiH2L2)=30.72
B(NiHL2)=21.81
DH(NiHL)=-35.4 kJ mol-1;DH(NiH2L2)=-74.7;DH(NiHL2)=-52.7;DH(NiL2)=-28.9
****
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
---
Ni++ gl KCl 25°C 0.20M U H B2=10.53 1984KGa (66072)4062
B3=13.83
B(NiHL)=15.02
B(NiH2L2)=29.38
B(NiHL2)=20.27
DH(NiHL)=-37.4; DH(NiH2L2)=-77.1; DH(NiHL2)=-55.1; DH(B2)=-26.1;DH(B3)=-46.1
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
---
Ni++ gl KNO3 35°C 0.10M C M 1997PSb (66164)4063
K(Ni+HL)=5.21
K(NiHL+A)=4.11
H2A is thiamine orthophosphoric acid.

```
---------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U    M                  1990MBa (66165)4064
                                      K(Ni+HL)=4.70
                                      K(NiHL+HL)=4.21
                                      B(NiL(H2DOPA))=9.82
---------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M                  1985KGa (66166)4065
                                      B(NiHL(bpy))=22.04
                                      B(NiL(bpy))=12.60
---------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U   H    B2=10.11       1984KGa (66167)4066
                                      B3=13.67
                                      B(NiHL)=15.00
                                      B(NiH2L2)=29.35
                                      B(NiHL2)=20.03
DH(NiHL)=-35.9 kJ mol-1; DH(NiH2L2)=-74.8; DH(NiHL2)=-50.8; DH(B2)=-24.9;
DH(B3)=-46.5; B(NiH3L3)=42.36; B(NiH2L3)=33.32; B(NiHL3)=23.73
---------------------------------------------------------------------------
Ni++       gl  NaClO4 30°C 0.20M U    M                  1984PBc (66168)4067
                                      K(Ni+HL)=4.75
Ternary complexes with 2,2'-bipyridyl and 1,10-phenanthroline
---------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C TIH  R                1984PEa (66169)4068
                                      K(Ni+HL)=5.0
                                      K(Ni+2HL)=9.2
IUPAC evaluation
---------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U    M                  1983MDc (66170)4069
                                      K(Ni+HL)=4.81
                                      K(Ni+2HL)=8.81
---------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C      T K1=5.79   B2=10.23  1982PSa (66171)4070
                                      B3=13.09, B(NiHL)=15.14
                                      B(NiHL2)=20.01
                                      B(NiH2L2)=29.55
                                      K(Ni+2HL)=9.27,K(Ni+3HL)=12.41
---------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U      T                1973BBe (66172)4071
                                      K(Ni+HL)=5.14
                                      K(NiHL+HL)=4.41
---------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.05M U    M T                1972GSc (66173)4072
                                      K(Ni+HL)=5.10
                                      K(NiHL+HL)=4.36
                                      K(Ni+Gly+HL)=10.37
                                      K(Ni+Ala+HL)=10.10
K(Ni+A+HL)=10.02, K(Ni+B+HL)=10.05, K(Ni+C+HL)=10.08, K(Ni+Ser+HL)=10.03,
K(Ni+Thr+HL)=10.14, K(Ni+Phe+HL)=9.86. A=2-aminobutanoic, B=norVal, C=norLeu
---------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.37M U      T                1971WSa (66174)4073
```

```
                                        K(Ni+HL)=4.71
                                        K(Ni+2HL)=8.60
-------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U                      1952ALa (66175)4074
                                        K(Ni+2HL)=10.1
*************************************************************************
C9H11NO3               HL                    CAS 78547-13-4  (1897)
2-Aminooxy-3-phenyl-propanoic acid; C6H5.CH2.CH(O.NH2).COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=2.06        1985WTa (66262)4075
*************************************************************************
C9H11NO3               HL    Peonoloxime        (6250)
2-Hydroxy-4-methoxyacetophenoneoxime; CH3O.C6H3(OH).C(:NOH).CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  diox/w 28°C  50%  U        K1=8.85   B2=15.94  1979BRb (66268)4076
*************************************************************************
C9H11NO3               HL                    CAS 85676-52-4  (628)
N-(3-Methoxyphenyl)aminoethanoic acid; CH3O.C6H4.NH.CH2.COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=2.98        1983CLb (66279)4077
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M   K1=2.98        1983CLc (66280)4078
                                        K(Ni(bpy)+L)=3.53
*************************************************************************
C9H11NO3               HL                    CAS 22094-69-5  (633)
N-(4-Methoxyphenyl)aminoethanoic acid; CH3O.C6H4.NH.CH2.COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M                   1984CMa (66286)4079
                                        K(Ni(phen)+L)=5.39
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=3.66        1979CXa (66287)4080
*************************************************************************
C9H11NO3              H2L                    CAS 2233-84-3  (697)
N-2-Hydroxybenzyl-aminoethanoic acid; HO.C6H4.CH2.NH.CH2.COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  C    M   K1=8.47   B2=12.01  1995PBc (66295)4081
                                        K(NiL+A)=11.14
                                        K(NiL+C)=11.03
                                        K(NiL+D)=11.03
Medium: 50% v/v dioxane/H2O, 0.20 M NaClO4. HA is indole-3-ethanoic acid,
```

HC is indole-3-propanoic acid, HD is indole-3-butanoic acid.

Ni++ gl diox/w 25°C 50% U M K1=8.47 B2=12.01 1993PBd (66296)4082
B(Ni(gly)L)=13.80
B(Ni(ala)L)=12.73
B(Ni(phe)L)=12.17
K(Ni+HA+L)=12.34
Medium: 50% v/v dioxane/H2O, 0.2 M NaClO4. H2A is tyrosine.
B(Ni(trp)L)=12.48.

Ni++ gl KCl 30°C 0.10M U M K1=9.07 B2=14.61 1980ZHa (66297)4083
B(NiL(IMDA))=15.4
B(NiL(Tart))=12.7

****

C9H11NO4 H3L DOPA CAS 59-92-7 (5)
2-Amino-3-(3,4-dihydroxyphenyl)propanoic acid;H2NCH(CH2C6H3(OH)2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	37°C	0.15M	U	M	K1=10.84 B(NiH2L)=25.93 B(NiH3L2)=42.36 B(NiH4L2)=51.16 B(NiLCu)=20.88 B(NiLZn)=15.50.	1995NAc (66359)	4084
Ni++	gl	NaClO4	30°C	0.20M	U	M	K1=5.12 K(Ni+H2L+His)=13.03	1990MBa (66360)	4085
Ni++	gl	KCl	25°C	0.20M	C	M	B(NiH2L(bpy))=34.98 B(NiHL(bpy))=27.23 B(NiL(bpy))=17.58	1985KGa (66361)	4086
Ni++	gl	KCl	25°C	0.20M	C	M	K(Ni(His)+L)=7.66 B(NiH2L(His))=35.79 K(Ni(ATP)+L)=4.37 B(NiH2L(ATP))=32.50 K(Ni(Ala)+L)=4.61, B(NiH2L(Ala))=32.74; K(Ni(GlyGly)+L)=3.48, B(NiH2L(GlyGly))=31.61	1984KDb (66362)	4087
Ni++	gl	NaClO4	30°C	0.20M	U	M	K(Ni+H2L)=5.12	1984PBc (66363)	4088

Ternary complexes with 2,2'-bipyridyl and 1,10-phenanthroline

---

Ni++	sp	KCl	25°C	0.20M	C		K(NiL2+H)=11.47 K(NiHL2+H)=9.66 K(NiH2L2+H)=9.00	1983KGa (66364)	4089

Microconstants also reported.

Ni++	gl	KCl	25°C	0.20M	C	M	B2=17.10	1979GKa (66365)4090
							B(NiH2L)=28.13	
							B(NiHL)=19.9	
							B(NiH4L2)=55.06	
							B(NiH3L2)=47.19	

B(NiH2L2)=38.19; B(NiHL2)=28.57

Ni++	gl	NaClO4	25°C	0.50M	U			1977BPc (66366)4091
							B(NiH2L)=27.28	
							B(NiH4L2)=53.70	
							B(NiH6L3)=79.32	
							B(NiH5L3)=70.40	

B(NiH4L3)=61.70, B(NiH3L3)=51.40, B(NiH2L3)=42.00.

Ni++	gl	NaNO3	20°C	0.50M	U			1974GSa (66367)4092
							K(Ni+H2L)=4.0	
							K(Ni+2H2L)=8.73	

Ni++	gl	KNO3	25°C	0.10M	U			1973BKb (66368)4093
							K(Ni+H2L)=4.85	
							K(NiH2L+H2L)=4.28	

Ni++	gl	KNO3	25°C	1.0M	U			1972GJa (66369)4094
							K(Ni+H2L)=4.96	
							K(NiH2L+H2L)=4.20	

****

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

---

Ni++	gl	diox/w	30°C	45%	U		B2=11.61	1984MYa (66412)4095
							K(Ni+2HL)=6.06	
							K(Ni+HL+L)=8.73	

****

C9H11NO4S2 H3L CAS 97512-83-9 (1330)
N-Benzenesulfonyl-L-cysteine;

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

---

Ni++	gl	alc/w	25°C	50%	C	M		1997MGb (66435)4096
							K(Ni+HL)=6.59	
							B(Ni(en)(HL))=14.02	
							B(Ni(gly)(HL))=12.72	
							*K(Ni(bpy)(HL))=-11.50	

Medium: 50% v/v EtOH/H2O, 0.2 M NaNO3. *K(Ni(en)HL)=-10.60, *K(Ni(gly)HL)=-11.50, *K(NiLbpy)=-12.00,*K(NiLen)=-13.10,*K(NiLgly)=-12.40

Ni++ sp diox/w 30°C 50% U K1=6.46 B2=13.21 1981MDa (66436)4097
****
C9H11NO5S H2L CAS 85828-29-1 (8747)
N-(Phenylsulfonyl)-L-serine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 25°C 50% C T H 1987MDe (66455)4098
K(Ni+HL=NiL+H)=5.32
K(Ni+2HL=NiL2+2H)=11.32
*K(NiL2)=-10.46
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
---
Ni++ sp NaClO4 25°C 0.30M C T H K1=4.47 1995DAa (66467)4099
DH(K1)=-10.3 kJ mol-1, DS(K1)=51 J K-1 mol-1.
****
C9H11N3O2 HL (7179)
2-Hydroxy-acetophenone semicarbazone; HOC6H4C(CH3):NNHCONH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp non-aq ? 100% U K1=6.24 B2=10.48 1991SKc (66484)4100
Medium: EtOH

Ni++ sp alc/w ? 100% U K1=6.24 B2=10.48 1991SKd (66485)4101
Medium: EtOH
****
C9H11N3O2S HL (1273)
1-Ethoxycarbonyl-3-pyridin-2-ylthiourea; C5H4N.NH.CS.NH.CO.OC2H5

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 25°C 75% U K1=6.58 B2=13.09 1980SMb (66493)4102
****
C9H11N3O2S HL CAS 51146-75-9 (6170)
N-(2-Hydroxy-3-methoxybenzylidene)thiosemicarbazide; CH3O(OH)C6H3.CH:N.CS.NH.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 35°C 50% U I K1=8.37 B2=15.96 1993GJa (66500)4103
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=9.05.
****
C9H11O2As HL CAS 20717-70-8 (1277)

2-Carboxyphenyl dimethylarsine; HOOC.C6H4.As(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	40°C	70%	U		K1=2.53	1980SSb	(66531)4104

In 70% EtOH: K1=2.51

****

C9H12N2O HL Atrolactamidine CAS 27906-16-1 (3878)
2-Hydroxy-2-phenylpropanoylamidine; C6H5.C(OH)(CH3)C(:NH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	U		K1=7.87 B2=15.40	1963GJb	(66556)4105

****

C9H12N2O HL (6765)
N-(2-Aminoethyl)salicylideneimine; HO.C6H4.CH:NCH2CH2NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	mixed	25°C	80%	C		K1=16.9	1991LMa	(66562)4106

Medium: 80% w/w DMSO/H2O, 0.1 M KClO4

****

C9H12N2O L (5974)
Phenylalaninamide; NH2.CH(CH2.C6H5).CO.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	C		K1=2.57 B2= 4.69 B3=6.41 B(NiH-2L2)=-11.86	1997DFb	(66570)4107

****

C9H12N2O2 HL CAS 19254-08-1 (5893)
2-Amino-N-hydroxy-3-phenylpropanamide, phenylalanine hydroxamic acid;
C6H5.CH2.CH(NH2).CO.NHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=6.53 B2=13.89	1991FKa	(66577)4108

****

C9H12N2O2 HL CAS 66315-20-6 (3272)
N-2'-Aminoethylanthranilic acid; HOOC.C6H4.NH.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	35°C	50%	U		K1=7.8 B2=14.7	1958YSa	(66585)4109

****

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

---
Ni++ gl KNO3 25°C 0.10M M K1=5.05 B2=9.07 1976RNa (66596)4110
B2=9.68 (racemic ligand)
****
C9H12N2O3 H3L Tyr hydroxamic CAS 51344-01-5 (864)
2-Amino-N-hydroxy-3-(4-hydroxyphenyl)propanamide; HO.C6H4.CH2.CH(NH2)CO.NHOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.20M C B2=15.12 1991FKa (66603)4111
B(NiHL)=16.01
B(NiH2L2)=33.94
B(NiHL2)=24.69
B(NiH-1L2)=5.15

Ni++ gl KCl 25°C 0.50M C B2=16.186 1987LEb (66604)4112
B(NiH2L2)=33.668
B(NiHL2)=25.700
B(NiH-1L2)=6.646
****
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
---
Ni++ gl KCl 25°C 0.20M C B2=16.28 1991FKa (66618)4113
B(NiHL)=16.25
B(NiH2L2)=33.08
B(NiHL2)=25.02
****
C9H12N2O4S2 HL Dithiouridine (7417)
2,4-Dithiouracil-1-ribofuranoside, 2,4-dithiouridine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.20M C K1=3.02 B2= 5.66 1997KVa (66628)4114
****
C9H12N2O5S HL 2-Thiouridine (7416)
2-Thiouracil-1-ribofuranoside; 2-thiouridine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.20M C K1=2.99 B2= 5.95 1997KVa (66631)4115
****
C9H12N2O5S HL 4-Thiouridine CAS 13957-31-8 (7415)
4-Thiouracil-1-ribofuranoside, 4-thiouridine;

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

Ni++ gl KCl 25°C 0.20M C K1=2.68 B2= 5.13 1997KVa (66634)4116
****
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
---
Ni++ gl KNO3 25°C 0.10M U T HM 1995RSb (66668)4117
B(Ni(ala)L)=8.95
B(Ni(phe)L)=8.45
B(Cu(trp)L)=8.93
Data for 35 and 45 C. DH(Ni(ala)L)=-19.9 kJ mol-1, DS(Ni(ala)L)=107 J K-1 mol-1; DH(Ni(phe)L)=-20.0, DS(Ni(phe)L)=95; DH(Ni(trp)L)=-19.0, DS=107.

Ni++ gl NaClO4 25°C 0.20M U K1=3.89 1991SPa (66669)4118

Ni++ gl KNO3 35°C 0.10M U M K1=3.49 1990RSc (66670)4119
K(NiA+L)=2.99
K(NiB+L)=2.35
K(NiC+L)=2.19
H2A=Iminodiethanoic acid, H3B=NTA, H4C=EDTA

Ni++ gl KNO3 35°C 0.10M U M K1=2.77 1990RSc (66671)4120
K(NiL+Ala)=2.51
K(NiL+Phe)=2.49
K(NiL+Trp)=2.48

Ni++ gl KNO3 25°C 0.10M C T HM K1=3.90 B2=7.65 1987KRa (66672)4121

Ni++ gl KNO3 35°C 0.10M U M K1=3.57 1986RRa (66673)4122
Ternary complexes with glycine, oxalate, histidine and histamine
****
C9H12N2O10 H5L CAS 80921-06-8 (2924)
2,3-Diaminopropanoic-N,N'-di-1,3-propanedioic acid;
(HOOC)2CH.NH.CH(COOH).CH2.NH.CH(COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF KNO3 25°C 0.10M U K1=12.36 1982KBb (66725)4123
****
C9H12N3OCl HL CAS 5756-81-0 (4683)
1-(2'-Chloro)phenyl-3-propyl-3-hydroxytriazene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF diox/w 25°C 70% U K1=7.72 B2=13.66 1969DSa (66751)4124
Medium: 70% dioxan, 0.1 M KCl
****
C9H12N4O L CAS 78105-09-6 (8186)
9-(1-Ethoxyethyl)purine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	kin	oth/un	40°C	0.20M	C		K1=0.89		1980LOa (66754)	4125

Medium: 0.20 M Mg(ClO4)2.

****

C9H12O6 H3L CAS 16526-68-4 (5948)

cis, cis-1,3,5-Cyclohexanetricarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		K1=1.78		1983WKa (66769)	4126
							B(NiHL)=6.45			
							B(NiH2L)=10.31			

****

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
Ni++	gl	KNO3	25°C	0.50M	U		K1=1.98	B2=3.94	1983LRa (66780)	4127

****

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
Ni++	gl	KCl	25°C	0.06M	U T H		K1=6.22	B2=9.88	1962ALa (66816)	4128

At 0 C:K1=6.17, K2=3.58, B2=9.00(?); DH(B2)=16.3 kJ mol-1,DS=234 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
Ni++	gl	KCl	25°C	0.20M	C		K1=9.43	B2=14.2	1981GKb (66838)	4129
							B(NiHL)=18.84			
							B(NiH2L2)=34.5			
							B(NiHL2)=24.7			
Ni++	gl	NaNO3	20°C	0.50M	U		B2=12.5		1974GSa (66839)	4130
							B(NiHL)=17.43			
							B(NiHL2)=22.9			
							B(NiH2L2)=32			
Ni++	EMF	diox/w	25°C	70%	U		K1=9.43	B2=17.29	1969DSa (66840)	4131

Medium: 70% dioxan, 0.1 M KCl

```
Ni++       gl  KCl    25°C 0.10M U        K1=10.40       1966JNa (66841)4132
K1 adjusted to give hypothetical microscopic constant
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.06M U T H    K1=5.65   B2=9.17   1962ALa (66842)4133
At 0C: K1=6.17, K2=3.71, B2=8.90(?); DH(B2)=-30.9 kJ mol-1,DS=59 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C .058M U T      B2=9.26        1957LYa (66843)4134
B2=9.00(0 C)
********************************************************************************
C9H13NO6              H3L                          (3881)
2,6-Dicarboxypiperidyl-N-ethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=10.87       1968KTd (66874)4135
********************************************************************************
C9H13N2O3P             HL                           (7918)
(Glycylamino)methyl(phenylphosphinic acid);
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=4.29   B2= 7.43  2001LKa (66915)4136
                                         B(NiHL)=10.35
********************************************************************************
C9H13N2O8PS           H3L                      CAS 29123-25-9  (9046)
2-Thiouridine 5'-monophosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.51   B2= 6.30  2003SBb (66920)4137
                                         B(NiH-1L2)=-2.49
                                         B(NiH-2L2)=-11.27
********************************************************************************
C9H13N2O8PS           H3L                      CAS 4145-46-4  (9047)
4-Thiouridine 5'-monophosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=2.85   B2= 6.06  2003SBb (66923)4138
                                         B(NiH-2L2)=-11.10
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       cal R4N.X  25°C 0.10M C   H    K1=2.03        1995HTa (66941)4139
                                         K(NiL+H)=3.0
DH(K1)=+8.7 kJ mol-1; DH(NiL+H)=3.4
--------------------------------------------------------------------------------
```

```
Ni++       gl  KNO3   35°C 0.10M U    M                  1992RAd (66942)4140
                                       K(Ni+HL)=2.18
                                       K(Ni+HL+Gly)=12.34
                                       K(Ni+HL+His)=13.43
                                       K(Ni+HL+histamine)=11.02
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M C TI   R                1991SMa (66943)4141
                                       K(Ni+HL)=2.37
IUPAC evaluation
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C                       1988MSa (66944)4142
                                       K(Ni+HL)=1.97
--------------------------------------------------------------------------------
Ni++       nmr oth/un 23°C 0.30M U    M                  1985PGa (66945)4143
                                       Keff(NiA+HL)=2.83
A=Tetrakis(4-N-methylpyridyl)porphyrin.  pD=7.0
********************************************************************************
C9H13N3O               HL                      CAS 50355-76-5  (4653)
1-Phenyl-3-propyl-3-hydroxytriazene; C6H5.N:N.N(OH)CH2CH2CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF diox/w 25°C  70%  U        K1=8.92   B2=16.20  1969DSa (66984)4144
Medium: 70% dioxan, 0.1 M KCl
********************************************************************************
C9H13N3O2              HL                      CAS 5756-77-4  (4654)
1-(2'-Methoxy)phenyl-3-ethyl-3-hydroxytriazene;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF diox/w 25°C  70%  U        K1=9.57   B2=17.71  1969DSa (66985)4145
Medium: 70% dioxan, 0.1 M KCl
********************************************************************************
C9H13N3O3S            H2L                      CAS 62404-83-5  (2161)
3-Mercaptopropanoyl-histidine; CH2(SH).CH2.CO.NH.CH(CH2.C3H3N2).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=4.67        1977SHa (66987)4146
                                       K(NiH-1L+H)=7.61
********************************************************************************
C9H13N3O5               L    Cytidine         CAS 65-46-3  (2152)
Cytidine, Cytosine-1-beta-D-ribofuranoside;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T HM                  1995RSb (67021)4147
                                       K(NiL+ala)=5.20
                                       K(NiL+phe)=5.56
                                       K(NiL+trp)=6.07
```

Data for 35 and 45 C. DH(Ni(ala)L)=-15.4 kJ mol-1, DS(Ni(ala)L)=48 J K-1 mol-1; DH(Ni(phe)L)=18.2, DS(Ni(phe)L)=46; DH(Ni(trp)L)=-22.7, DS=40.

Ni++	gl	NaNO3	25°C	0.50M	C		K1=0.14	1992KJa	(67022)4148

Ni++	gl	KNO3	35°C	0.10M	U	M	K1=0.97	1990RSc	(67023)4149
							B(NiL(Ala))=6.04		
							B(NiL(Phe))=6.18		
							B(NiL(Trp))=6.53		

Ni++	gl	KNO3	35°C	0.10M	C	M	K1=2.94	1985RRc	(67024)4150
							B(NiHL(Gly))=14.28		
							B(NiL(oxalate))=9.31		
							B(NiL(His))=13.48		
							B(NiL(histamine))=12.65		

Ni++	gl	KNO3	45°C	0.10M	U		K1=3.03	1981TKa	(67025)4151

****

C9H14N2 L CAS 14088-79-0 (3252)
N-Benzylethylenediamine; C6H5.CH2.NH.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	30°C	50%	U		K1=7.17	B2=12.62	1972GPb	(67117)4152
							K3=3.30			

****

C9H14N2O12P2 H4L UDP CAS 58-98-0 (3288)
Uridine-5'-diphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	M		K1=3.50		1999SSa	(67146)4153
							K(Ni+H2L)=2.2			
							K(NiHL+H)=5.1			

Ni++	gl	KNO3	25°C	0.10M	U		K1=3.50	1995SBa	(67147)4154

****

C9H14N2S L CAS 80191-93-1 (8262)
2-[[2-(2-Pyridinyl)ethyl)thio]ethanamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	M	H	K1=4.454	B2= 7.51	1984HGb	(67164)4155
							K(Ni+HL)=0.6			

By calorimetry: DH(K1)=-32.7 kJ mol-1, DH(K2)=-29.3, DH(Ni+HL)=-2.1.

****

C9H14N2S L CAS 80191-92-0 (352)
3-[(2-Pyridinylmethyl)thio]-1-propanamine;

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

---

Ni++ gl KNO3 25°C 0.50M M H K1=5.13 B2= 8.32 1984HGb (67168)4156
K(Ni+HL)=1.51
K(NiHL+HL)=1.28
K(NiL+HL)=1.18
By calorimetry: DH(K2)=-33 kJ mol-1.

****

C9H14N3O7P H2L dCMP CAS 1032-65-1 (5783)
Deoxycytidine-5'-monophosphoric acid;

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

---

Ni++ nmr oth/un 25°C 0.20M U M 1985PGa (67175)4157
Keff(NiA+L)=2.30
A=Tetrakis(4-N-methylpyridyl)porphyrin. pH=6.9

****

C9H14N3O8P H2L CMP-5 CAS 63-37-6 (1243)
Cytidine-5'-monophosphoric acid, Cytidilic acid;

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

---

Ni++ gl KNO3 25°C 0.10M C M K1=3.08 2001AAa (67208)4158
Also data for ternary complexes with MOPSO, TAPSO and ACES.

Ni++ gl KNO3 20°C 0.10M U K1=3.38 1999GLa (67209)4159

Ni++ cal R4N.X 25°C 0.10M C H K1=2.00 1995HTa (67210)4160
K(NiL+H)=6.25
DH(K1)=+8.3 kJ mol-1; DH(NiL+H)=3.0

Ni++ gl R4N.X 25°C 0.10M C TI R K1=2.34 1991SMa (67211)4161
IUPAC evaluation

Ni++ gl NaNO3 25°C 0.10M C K1=1.94 1988MSa (67212)4162

Ni++ gl KNO3 35°C 0.10M U M 1986RRe (67213)4163
K(Ni+HL+HA)=6.17
K(NiLA+2H)=9.25
K(Ni+HL+E)=7.09
K(NiLE+H)=3.81
B(NiLC)=15.12; B(NiLD)=16.37. HA is glycine; H2E is oxalic acid;
C is histamine; HD is histidine.

Ni++ gl NaNO3 35°C 0.10M U M K1=2.36 1985KSc (67214)4164
K(Ni(phen)+L)=3.77
K(Ni(GlyGly)+L)=2.15
B(Ni(salicylate)+L)=0.84

Ni++ gl KCl 25°C 0.10M U K1=2.19 1984MDb (67215)4165

```
Ni++       con KNO3   25°C 0.10M U        K1=2.00        1980OFa (67216)4166
--------------------------------------------------------------------------------
Ni++       gl  KNO3   15°C 0.10M U        K1=1.90        1972FSa (67217)4167
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C    M   K1=4.61        1983FSc (67295)4168
                                          B(NiHL)=12.11
                                          B(NiH-1L2)=1.06
                                          B(NiHL(Gly))=17.61
                                          B(NiL(Gly))=9.73
B(NiH-1L(Gly))=0.88;  B(NiHL(GlyGly))=16.02;  B(NiL(GlyGly)=8.03;
B(NiHL(His))=20.12;  B(NiL(His))=12.03;  B(NiH-1L(His))=2.48
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=4.30        1975BPb (67296)4169
                                          B(NiHL)=12.29
                                          B(NiH-1L)=-3.152
                                          B(NiH-1L2)=-1.04
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=5.42        1964LMa (67297)4170
                                          K(NiH-1L+H)=9.14
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.16M U        K1=2.80   B2=4.90   1960MEa (67298)4171
                                          K3=1.6
********************************************************************************
C9H14N4O3              HL    His-Ala          CAS 16874-75-2  (8025)
Histidyl-Alanine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C   H    K1=6.73   B2=12.11  2001CFb (67347)4172
DH(K1)=-37 kJ mol-1, DS(K1)=5 J K-1 mol-1, DH(B2)=-73, DS(B2)=-12.
********************************************************************************
C9H14N5O3P             H2L                   CAS 121149-93-7  (2512)
9-(4-Phosphonobutyl)adenine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M        K1=2.41        2000GKa (67351)4173
                                          K(Ni+HL)=1.0
                                          *K(NiHL)=-6.3
********************************************************************************
C9H14O7P2              H5L                   CAS 147608-61-5  (7128)
Hydroxy-4-methylbenzene-2,6-di(methylphosphonic acid);
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

Ni++ gl KNO3 20°C 1.0M U 1995AAa (67365)4174
K(Ni+H5L=NiHL+4H)=-14.45
****
C9H15NO6 H3L (7177)
2-Aminopentanoic-N,N-diethanoic acid; C3H7C(COOH)N(CH2COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 20°C 0.10M U K1=11.11 1974RMf (67397)4175
****
C9H15NO6 H3L CAS 817-11-8 (3271)
3,3',3''-Nitrilotripropanoic acid; (HOOC.CH2.CH2)3N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ cal KNO3 25°C 0.10M C H 1983GSb (67424)4176
DH(K1)=9.01 kJ mol-1, DS(K1)=133 J K-1 mol-1

Ni++ gl KCl 30°C 0.10M U K1=5.8 1953CMa (67425)4177
****
C9H15NO6 H3L CAS 95482-53-4 (3270)
N-(2-Carboxyethyl)-3,3-iminodipropanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 30°C 0.10M U K1=9.0 1953CMa (67437)4178
****
C9H15NO6P2 H4L CAS 6056-53-7 (1337)
N-Benzyliminobis(methylenephosphonic) acid; C6H5CH2N(CH2PO3H2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.20M C K1=8.27 2000KKa (67453)4179
B(NiHL)=14.79
B(NiH2L)=19.87
B(NiH-1L)=-3.61

Ni++ gl KNO3 25°C 1.00M M K1=7.75 1982BGb (67454)4180
K(Ni+HL)=2.85
****
C9H15NO6S H3L DCMM CAS 72306-91-3 (8239)
Dicarboxymethyl-N,N-methionine acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaCl 25°C 0.50M C 1980MFc (67465)4181
K(Ni+HL)=7.45
K(NiHL+HL)=5.72
K(Ni(HL)2+HL)=2.75
Addditional methods: conductivity, spectrophotometry

****
C9H15N2O15P3 H5L UTP CAS 63-39-8 (407)
Uridine-5'-triphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	R4N.X	25°C	0.10M	C	T	K(Ni+HL)=4.82 K(Ni+H2L)=2.4	1991SMa	(67494)4182
IUPAC evaluation									
Ni++	gl	NaNO3	25°C	0.10M	C		K(Ni+HL)=4.47 K(NiL+H)=4.49 K(Ni+H2L)=2.51	1987STb	(67495)4183
Ni++	gl	KNO3	25°C	0.10M	U	T H	K1=7.67	1983RRe	(67496)4184
Also data for 35 and 45 C. At 45 C: K1=7.44. DH(K1)=-20.9 kJ mol-1, DS(K1)=76 J K-1 mol-1.									
Ni++	gl	NaClO4	25°C	0.10M	C	M	K(Ni+HL)=4.29 B(Ni(HL)(bpy))=11.29	1978FMa	(67497)4185
Ni++	gl	KNO3	35°C	0.10M	U		K(Ni+HL)=7.56	1976KRa	(67498)4186
Ni++	nmr	NaClO4	25°C	0.10M	U	M	K(NiL+H)=9.10 K(Ni(OH)L+H)=9.1 K(Ni(bpy)L+H)=9.24	1975SIb	(67499)4187
By spectrophotometry, K(NiL+H)=9.1.									

****
C9H15N3 L CAS 60354-75-8 (6081)
2,6-Di(2-aminoethyl)pyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	20°C	1M	C		K1=8.67 B(NiH-1L)=-2.67	1992CPb	(67538)4188

****
C9H15N3 L CAS 72830-26-3 (3253)
2-(2-(2-Aminoethyl)aminoethyl)pyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	U		K1=9.4	1964LMb	(67545)4189

****
C9H15N3O L CAS 96551-18-7 (6150)
2-Amino-3-aminomethyl-4-methoxymethyl-6-methylpyridine;

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.35M M        K1=3.56   B2=5.85   1985CSa (67553)4190
********************************************************************************
C9H15N3O11P2          H3L    CDP              CAS 63-38-7  (2187)
Cytidine-5'-diphosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M         K1=3.45        1999SSa (67573)4191
                                          K(Ni+HL)=2.2
                                          K(NiL+H)=5.14
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U         K1=3.82        1984MDb (67574)4192
                                          B(NiHL)=8.55
--------------------------------------------------------------------------------
Ni++       kin KNO3   15°C 0.10M U         K1=3.48        1978FSa (67575)4193
                                          K(Ni+HL)=1.87
                                          K(Ni+NiL)=1.67
Method: temperature jump
--------------------------------------------------------------------------------
Ni++       gl  KNO3   15°C 0.10M U         K1=3.48   B2=5.47   1972FSa (67576)4194
                                          K(Ni+HL)=1.87
********************************************************************************
C9H15N5O2               L                       (7098)
Glycyl-glycyl-histamine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C         K1=4.15        1996GHa (67594)4195
                                          B(1,1,1)=10.48
                                          B(1,-1,1)=-2.87
                                          B(1,-2,1)=-7.992
                                          B(1,-3,1)=-19.56
B(p,q,r): pM+qH=rL=MpHqLr
********************************************************************************
C9H16N2O2              HL                       (3882)
4-(2'-Propyl)cyclohexane-1,2-dione dioxime  (4-isopropylnioxime)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  75%  U  I     K1=10.1   B2=20.4   1963BAb (67604)4196
                                          Kso=-27.84
Medium: 75% dioxan, 0.1 M. B2=16.8(0% dioxan)
********************************************************************************
C9H16N2O4              H2L                   CAS 124099-99-6  (6518)
1,4-Diazacycloheptane-N,N'-diethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

```
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=6.40        1990HNa (67611)4197
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M C        K1=6.42        1987FYb (67612)4198
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=7.94   B2=14.32  1955SAa (67621)4199
********************************************************************************
C9H16N3O14P3          H4L    CTP             CAS 65-47-4  (406)
Cytidine-5'-triphosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M C TI   R K1=4.84        1991SMa (67666)4200
                                         K(Ni+HL)=2.7
IUPAC evaluation
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C        K1=4.52        1987STb (67667)4201
                                         K(Ni+HL)=2.70
                                         K(NiL+H)=4.73
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=4.51        1984MDb (67668)4202
                                         B(NiHL)=9.20
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T H    K1=5.69        1983RRe (67669)4203
                                         K(Ni+HL)=4.74
Also data for 35 and 45 C. At 45 C: K1=5.51, K(Ni+HL)=4.51
DH(K1)=-16.3 kJ mol-1, DS(K1)=54 J K-1 mol-1; DH(Ni+HL)=-20.9, DS=21
--------------------------------------------------------------------------------
Ni++       kin KNO3   15°C 0.10M U        K1=4.41        1978FSa (67670)4204
                                         K(Ni+NiL)=2.23
                                         K(Ni+HL)=2.68
Method: temperature jump
--------------------------------------------------------------------------------
Ni++       nmr NaClO4 25°C 0.10M U                       1975SIb (67671)4205
                                         K(Ni(OH)L+H)=9.58
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C  0.1M C  I     K1=5.58        1975TRc (67672)4206
                                         K(Ni+HL)=4.61
--------------------------------------------------------------------------------
Ni++       gl  KNO3   15°C 0.10M U        K1=4.41        1972FSa (67673)4207
                                         K(Ni+HL)=2.68
********************************************************************************
C9H16N4O4               L                      CAS 157358-29-7  (7398)
N,N'-Bis(2-hydroxyiminopropionyl)propane-1,3-diamine;
--------------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M C                         2004NJc (67721)4208
                                     B(NiHL)=15.46
                                     B(NiH-1L)=2.84
                                     B(NiH-2L)=-8.37
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C                         1997DKa (67722)4209
                                     B(NiH-1L)=1.14
                                     B(NiH-2L)=-7.05
*************************************************************************
C9H16N4O5              HL                      (7472)
2-Hydroxymethylserylhistidine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M C        K1=3.57         1999MKb (67727)4210
                                     B(NiH-1L)=-1.97
                                     B(Ni4H-8L4)=-37.17
*************************************************************************
C9H16O2                HL                      CAS 18362-64-6  (1134)
2,6-Dimethyl-3,5-heptanedione; (CH3)2.CH.CO.CH2.CO.CH(CH3)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C  0.5M C        K1=7.20         1998BLa (67741)4211
*************************************************************************
C9H16O2                 L                      CAS 1540-36-9  (3254)
3-n-Butylpentane-2,4-dione; CH3.CO.CH(CH2.CH2.CH2.CH3).CO.CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       sp  non-aq 30°C 100%  U    M                    1968AGa (67751)4212
                                     K(2NiL2+py)=5.1
                                     K(Ni2L2py+3py=2NiL2(py)2)=2.9
Medium: toluene
*************************************************************************
C9H16O4               H2L                      CAS 1636-27-7  (485)
Dipropylpropanedioic acid (Di-n-propylmalonic acid);
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=2.48         1970OVa (67762)4213
*************************************************************************
C9H17NO4              H2L                      CAS 60435-61-2  (342)
N-(2-Dimethylpropyl)iminodiethanoic acid; (CH3)3C.CH2.N(CH2.COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=8.24   B2=15.37  1976JPa (67804)4214
```

****

C9H17NO4 H2L CAS 56004-51-4 (346)
N-Pentyliminodiethanoic acid; C5H11.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=8.87	B2=16.00	1976JPa	(67806)4215

****

C9H17NO5 HL Pantothenic acd CAS 63409-48-3 (2629)
N-(2,4-Dihydroxy-3,3-dimethylbutyryl)-3-aminopropanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.24M	U		K1=1.87	B2=3.07	1980FMd	(67810)4216

****

C9H17NO5 H2L CAS 60470-38-4 (338)
N-(5-Hydroxypentyl)iminodiethanoic acid; HO.(CH2)5.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=8.73	B2=15.74	1976JPa	(67818)4217

****

C9H17NO6 H2L CAS 58144-32-4 (6077)
N-(1,1-Di(hydroxymethyl)propyl)iminodiethanoic acid;
(HO.CH2)2C(CH2.CH3).N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	1.0M	C		K1=9.42		1981ASb	(67823)4218

****

C9H17NO6S HL (6381)
2-(D-Deoxyglucosyl)thiazolidine-4-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	C		K1=5.94	B2=9.79	1992GBb	(67832)4219
							B(NiH-1L2)=0.09			

****

C9H17NO7 HL CAS 153626-24-5 (6757)
Fructose-beta-alanine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	C		K1=4.13	B2=7.92	1993GGb	(67837)4220
							B(NiH-1L)=-0.33			
							B(NiH-2L2)=-10.02			

****

C9H17N3O4S H2L Ala-Ala-Cys (6477)
Alanyl-alanyl-cysteine

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U                         1990CRa (67862)4221
                                      B(NiHL)=13.6
                                      B(NiH2L)=-4.47
*************************************************************************
C9H17N3O5             H2L    2,2-DIHA         CAS 709640-94-8  (9155)
N-Hydroxy-N'-[3-(hydroxymethylamino)-3-oxopropyl]-N-methyl-butanediamide;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.20M C        K1=8.1           2004FBa (67877)4222
                                      B(NiHL)=13.98
                                      B(Ni2L3)=22.3
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.20M U        K1=3.56   B2=6.64   1982KRd (67894)4223
                                      B3=8.96
                                      B(NiH-1L2)=-2.83
                                      B(NiH-2L2)=-14.30
-------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=3.52   B2=6.72   1977PNa (67895)4224
-------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=3.52   B2= 6.72  1976PNa (67896)4225
L=DL-alpha-alanyl-DL-leucine
-------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.12M U        K1=3.52   B2= 6.72  1976PNa (67897)4226
L=DL-alpha-alanyl-DL-leucine
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.01M U        K1=3.81   B2=7.70   1959DLb (67915)4227
*************************************************************************
C9H18N2O4             H2L                CAS 18992-11-5  (5913)
N,N-Dihydroxynonanediamide; HN(OH).CO.(CH2)7.CO.NH(OH)
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C        K1=8.92          1989EHa (67933)4228
                                      B(NiHL)=4.89
*************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.20M U                      1981KKa (67953)4229
                                          B(NiH-2L)=-6.05
********************************************************************************
C9H18N4O2              L                      (5655)
1,4,7,11-Tetraazacyclotridecane-2,3-dione;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C    ?  U   H                  1982HBb (67959)4230
                                        K(NiH-2Laq2=NiH-2L+2aq)=0.51
K was determined for: MH-2L(OH2)2(octahedral)=MH-2L(planar)+2H2O equilibrium
DH=-17.7 kJ mol-1, DS=53.5 J K-1 mol-1
********************************************************************************
C9H18O2Si              HL                     CAS 17940-02-2  (3275)
6-Trimethylsilylhexane-2,4-dione; (CH3)3.Si.CH2.CH2.CO.CH2.CO.CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=9.65   B2=18.35  1953UFe (67964)4231
********************************************************************************
C9H19NS2               HL                     CAS 150-11-8  (1154)
N,N-Di(n-butyl)dithiocarbamate; (C4H9)2N.CSSH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF non-aq 25°C 100%  U        B2=13.1        1987USa (67984)4232
Medium: DMF, 0.1 M LiClO4
--------------------------------------------------------------------------------
Ni++       nmr oth/un 25°C    ?  U T HM                  1975VWa (67985)4233
                                        K(NiL2+2A)=-1.05
                                        K(NiL2+2B)=-0.89
                                        K(NiL2+2C)=-1.06
                                        K(NiL2+2D)=-1.05
A=pyridine, DH=-34.9 kJ mol-1.  B=4-picoline, DH=-24.4.  C=3-picoline,
DH=-22.4.   D=3,5-lutidine, DH=-15.7.
--------------------------------------------------------------------------------
Ni++       ISE non-aq 25°C 100%  U        K1=4.70   B2=8.12   1974TBa (67986)4234
Medium: DMF, Ag electrode
********************************************************************************
C9H19N2O4+             H2L                    (3277)
2-Di(carboxymethyl)aminoethyltrimethylammonium cation
            +
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=6      B2=11.5   1955SAa (67995)4235
********************************************************************************
```

C9H19N3O3 HL B-Ala-Lys CAS 22467-93-2 (7718)
Beta-Alanyl-lysine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M C H K1=5.0 2001CFb (68009)4236
B(NiHL)=14.08
B(NiH2L2)=27.45
DH(NiH2L2)=-147 kJ mol-1, DS(NiH2L2)=34 J K-1 mol-1.
****
C9H19N5O3 HL Ala-Arg CAS 16709-12-9 (1946)
Alanyl-arginine; H2N.CH(CH3).CO.NH.CH((CH2)3.NH.C(:NH).NH2).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp NaClO4 20°C 0.20M U K1=4.66 1974WKa (68015)4237
****
C9H19N5O3 HL Arg-D-Ala (1945)
Arginyl-D-alanine; H2N.CH((CH2)3.NH.C(:NH).NH2).CO.NH.CH(CH3).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp NaClO4 20°C 0.20M U K1=4.80 1974WKa (68018)4238
****
C9H19N5O3 HL Arg-Ala CAS 40968-45-4 (1944)
Arginyl-alanine; H2N.CH((CH2)3.NH.C(:NH).NH2).CO.NH.CH(CH3).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp NaClO4 20°C 0.20M U K1=4.83 1974WKa (68021)4239
****
C9H19N5O3 HL D-Ala-Arg (1947)
D-Alanyl-arginine; H2N.CH(CH3).CO.NH.CH((CH2)3.NH.C(:NH).NH2).COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp NaClO4 20°C 0.20M U K1=4.68 1974WKa (68024)4240
****
C9H20N2O2 L 13-AneN2O2 CAS 60350-15-4 (5662)
1,4-Dioxa-7,11-diazacyclotridecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.10M U K1=5.83 1986TSa (68033)4241
****
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
---

Ni++ gl KNO3 25°C 0.10M C K1=3.59 2001AOa (68050)4242
****
C9H20N2O6 L CAS 267643-08-3 (919)
(2S)-2,3-Diaminopropyl-beta-D-glucopyranoside;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaCl 25°C 0.16M C K1=6.97 B2=12.94 2000SMa (68057)4243
B3=17.25
K(Ni+HL)=2.61
K(Ni+HL+L)=ca.9.2
****
C9H20N2O6 L CAS 221558-98-1 (690)
1,3-Diamino-2-propyl-alpha-D-mannopyranoside;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaCl 25°C 0.16M C K1=5.53 B2= 9.30 2000SMa (68061)4244
B3=12.3
K(Ni+HL)=2.9
****
C9H20N2O6 L CAS 220972-45-2 (622)
1,3-Diamino-2-propyl-beta-D-glucopyranoside;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaCl 25°C 0.16M C K1=5.44 B2= 9.06 2000SMa (68065)4245
B3=11.69
****
C9H20N3O2 H2L (8301)
1-(Diethylmethylammonium)-2,3-butanedione dioxime;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M U I 1976LUa (68072)4246
K(Ni+HL)=4.80
K(NiHL+HL)=6.80
K(Ni+H2L=NiHL+H)=-4.35
K(Ni+2H2L=Ni(HL)2+2H)=-6.75
Data for 25, 50 and 75% v/v dioxan/H2O. At 50%, K(Ni+HL)=5.70,
K(NiHL+HL)=7.95, K(Ni+H2L=NiHL+H)=-4.55, K(Ni+2H2L=Ni(HL)2+2H)=-6.85
****
C9H20N4O2 L BCMEN CAS 89709-74-0 (5530)
N,N'-Bis(2-carbamoylethyl)-1,2-diaminopropane;
H2N.CO.CH2.CH2.NH.CH(CH3).CH2.NH.CH2.CH2.CO.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M C K1=7.95 1985LCb (68091)4247

```
Ni++       gl  NaNO3  25°C 0.10M C        K1=7.98        1984LCa (68092)4248
                                          K(NiH-1L+H)=8.68
                                          K(NiH-2L+H)=9.90
*************************************************************************
C9H20N4O2              L                      CAS 34740-97-1  (5529)
N,N'-Bis(2-carbamoylethyl)-1,3-diaminopropane;
H2N.CO.CH2.CH2.NH.CH2.CH2.CH2.NH.CH2.CH2.CO.NH2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C        K1=6.82        1985LCb (68102)4249
-------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C        K1=6.81        1984LCa (68103)4250
                                          K(NiH-1L+H)=9.01
                                          K(NiH-2L+H)=10.22
*************************************************************************
C9H20N4O2              L                      CAS 54322-58-6  (8501)
N,N'-Dialanyldiaminopropane;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=4.64   B2= 4.64  1984MDc (68107)4251
                                          K(NiL=NiH-2L+2H)=-14.76
Method: batch technique. Ligand is S,R,S stereoisomer.
For the S,S,S stereoisomer, K1=4.66, K2<3, K(NiL=NiH-2L+2H)=-15.04.
*************************************************************************
C9H20N4O3              L                      CAS 89709-75-1  (5531)
N,N'-Bis(2-carbamoylethyl)-2-hydroxy-1,3-diaminopropane;
(H2N.CO.CH2.CH2.NH.CH2)2CH(OH)
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C        K1=6.43        1985LCb (68117)4252
-------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C        K1=6.41        1984LCa (68118)4253
                                          K(NiH-1L+H)=8.86
                                          K(NiH-2L+H)=10.10
*************************************************************************
C9H20O14P2          H3L                      (4662)
1-(Glycerylphosphoryl)-L-myoinositol-5-phosphate;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  R4N.X  20°C 0.10M U        K1=2.50        1969HRa (68126)4254
Medium: 0.1 (C3H6)4NI
*************************************************************************
C9H21N                 L                      CAS 102-69-2  (1342)
Tripropylamine; (C3H7)3N
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

```
--------------------------------------------------------------------------------
Ni++       dis oth/un 20°C 100%  U    M                  1971ADa (68134)4255
                                          K(NiA2+L)=1.71
Medium: CHCl3. HA=1-phenyl-3-methyl-4-benzoylpyranol-5-one
********************************************************************************
C9H21NO3                L                      CAS 122-20-3  (946)
Tri-isopropanolamine; (CH3.CH(OH).CH2)3N
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 1.00M U        K1=3.89   B2=5.16   1982RMa (68141)4256
                                          K3=1.39
********************************************************************************
C9H21N3                 L                        (6993)
1,4,7-Trimethyl-1,4,7-triazacyclononane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=12.3   B2=22.50  1995DDa (68164)4257
********************************************************************************
C9H21N3                 L                      CAS 294-80-4  (1531)
1,5,9-Triazacyclododecane; cyclo(-NH.(CH2)3.NH.(CH2)3.NH.(CH2)3-)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M        K1=10.93       1978ZOa (68180)4258
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=11.37       1991ACa (68195)4259
                                          B(NiH-2L)=-3.89
                                          K(NiL+2OH)=12.38
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=11.90       1986TSa (68196)4260
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=14.64  B2=25.91  1999WKa (68209)4261
********************************************************************************
C9H21O3P                L                      CAS 116-17-6  (1726)
Tri(isopropyl)phosphite; (CH3.CH(CH3)O)3P
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Ni++       sp  non-aq 25°C 100%  U                        1974TSa (68215)4262
                                       K4=4.6
Medium: benzene
--------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U    M                   1973GTc (68216)4263
                                       K(NiBr2+4L)=5.53
                                       K(NiI2+4L)=11.83
********************************************************************************
C9H21O3P                L                        CAS 923-99-9  (4663)
Tripropylphosphite; (CH3.CH2.CH2.O)3P
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C 100%  U    M                   1973GTc (68218)4264
                                       K(NiBr2+4L)=10.61
                                       K(NiI2+4L)=11.85
********************************************************************************
C9H21O17P3            H5L                       CAS 98975-41-8  (3885)
1'-Glycerylphosphorylinositol-3,4-diphosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  20°C 0.10M U        K1=4.45         1969HRa (68221)4265
                                       K(Ni+HL)=2.86
Medium : 0.1 (C3H7)4NI
********************************************************************************
C9H21P                  L                        CAS 6476-36-4  (168)
Tri-isopropylphosphine; ((CH3)2CH)3P
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  oth/un -20°C 100%  U TI                    1969RGb (68226)4266
                                       K(NiL2(CN)2+L)=1.63
                                       K=1.27 (-10 C)
                                       K=0.91 (0 C)
                                       K=0.53 (10 C)
Medium: EtOH.  In n-hexane: K(-30 C)=1.78), K1(-20 C)=1.39, K1(0 C)=0.64
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 1.00M U                        1986JMa (68240)4267
                                       K(NiL+OH)=0.95
--------------------------------------------------------------------------------
Ni++       sp  NaNO3  25°C 0.10M U        K1=17.98        1985THa (68241)4268
********************************************************************************
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
Ni++	gl	NaNO3	25°C	0.10M	U		K1=13.20	1990HNa (68254)	4269
Ni++	gl	NaClO4	25°C	0.10M	U		K1=13.5	1977PBb (68255)	4270

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
Ni++	gl	KNO3	25°C	0.10M	C		K1=13.40	1995BLa (68286)	4271

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
Ni++	gl	KNO3	25°C	1.00M	U			1988MKb (68298)	4272
							K(Ni+Cu+HL)=18.3		
							B(NiCuL)=33.21		
							K(Ni+CuHL)=1.85		
Ni++	gl	KCl	25°C	1.0M	U		K1=19.4	1984KMa (68299)	4273
							K(Ni+HL)=13.8		
							K(Ni+H2L)=10.4		

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
Ni++	gl	KNO3	25°C	1.00M	C	H	K1=12.38	1982ABc (68331)	4274
							B(NiH2L)=24.55		

By calorimetry: DH1=-55.2 kJ mol-1, DS1=52.3

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
Ni++	gl	KNO3	20°C	0.10M	C	M		2002GLc (68349)	4275
							B(NiH2L)=27.83		
							B(NiAH4L)=44.87		
							B(NiAH2L)=27.95		

H2A is adenosine-5'-monophosphoric acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	20°C	0.10M	C	M		2002GLc (68350)	4276
							K(Ni+H2L)=7.45		

K(NiA+H2L)=4.50
K(NiA+H4L)=5.41
H2A is adenosine-5'-monophosphoric acid.

Ni++ gl oth/un 25°C ? U K1=10.11 1976NGa (68351)4277

Ni++ gl NaClO4 25°C ? U K1=10.11 1976NGe (68352)4278

Ni++ gl KCl 25°C 0.10M C K1=8.702 1974GVa (68353)4279
B(NiHL)=15.78

Ni++ cal NaNO3 25°C 0.10M U K1=10.46 1972BFb (68354)4280

****

C9H24N4 L CAS 4963-47-7 (546)
Tris-(3-aminopropyl)amine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	U		K1=8.702 K(Ni+HL)=5.3	1968DPa (68379)	4281
Ni++	sp	KCl	25°C	0.10M	U		K1=8.70	1968VPa (68380)	4282
Ni++	gl	NaNO3	20°C	0.10M	U		K1=10.65	1962TAb (68381)	4283

****

C10H6O3 HL CAS 83-72-7 (3294)
2-Hydroxy-1,4-naphthoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=5.59 B2=10.88	1960KFc (68452)	4284

****

C10H6O3 HL CAS 481-39-0 (3295)
5-Hydroxy-1,4-naphthoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=8.96 B2=16.62	1960KFa (68470)	4285

****

C10H7NO2 HL CAS 131-91-9 (2668)
1-Nitroso-2-naphthol, alpha-Nitroso-beta-naphthol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	alc/w	RT	40%	M		K1=4.28 B2= 8.76	1993RAb (68556)	4286

Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

Ni++ sp NaClO4 25°C 0.10M U K1=6.7 1975LAd (68557)4287

Ni++ dis oth/un 25°C 0.10M U B2=14.40 1971BZb (68558)4288

```
--------------------------------------------------------------------------------
Ni++       vlt diox/w 20°C  50%  U        K1=8.56        1967CEb (68559)4289
Medium: 50% dioxan, 0.3 M acetate buffer
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U  I     K1=8.69   B2=16.95  1957CFa (68560)4290
                                         B3=23.05
In 75% dioxan K1=10.75, K2=10.54, K3=6.80
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=11.50  B2=21.60  1954UFa (68561)4291
                                         K3=6.60
********************************************************************************
C10H7NO2               HL                    CAS 14510-06-6  (4715)
2-Formyl-8-hydroxyquinoline;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=6.58   B2=13.20  1972HUb (68604)4292
Medium: 50% v/v dioxan, 0.1 M KCl
********************************************************************************
C10H7NO2               HL                    CAS 132-53-6  (2524)
2-Nitroso-1-naphthol;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  alc/w   RT   40%  M        K1=4.43   B2= 9.07  1993RAb (68622)4293
Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.
--------------------------------------------------------------------------------
Ni++       sp  alc/w  25°C  20%  U        B2=10.2        1979CEa (68623)4294
In 100% EtOH: B2=9.9, B3=15.4
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U        K1=5.98        1975LAd (68624)4295
--------------------------------------------------------------------------------
Ni++       dis oth/un 25°C 0.10M U        B2=12.85       1971BZb (68625)4296
--------------------------------------------------------------------------------
Ni++       gl  diox/w 21°C  50%  U        K1=7.11   B2=13.20  1970MGd (68626)4297
Medium: 50% dioxan, 0.3 M NaClO4
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U  I     K1=9.62   B2=18.50  1957CFa (68627)4298
                                         K3=5.12
In 75% dioxan K1=10.07, K2=9.33
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=10.70  B2=19.90  1954UFa (68628)4299
                                         B3=25.8
********************************************************************************
C10H7NO2               HL                    CAS 2598-30-3  (3317)
5-Formyl-8-hydroxyquinoline;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=8.27   B2=15.83  1958JPa (68669)4300
```

K3=6.70

Medium: 50% dioxan, 0.3 M NaCl

****

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
Ni++	gl	KNO3	25°C	0.10M	U		K1=4.19		1957SYa (68685)	4301
Ni++	gl	oth/un	25°C	0.0	U		K1=4.6	B2=8.6	1955HCa (68686)	4302
Ni++	gl	diox/w	25°C	50%	U		K1=5.3	B2=10.4	1955HCb (68687)	4303
Ni++	gl	oth/un	25°C	0.0	U		K1=4.95	B2=8.65	1955LUa (68688)	4304

****

C10H7NO2 HL CAS 86-59-9 (873)

Quinoline-8-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	alc/w	30°C	50%	U		K1=5.07	B2=9.33	1981RRa (68739)	4305

Medium: 50% v/v EtOH, 0.1 M KNO3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	25°C	0.02M	U		K1=4.4	B2=7.8	1955HCa (68740)	4306
Ni++	gl	diox/w	25°C	50%	U		K1=6.2	B2=11.4	1955HCb (68741)	4307
Ni++	gl	oth/un	25°C	0.0	U		K1=4.46	B2=8.13	1955LUa (68742)	4308

****

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
Ni++	gl	diox/w	25°C	50%	U		K1=1.8	1968EGb (68777)	4309

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
Ni++	gl	diox/w	25°C	50%	U		K1=3.5	B2=6.20	1964BFa (68784)	4310
							K(Ni(OH)L+H)=7.2			
							K(Ni(OH)2L+H)=9.5			

****

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
Ni++	gl	diox/w	25°C	50%	U		K1=7.1 B2=12.60 K(Ni(OH)L+H)=10.0 K(Ni(OH)2L+H)=11.8	1964BFa (68791)	4311

****

C10H7NO5S H2L CAS 97573-20-5 (3332)
1,2-Naphthoquinone-4-sulfonic acid-2-oxime

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	U	I	K(Ni+HL=NiL+H)=-0.65 K(NiL+HL=NiL2+H)=-1.10 K(NiL2+HL=NiL3+H)=3.7	1961MAd (68798)	4312

By spectrophotometry, I=0.004 M: K(Ni+HL=NiL+H)=-0.28

****

C10H7NO5S H2L CAS 14090-74-5 (2676)
1-Nitroso-2-hydroxynaphalene-7-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	NaClO4	25°C	0.10M	C		K1=6.90	1989BDa (68804)	4313

****

C10H7NO5S H2L CAS 26276-78-8 (6111)
1-Nitroso-2-hydroxynaphthalene-3-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	NaClO4	25°C	0.10M	C		K1=7.11	1989BDa (68824)	4314

Medium: LiClO4

****

C10H7NO5S H2L CAS 14090-74-5 (4765)
1-Nitroso-2-hydroxynaphthalene-4-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	NaClO4	25°C	0.10M	C		K1=6.56	1989BDa (68826)	4315

****

C10H7NO5S H2L CAS 50332-97-3 (2660)
1-Nitroso-2-hydroxynaphthalene-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	NaClO4	25°C	0.10M	C		K1=6.50	1989BDa (68829)	4316

****

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

```
--------------------------------------------------------------------------------
Ni++       gl  oth/un  RT  0.10M M        K1=7.99   B2=13.66  1993RAb (68868)4317
Medium not stated.
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U        K1=6.99        1975LAd (68869)4318
--------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C  0.0  U        K1=6.31        1966MAg (68870)4319
--------------------------------------------------------------------------------
Ni++       sp  none     ?   0.0  U                       1958TPa (68871)4320
                                        B3=16.8
********************************************************************************
C10H7NO5S             H2L                     CAS 23525-13-6  (1813)
2-Nitroso-1-hydroxynaphthalene-5-sulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M C        K1=5.75        1989BDa (68905)4321
--------------------------------------------------------------------------------
Ni++       EMF oth/un 25°C  0.0  U        K1=6.50   B2=11.65  1971SAf (68906)4322
                                        B3=15.30
********************************************************************************
C10H7NO5S             H2L                     CAS 26276-78-8  (4763)
2-Nitroso-1-hydroxynaphthalene-6-sulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M C        K1=6.01        1989BDa (68918)4323
--------------------------------------------------------------------------------
Ni++       EMF oth/un 25°C  0.0  U        K1=6.41   B2=11.57  1971MSf (68919)4324
                                        B3=15.40
--------------------------------------------------------------------------------
Ni++       EMF oth/un 25°C  0.0  U        K1=7.41   B2=13.58  1971SAf (68920)4325
                                        B3=18.26
--------------------------------------------------------------------------------
Ni++       EMF KCl    25°C 0.10M U    M                   1971SAf (68921)4326
                                        B(NiLA)=12.06
                                        B(NiLA2)=16.53
                                        B(NiL2A)=17.72
H2A=2-nitroso-1-naphthol-5-sulphonic acid
********************************************************************************
C10H7NO5S             H2L                       (4764)
2-Nitroso-1-hydroxynaphthalene-7-sulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M C        K1=5.97        1989BDa (68926)4327
********************************************************************************
C10H7NO5S             H2L                     CAS 31005-79-9  (1814)
2-Nitroso-1-hydroxynaphthalene-8-sulfonic acid;
--------------------------------------------------------------------------------
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	NaClO4	25°C	0.10M	C		K1=6.44		1989BDa	(68935)4328

C10H7NO8S2 H3L CAS 26276-77-7 (4767)
1-Hydroxy-2-nitrosonaphthalene-4,8-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	EMF	KCl	25°C	0.10M	U		K1=5.74	B2=9.51	1970MMh	(68959)4329
							B3=12.0			

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
Ni++	sp	NaClO4	25°C	0.10M	U		K1=7.64		1975LAd	(68984)4330
Ni++	gl	KCl	25°C	0.10M	U		K1=6.81		1974ANb	(68985)4331
Ni++	oth	oth/un	?	0.0	U		K1=6.29	B2=9.89	1973GBa	(68986)4332
Ni++	ix	oth/un	30°C	0.10M	U	I	K1=8.23	B2=13.58	1973NDa	(68987)4333

I=0: K1=8.62, B2=13.95, I=0.5: K1=7.20, B2=12.35
I=1.0: K1=5.62, B2=10.73, Method: cation exchange

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	oth	KCl	25°C	0.10M	U	I	K1=6.9	B2=12.5	1967MAi	(68988)4334
							B3=17.3			

At I=0:K1=8.3, B2=13.4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	U	I			1961MAd	(68989)4335
							K(NiL+HL=NiL2+H)=-1.28			
							K(NiL2+HL=NiL3+H)=-2.05			

By spectrophotometry, I=0.005 M: K(Ni+HL=NiL+H)=0.57

C10H7NO8S2 H3L CAS 50332-98-4 (2656)
1-Nitroso-2-hydroxynaphthalene-5,7-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	M	I	K1=6.94	B2=18.99	1974SRb	(69043)4336

C10H7NO8S2 H3L CAS 52664-45-6 (1627)
2-Nitroso-1-hydroxynaphthalene-4,6-disulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	NaClO4	25°C	0.10M	C		K1=5.56		1989BDa	(69046)4337

C10H7N2O2F3S HL CAS 23375-18-0 (1680)
8-(Trifluoromethanesulfonamido)quinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=8.8	B2=16.0	1984NYa	(69067)4338

****

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
Ni++	gl	alc/w	30°C	60%	M		K1=5.36	B2=10.68	1996HTb	(69071)4339

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
Ni++	gl	alc/w	18°C	50%	U	T	K1=6.55	B2=11.38	1982SGa	(69081)4340

Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4

****

C10H7N5O5 HL CAS 102964-51-2 (6212)
5-(2'-Nitrophenylazo)barbituric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	75%	U		K1=4.18	B2=8.06	1986MIa	(69091)4341

****

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
Ni++	dis	NaNO3	25°C	0.10M	C		K1=3.1	B2=7.9	1994SDc	(69119)4342

Method: solvent extraction into CHCl3

Ni++	dis	NaClO4	25°C	1.0M	U		K1=3.60	B2=6.68	1977SIa	(69120)4343
Ni++	dis	NaClO4	25°C	1.0M	C	M	K1=3.60	B2= 6.68	1977SMe	(69121)4344
							K(NiL2(org)+A(org))=5.19			
							K(NiL2(org)+2A(org))=8.98			

Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylposphine oxide (A). K(Ni+2HL(org)=NiL2(org)+2H)=-9.52.

Ni++	gl	diox/w	30°C	75%	U		B2=15.4	1953UFe	(69122)4345
Ni++	gl	oth/un	?	0.0	U		B2=10.90	1951UFa	(69123)4346

****

C10H8NO4BrS H2L CAS 37026-31-6 (3933)
7-Bromo-8-hydroxy-2-methylquinoline-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	.005M	U		K1=6.80	B2=12.30	1963FFa (69188)	4347
							K3 < 3.5			

****

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
Ni++	gl	NaNO3	37°C	0.10M	U		K1=6.97		1997MGa (69365)	4348
Ni++	gl	alc/w	25°C	50%	C		K1=6.65		1997MGb (69366)	4349
Ni++	gl	NaNO3	25°C	0.10M	U	M			1996BMa (69367)	4350
							K(NiL+HA)=8.62			
							K(NiL2+HA)=15.36			
							K(NiL+A)=14.60			
							K(NiL2+A)=21.21			

H2A=N-p-tolyl-sulfonylglycine. Additional methods: spectrophotometry and polarography. Also data for H2A=tosyl-B-alanine and tosyl-N-benzoylglycine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	37°C	0.10M	U		K1=6.97		1994MGc (69368)	4351

Data for ternary complexes with 6-aminopenicillanic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	30°C	0.10M	U		K1=7.13		1994RSa (69369)	4352
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=7.04	B2=13.85	1991DAc (69370)	4353

Data for ternary complexes with acetohydroxamic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=7.04		1990DAc (69371)	4354
							K(NiL+A)=5.35			
							B(NiAL)=12.39			

HL: benzohydroxamic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	sp	non-aq	25°C	100%	U	HM	K1=5.90	B2=11.18	1989IOa (69372)	4355
							K3=4.25			
							K(NiCl+L=NiClL)=6.73			
							K(NiClL+L=NiClL2)=5.37			
							K(NiCl2L+L=NiCl2L2)=5.15			

In N,N-dimethylformamide. DH(K1)=-31.1 kJ mol-1; DH(K2)=-32.7; DH(K3)=-28.4. DH(NiClL)=-31.3; DH(NiClL2)=-33.2; DH(NiCl2L2)=-38. Also data for NiLn+Cl.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	NaClO4	25°C	0.50M	U	I	K1=6.88	1987PSa (69373)	4356

In 0.86 mol DMSO/H2O, 0.5 M NaClO4: K1=6.10

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	vlt	diox/w	25°C	var	U	I	K1=6.3	1987PSb (69374)	4357

Medium: 0.18 mol dioxan/H2O, 0.1 M KNO3. In H2O: K1=6.8; in 0.14 mol: K1=6.3
in 0.06 mol:K1=6.4; 0.04 mol:6.7; 0.02 mol:7.0

Ni++ gl diox/w 25°C 50% U M K1=7.84 B2=15.31 1984ABb (69375)4358
B(NiL(PFHA))=13.84
B(NiL(PTHA))=14.00
PFHA=N-phenyl-2-furylhydroxamate, PTHA=N-phenyl-2-thenohydroxamate

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Ni++ sp non-aq 25°C 100% U HM 1984ISa (69376)4359
K(NiA2+L)=3.06
In benzene, HA=S-methyl-N-(4-methoxyphenylidene)hydrazine-carbodithioic acid
Data also for other related HA ligands

Ni++ gl NaClO4 35°C 0.10M U K1=6.81 B2=13.21 1983ABb (69377)4360

Ni++ sp NaClO4 25°C 0.20M U I K1=3.49 1983EBa (69378)4361

Ni++ kin NaNO3 25°C 0.30M U M 1983HMa (69379)4362
K(NiA+L)=3.50
K(NiB+L)=3.49
K(NiC+L)=3.80
A=Ethylenepropylenetriamine, B=Dipropylenetriamine, C=diethylenetriamine.
Data also for ternary complexes with 5-nitrosalicylic acid and above amines

---

Ni++ sp non-aq 25°C 100% U I M 1982HYa (69380)4363
B(NiA2L)=3.12
Medium: CCl4. HA=diphenylthiocarbazone

Ni++ gl KNO3 25°C 0.10M C M 1979DAa (69381)4364
B(NiL(pn))=12.26
B(NiL2(pn))=17.78
B(NiL(pn)2)=15.46
pn=1,3-Diaminopropane. Data also available for Ni+L+histamine

---

Ni++ gl KNO3 25°C 0.10M C M 1978DAb (69382)4365
B(NiLA)=11.20
B(NiL2A)=17.83
B(NiLA2)=16.19
HA=N,N-dimethylglycine

Ni++ gl KNO3 25°C 0.10M U M K1=7.04 B2=13.94 1978DOa (69383)4366
B3=20.15
B(NiAL)=12.36, B(NiHAL)=16.14, K(NiL+HA)=3.49, K(NiL+A)=5.32.H3A=citric acid

---

Ni++ gl KNO3 30°C 0.10M M M 1977MSd (69384)4367
K(NiL+His)=8.03

Ni++ gl NaClO4 25°C 0.10M U M K1=7.01 B2=13.82 1976ABb (69385)4368
K(ZnL+benzylhydroxamate)=5.04

```
Ni++       gl  KNO3   25°C 0.10M C    M   K1=7.04   B2=13.94  1976DOa (69386)4369
                                          B3=20.15
B(NiL(Gly))=12.26;  B(NiL(Sar))=11.90;  B(NiL(B-Ala))=10.99;
B(NiL2(Gly)=18.61; B(NiL2(Sar))=18.30
-------------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  U                      1976GMa (69387)4370
                                          K(NiA2+L)=6.41
In benzene.  A = O,O-diethylphosphorodithioate
-------------------------------------------------------------------------------
Ni++       cal non-aq 30°C 100%  U   H                  1974DGa (69388)4371
                                          K(NiA2+L) > 6
In benzene. HA=thiobenzoyl-1,1,1-trifluoroacetone; DH=-68 kJ mol-1
-------------------------------------------------------------------------------
Ni++       cal non-aq 30°C 100%  U   H                  1974GPa (69389)4372
In benzene. DH(NiA2+L)=-73.7 kJ mol-1; DH(NiB2+L)=-75.5; DH(NiC2+L)=-70.2
A=O-methylxanthate, B=O-hexylxanthate, C=O-2-propylxanthate
-------------------------------------------------------------------------------
Ni++       gl  oth/un 35°C 0.20M U    M                  1973JPb (69390)4373
                                          K(NiL+A)=5.22
                                          K(NiL+B)=5.12
                                          K(NiL+C)=5.09
                                          K(NiL+D)=6.86
K(NiL+E)=6.87, K(NiL+F)=6.70, H2A=malic acid, H2B=lactic acid, H2C=glycollic
acid, H2D=thiomalic acid, H2E=thiolactic acid, H2F=thioglycollic acid.
-------------------------------------------------------------------------------
Ni++       oth alc/w  20°C  20%  C        K1=5.98   B2=11.42  1973RAc (69391)4374
                                          B3=17.20
Method: recalculation of literature data. Medium: 20% EtOH/H2O.
-------------------------------------------------------------------------------
Ni++       oth NaClO4 30°C 0.20M U    M                  1972MJa (69392)4375
                                          B(NiLA)=7.69
                                          B(NiLB)=8.61
                                          K(Ni+L+HC)=6.90
H2A=pyrocatechol, H3B=protocatechuic acid, H3C=pyrogallol
-------------------------------------------------------------------------------
Ni++       EMF KNO3   30°C 0.10M U    M                  1972STa (69393)4376
                                          B(NiL(en))=6.43
                                          B(NiL(pn))=6.69
-------------------------------------------------------------------------------
Ni++       EMF alc/w    ?   20%  U        K1=6.25   B2=11.80  1971DFb (69394)4377
                                          K3=5.20
Medium: 20% EtOH. By  polarography, K1=6.28, K2=5.63, K3=5.19
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M   K1=7.13   B2=14.01  1971GSb (69395)4378
                                          B(NiLA)=16.38
                                          B(NiL(Gly))=12.75
                                          B(NiL(en))=13.92
H2A=catechol
-------------------------------------------------------------------------------
Ni++       dis KNO3   30°C  1.0M U   HM   K1=6.95   B2=13.78  1965DDa (69396)4379
```

K3=6.35
By calorimetry:DH(K1)=-37.2 kJ mol-1, DS=10.5 J K-1 mol-1; DH(B2)=-74.4,
DS=18.4; DH(B3)=-111.6,DS=17.1. Ternary complexes with ATP etc.

Ni++ cal NaNO3 20°C 0.10M U H 1963ANb (69397)4380
DH(K1)=-40.1 kJ mol-1, DS=0 J K-1 mol-1; DH(B2)=-79.4, DS=-2.9;
DH(B3)=-117.9, DS=-8.8

Ni++ EMF NaNO3 20°C 0.10M U K1=7.13 B2=14.01 1963ANg (69398)4381
K3=6.53

Ni++ gl NaClO4 25°C 1.0M U H K1=6.80 B2=13.26 1962ABa (69399)4382
K3=5.20
DH(K1)=-33.5 kJ mol-1, DS=17; DH(K2)=-33.5, DS=8; DH(K3)=-33.5, DS=-13

Ni++ sp alc/w 20°C 42% U K1=6.9 B2=13.7 1962CLa (69400)4383
B3=19.6
Medium: 41.5% EtOH, 0.05 M KNO3

Ni++ dis KCl 25°C 0.10M U K1=7.07 B2=13.93 1962IMa (69401)4384
K3=6.20
****
C10H8N2O2 HL CAS 80690-06-8 (874)
5-Aminoquinoline-8-carboxylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 30°C 50% U K1=6.00 B2=11.23 1981RRa (69672)4385
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
---
Ni++ gl diox/w 25°C 50% U K1=8.47 B2=15.97 1967SFa (69679)4386
****
C10H8N2O2S HL CAS 15112-10-4 (8299)
N-Phenyl-2-thiobarbituric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 31°C 0.10M U T H K1=6.08 B2=10.68 1984SJa (69688)4387
Also data for 18 and 42 C. DH(K1)=-76.2 kJ mol-1, DS(K1)=-135 J K-1 mol-1
DH(K2)=-41.2, DS(K2)=-47.9.
****
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

---
Ni++ dis NaClO4 25°C 0.10M U K1=8.18 B2=14.85 1964SAe (69699)4388

Ni++ gl diox/w 25°C 50% U K1=8.4 B2=14.7 1958PBa (69700)4389
****
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
---
Ni++ gl alc/w 22°C 80% U T H K1=7.70 B2=13.25 1985SAb (69705)4390
30 C: K1= 7.60, K2=5.50; 40 C: K1= 7.50, K2=5.40
DH(K1)=-19.1 kJ mol-1, DS=81 J K-1 mol-1; DH(K2)=-24.8, DS=24
****
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
---
Ni++ gl NaClO4 25°C .005M U K1=5.92 B2=10.77 1963FFa (69711)4391
K3 < 3.5
****
C10H8N3O2Br HL CAS 37644-49-8 (4778)
3-Methyl-4-(2'-bromophenylazo)isoxazol-5-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 75% U K1=3.50 B2=7.61 1971SYa (69716)4392
****
C10H8N3O2Cl HL CAS 1933-75-1 (4776)
3-Methyl-4-(2'-chlorophenylazo)isoxazol-5-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 75% U K1=2.70 B2=7.89 1971SYa (69719)4393
****
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
---
Ni++ gl diox/w 30°C 75% U K1=4.30 B2=9.38 1971SYa (69722)4394
****
C10H8N4O3 HL CAS 43168-60-1 (6209)
5-Phenylazobarbituric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 75% U K1=5.12 B2=9.68 1986MIa (69725)4395
****

C10H8N4O4 HL CAS 1747-31-5 (4716)
3-Methyl-4-(2'-nitrobenzeneazo)isoxazol-5-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=3.66	B2=7.62	1971SYa	(69740)4396

Medium: 75% dioxan

****

C10H8O2 H2L CAS 92-44-4 (1658)
2,3-Dihydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	30°C	0.20M	U	M			1974MJa	(69761)4397
							K(Ni(His)+L)=8.53			

****

C10H8O4 H2L CAS 38489-70-2 (3297)
Benzoylpyruvic acid; C6H5.CO.CH2.CO.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=14.4	B2=20.6	1954UFa	(69795)4398

****

C10H8O4S HL (1038)
1-Hydroxynaphthalene-2-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=3.11	B2=6.41	1989SSe	(69797)4399

****

C10H8O4S HL (4148)
1-Hydroxynaphthalene-5-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=3.17	B2=6.33	1989SSe	(69799)4400

****

C10H8O5S H3L DHNSA (877)
2,3-Dihydroxynaphthalene-6-sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	U		K1=9.88	B2=18.25	1984NHa	(69826)4401
Ni++	gl	NaClO4	25°C	0.50M	C		K1=8.41	B2=14.15	1976LAe	(69827)4402
							B3=17.3			

****

C10H8O7S2 H3L (6341)
2-Hydroxynaphthalene-6,8-disulfonic acid;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.81   B2=5.39   1989SSe (69883)4403
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=9.55        1990HWa (69912)4404
-------------------------------------------------------------------------
Ni++       gl  KNO3   27°C 0.10M U        K1=5.85   B2= 9.27  1988AIa (69913)4405
-------------------------------------------------------------------------
Ni++       sp  oth/un 22°C    ?  U                          1966MCb (69914)4406
                                        B3=12.00(?)
*************************************************************************
C10H9N                  L                     CAS 91-62-3  (8354)
6-Methylquinoline;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.20M C    M   K1=2.72        1993BAb (69993)4407
                                       K(Ni(gly)+L)=6.20
                                       K(Ni(ala)+L)=6.15
                                       K(Ni)val)+L)=6.10
                                       K(NiA+L)=5.98
K(Ni(gln)+L)=5.55, K(Ni(glu)+L)=8.30, K(Ni(asp)+L)=9.15. 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
-------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=8.88   B2=17.49  1984YAa (70018)4408
-------------------------------------------------------------------------
Ni++       cal diox/w 25°C  50%  U   H                    1968GFa (70019)4409
DH(K1)=-20.9 kJ mol-1, DS=100.3 J K-1 mol-1; DH(B2)=-50.6, DS=155
-------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=8.96   B2=16.94  1967SFa (70020)4410
-------------------------------------------------------------------------
Ni++       cal diox/w 25°C  50%  U   H                    1959FFa (70021)4411
DH(K1)=-27.2,(-21.7) kJ mol-1; DH(B2)=-43(-44), DS=197 J K-1 mol-1
-------------------------------------------------------------------------
Ni++       gl  diox/w 20°C  50%  U        K1=8.52   B2=16.48  1954IRa (70022)4412
Medium: 50% dioxan, 0.3 M NaClO4
-------------------------------------------------------------------------
Ni++       gl  diox/w 40°C  50%  U T H    K1=9.07   B2=17.29  1954JFa (70023)4413
K1=9.67(0.7 C),9.41(25 C); K2=8.71(0.7 C),8.35(25 C).
DH(B2)=-44.7 kJ mol-1, DS=192 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
---
Ni++ gl NaClO4 25°C 0.20M C M K1=2.70 1993BAb (70070)4414
K(Ni(gly)+L)=6.20
K(Ni(ala)+L)=6.08
K(Ni(val)+L)=6.05
K(NiA+L)=5.95
K(Ni(gln)+L)=5.55, K(Ni(glu)+L)=8.25, K(Ni(asp)+L)=9.10. 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
---
Ni++ gl diox/w 25°C 50% U H K1=10.56 B2=20.47 1968GFa (70083)4415
Medium: 50% dioxan, 0.1 M NaClO4. By calorimetry: DH(K1)=-39.3 kJ mol-1,
DS=71 J K-1 mol-1; DH(B2)=-76.5, DS=134

Ni++ cal diox/w 25°C 50% U H 1959FFa (70084)4416
DH(B2)=-107.8 kJ mol-1, DS=63 J K-1 mol-1

Ni++ gl diox/w 40°C 50% U T H K1=11.15 B2=21.32 1954JFa (70085)4417
K1=12.36(0.7 C),11.57(25 C); K2=10.72(25 C). DH(B2)=-108 kJ mol-1, DS=63
****
C10H9NO L CAS 938-33-0 (3322)
8-Methoxyquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 25°C 0.10M U K1=2.0 1964PCa (70104)4418
****
C10H9NOS L CAS 13444-13-8 (4779)
2-Acetonylbenzothiazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp alc/w ? 100% U M 1971ACc (70108)4419
K(Ni(NO3)2+2L)=2.87
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
---
Ni++ gl diox/w 25°C 50% U K1=9.7 B2=18.70 1967SFa (70113)4420
****

C10H9NO2 HL CAS 87-51-4 (891)
Indole-3-ethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 50% U K1=3.25 B2=5.68 1981SKc (70132)4421
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
---
Ni++ gl diox/w 25°C 50% U K1=3.67 1969HSc (70142)4422
Medium: 50% dioxan, 0.1 M KClO4
****
C10H9NO3 HL Maleanilic acid CAS 37902-58-2 (6225)
Maleanilic acid; HOOC.CH:CH.CO.NH.C6H5

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 22°C 80% U T H K1=7.15 B2=13.20 1985SAb (70154)4423
30 C: K1= 7.00, K2=6.00; 40 C: K1= 6.90, K2=5.90
DH(K1)=-21.0 kJ mol-1, DS=65 J K-1 mol-1; DH(K2)=-15.3, 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
---
Ni++ gl KNO3 25°C 0.10M C K1=9.62 B2=16.72 1990ARa (70162)4424
****
C10H9NO3S2 HL (7206)
6-Methyl-5-sulfo-8-mercaptoquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp oth/un 20°C 0.10M U K1=8.7 1985DAb (70172)4425
****
C10H9NO4 HL (311)
1-(4-Nitrophenyl)butane-1,3-dione; O2N.C6H4.CO.CH2.CO.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 50% U K1=5.63 1974DHa (70183)4426
****
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
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C .005M U        K1=7.69   B2=14.14  1963FFa (70192)4427
                                          K3=4.48
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  oth/un 20°C  0.0  U        K1=3.47   B2=5.26   1961PEb (70217)4428
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  oth/un 30°C    ?  U        K1=3.45        1985TZa (70227)4429
*************************************************************************
C10H9NS                HL                     CAS 10222-10-3  (1029)
2-Methyl-8-mercaptoquinoline;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       sp  non-aq 25°C 100%  C    M                   1987YSb (70245)4430
                                       K(NiL2+phen)=1.55
Medium: CHCl3.
-------------------------------------------------------------------------
Ni++       gl  non-aq 25°C 100%  U        K1=8.1    B2=13.4   1984UBa (70246)4431
Medium: DMF, 0.1 M LiClO4.  Similar data to reference UB83a
-------------------------------------------------------------------------
Ni++       EMF non-aq 25°C 100%  U        K1=8.1    B2=13.40  1983UBa (70247)4432
Medium: DMF, 0.1 M LiClO4
-------------------------------------------------------------------------
Ni++       cal diox/w 25°C  50%  U   H                   1968GFa (70248)4433
Medium: 50% dioxan, 0.1 M NaClO4. DH(K1)=-33.8 kJ mol-1, DS=63 J K-1 mol-1
-------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=9.2         1966KFb (70249)4434
Medium: 50% dioxan, 0.1 M NaClO4
*************************************************************************
C10H9NS                HL                     CAS 13982-83-7  (1030)
4-Methyl-8-mercaptoquinoline;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  non-aq 25°C 100%  U        K1=9.7    B2=17.0   1984UBa (70268)4435
Medium: DMF, 0.1 M LiClO4.  Similar data to reference UB83a
-------------------------------------------------------------------------
Ni++       EMF non-aq 25°C 100%  U        K1=9.7    B2=17.00  1983UBa (70269)4436
Medium: DMF, 0.1 M LiClO4
```

****
C10H9NS HL CAS 66493-38-7 (5688)
5-Methyl-8-mercaptoquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF non-aq 25°C 100% U K1=11.0 B2=19.90 1986UBa (70280)4437
Medium: dimethylformamide, LiClO4
****
C10H9NS HL CAS 15759-04-3 (1031)
6-Methyl-8-mercaptoquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl non-aq 25°C 100% U K1=9.2 B2=16.5 1984UBa (70282)4438
Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

Ni++ EMF non-aq 25°C 100% U K1=9.2 B2=16.50 1983UBa (70283)4439
Medium: DMF, 0.1 M LiClO4
****
C10H9NS HL CAS 15759-05-4 (1032)
7-Methyl-8-mercaptoquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl non-aq 25°C 100% U K1=11.3 B2=19.2 1984UBa (70294)4440
Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

Ni++ EMF non-aq 25°C 100% U K1=11.3 B2=19.20 1983UBa (70295)4441
Medium: DMF, 0.1 M LiClO4
****
C10H9NS2 HL CAS 32433-56-0 (5691)
5-Thiomethyl-8-mercaptoquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF non-aq 25°C 100% U K1=7.9 B2=14.40 1986UBa (70306)4442
Medium: dimethylformamide, LiClO4
****
C10H9NS2 HL CAS 91330-90-0 (5693)
7-Thiomethyl-8-mercaptoquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ EMF non-aq 25°C 100% U K1=9.0 B2=15.70 1986UBa (70311)4443
Medium: dimethylformamide, LiClO4
****
C10H9N3 L Dipyridylamine CAS 1202-34-2 (2428)
(2,2'-Dipyridyl)amine; C5H4N.NH.C5H4N

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=6.76   B2=12.84  1991DAc (70323)4444
Data for ternary complexes with acetohydroxamic acid
--------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M C    M                 1979FSa (70324)4445
                                        B(NiL(pyrocatecholate))=15.51
                                        K(NiL+pyrocatecholate)=9.26
                                        K(Ni(pyrocatecholate)+L)=6.62
--------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U TIH    K1=6.76   B2=12.84  1976BBe (70325)4446
--------------------------------------------------------------------------
Ni++       EMF KNO3   20°C 0.10M U        K1=6.25   B2=12.03  1971ANa (70326)4447
**************************************************************************
C10H9N3OS              HL                      CAS 60321-26-8  (4671)
2-(2-Thiazolylazo)methylphenol; C3H2NS.N:N.C6H3(CH3)OH
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Ni++       sp  diox/w 25°C  10%  U T      K1=11.70       1973KSd (70353)4448
Medium: 10% dioxan, 0.1 M KNO3. 22 C: K1=11.76; 35 C: K1=11.56
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  50%  U        K1=8.3    B2=16.20  1967NPb (70371)4449
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
--------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  75%  U        K1=7.68   B2=12.44  1995UFa (70381)4450
--------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=4.38   B2=9.77   1971SYa (70382)4451
**************************************************************************
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
--------------------------------------------------------------------------
Ni++       gl  alc/w  20°C  50%  U T      K1=3.82   B2=6.95   1981SSc (70387)4452
At 30 C: K1=3.94, B2=6.81
**************************************************************************
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
-------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U        K1=9.32   B2=17.84  1989TSa (70410)4453
                                          B(NiHL)=14.83
*************************************************************************
C10H9N3O5S            H3L                    CAS 94519-58-1  (5579)
1-Cyano-2-oxypropyl-azo-4-sulfo-2-hydroxybenzene;CH3COCH(CN)N:NC6H3(OH)HSO3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.04M C        K1=11.11  B2=19.22  1985RMa (70414)4454
K2 measured in solution with 0.01 M Tris buffer
*************************************************************************
C10H9OBrS              HL                     CAS 87112-37-6  (8334)
p-Bromobenzoylthioacetone;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=9.55   B2=18.97  1991CAb (70420)4455
Medium: 75% v/v dioxane/H2O, 0.10 M KCl.
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=10.79  B2=18.64  1976GRa (70427)4456
-------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=6.32        1974DHa (70428)4457
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        B2=19.31       1976BRd (70443)4458
*************************************************************************
C10H9O4P              H2L                    CAS 1136-89-6  (1931)
1-Naphthyl-phosphoric acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.15M U        K1=1.56        1989AKa (70458)4459
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=4.17        1969HSc (70487)4460
```

Medium: 50% dioxan, 0.1 M KClO4

****

C10H10NO3Br HL CAS 61563-99-3 (1991)

4-Bromo-N-hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H4.Br

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	none	20°C	0.0	U		K1=5.67 B2=9.70	1979KSb (70504)	4461

****

C10H10NO3Cl HL CAS 75813-79-5 (1962)

4-Chloro-N-hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H4.Cl

---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	none	20°C	0.0	U		K1=5.75 B2=10.25	1979KSb (70508)	4462

****

C10H10NO4P HL (1932)

8-Quinolyl-methyl-phosphoric acid; (C9H7N)CH2PO4H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaCl	25°C	0.15M	U		K1=1.72 B(NiH-1L)=-5.08	1989AKa (70519)	4463

****

C10H10N2 L CAS 26628-04-2 (3300)

8-Aminoquinaldine (8-Amino-2-methylquinoline)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	U		K1=2.6	1964PCa (70524)	4464

****

C10H10N2O HL CAS 70125-17-6 (3906)

2-Aminomethyl-8-hydroxyquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	25°C	50%	U		K1=13.42 B2=26.12	1967SFa (70531)	4465

****

C10H10N2O HL CAS 37920-81-3 (3323)

8-Hydroxy-2,4-dimethylquinazoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	20°C	50%	U		K1=7.88 B2=14.88	1954IRa (70537)	4466

Medium: 50% dioxan, 0.3 M NaClO4

****

C10H10N2O2 HL (6192)

Benzimidazole-2-propanoic acid; C7H5N2.CH2.CH2.COOH

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

```
------------------------------------------------------------------------------
Ni++       gl  alc/w  30°C  50%  U    M   K1=3.31   B2=6.09   1987RGa (70542)4467
                                          K(NiA+L)=4.91
                                          K(NiB+L)=3.52
                                          K(Ni(bpy)+L)=4.02
Medium: 50% EtOH, 0.1 M NaClO4. H2A=oxalic acid, H2B=malonic acid
******************************************************************************
C10H10N2O2S             L                      CAS 4939-30-4  (1676)
8-(Methanesulfonamido)quinoline;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=10.8   B2=20.6   1984NYa (70546)4468
******************************************************************************
C10H10N2O3S           H2L                    CAS 76045-30-2  (7218)
Desferriferrithiocin,
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
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        B2=17.74       1990ARa (70552)4469
******************************************************************************
C10H10N3OCl             L                      CAS 135471-86-2  (8750)
2-(Chloroacetylaminomethyl)benzimidazole;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U                        1990MCb (70584)4470
                                          B(NiH-1L)=-5.54
                                          K(NiH-1L+L=NiH-2L2+H)=-12.30
                                          *K(NiH-1L)=-7.89
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
------------------------------------------------------------------------------
Ni++       gl  alc/w  30°C  50%  C    M                   1999MBc (70597)4471
                                          B(Ni(gly)L)=10.97
                                          B(NiAL)=9.54
                                          B(Ni(met)L)=8.87
                                          B(NiH-1(gly)L)=1.93
In 50% v/v EtOH/H2O, 0.10 M NaNO3. B(NiH-2(gly)L)=-8.08; B(NiH-1AL)=0.45,
B(NiH-2AL)=-9.47; B(NiH-1(met)L)=1.40, B(NiH-2(met)L)=-6.60. A: Beta-ala
------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U        K1=3.14   B2= 5.60  1993MBc (70598)4472
                                          *K(NiL)=-8.94
                                          *K(NiL2)=-6.61
                                          *K(Ni(OH)L2)=-8.91
```

Medium: 50% v/v dioxane/H2O, 0.10 M NaNO3.

Ni++ gl alc/w 25°C 50% U M K1=3.75 B2=6.42 1986SKe (70599)4473
K(NiA+L)=2.25

Medium: 50% v/v EtOH/H2O, 0.1 M NaCl. H3A=nitrolotrientanoic acid

---

Ni++ gl mixed 25°C 65% U T K1=3.75 B2=6.42 1982KNc (70600)4474

Medium: 65% DMSO/H2O, 0.1 KNO3

****

C10H10OS HL CAS 13522-48-0 (4722)

3-Mercapto-1-phenylbut-2-en-1-one; C6H5.CO.CH:CH.C(SH).CH3

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

---

Ni++ gl diox/w 30°C 75% U I K1=9.54 B2=18.50 1969LSa (70629)4475

Medium: 75% dioxan, 0.018 M NaCl

In 0.017 NaClO4, 74.5% dioxan: K1=9.73, K2=9.67

****

C10H10O2 HL Benzoylacetone CAS 93-91-4 (197)

1-Phenylbutane-1,3-dione; C6H5.CO.CH2.CO.CH3

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

---

Ni++ gl diox/w 30°C 75% U K1=8.69 B2=16.72 1977AHb (70679)4476

Ni++ dis NaClO4 25°C 1.0M U K1=4.41 B2=9.86 1977SIa (70680)4477

Ni++ dis NaClO4 25°C 1.0M C M K1=4.41 B2= 9.86 1977SMe (70681)4478
K(NiL2(org)+A(org))=3.50

Method: distribution from 1.0 M NaClO4 into CCl4/HL/tri-octylposphine oxide (A). K(Ni+2HL(org)=NiL2(org)+2H)=-12.84.

Ni++ gl diox/w 30°C 50% U M K1=7.05 B2=13.02 1975DBd (70682)4479
K(Ni(bpy)+L)=6.75
K(Ni(phen)+L)=6.59
K(Ni(IDA)+L)=5.60
K(Ni(NTA)+L)=5.10

Ni++ gl diox/w 25°C 50% U K1=6.51 B2=12.27 1974DHa (70683)4480

Ni++ sp non-aq ? 100% U M 1972CHd (70684)4481
K(Ni3L6=3NiL2)=-4.7
K(2Ni3L6+3py=3Ni2L4py)=14.48
K(Ni2L4py+3py=2NiL2py2)=7.26

Medium: CH2Cl2

Ni++ gl diox/w 25°C 75% U T K1=9.13 B2=16.89 1971RMc (70685)4482

Medium: 75% dioxan, 0.02 M Me4NCl. 15 C: K1=9.19, K2=7.84; 40 C: 9.03, 7.69

Ni++ gl diox/w 30°C 75% U K1=10.30 B2=18.82 1955HOa (70686)4483

```
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=9.58   B2=18.0   1953UFe (70687)4484
********************************************************************************
C10H10O3               HL                      CAS 16636-62-7  (3298)
2-Hydroxybenzoylacetone; HO.C6H4.CO.CH2.CO.CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=9.25   B2=17.31  1955HOa (70795)4485
********************************************************************************
C10H10O4              H2L                      CAS 616-75-1  (4700)
Benzylmalonic acid; HOOC.CH(CH2.C6H5).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  none   25°C  0.0  U        K1=3.48        1970NPb (70815)4486
--------------------------------------------------------------------------------
Ni++       EMF oth/un   ?     ?  U        K1=2.1         1968KKa (70816)4487
********************************************************************************
C10H10O5              H2L    Ethoxyphthalic     (3299)
4-Ethoxyphthalic acid; CH3.CH2.O.C6H2(COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=2.18        1956YSa (70834)4488
********************************************************************************
C10H10O6              H2L                      CAS 5411-14-3  (2394)
1,2-Phenylenedioxodiethanoic acid; C6H4(O.CH2.COOH)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=1.6         1968SMb (70839)4489
********************************************************************************
C10H11NOS               L                       (2831)
Acetothioacetanilide; CH3.CO.CH2.CS.NH.C6H5
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=6.17   B2=10.50  1985BNa (70874)4490
Data also for 4-Me-, 4-MeO- and 4-Cl- analogues
--------------------------------------------------------------------------------
Ni++       sp  diox/w 25°C  50%  U        K1=6.17        1985NBa (70875)4491
Data also for 4-methoxy, 4-methyl and 4-chloro analogues
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=4.82        1969HSc (70902)4492
```

Medium: 50% dioxan, 0.1 M KClO4

****

C10H11NO2 HL (4730)

N-Phenyl-(trans-2-buteno)hydroxamic acid; CH3.CH:CH.CO.N(C6H5).OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	35°C	50%	U		K1=7.50	B2=13.07	1970BTc	(70920)4493

****

C10H11NO2S HL CAS 42607-21-6 (8331)

2-Phenylthiazolidine-4-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	30°C	0.10M	U	TIH	K1=5.18	B2= 9.78	1983RKb	(70924)4494

At I=0.0, K1=5.37, K2=4.76. Data for 25-50 C. DH(K1)=-30.2 kJ mol-1, DS(K1)=20.7 J K-1 mol-1; DH(K2)=-26.9, DS(K2)=12.8.

****

C10H11NO3 HL (1960)

N-Hydroxyacetoacetanilide; CH3.CO.CH2.CO.N(OH).C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	none	20°C	0.0	U		K1=6.0	B2=10.54	1979KSb	(70938)4495

****

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
Ni++	cal	KNO3	25°C	0.1M	C	H			1991ANa	(70975)4496

DH(K1)=15.0 kJ mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	cal	KNO3	25°C	0.10M	U		K1=3.58		1991Aa	(70976)4497

DH(K1)=15.06 kJ mol-1, DS(K1)=121.34 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	oth/un	25°C	0.10M	U		K1=3.6	B2=6.0	1959SYc	(70977)4498
Ni++	gl	KCl	30°C	0.10M	U		K1=3.8	B2=6.4	1957TBc	(70978)4499
Ni++	gl	KCl	20°C	0.10M	U		K1=3.53		1955SAa	(70979)4500

****

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
Ni++	gl	alc/w	25°C	50%	U		K1=3.17	B2= 6.21	1989MSi	(71013)4501
							B(NiH-1L)=-4.51			
							K(Ni+OH+L)=9.49			

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

****

C10H11NO5 H2L CAS 88194-12-1 (3908)
2-N(-(2'-Hydroxyethyl)amino)benzene-1,4-dicarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	20°C	0.10M	U		K1=2.45	K2=<2.4	1964ULa (71024)	4502
							K(Ni+HL)=1.50			

****

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
Ni++	gl	KNO3	25°C	0.10M	U		K1=14.12		1980TAa (71030)	4503
							K(Ni+HL)=8.31			
Ni++	EMF	oth/un	?	?	U		K1=10.74		1968TRc (71031)	4504
							K(Ni+HL)=4.44			

****

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
Ni++	gl	KNO3	25°C	0.10M	U		K1=9.02		1980TAa (71051)	4505
							K(Ni+HL)=7.84			

****

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
Ni++	gl	KNO3	25°C	0.10M	U		K1=8.14	B2=13.92	1965AUa (71056)	4506

****

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
Ni++	gl	NaNO3	25°C	0.10M	M	M	K1=2.32		1995SKa (71082)	4507
							B(Ni(phen)L)=2.44			

****

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
Ni++	gl	diox/w	40°C	75%	U		K1=6.40	B2=12.48	1974PSc (71101)	4508

Medium: 75% dioxan/H2O, 0.1 M NaClO4
****
C10H11O4As H2L CAS 51525-18-9 (3907)
As-Phenylarsinodiethanoic acid; C6H5.As(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	20°C	0.10M	U		K1=1.5		1964PIa	(71123)4509
****
C10H11O4P H2L CAS 58942-13-5 (7014)
Phenylphosphino-P,P-diethanoic acid, Diphenylphosphinediethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U		K1=3.68	B2=6.49	1979POa	(71133)4510
Ni++	gl	NaClO4	25°C	0.10M	U		K1=3.68 B(NiHL)=7.77 B(NiHL2)=13.26	B2=6.49	1978POb	(71134)4511

In 50% v/v dioxan/H2O: K1=5.12; B2=9.67; B(NiHL)=7.77; B(NiHL2)=13.26
****
C10H12NOCl HL (4790)
N-Isopropyl-5-chlorosalicylideneimine; HO.C6H3(Cl).CH:N.CH(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	cal	non-aq	30°C	100%	U	M	K(NiL2+2py)=3.04		1973DGb	(71148)4512

Medium: benzene
****
C10H12N2 L Tolazoline CAS 59-97-2 (1036)
2-Benzyl-2-imidazoline; C6H5.CH2.C3H5N2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	U		K1=2.81 B3=7.99 B4=10.30 B5=12.51	B2=5.48	1983LWa	(71152)4513
****
C10H12N2O HL CAS 155055-22-4 (8339)
3-(Phenylimino)-2-butanone oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	alc/w	30°C	50%	U	T	K1=9.01	B2=17.11	1993HMd	(71161)4514

Medium: 50% v/v MeOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.
For 2-OH deriv., K1=8.04, for 3-OH, K1=8.28, for 4-OH, K1=8.30.
****
C10H12N2O HL Serotonin CAS 153-98-0 (4735)

5-Hydroxytryptamine (5-hydroxy-3-(2-aminoethyl)indole)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	20°C	0.37M	U		K1=5.05		1971WSd (71167)	4515
							K(Ni+HL)=3.35			

****

C10H12N2O2 HL CAS 70263-59-1 (8479)
2-(Phenylhydrazono)butanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	alc/w	30°C	40%	C	TI	K1=3.50	B2= 6.17	1997RRd (71172)	4516

Medium: 40% v/v EtOH/H2O, 0.10 M KNO3. Also data for 50-70% v/v EtOH/H2O, 0.1 M KNO3, and for 20-50 C.

****

C10H12N2O3S HL CAS 93100-65-3 (6199)
2-(2-Pyrrolideneamino)benzene sulfonic acid; C4H7N:N.C6H4.HSO3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U T	H	K1=13.32		1987RDb (71207)	4517

35 C:K=13.90, 45 C:14.19. DH=78.93 kJ mol-1, DS=520 J K-1 mol-1

****

C10H12N2O4 H2L CAS 16598-05-3 (967)
2-Pyridylmethyliminodiethanoic acid; C5H4N.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=11.22		1983FSa (71226)	4518
Ni++	gl	NaNO3	20°C	0.10M	C	H	K1=12.65	B2=16.35	1981ANb (71227)	4519

DH(K1)=-28.0 kJ mol-1 DS=146.4 J K-1 mol-1, DH(K2)=-17.2 DS=12.1
additional method: exchange equilibria and ion selective electrode

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=9.11	B2=15.94	1975IPa (71228)	4520
Ni++	gl	KNO3	25°C	0.10M	U	M			1973NRb (71229)	4521
							K(NiL+Phe)=3.54, 3.44(D-Phe)			
							K(NiL+Trp)=4.02, 3.93(D-Trp)			
							K(NiL+Val)=3.67, 3.59(D-Val)			
							K(NiL+Thr)=3.76, 3.72(D-Thr)			

K(NiL+Leu)=3.73, 3.74(D-Leu), K(NiL+Ala)=3.73, 3.72(D-Ala)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	U		K1=11.22	B2=14.90	1966SIb (71230)	4522

****

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

```
--------------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.50M C        K1=1.44        1984RFb (71287)4523
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=4.9    B2=7.9    1987CSb (71297)4524
                                          B3=10.9
********************************************************************************
C10H12N2O4            H2L                        (8610)
N-Carboxymethyl-beta-(2-pyridyl)-L-alpha-alanine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M                   1977BRa (71308)4525
                                       K(NiL+D-val)=3.51
                                       K(NiL+L-val)=2.95
                                       K(NiL+D-phe)=2.98
                                       K(NiL+L-phe)=2.72
K(NiL+D-ala)=3.09, K(NiL+L-ala)=2.84; K(NiL+D-ser)=2.92, K(NiL+L-ser)=2.71
********************************************************************************
C10H12N2O5S            HL                        (6278)
2-Benzenesulfonamidosuccinamic acid; C6H5.SO2.NH.CH(CO.NH2).CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  50%  U        K1=5.80        1978GMc (71310)4526
********************************************************************************
C10H12N4O              L                     CAS 16347-32-3  (2483)
9-(Tetrahydro-2-pyranyl)purine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U        K1=1.24        1983ALa (71320)4527
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U        K1=1.31        1981LAc (71327)4528
********************************************************************************
C10H12N4O4S            HL    6-Thioinosine    CAS 574-25-4  (7418)
6-Mercaptopurine-9-ribofuranoside;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=4.18   B2= 8.38  1997KVa (71332)4529
```

****

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
Ni++	gl	KNO3	35°C	0.10M	U	M	K1=2.71 B(NiL(Ala))=8.07 B(NiLA)=8.01 B(NiL(norVal))=8.22 B(NiL(norLeu))=8.29	1991RRa	(71364)4530

HA=2-aminobutanoic acid

Ni++	gl	NaClO4	25°C	0.20M	U		K1=3.42	1991SPa	(71365)4531

Also data for several t-RNA samples

Ni++	gl	KNO3	35°C	0.10M	U	M	K1=2.71 B(Ni(Ala)L)=8.07 B(Ni(Phe)L)=8.32 B(Ni(Trp)L)=8.76	1990RRb	(71366)4532

Ni++	gl	KNO3	25°C	0.10M	C T H		K1=3.37	1983RRd	(71367)4533

Data for 25-45 C. DH(K1)=-5.52 kJ mol-1, DS(K1)=46.0 J K-1 mol-1.

Ni++	gl	NaClO4	25°C	1.0M	U		K1=2.8 K(Ni+HL)=1.1 K(Ni+HL=NiL+H)=-5.9	1981LVa	(71368)4534

Ni++	sp	NaClO4	15°C	1.00M	U		K1=1.15	1981NDa	(71369)4535

Ni++	gl	oth/un	20°C	0.01M	U		K1=3.3	1953ALa	(71370)4536

****

C10H12N4O6 H2L Xanthosine CAS 5968-90-1 (1176)
3,9-Dihydro-9-ribofuranosyl-1H-purine-2,6-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	35°C	0.10M	U	M	K1=2.01 K(Ni(Ala)+L)=5.18 K(NiA+L)=5.32 K(Ni(norVal)+L)=5.50 K(Ni(norLeu)+L)=5.68	1991RRa	(71435)4537

HA=2-aminobutanoic acid

Ni++	gl	KNO3	25°C	0.10M	U	M		1990RRa	(71436)4538
							B(NiHL(His))=12.06 B(NiHL(histamine))=10.92 B(NiH2L(catechol))=10.38 B(NiHL(Gly))=11.08		

```
Ni++       gl  KNO3   35°C 0.10M U    M   K1=2.01        1990RRb (71437)4539
                                          B(Ni(Ala)L)=5.18
                                          B(Ni(Phe)L)=5.46
                                          B(Ni(Trp)L)=5.99
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C        K1=0.7         1989KTa (71438)4540
                                          K(Ni+H-1L)=2.09
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M C    M                  1985RRh (71439)4541
                                          K(Ni+HL)=2.92
                                          K(Ni+HL+gly)=10.9
                                          K(Ni+HL+his)=11.84
                                          K(Ni+HL+HA)=10.13
K(Ni+HL+B)=9.38. H2A is catechol, H2B is oxalic acid.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M U    M                  1983RRb (71440)4542
                                          K(Ni+HL)=2.92
                                          K(Ni+2HL)=5.90
                                          K(Ni+H2L+HGly=NiHLA+2H)=10.9
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T H                  1983RRc (71441)4543
                                          K(Ni+2HL)=5.84
DH=-19.2kJ mol-1. At 5 C: K=6.58; 35 C: 5.90; 45 C: 5.88
-------------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M U    M                  1979RRb (71442)4544
                                          K(Ni+HL+TetraMeen)=5.53
                                          K(Ni+HL+Sulphosalicylate)=2.87
-------------------------------------------------------------------------------
Ni++       gl  KNO3   45°C 0.10M U    M                  1979RRb (71443)4545
                                          K(Ni(bpy)+HL)=2.57
                                          K(Ni(phen)+HL)=2.67
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T                     1978RRa (71444)4546
                                          K(Ni+HL)=2.88
-------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K1=3.0         1953ALa (71445)4547
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U        K1=3.50        1965SIa (71504)4548
*******************************************************************************
C10H12N6O4             HL                        (6488)
N6(Threoninocarbonyl)adenine; C5H3N4.NH.CO.NH.CH(COOH).CH(OH).CH3
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U        K1=5.15   B2=9.34   1990VJa (71516)4549
```

B(NiH-1L)=-0.09

****

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
Ni++	gl	diox/w	27°C	75%	U		K1=9.41	B2=16.07	1973KDc (71524)	4550

Medium: 75% dioxan, 0.1 M NaClO4

****

C10H12O2 HL CAS 1901-78-6 (4701)
2-Hydroxybutyrophenone; HO.C6H4.CO.CH2.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	40°C	0.10M	U		K1=5.28	1973SPc (71531)	4551

****

C10H12O2 HL CAS 1946-74-3 (202)
3-Isopropyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	30°C	50%	U	M	K1=12.39	B2=19.28	1980KSa (71549)	4552
							B(Ni(bpy)+L)=6.97			
Ni++	nmr	non-aq	45°C	100%	U	M			1976MSa (71550)	4553
							K(NiL2+A)=0.17, A=a-picoline			
							K(NiL2+A)=0.18, A=piperidine			
							K(NiL2+EtNH2)=0.34			
							K(NiL2+2py)=0.88			
Ni++	dis	NaClO4	25°C	0.10M	U		K1=5.90	B2=11.10	1962DYa (71551)	4554
Ni++	gl	alc/w	25°C	50%	U		K1=6.08	B2=11.38	1955PHa (71552)	4555
							K3=3.60			
Ni++	gl	diox/w	30°C	50%	U		K1=8.6	B2=15.5	1954BFb (71553)	4556
							B3=19.2			
Ni++	gl	diox/w	30°C	50%	U		K1=8.5	B2=15.0	1954BFb (71554)	4557
							B3=19.0			

Medium: CHCl3

Medium: 50% EtOH

****

C10H12O2 HL CAS 499-44-5 (3303)
4-Isopropyltropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	dis	non-aq	25°C	100%	C	M	K1=6.1	B2=11.40	1997SNa (71625)	4558

K(2Ni+4L=Ni2L4(org))=30.4
Method: solvent extraction from 0.10 M NaNO3 into CHCl3.
K is for: 2Ni(aq)+4L(aq)=Ni2L4(org). K1 and B2 refer to 0.10 M NaNO3.

Ni++ gl diox/w 30°C 50% U K1=8.4 B2=14.9 1954BFb (71626)4559
B3=18.8
****
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
---
Ni++ gl diox/w 27°C 75% U K1=10.55 B2=16.97 1973KDc (71661)4560
Medium: 75% dioxan, 0.1 M NaClO4
****
C10H12O4 HL (3305)
6-Ethyl-2-Hydroxy-3-propionyl-4-pyrone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 20°C 0.10M U K1=3.9 1956ARb (71669)4561
****
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
---
Ni++ gl KNO3 25°C 0.10M U K1=1.6 1974ILa (71688)4562
****
C10H13NO L (5523)
3-Acetyl-2,4,6-trimethylpyridine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.50M U K1=1.8 1983BEb (71695)4563
****
C10H13NO HL CAS 32382-63-1 (4742)
N-Propylsalicylideneimine; HO.C6H4.CH:N.CH2.CH2.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp non-aq 25°C 100% C 2002CCc (71697)4564
K(NiL2+Ni)=1.02
K(NiL+NiL2)=3.50
Medium: acetonitrile.For the 5-Cl derivative, K(NiL2+Ni)=1.64,
K(NiL+NiL2)=3.67.

Ni++ cal non-aq 30°C 100% U M 1973DGb (71698)4565
K(NiL2+2py)=2.00
Medium: benzene. With N-isopropylsalicylideneimine K=2.18

****
C10H13NOS HL CAS 99075-17-9 (3339)
2-Mercapto-N-phenylbutyramide (2-Mercaptobutyranilide)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=8.74	B2=16.88	1961MAe (71700)	4566

****
C10H13NOS HL CAS 34282-28-5 (3338)
N-(Mercaptoacetyl)-2,6-dimethylaniline; (CH3)2.C6H3.NH.CO.CH2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=9.06	B2=17.58	1961MAe (71706)	4567

****
C10H13NO2 L (5521)
2,6-Dimethylisonicotinic acid ethyl ester;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.50M	U		K1=1.3	1983BEb (71711)	4568

****
C10H13NO2 HL (4743)
N-Phenyl-n-butyrohydroxamic acid; CH3.CH2.CH2.CO.N(C6H5).OH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	50%	U		K1=7.61	B2=13.30	1972STf (71717)	4569

****
C10H13NO3 H2L CAS 57496-55-6 (8744)
2-(2-Hydroxybenzylamino)propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	25°C	50%	U	M	K1=8.39	B2=12.28	1993PBd (71726)	4570
							B(Ni(gly)L)=13.40			
							B(Ni(ala)L)=12.45			
							B(Ni(phe)L)=11.89			
							K(Ni+HA+L)=12.37			

Medium: 50% v/v dioxane/H2O, 0.2 M NaClO4. H2A is tyrosine.
B(Ni(trp)L)=12.70.

****
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
Ni++	gl	diox/w	25°C	50%	C	M	K1=8.39	B2=12.28	1995PBc (71732)	4571
							K(NiL+A)=10.99			
							K(NiL+C)=10.88			

K(NiL+D)=10.92
Medium: 50% v/v dioxane/H2O, 0.20 M NaClO4. HA is indole-3-ethanoic acid,
HC is indole-3-propanoic acid, HD is indole-3-butanoic acid.

Ni++ gl KCl 25°C 0.10M U K1=9.00 B2=15.01 1975RIa (71733)4572
B(NiHL2)=23.24
B(NiHL)=15.19
Data are for L-ligand. For rac-ligand, K1=9.00, B2=14.81, B(NiHL)=15.18,
B(NiHL2)=23.10.
****
C10H13NO3 HL CAS 676256-93-2 (9134)
N-(2-Furanylmethylene)valine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 1.0M U K1=5.46 2003SGa (71746)4573
****
C10H13NO3S HL (3340)
N-(Mercaptoacetyl)-2,5-dimethoxyaniline; HS.CH2.CO.NH.C6H3(OCH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 75% U K1=8.79 B2=17.04 1961MAe (71749)4574
****
C10H13NO5S H2L CAS 93474-55-6 (8748)
N-(Phenylsulfonyl)-L-threonine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 25°C 50% C T H 1987MDe (71776)4575
K(Ni+HL=NiL+H)=5.23
K(Ni+2HL=NiL2+2H)=11.83
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
---
Ni++ gl NaNO3 25°C 0.10M M K1=2.30 1991BSc (71784)4576
K(NiH-1L+H)=8.24
****
C10H13N4O8P H3L IMP CAS 131-99-7 (843)
Inosine-5'-monophosphoric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M C M K1=2.95 2001AAa (71834)4577
Also data for ternary complexes with MOPSO, TAPSO and ACES.

```
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C T HM                  2000RNa (71835)4578
                                      K(Ni+H2L=NiL+2H)=4.71
                                      K(Ni+H2L+HA=NiLA+3H)=9.05
                                      K(Ni+H2L+HC=NiLC+3H)=9.18
Data for 35 and 45 C. HA is ala-ala; HC is ala-phe.
DH(NiLA)=-23.6 kJ mol-1, DS=94 J K-1 mol-1; DH(NiLC)=-22.9, DS=99.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   35°C 0.10M U                      1998RVb (71836)4579
                                      K(Ni+H2L=NiL+2H)=4.42
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M C   H                  1996HFa (71837)4580
                                      K(Ni+HL)=2.91
                                      K(Ni+2HL)=4.83
                                      K(Ni+H2L)=1.11
Medium: 0.1 M Me4NBr. DH(Ni+HL)=-16.2 kJ mol-1, DS=1 J K-1 mol-1;
DH(Ni+2HL)=-0.1, DS=36
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M                      1994SMb (71838)4581
                                      K(Ni+HL)=2.91
                                      *K(NiHL)=-6.95
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 15°C 0.20M U                      1981NDa (71839)4582
                                      K(Ni+HL=NiHL)=2.96
                                      K(Ni+H2L=NiH2L)=1.88
********************************************************************************
C10H13N4O9P           H3L                        (3930)
Inosine-5'-monophosphoric acid N(1)-oxide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U                      1965SIa (71879)4583
                                      K(Ni+HL)=3.90
********************************************************************************
C10H13N5O4             HL    Deoxyguanosine   CAS 961-07-9  (3911)
2-Aminopurin-6-one 9-deoxyriboside;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M       K1=3.20        1999SSb (71895)4584
                                      K(Ni+HL)=1.53
                                      *K(NiHL)=-7.57
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 1.00M U       K1=0.4         1981LAc (71925)4585
--------------------------------------------------------------------------------
```

Ni++ sp oth/un 20°C var U K1=-0.17 1964SBb (71926)4586
Medium: 1-3 M Ni(ClO4)2
****
C10H13N5O4S HL Thioguanosine CAS 85-31-4 (7419)
2-Amino-6-mercaptopurine riboside, 6-mercapto-2-aminopurine riboside;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.20M C K1=4.40 B2= 8.86 1997KVa (71960)4587
****
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
---
Ni++ gl KNO3 25°C 0.10M C T HM 1988KRa (71986)4588
K(Ni+HL)=3.89
K(NiHL+HL)=4.23
Also data at 15, 35 and 45 C. DH(NiHL)=-18; DS=16. DH(NiH2L2)=-19.3; DS=16.
Also ternary complexes with bpy, phen and 5-sulfosalicylic acid
---
Ni++ gl NaClO4 25°C 1.0M U 1981LVa (71987)4589
K(Ni+HL=NiHL)=1.4

Ni++ gl oth/un 20°C 0.01M U K1=3.8 1953ALa (71988)4590
****
C10H13N5O5 L CAS 116-92-9 (2174)
Adenosine-N'-oxide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl none 25°C 0.0 U K1=7.52 1960PEb (72028)4591
****
C10H14N2 L Nicotine CAS 54-11-5 (2631)
1-Methyl-2-(3-pyridyl)-pyrrolidine, Nicotine; C5H4N.C4H7N-CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ vlt NaClO4 25°C 0.50M U 1981TMd (72041)4592
K(Ni+HL)=1.71

Ni++ gl NaClO4 23°C 0.50M U 1980TMd (72042)4593
K(Ni+HL)=1.70
****
C10H14N2 L CAS 57404-42-9 (6274)
cis-2,3-Diamino-tetralin(1,2,3,4-tetrahydronaphthalene);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KNO3 25°C 0.10M C K1=6.31 B2=11.33 1974YKa (72047)4594

****
C10H14N2 L CAS 57404-43-0 (6273)
trans-2,3-Diamino-tetralin(1,2,3,4-tetrahydronaphthalene);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.10M C K1=7.09 B2=13.16 1974YKa (72051)4595
****
C10H14N2O HL (3913)
2-Hydroxy-2-phenylbutanoylamidine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl KCl 25°C 0.10M U K1=8.06 B2=15.80 1963GJb (72055)4596
****
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
---
Ni++ gl none 25°C 0.0 U T H K1=1.42 1974VSa (72062)4597

Ni++ gl KNO3 25°C 0.50M U K1=1.39 B2=2.45 1974WAa (72063)4598

Ni++ oth oth/un 0°C ? U K1=1.52 B2=2.93 1971KAc (72064)4599
Method: freezing point depression
****
C10H14N2O L CAS 7006-13-5 (4746)
N,N-Diethylpicolinamide; C5H4N.CO.N(CH2.CH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ oth oth/un 0°C ? U K1=1.52 B2=2.93 1971KAc (72067)4600
Method: freezing point depression
****
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
---
Ni++ gl NaNO3 20°C 1.0M M K1=7.40 B2=14.28 1997WYa (72099)4601
K3=3.61
K4=3.42
****
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
---
Ni++ gl KNO3 25°C 0.5M U T H K1=3.40 1992LKa (72114)4602

```
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U T      K1=3.40        1990LKa (72115)4603
DH(1)=-8.02 kJ mol-1
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=3.64        1989VZa (72116)4604
The actual isomer (prepared by the cyclisation of EDDS) is uncertain.
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       dis non-aq 25°C 100%  U                        1996KSa (72125)4605
                                        K(Ni+2HL=NiL2(org)+2H)=-1.60
By solvent extraction into CHCl3
********************************************************************************
C10H14N5O6P           H2L    dAMP             CAS 653-63-4  (5782)
Deoxyadenosine-5'-monophosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       nmr oth/un 25°C 0.20M U    M                   1985PGa (72139)4606
                                        Keff(NiA+L)=3.08
A=Tetrakis(4-N-methylpyridyl)porphyrin.  pH=6.9
********************************************************************************
C10H14N5O6PS          H2L    AMPS             CAS 19341-57-2  (8152)
Adenosine-5'-monothiophosphoric acid, 5-Thioadenylic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M        K1=2.35        1997SSg (72142)4607
                                        K(Ni+HL)=1.1
                                        K(NiL+H)=3.6
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       cal R4N.X  25°C 0.10M C   H    K1=1.95   B2=4.11   1995HTa (72164)4608
                                        K(NiL+H)=5.83
DH(K1)=+2.4 kJ mol-1; DH(K2)=-22.3; DH(NiL+H)=0.0
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M C      T K1=2.34        1991SMa (72165)4609
IUPAC evaluation
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=1.94        1989MSf (72166)4610
--------------------------------------------------------------------------------
Ni++       gl  KNO3   15°C 0.10M U        K1=2.18   B2=3.58   1980TFa (72167)4611
                                        K(Ni+HL)=0.7
```

```
------------------------------------------------------------------------------
Ni++       gl  KNO3   15°C 0.10M U        K1=2.08   B2=4.28   1972FSa (72168)4612
------------------------------------------------------------------------------
Ni++       gl  KNO3   40°C 0.10M U T H    K1=2.78        1967TMf (72169)4613
K1=2.86(0.4 C),2.84(12 C),2.81(25 C). At 25 C: DH(K1)=-4.2 J K-1 mol-1,DS=40
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       cal R4N.X  25°C 0.10M C   H    K1=2.00   B2=3.96   1995HTa (72207)4614
                                         K(NiL+H)=6.01
DH(K1)=+4.5 kJ mol-1; DH(K2)=-10.0; DH(NiL+H)=-3.0
------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M C TIH  R K1=2.24        1991SMa (72208)4615
IUPAC evaluation. DH(K1)=-10.0 kJ mol-1 (tentative)
------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=1.89        1989MSf (72209)4616
------------------------------------------------------------------------------
Ni++       gl  KNO3   15°C 0.10M U        K1=2.08   B2=2.08   1980TFa (72210)4617
                                         K(Ni+HL)=0.7
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M M        K1=1.98        1976TDa (72211)4618
                                         K(Ni+HL)=1.08
------------------------------------------------------------------------------
Ni++       gl  KNO3   40°C 0.10M U T H    K1=2.75        1967TMf (72212)4619
K1=2.85(0.4 C),2.82(12 C),2.79(25 C). At 25 C: DH(K1)=-4.2 J K-1 mol-1,DS=40
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.79        1962TMa (72213)4620
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M        K1=2.55        2003BSa (72322)4621
                                         K(NiL+H)=4.71
                                         K(Ni+HL)=1.05
------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M C                       2002GLc (72323)4622
                                         B(NiHL)=11.26
                                         B(NiH2L)=16.50
------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=2.84        2001AOa (72324)4623
                                         K(NiL+A)=1.69
                                         B(NiLA)=6.19
                                         K(NiL+B)=2.67
                                         B(NiLB)=7.17
K(NiL+C)=3.73, B(NiLC)=8.23. HA=MOPS, HB=POPSO and HC=HEPPSO.
```

```
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=2.84        2000ADa (72325)4624
                                          K(NiL+A)=5.96
                                          B(NiLA)=8.80
                                          K(NiL+B)=3.80
                                          B(NiLB)=6.64
K(NiL+C)=3.42, B(NiLC)=6.26. HA=ACES, HB=MOPSO, HC=CHES.
Also data for TAPSO and DIPSO.
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=2.90        2000KHa (72326)4625
                                          K(NiL+A)=2.98
                                          B(NiLA)=5.88
H2A=salicylhydroxamic acid.
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=2.90        2000KHb (72327)4626
                                          K(NiA+L)=3.20
                                          B(NiAL)=10.35
H2A=N-(2-acetamido)iminodiacetic acid.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=3.07        1999GLa (72328)4627
-------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M C   H                   1996HFa (72329)4628
                                          K(Ni+HL)=2.55
                                          K(Ni+2HL)=4.89
Medium: 0.1 M Me4NBr. DH(Ni+HL)=-10.0 kJ mol-1, DS=15 J K-1 mol-1;
DH(Ni+2HL)=-21.6, DS=-28
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M        K1=2.55        1996SSd (72330)4629
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M   K1=4.001       1993AHa (72331)4630
                                          B(NiLA)=8.091
                                          B(NiLB)=8.970
                                          B(NiLC)=8.636
                                          B(NiLD)=8.353
H2A=Oxalic acid, H2B=Succinic acid, H2C=Tartaric acid, H2D=Malic acid
B(NiLE)=8.741 H2E=Maleic acid, B(NiLF)=8.127 H3F=Citric acid
-------------------------------------------------------------------------------
Ni++       cal R4N.X  25°C 0.10M C   H    K1=2.55   B2= 4.89  1991HCb (72332)4631
Medium: 0.10 M Et4NBr. DH(K1)=-10.0 kJ mol-1, DH(K2)=21.6 kJ mol-1.
-------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M C TIH  R K1=2.76        1991SMa (72333)4632
IUPAC evaluation. DH(K1)=-10.5 kJ mol-1 (tentative). 37 C, I=0.15 M: K1=2.6
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=2.49        1989MSf (72334)4633
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C        K1=2.49        1988SMb (72335)4634
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=2.34        1980DMa (72336)4635
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U    M   K1=2.34        1980DMb (72337)4636
```

```
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.61   B2=5.04   1980OFa (72338)4637
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.20M U T H    K1=2.42        1979MGa (72339)4638
Medium: 0.20 M Me4NBr. Data for 5-37 C.
By calorimetry: DH(K1)=-10.4 kJ mol-1, DS(K1)=12.7 J K-1 mol-1.
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M M        K1=2.51        1976TDa (72340)4639
                                         K(Ni+HL)=1.04
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M   H    K1=2.49   B2=4.79   1974BSb (72341)4640
DH(K1)=-13.0 kJ mol-1 and DS(K1)=4.1 J mol-1 K-1.
DH(K2)=-13.8 kJ mol-1 and DS(K2)=-2.1 J mol-1 K-1.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   15°C 0.10M U        K1=2.59   B2=5.01   1972FSa (72342)4641
--------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  10%  U        K1=2.88        1967SBc (72343)4642
Medium: 10% dioxan, 0.1 M NaClO4
--------------------------------------------------------------------------------
Ni++       gl  KNO3   40°C 0.10M U T H    K1=2.84        1967TMf (72344)4643
K1=2.90(0.4 C),2.87(12 C),2.84(25 C). At 25 C: DH(K1)=-4.2 kJ mol-1, DS=40 J
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.67        1966DTa (72345)4644
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=2.62        1964SBa (72346)4645
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=2.84        1962TMa (72347)4646
--------------------------------------------------------------------------------
Ni++       ix  R4N.X  25?°C 0.25M U        K1=2.8        1961TDb (72348)4647
Medium: Me4NBr
********************************************************************************
C10H14N5O7P           H2L    dGMP             CAS 902-04-5  (5781)
Deoxyguanosine-5'-monophosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       nmr oth/un 25°C 0.20M U    M                  1985PGa (72510)4648
                                        Keff(NiA+L)=3.23
                                        Keff(NiAL+L)=2.11
A=Tetrakis(4-N-methylpyridyl)porphyrin.  pH=6.9
********************************************************************************
C10H14N5O8P           H2L                   CAS 4061-78-3  (3931)
Adenosine-5'-monophosphoric acid N(1)-oxide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U                       1964SBa (72517)4649
                                        K(Ni+HL)=2.66
                                        K(NiL+H)=7.70
By spectrophotometry: K1=7.45
```

****

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
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=3.16	2001AAa	(72555)4650

Also data for ternary complexes with MOPSO, TAPSO and ACES.

Ni++	gl	KNO3	25°C	0.10M	C	T HM		2000RNa	(72556)4651
							K(Ni+H2L=NiHL+H)=3.38		
							K(NiL+H)=4.35		
							K(NiHL+HA=NiLA+2H)=8.94		
							K(NiHL+HC=NiLC+2H)=8.86		

Data for 35 and 45 C. HA is ala-ala; HC is ala-phe.
DH(NiLA)=-22.6 kJ mol-1, DS=94 J K-1 mol-1; DH(NiLC)=-20.4, DS=103.

Ni++	gl	KNO3	35°C	0.10M	U	M		1998RVb	(72557)4652
							K(Ni+H2L=NiHL+H)=3.09		
							K(NiHL+HA=NiLA+2H)=9.62		
							K(NiHL+HC=NiLC+2H)=10.14		
							K(NiHL+HD=NiLD+2H)=10.38		

K(NiL+H)=4.19. HA is alanine, HC is phenylalanine, HD is tryptophan.

Ni++	gl	R4N.X	25°C	0.10M	C	H		1996HFa	(72558)4653
							K(Ni+HL)=3.04		
							K(Ni+2HL)=5.37		
							K(Ni+H2L)=1.36		

Medium: 0.1 M Me4NBr. DH(Ni+HL)=-18.4 kJ mol-1, DS=-4 J K-1 mol-1;
DH(Ni+2HL)=-9.0, DS=14

Ni++	sp	NaCl	23°C	?	U			1996SVa	(72559)4654
							K(Ni+HL)=4.1		

Data also for other deoxyribonucleotides and calf thymus DNA

Ni++	gl	NaNO3	25°C	0.10M	M			1994SMb	(72560)4655
							K(Ni+HL)=3.13		
							*K(NiHL)=-6.7		

Ni++	gl	KNO3	35°C	0.10M	U	M		1990RAc	(72561)4656
							B(NiHL)=2.77		
							K(Ni+H2L+Gly)=9.25		
							K(Ni+HL+His)=12.97		
							K(Ni+HL+histamine)=11.88		

****

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

---

```
Ni++       gl  NaClO4 25°C 0.10M U        K1=4.8         1973PPc (72621)4657
                                         B(NiHL)=7.71
                                         B(Ni2L)=5.65
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.10M U        K1=4.02        1972PPb (72622)4658
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U        K1=4.17        1970GMd (72623)4659
                                         K(Ni+HL)=2.88
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=1.82        1981CBa (72651)4660
*******************************************************************************
C10H15N2O4P           H2L                        (7120)
Phenylalanylaminomethylphosphonic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=3.501  B2=6.11   1995HLa (72673)4661
                                         B(NiHL)=9.37
                                         B(NiH-1L)=-5.24
                                         B(NiH-1L2)=-2.70
*******************************************************************************
C10H15N2O7P           H2L    dTMP             CAS 3715-64-8  (5784)
Deoxythymidine-5'-monophosphoric acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       nmr oth/un 25°C 0.20M U    M                    1985PGa (72677)4662
                                         Keff(NiA+L)=2.72
                                         Keff(NiAL+L)=1.26
A=Tetrakis(4-N-methylpyridyl)porphyrin.  pH=6.9
*******************************************************************************
C10H15N2O8P           H2L    TMP-5            CAS 365-07-1  (2949)
Thymidine-5'-monophosphoric acid, Thymidylic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M C TI   R                  1991SMa (72686)4663
                                         K(Ni+HL)=2.32
IUPAC evaluation
-------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C                         1988MSa (72687)4664
                                         K(Ni+HL)=1.92
*******************************************************************************
C10H15N3O             L                        (4749)
N,alpha-(2-Pyridylmethyl)-glycine-ethylamide; C5H4N.CH2.NH.CH2.CO.NH.CH2.CH3
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	EMF	diox/w	25°C	70%	U		K1=9.52 B2=17.40	1969DSa (72709)	4665

Medium: 70% dioxan, 0.1 M KCl

****

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
Ni++	gl	KNO3	25°C	0.10M	C		K1=8.02	1974MMb (72714)	4666
							K(NiL+H)=3.39		
							K(NiH-2L+H)=8.97		

****

C10H15N4O14P3 H5L ITP CAS 35908-31-7 (2148)

Inosine 5'-triphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	C			2001SBc (72732)	4667
							K(Ni+HL)=5.01		
							K(NiHL+H)=4.45		
							K(Ni+H2L)=3.0		
Ni++	gl	R4N.X	25°C	0.10M	C	T		1991SMa (72733)	4668
							K(Ni+HL)=5.08		

IUPAC evaluation

Ni++	gl	NaClO4	25°C	0.20M	U			1991SPa (72734)	4669
							K(Ni+HL)=4.27		
Ni++	gl	NaClO4	25°C	0.10M	U	M		1977CSa (72735)	4670
							K(Ni+HL)=4.73		
							K(Ni(bpy)+HL)=4.44		
							B(Ni(bpy)(HL))=11.57		
Ni++	sp	NaClO4	25°C	0.10M	U	M		1977CSa (72736)	4671
							Keff(Ni(bpy)+HL)=2.52, pH 3.5		
Ni++	nmr	NaClO4	25°C	0.10M	U	M		1975SIb (72737)	4672
							K(NiL+H)=8.39		
							K(Ni(OH)L+H)=10.6		
							K(Ni(bpy)L+H)=8.77		

By spectrophotometry, K(NiL+H)=8.2.

Ni++	gl	KNO3	25°C	0.10M	U	T		1973TRb (72738)	4673
							K(Ni+HL)=5.06		

K(35 C)=5.12, K(45 C)=5.01

****

C10H15N5O4 HL Gly-Gly-His CAS 93404-95-6 (74)
Glycyl-glycyl-histidine; H2N.CH2.CO.NH.CH2.CO.NH.CH(CH2.C3H3N2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	KCl	25°C	0.10M	C		K1=4.76		1993HHa	(72795)4674
							B(NiHL)=11.33			
							B(NiH-2L)=-6.93			
Ni++	gl	KCl	25°C	0.16M	U				1966BRd	(72796)4675
							K(NiH-1L+H)=6.20			
							K(NiH-2L+H)=6.30			
							K(NiH-2LOH+H)=6.35			

****

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
Ni++	gl	none	21°C	0.0	M		K1=6.50	B2=12.23	1974YAa	(72822)4676

****

C10H15N5O10P2 H3L ADP CAS 20398-34-9 (2181)
Adenosine-5'-diphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	M		K1=3.93		2003BSa	(72875)4677
							K(NiL+H)=4.73			
							K(Ni+HL)=2.26			
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=4.50		2001AOa	(72876)4678
							K(NiL+A)=1.80			
							B(NiLA)=5.51			
							K(NiL+B)=1.52			
							B(NiLB)=5.23			
K(NiL+C)=2.72, B(NiLC)=6.43, K(NiL+D)=3.40, B(NiLD)=7.11.										
HA=PIPES, HB=MOPS, HC=POPSO and HD=HEPPSO.										
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=3.71		2000ADa	(72877)4679
							K(NiL+A)=8.60			
							B(NiLA)=12.31			
							K(NiL+B)=3.93			
							B(NiLB)=7.64			
HA=ACES, HB=MOPSO. Also data for CHES, TAPSO and DIPSO.										
Ni++	gl	NaNO3	25°C	0.10M	C	M	K1=4.40		2000KHa	(72878)4680
							K(NiL+A)=4.50			
							B(NiLA)=8.90			
H2A=salicylhydroxamic acid.										

```
Ni++       gl  NaNO3  25°C 0.10M C    M   K1=4.40        2000KHb (72879)4681
                                          K(NiA+L)=4.84
                                          B(NiAL)=11.99
H2A=N-(2-acetamido)iminodiacetic acid.
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=3.99        1995SBa (72880)4682
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M M    M   K1=4.471       1993AHa (72881)4683
                                          B(NiLA)=8.791
                                          B(NiLB)=9.991
                                          B(NiLC)=9.609
                                          B(NiLD)=9.213
H2A=Oxalic acid, H2B=Succinic acid, H2C=Tartaric acid, H2D=Malic acid
B(NiLE)=9.844 H2E=Maleic acid, B(NiLF)=9.019 H3F=Citric acid
-------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.10M C TIH  R K1=4.5         1991SMa (72882)4684
                                          K(Ni+HL)=2.31
IUPAC evaluation. 37 C, 0.15 NaCl: K1=4.2. DH(K1)=6.3 kJ mol-1(tentative)
-------------------------------------------------------------------------------
Ni++       nmr oth/un 23°C 0.30M U    M                1985PGa (72883)4685
                                          Keff(NiA+L)=3.7
A=Tetrakis(4-N-methylpyridyl)porphyrin.  pD=7.0
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=3.71        1980DMa (72884)4686
                                          B(NiHL)=8.61
-------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U    M   K1=3.71        1980DMb (72885)4687
                                          K(Ni+H+L)=8.61
-------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 0.20M U T H    K1=3.90   B2= 6.15  1979MGa (72886)4688
                                          K(Ni+HL)=2.28
Medium: 0.20 M Me4NBr. Data for 5-37 C.
By calorimetry: DH(K1)=6.3 kJ mol-1, DS(K1)=93.8 J K-1 mol-1.
-------------------------------------------------------------------------------
Ni++       sp  KNO3   15°C 0.10M M                    1978FSb (72887)4689
                                          K(Ni+NiL)=1.60
-------------------------------------------------------------------------------
Ni++       gl  KNO3   15°C 0.10M U        K1=4.18   B2=6.48   1972FSa (72888)4690
                                          K(Ni+HL)=2.30
-------------------------------------------------------------------------------
Ni++       gl  KNO3   40°C 0.10M U T H    K1=4.42        1967TMf (72889)4691
                                          K(Ni+HL)=2.22
K1=4.62(0.4 C),4.57(12 C),4.50(25 C); K=2.43(0.4 C),2.37(12 C),2.30(25 C).
At 25 C:DH(K1)=-7.9 kJ mol-1,DS=59 J K-1 mol-1; DH(Ni+HL)=-8.8,DS=13
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=4.50        1962TMa (72890)4692
                                          K(Ni+HL)=2.30
*******************************************************************************
C10H15P                 L                      CAS 1605-53-4  (4705)
Phenyldiethylphosphine; C6H5.P(CH2.CH3)2
```

```
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  non-aq 20°C 100%  U TI                    1969RGb (73023)4693
                                          K(NiL2(CN)2+L)=3.12
Medium: EtOH. K(10 C)=3.51, K(30 C)=2.69
In dichloroethane. T:20-40 C, K1(20 C)=1.97, K(30 C)=1.54, K(40 C)=1.10
*******************************************************************************
C10H16N2O2              L                        (7408)
N-(2-Pyridylmethyl)iminodiethanol; C5H4N.CH2.N(CH2CH2.OH)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=7.34        1986DSa (73031)4694
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M M        K1=6.50   B2=11.52  2003GSa (73066)4695
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       EMF KNO3   25°C 0.10M U        K1=16.00       1989VZa (73082)4696
                                          K(Ni+HL)=9.53
-------------------------------------------------------------------------------
Ni++       EMF KNO3   25°C 0.10M U        K1=16.78       1972SGe (73083)4697
By Cu/Hg (indirect method): K1=16.78
-------------------------------------------------------------------------------
Ni++       gl  KNO3   30°C  1.0M U        K1=11.30       1972TSf (73084)4698
-------------------------------------------------------------------------------
Ni++       dis KNO3   20°C 0.10M U        K1=17.4        1968MJa (73085)4699
Method: paper electrophoresis
-------------------------------------------------------------------------------
Ni++       sp  KNO3   20°C 0.10M U        K1=18.02       1966MSg (73086)4700
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 1.50M U   HM                   1987VBd (73362)4701
                                          K(NiA+L)=0.8
H2A=Iminodiethanoic acid; DH(NiA+L)=-4.9 kJ mol-1
-------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 1.50M U   H                    1985VKa (73363)4702
```

```
                                        K(NiL+OH)=0.93
DH(NiL+OH)=-9.92 kJ mol-1
-------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.50M U   H                  1984PTb (73364)4703
DH(K1)=-20.1 kJ mol-1, DH(NiL+OH)=-21.3
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U       K1=18.52       1983FSa (73365)4704
-------------------------------------------------------------------------------
Ni++       sp  none   25°C  0.0  U    M   K1=18.6        1983KPa (73366)4705
                                        K(NiL+en)=2.74
                                        K(NiL+CN)=4.08
en: 1,2-Diaminoethane, measured at pH 11.1
-------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 1.50M U   H                  1982VBa (73367)4706
                                        K(NiL+Gly)=1.17
DH(NiL+Gly)=-21.8 kJ mol-1
-------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 1.50M U  I M                 1982VVa (73368)4707
                                        B(NiL(oxalate))=18.20
                                        B(NiL(pyrophosphate))=18.42
-------------------------------------------------------------------------------
Ni++       EMF KCl    20°C 0.10M C       K1=18.4        1981SFa (73369)4708
Method: Pt/H2 electrode.
-------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 1.50M U T HM                 1981VVa (73370)4709
                                        K(NiL+en)=2.36
                                        B(NiL(en))=19.98
-------------------------------------------------------------------------------
Ni++       sol KNO3   25°C 1.00M U                     1979JPb (73371)4710
                                        K(NiL+H)=2.96
                                        K(NiHL+H)=0.99
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M   K1=18.47       1979KNa (73372)4711
                                        K(NiL+CN)=3.76
-------------------------------------------------------------------------------
Ni++       oth none   25°C  0.0  U       K1=18.67       1977DFa (73373)4712
Calculated from a model.  Constants also for other related Ni++ complexes
-------------------------------------------------------------------------------
Ni++       cal KNO3   25°C  0.5M U  IH    K1=17.82       1976VBb (73374)4713
                                        DH1=-33.10 kJ/mol
For15 C: K1=18.04 DH1=-34.43; 35 C: K1=17.66, DH1=-32.0
for 25 C and I=0.3 M K1=17.91; for 25 C and I=1.0 M K1=17.63
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U      T K1=18.52       1975APc (73375)4714
-------------------------------------------------------------------------------
Ni++       sol oth/un 22°C 0.10M U       K1=18.79       1974TNa (73376)4715
                                        K(Ni+HL)=3.4
                                        K(NiHL+H)=1.4
-------------------------------------------------------------------------------
Ni++       oth NaClO4 25°C  1.0M U T                    1973HHb (73377)4716
```

```
                                        K(CoLCl+Ni)=0.97
K(45 C)=0.33
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C  1.0M U    M                  1970HSc (73378)4717
                                        K(NiL+H)=2.63
                                        K(NiL+N3)=0.02
                                        K(NiL+SCN)=0.02
                                        K(NiL+py)=0.86
K(NiL+NH3)=1.25. K(NiL+NH2.NH2)=0.54. K(NiL+NH2OH)=0.06, K(NiHL+SCN)=0.66
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=18.66       1969BNa (73379)4718
                                        K(NiL+H)=3.22
                                        K(Ni+HL)=11.56
-------------------------------------------------------------------------------
Ni++       gl  R4N.X  25°C 1.50M U    M   K1=18.60       1969FDa (73380)4719
                                        B(NiL(py))=18.93
                                        B(NiL(NH3))=19.90
Medium: NH4NO3
-------------------------------------------------------------------------------
Ni++       sp  KCl    25°C 0.50M U  I M                  1967JMa (73381)4720
                                        K(NiL+NH3)=1.35
In 1.0 M NaClO4: K=1.39
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C  1.0M U    M                  1965BRe (73382)4721
                                        K(NiL+A)=1.5
                                        K(NaL+B)=1.66
                                        K(NaL+en)=2.3
                                        K(NaL+py)=1.69
K(NaL+diaminopropane)=0.3. A=hydroxylamine, B=hydrazine
-------------------------------------------------------------------------------
Ni++       oth KNO3   20°C 0.10M U        K1=19          1965JMb (73383)4722
Method: electrophoresis
-------------------------------------------------------------------------------
Ni++       vlt KNO3   25°C 0.20M U        K1=18.12       1965OGa (73384)4723
-------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.10M U   H                  1965WHa (73385)4724
DH(K1)=-35.5 kJ mol-1, DS=238 kJ mol-1
-------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M U        K1=18.62       1964ANa (73386)4725
                                        K(Ni+HL)=11.56
-------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.10M U                       1964NAa (73387)4726
                                        K(NiL+CN)=4.08
-------------------------------------------------------------------------------
Ni++       cal KNO3   20°C 0.10M U   H                  1963ANf (73388)4727
DH(K1)=-31.6 kJ mol-1, DS=247 J K-1 mol-1
-------------------------------------------------------------------------------
Ni++       sp  NaClO4   ?   1.0M U                       1963BKb (73389)4728
                                        K(Ni+HL)=11.62
                                        K(NiL+OH)=0.41
```

```
--------------------------------------------------------------------------------
Ni++       sol KNO3   25°C  2.0M U    M T                1963FVa (73390)4729
                                          K(?)=14.06
Ternary complexes with oxalic acid
--------------------------------------------------------------------------------
Ni++       dis NaClO4 20°C 0.10M U        K1=18.36       1963STc (73391)4730
Medium: KClO4
--------------------------------------------------------------------------------
Ni++       cal oth/un 25°C  0.0  U        K1=20.33       1959YKa (73392)4731
--------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.17M U   H                   1956CSb (73393)4732
DH(K1)=-34.9 kJ mol-1, DG=-103.30, DS=237 J K-1 mol-1; DH(NiL+OH=0
--------------------------------------------------------------------------------
Ni++       EMF oth/un 25°C  0.0  U   H                   1956MAa (73394)4733
Method: H electrode. DS(K1)=230 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       cal oth/un 25°C 0.05M U   H                   1954CHa (73395)4734
Medium: Ni(NO3)2. DH(K1)=-31.8 kJ mol-1, DS=230 J K-1 mol-1
--------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U  I   T K1=18.56       1954SGa (73396)4735
By spectrophotometry K1=17.4. By polarography,0.1 M KNO3: K1=18.62, K(Ni+HL)
=11.56, K(NiL+H)=5.20
--------------------------------------------------------------------------------
Ni++       sp  KNO3   30°C 0.10M U        K1=17.5        1953HMa (73397)4736
********************************************************************************
C10H16N2O9            H4L                      CAS 616-90-0  (2615)
Bis-(2-aminoethylether)-N,N'di(1,3-propanedioic acid); ((HOOC)2CH.NH.CH2.CH2)2O
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       EMF KNO3   25°C 0.10M U        K1=11.99       1979KBe (74369)4737
********************************************************************************
C10H16N2O11P2         H4L                      CAS 491-97-4  (7674)
Thymidine-5'-diphosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M M                       1999SSa (74382)4738
                                          K(Ni+HL)=3.57
********************************************************************************
C10H16N2S4              L                      CAS 172161-19-2  (8649)
(2Z,2'Z)-3,3'-(1,2-Ethanediyldiimino)bis-2-propene(dithioic)acid, dimethyl ester;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       vlt non-aq 25°C 100%  C        K1=16.7        1999BGb (74394)4739
Method: cyclic voltammetry. Medium: MeCN, 0.10 M Bu4NPF6.
********************************************************************************
C10H16N5O13P3         H4L    ATP              CAS 56-65-5  (403)
Adenosine-5'-triphosphoric acid;
```

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference ExptNo
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=4.83 K(NiL+A)=1.59 B(NiLA)=6.42 K(NiL+B)=1.10 B(NiLB)=5.93	2001AOa (74513)4740
K(NiL+C)=3.11, B(NiLC)=7.94, K(NiL+D)=3.55, B(NiLD)=8.38, K(NiL+E)=2.66, B(NiLE)=7.49. HA=PIPES, HB=MOPS, HC=POPSO, HD=HEPPSO and HE=AMPSO.								
Ni++	gl	KNO3	25°C	0.10M	C	TIHM	K1=4.93 K(NiL+A)=4.64	2001BTa (74514)4741
Data for 20-50% w/w EtOH, DMF, dioxane, AN/H2O, 0.10 M KNO3 and 15-45 C. DH(K1)=-19.26 kJ mol-1, DS(K1)=-42.78 J K-1 mol-1. HA=Asparagine.								
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=4.83 K(NiL+A)=4.00 B(NiLA)=8.83 K(NiL+B)=4.38 B(NiLB)=9.21	2000ADa (74515)4742
K(NiL+C)=3.34, B(NiLC)=8.17. HA=ACES, HB=MOPSO, HC=CHES. Also data for TAPSO and DIPSO.								
Ni++	gl	NaNO3	25°C	0.10M	C	M	K1=5.00 K(NiL+A)=6.39 B(NiLA)=11.39	2000KHa (74516)4743
H2A=salicylhydroxamic acid.								
Ni++	gl	NaNO3	25°C	0.10M	C	M	K1=4.90 K(NiA+L)=5.58 B(NiAL)=12.73	2000KHb (74517)4744
H2A=N-(2-acetamido)iminodiacetic acid.								
Ni++	gl	KNO3	25°C	0.10M	C	M	K1=4.93 K(NiL+His)=8.23 K(NiL+Lys)=5.43 K(NiL+Asn)=4.66 K(NiL+Gln)=4.36	1999BIa (74518)4745
K(NiL+Asp)=8.95, K(NiL+Glu)=7.90, K(NiL+Pro)=5.95.								
Ni++	gl	KNO3	25°C	0.10M	M	M	K1=4.949 B(NiLA)=9.951 B(NiLB)=10.935 B(NiLC)=10.361 B(NiLD)=10.112	1993AHa (74519)4746
H2A=Oxalic acid, H2B=Succinic acid, H2C=Tartaric acid, H2D=Malic acid B(NiLE)=10.472 H2E=Maleic acid, B(NiLF)=10.031 H3F=Citric acid								
Ni++	gl	R4N.X	25°C	0.10M	C	TIH	R K1=5.21	1991SMa (74520)4747

								K(Ni+HL)=2,79		
IUPAC eval. DH(Ni+HL)=-14.6 kJ mol-1,K(NiL+Ni)=18.0. 37 C,I=0.35 M: K1=4.86										
Ni++	gl	NaClO4	25°C	0.20M	U		K1=4.30		1991SPa	(74521)4748
Ni++	sp	none	25°C	0.0	U	I	M		1990UBa	(74522)4749
								B(NiLA)=11.88		
								B(NiLB)=11.92		
in 25% Dixoan/H2O: B(NiLA)=13.15, in 50% Dioxan/H2O: K=19.22										
H2A=pyridine-2,6-dicarboxylic acid, H2B=iminodiethanoic acid										
Ni++	gl	KNO3	25°C	0.10M	U		K1=4.43		1989MAc	(74523)4750
Ni++	gl	NaNO3	25°C	0.10M	C		K1=4.86		1987STb	(74524)4751
								K(Ni+HL)=2.86		
								K(NiL+H)=4.47		
Ni++	gl	KCl	25°C	0.20M	C	M			1984KDb	(74525)4752
								B(NiL(DOPA))=14.23		
								B(NiHL(DOPA))=22.8		
								B(NiHL(Dopamine))=21.8		
								B(NiHL(Adrenaline))=21.3		
B(NiHL(Noradrenaline))=20.5, H3DOPA=3,4-dihydroxyphenylalanine										
Ni++	gl	KCl	25°C	0.10M	U	M			1983MDd	(74526)4753
								B(NiL(Gly))=7.32		
Ni++	gl	KCl	25°C	0.10M	U		K1=4.57		1980DMa	(74527)4754
								B(NiHL)=9.53		
Ni++	gl	KCl	25°C	0.10M	U	M	K1=4.57		1980DMb	(74528)4755
								K(Ni+H+L)=9.33		
Ni++	sp	KNO3	15°C	0.10M	U				1978FSb	(74529)4756
								K(Ni+NiL)=2.40		
Ni++	gl	NaCl	25°C	0.12M	U	M	K1=4.50		1978RMc	(74530)4757
								K(NiL+DOPA)=7.30		
H3DOPA=3,4-dihydroxyphenylalanine										
Ni++	sp	NaClO4	25°C	0.10M	U	M			1977CSa	(74531)4758
								K(Ni(bpy)+L)=4.47		
Ni++	gl	NaClO4	25°C	0.10M	U	M	K1=4.85		1977CSa	(74532)4759
								K(Ni(bpy)+L)=4.45		
Ni++	sp	R4N.X	25°C	0.10M	U		K1=4.57		1973GSa	(74533)4760
								K(Ni+NiL)=2.40		
Medium: Me4NCl. pH=6.2										

```
Ni++       gl  KNO3   15°C 0.10M U        K1=4.79        1972FSa (74534)4761
                                          K(Ni+HL)=2.78
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U    M   K1=4.85        1967SBc (74535)4762
                                          K(Ni(bpy)+L)=4.45
--------------------------------------------------------------------------------
Ni++       gl  R4N.X  30°C 0.10M U        K1=5.32        1966PSa (74536)4763
                                          K(Ni+HL)=2.98
Medium: Me4NBr
--------------------------------------------------------------------------------
Ni++       gl  KNO3   40°C 0.10M U T H    K1=4.90        1966TMb (74537)4764
                                          K(Ni+HL)=2.59
K1=5.18(0.4 C),5.05(12 C),5.02(25 C); K=2.88(0.4 C),2.80(12 C),2.72(25 C).
At 25 C:DH(K1)=-10.5 kJ mol-1, DS=63 J K-1 mol-1; DH(Ni+HL)=-10.0, DS=17
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=5.02        1962TMb (74538)4765
                                          K(Ni+HL)=2.72
--------------------------------------------------------------------------------
Ni++       gl  KCl    22°C 0.10M U        K1=4.54        1961BRb (74539)4766
                                          K(Ni(OH)L+H)=9.3
********************************************************************************
C10H16N5O14P3         H5L    GTP              CAS 86-01-1  (404)
Guanosine-5'-triphosphoric acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C                         2001SBc (74858)4767
                                          K(Ni+HL)=5.42
                                          K(NiHL+H)=4.77
                                          K(Ni+H2L)=3.69
--------------------------------------------------------------------------------
Ni++       nmr NaClO4 25°C 0.10M U    M                    1975SIb (74859)4768
                                          K(NiL+H)=8.64
                                          K(Ni(OH)L+H)=10.57
                                          K(Ni(bpy)L+H)=9.16
By spectrophotometry, K(NiL+H)=8.6.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U T                       1973TRb (74860)4769
                                          K(Ni+HL)=5.78
K1(35 C)=5.87, K1(45 C)=5.70
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M U        K1=14.02       1968GRa (74893)4770
********************************************************************************
C10H16O8P2            H4L                        (6907)
1,2-Diphosphinoethane-P,P,P'P'-tetraethanoic acid;
```

(HOOC.CH2)2P.CH2.CH2.P(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	C		B2=22.24 B(NiH2L2)=31.22 B(NiH4L2)=38.24 B(NiH6L2)=43.60	1992PPb (74933)	4771

Additional method: competition with 1,10-phenanthroline

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	C		B(NiH2L2)=31.22	1982PPc (74934)	4772

****

C10H17NO4 H2L CAS 2848-06-8 (3916)

N-(Cyclohexyl)iminodiethanoic acid; C6H11.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	20°C	0.10M	U		K1=8.08	1964PIa (74965)	4773

****

C10H17NO8S 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
Ni++	gl	NaClO4	25°C	0.10M	C		K1=5.41 B2=9.09 B(NiHL)=8.70	1992GNa (75009)	4774

****

C10H17N2O14P3 H3L TTP CAS 365-08-2 (402)

Thymidine-5'-triphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaCl	25°C	0.10M	C	T	K1=4.87 K(Ni+HL)=4.87	1991SMa (75036)	4775

IUPAC evaluation

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	C		K(Ni+HL)=4.52	1987STb (75037)	4776
Ni++	nmr	NaClO4	25°C	0.10M	U	M	K(NiL+H)=9.08 K(Ni(OH)L+H)=9.9 K(Ni(bpy)L+H)=9.42	1975SIb (75038)	4777

By spectrophotometry, K(NiL+H)=9.3.

****

C10H17N3O6S H3L Glutathione CAS 70-18-8 (333)

Glutamyl-cysteinyl-glycine;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U TIH    K1=7.108       2001SGd (75087)4778
Data for 0.05-0.2 M NaClO4 and 15-45 C. DH(K1)=-30.5 kJ mol-1, DS(K1)=-45
J K-1 mol-1. At I=0, K1=7.720. Also data for MeOH/H2O, EtOH/H2O, DMF/H2O.
-------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U T  M                  1995SSc (75088)4779
                                      K(NiA+L)=6.25
                                      K(NiB+L)=6.83
                                      K(NiC+L)=6.25
                                      K(NiD+L)=7.95
Also data for 40 and 50 C. HA is anthranilic acid, H2B is ascorbic acid,
HC is nicotinic acid, HD is sulfanilic acid.
-------------------------------------------------------------------------
Ni++       gl  NaCl   37°C 0.15M C        K1=7.37   B2=10.44  1980FMf (75089)4780
                                      B(NiHL)=13.91
                                      B(NiHL2)=19.34
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.16M U        K1=5.0         1959MEa (75090)4781
*************************************************************************
C10H17N6O12P3         H4L                      CAS 4209-30-7  (4795)
Adenyl-5'-yl-imidodiphosphoric acid; adenosine-O.PO(OH).O.PO(OH).NH.PO(OH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  R4N.X  20°C 0.10M M        K1=5.69        1976PSe (75164)4782
                                      K(Ni+HL)=3.22
*************************************************************************
C10H18N2O4            H2L                      CAS 17423-86-4  (8122)
1,4-Piperazine-N,N'-dipropanoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   30°C 0.10M U TIH    K1=5.27   B2= 8.23  1991KEa (75187)4783
DH(K1)=-37.9 kJ mol-1, DS(K1)=24.3 J K-1 mol-1; DH(K2)=-17.9,
DS(K2)=3.2. 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
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=10.3        1975BIb (75194)4784
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=9.14        1975CKa (75195)4785
                                      K(NiL(OH)+H)=9.48
*************************************************************************
C10H18N2O4S           H2L                        (6638)
1-Thia-4,7-diazacyclononane-N,N'-diethanoic acid;
-------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=15.60       1993WLa (75210)4786
*************************************************************************
C10H18N2O5            H2L                        (5608)
1-Oxa-4,7-diazacyclononane-N,N'-diethanoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=11.89       1990CCa (75224)4787
*************************************************************************
C10H18N2O5            H2L                        (6634)
N,N-Diethylacetamidoiminodiethanoic acid; (C2H5)2N.CO.CH2.N(CH2.COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.50M U        K1=8.80   B2=13.39  1992GLa (75244)4788
                                         B(NiH-1L)=-2.22
*************************************************************************
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
-------------------------------------------------------------------------
Ni++       gl  NaCl   25°C 0.10M U                        1985KLb (75290)4789
                                      K(NiL+H)=1.73
                                      K(NiH-1L+H)=1.46
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=17.1        1983FSa (75291)4790
-------------------------------------------------------------------------
Ni++       oth oth/un   ?     ?  U        K1=17.7        1970DTc (75292)4791
-------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C  1.0M U    M                  1970HSc (75293)4792
                                      K(NiL+N3)=0.64
                                      K(NiL+SCN)=0.56
                                      K(NiL+py)=1.51
                                      K(NiL+NH3)=1.81
K(NiL+A)=1.19, K(NiL+B)=0.71.   A=hydrazine, B=hydroxylamine
-------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=16.66       1969BNa (75294)4793
2nd method: calorimetry
-------------------------------------------------------------------------
Ni++       sp  KCl    25°C 0.50M U    M                  1967JMa (75295)4794
                                      K(NiL+NH3)=2.00
-------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.10M U   H                   1965WHa (75296)4795
DH(K1)=-43.0 kJ mol-1, DS=188 J K-1 mol-1
-------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 1.25M U    M                  1963BMc (75297)4796
                                      K(NiL+H)=2.54
```

K(CuL+Ni=NiL+Cu)=2.0

Ni++ gl KCl 30°C 0.10M U K1=17.0 1955CMa (75298)4797

****

C10H18N4O6 H2L (4504)

Hexanoic acid bis(3-hydroxycarbamoyl-methyl)amide; HONHCOCH2NHCO(CH2)4CONHCH2CONHOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C		K1=7.44	1999FEa	(75563)4798
							B(Ni2L3)=20.94		
							B(NiHL)=13.89		

****

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
Ni++	gl	KCl	25°C	0.20M	C		K1=3.83	1988VSb	(75573)4799
							B(NiHL)=9.95		
							B(NiH-1L)=-4.05		
							B(NiH-2L2)=10.17		

****

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
Ni++	gl	KNO3	25°C	0.10M	U			1971MMe	(75579)4800
							K(Ni+H2L)=11.0		
							K(NiL+H)=6.81		
							K(NiHL+H)=5.62		

****

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
Ni++	gl	diox/w	30°C	75%	U		K1=9.99 B2=19.53	1972UDa	(75594)4801

Medium: 75% v/v dioxan, 0.01 M Me4NClO4

****

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
Ni++	gl	KNO3	25°C	0.10M	U		K1=1.94	1975MTc	(75613)4802

****

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
--------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=8.70   B2=16.11  1955SAa (75632)4803
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M U        K1=2.41        1981FDb (75649)4804
********************************************************************************
C10H19N3O4             HL    Gly-Gly-Leu      CAS 14857-82-0  (1229)
Glycyl-glycyl-leucine; H2N.CH2.CO.NH.CH2.CO.NH.CH(CH2.CH(CH3)2).COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=3.70   B2=7.01   1978BIb (75663)4805
                                         K3=2.3
                                         K(2H+NiH-2L)=16.03
                                         K(H+NiH-2LOH) >14
********************************************************************************
C10H19N3O4             HL    Gly-Leu-Gly      CAS 2576-67-2  (1228)
Glycyl-leucyl-glycine; H2N.CH2.CO.NH.CH(CH2.CH(CH3)2).CO.NH.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=3.7         1978BIb (75668)4806
                                         K(2H+NiH-2L) 16.31
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=3.02   B2=5.42   1978BIb (75679)4807
                                         K(2H+NiH-2L)=15.48
                                         K(H+NiH-2LOH)=13.0
--------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C 0.01M U        K1=3.16        1959DLb (75680)4808
********************************************************************************
C10H19N3O5           H2L                    CAS 6366-86-5  (8573)
N-6-L-alpha-Asparty-L-lysine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C                        2002KVa (75702)4809
                                         B(NiHL)=14.88
                                         B(Ni2L2)=18.80
********************************************************************************
```

C10H19N3O5 H2L 2,3-DIHA CAS 709640-93-7 (9156)
N-Hydroxy-N'-[4-(hydroxymethylamino)-4-oxobutyl]-N-methyl-butanediamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.20M	C		K1=7.95 B(NiHL)=14.05 B(Ni2L3)=21.9	2004FBa (75706)	4810

****
C10H20N2 L CAS 42121-74-4 (6275)
2(e),3(e)-Diamino-trans-decaline(decahydronaphthalene);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	C		K1=8.22 B2=15.31 K(NiL(OH)+H)=6.60	1974YKa (75723)	4811

****
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
Ni++	gl	NaCl	25°C	0.12M	U		K1=2.99 B2=5.64	1977PNa (75735)	4812
Ni++	gl	NaCl	25°C	0.12M	U		K1=2.99 B2= 5.64	1976PNa (75736)	4813
Ni++	gl	KNO3	25°C	0.10M	C		K1=3.12 B2=5.94 B(NiH-1L)=-6.04 B(NiH-2L2)=-12.4 B(NiH-1L2)=-3.08 B(NiH-2L)=-15.5	1975BPa (75737)	4814

****
C10H20N2O3 HL NIBL (6057)
N-(Isobutyroyl)-lysine; (CH3)2CH.CO.NH.(CH2)4.CH(NH2)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	C		K1=5.21 B2=9.50	1987LMa (75745)	4815
Ni++	cal	NaClO4	25°C	0.10M	C	H		1987LMc (75746)	4816

DH(K1)=-20.90 kJ mol-1, DS(K1)=30.2 J K-1 mol-1.
DH(K2)=-18.81, DS(K2)=19.5.

****
C10H20N2O4 H2L CAS 7532-84-5 (1027)
1,2-Diaminoethane-N,N'-di(2-(2-methyl)propanoic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.10M	U		K1=10.79	1983FSa (75765)	4817

****

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
Ni++	gl	KNO3	25°C	0.10M	U			1977TIa	(75773)4818
							K(Ni+HL)=8.65		

****
C10H20N2O4 H2L CAS 5578-84-7 (5914)
N,N-Dihydroxydecanediamide; HN(OH).CO.(CH2)8.CO.NH(OH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	C		K1=8.78	1989EHa	(75792)4819

****
C10H20N2O4S2 H2L CAS 20902-45-8 (5411)
Penicillamine disulfide, 3,3'-Dithiobis(2-amino-3-methylbutanoic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KCl	25°C	0.20M	C			1988VSb	(75823)4820
							B(NiHL)=12.90		
							B(Ni2L2)=16.27		

****
C10H20N2O6 H2L (7208)
1,2-Diaminoethane-N,N'-bis(3-hydroxy-2-butanoic acid)); (CH2NHCH(COOH)CH(OH)CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	20°C	0.10M	U		K1=11.73	1970DKa	(75828)4821

By spectrophotometry: K1=11.8 in 0.1 M NaClO4

****
C10H20N2O6 H2L CAS 96817-35-5 (4755)
1,2-Diaminoethane-N,N'-bis(4-hydroxy-2-butanoic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	oth/un	20°C	0.10M	U		K1=11.71	1972DKa	(75839)4822

****
C10H20N2S2 L CAS 13749-59-2 (2825)
Tetraethyldithiooxamide; (C2H5)2N.CS.CS.N(C2H5)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	none	25°C	0.0	U		K1=6.36	1976AMc	(75862)4823

****
C10H20N4O2 L CAS 63972-19-0 (137)
1,4,8,11-Tetraazacyclotetradecane-5,7-dione;

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

```
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.20M U                      1984KKc (75885)4824
                                       B(NiH-2L)=-5.15
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.20M U                      1981KKa (75886)4825
                                       B(NiH-2L)=-5.15
********************************************************************************
C10H20N4O4             HL                       (8572)
Glycyl-lysyl-epsilon-glycine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.20M C        K1=6.07   B2= 9.14  2002KVa (75890)4826
                                       B(NiHL)=12.25
                                       B(NiH-1L)=-3.39
********************************************************************************
C10H20O5                L    15-Crown-5       CAS 33100-27-5  (576)
1,4,7,10,13-Pentaoxacyclopentadecane; cyclo(-(O.CH2.CH2)5-)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       con mixed  25°C  90%  C        K1=2.02        2003ISa (75922)4827
Medium: 90% v/v DMSO/H2O.
--------------------------------------------------------------------------------
Ni++       con alc/w  25°C  40%  C        K1=1.95        2001ISa (75923)4828
Medium: 40% v/v EtOH/H2O.
--------------------------------------------------------------------------------
Ni++       nmr non-aq 27°C 100%  C        K1=3.72        2000SMg (75924)4829
Medium: acetonitrile. Method: competitive 7Li nmr technique.
--------------------------------------------------------------------------------
Ni++       cal non-aq 25°C 100%  C   H    K1=2.55        1999SBe (75925)4830
Medium: acetonitrile. DH(K1)=-16.3 kJ mol-1.
--------------------------------------------------------------------------------
Ni++       vlt alc/w  25°C 100%  C        K1=2.59        1987CBd (75926)4831
Medium: methanol, 0.10 M Et4NI or Bu4NClO4. Method: polarography.
Additional method conductivity in methanol: K1=2.32.
********************************************************************************
C10H20S4                L    14-Ane-S4        CAS 24194-61-4  (175)
1,4,8,11-Tetrathiacyclotetradecane; cyclo(-(S.CH2.CH2)2.CH2.(S.CH2.CH2)2.CH2-)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       kin non-aq 25°C 100%  U        K1=1.52        2000KGb (76153)4832
Medium: acetonitrile, 0.15 M NaClO4.
********************************************************************************
C10H21NO               HL                       (3331)
3-Methyl-3-n-pentylaminobutan-2-one oxime
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
```

```
Ni++       gl  oth/un 24°C 0.27M U                    1958MUa (76166)4833
                                         K(NiL2+H)=8.5
*****************************************************************************
C10H21NO3              L                      (6568)
Trans-1-(bis(2-hydroxyethyl)amino)-2-hydroxycyclohexane;
-----------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-----------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C        K1=3.60        1991DCa (76170)4834
                                         K(NiL+OH)=5.06
*****************************************************************************
C10H21N5O2             L                    CAS 76201-29-1  (1611)
1,4,7,10,13-Pentaazacyclopentadecane-2,6-dione;
cyclo(-CO.CH2.NH.CH2.CO.NH(CH2.CH2.NH)3-)
-----------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-----------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=5.4         1997SDc (76202)4835
                                         B(NiH2L)=17.1
                                         B(NiHL)=13.2
                                         B(NiH-1L)=-2.1
                                         B(NiH-2L)=-10.2
*****************************************************************************
C10H21N11              L                      (7006)
1,7-Di(2-(5-tetraazolyl)ethyl)-1,4,7-triazaheptane;
-----------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-----------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.10M U        K1=19.00       1981ESa (76207)4836
*****************************************************************************
C10H22N2               L                    CAS 77037-98-0  (3900)
1-(Cyclohexylamino)-2-methyl-2-propylamine;
-----------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-----------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=0      B2=9.60   1965TSc (76218)4837
                                         K3=3.9
*****************************************************************************
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
-----------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U   H    K1=7.98        1979ASb (76225)4838
Also DH values
-----------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=8.06        1977LAa (76226)4839
-----------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=7.98        1975ASc (76227)4840
*****************************************************************************
```

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
Ni++	gl	NaClO4	25°C	0.10M	U	H	K1=8.06	1979ASb (76247)	4841

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
Ni++	gl	R4N.X	25°C	0.10M	C		K1=5.05	1983LCa (76256)	4842

****

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
Ni++	cal	non-aq	25°C	100%	C	H	K1=>5	1999SBe (76270)	4843

Medium: acetonitrile. DH(K1)=-49.7 kJ mol-1.

Ni++	gl	R4N.X	25°C	0.05M	C		K1=3.3	1997BCc (76271)	4844

Medium: 0.05 M Me4NClO4

Ni++	cal	alc/w	25°C	100%	U	H	K1=4.90	1985BUd (76272)	4845

Medium: MeOH, 0.05 M Et4N.NO3. DH=+23.8 kJ mol-1

Ni++	gl	R4N.X	25°C	0.10M	C		K1=4.05	1983LCa (76273)	4846
Ni++	gl	R4N.X	25°C	0.10M	C		K1=3.73	1977ASc (76274)	4847

****

C10H22N4 L CAS 82413-08-9 (6153)
1,4,7,10-Tetraaza-bicyclo[8.2.2]tetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaNO3	25°C	0.10M	U		K1=14.1	1988HDa (76381)	4848
Ni++	gl	NaNO3	25°C	0.10M	U		K1=14.3	1987HEa (76382)	4849

****

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
Ni++	gl	NaClO4	25°C	0.10M	C			1985HPa (76399)	4850
							B(NiH-1L)=3.90		

```
Ni++       gl  NaClO4 25°C 0.10M C                        1985HPa (76400)4851
                                        B(NiH-1L)=3.90
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 35°C 0.20M U                        1984KKc (76401)4852
                                        B(NiH-1L)=4.00
********************************************************************************
C10H22N4O4            H2L                        (1878)
1,8-Diamino-3,6-diazaoctane-3,6-diethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=19.95       1981CDa (76424)4853
                                        K(Ni+H2L)=9.59
                                        K(Ni+HL)=15.57
********************************************************************************
C10H23N3O              L                          (6453)
1-Oxa-4,8,12-triazacyclotetradecane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C        K1=11.79       1996JLb (76501)4854
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=9.7         1991ACa (76502)4855
                                        B(NiHL)=16.67
                                        B(NiH-2L)=-5.9
                                        K(NiL+2OH)=12.04
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=9.26        1994CDa (76515)4856
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M C        K1=8.93        1989HBa (76516)4857
********************************************************************************
C10H24N2               L                      CAS 3529-09-7  (3314)
N,N'-Di-n-butylethylenediamine; (CH3.CH2.CH2.CH2.NH.CH2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=5.42        1954BMa (76543)4858
********************************************************************************
C10H24N2OS2            L                      CAS 68704-79-0  (1787)
8-Oxa-2,14-diaza-5,11-dithiapentadecane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U   H    K1=4.78        1979ASb (76550)4859
                                        B(NiHL)=7.96
```

Also DH values

Ni++ gl NaClO4 25°C 0.10M U K1=4.92 B2=8.43 1975ASb (76551)4860

****

C10H24N2O2 L Ethambutol CAS 36697-71-9 (1403)

R-2,2'-(1,2-Ethandyldiimino)-bis-1-butanol;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	NaClO4	25°C	0.10M	U	T H	K1=5.92	1990BPb (76569)	4861

****

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
Ni++	gl	NaClO4	25°C	0.30M	C	I	K1=6.91	1976OAa (76579)	4862
							B(NiH-1L)=-2.26		
							B(NiH-2L)=-13.0		
							B(Ni2H-3L)=12.02		
							B(NiL(OH))=-9.15		
Ni++	sp	NaClO4	25°C	0.10M	U		K1=6.5	1969RTa (76580)	4863

By Kinetics : K1=6.5

Ni++	gl	KNO3	25°C	0.50M	U		K1=6.50	1964PGa (76581)	4864
							K(NiH-1L+H)=9.07		
Ni++	gl	oth/un	25°C	0.50M	U		K1=6.27	1960HDa (76582)	4865

****

C10H24N4 L CAS 70072-63-8 (286)

1,4,7,10-Tetraazacyclotetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	KNO3	25°C	0.50M	C	H	K1=14.81	1983MPb (76602)	4866
							B(NiHL)=19.3		
							K(Ni+HL)=8.32		

DH(K1)=-53.5 kJ mol-1.

Ni++	sp	NaClO4	25°C	0.10M	U	H		1983SNb (76603)	4867
							K(NiL+2H2O=NiL(H2O)2)=-0.19		

DH= -20 kJ mol-1,DS=-71 J K-1 m-1. K from the temperature dependence of the absorption spectra ; four-coordinate = six-coordinate equilibria

---

Ni++	cal	KNO3	25°C	0.50M	C	H		1982MPa (76604)	4868

DH(K1)=-53.6 kJ mol-1 (High spin), -36.4 (Low spin)

****

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
---
Ni++ sp none 15°C 0 U T H 1995HKa (76610)4869
K(NiL+2H2O=NiL(OH2)2)=0.173
DH=-22.6 kJ mol-1, DS=-74 J K-1 mol-1. At 22 C: K=0.079; at 29 C: K=0.0;
at 36 C: K=-0.091; at 44 C: K=-0.215; at 51 C: K=-0.284; at 60 C: K=-0.377

Ni++ cal KCl 25°C 1.0M C H 1980FMb (76611)4870
DH1=-69.0 kJ mol-1, Data also for high and low spin forms.
****
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
---
Ni++ kin NaClO4 22°C 0.10M C M 1995KMc (76639)4871
K(NiL+H)=1.8
K(NiL+CO2)=1.21
Metal is Ni(I). Method: pulse radiolysis and laser flash photolysis.

Ni++ gl KNO3 25°C 0.10M C HM 1990BBc (76640)4872
K(cis-NiL+oxalate)=4.47
DH=-10.9 kJ mol-1, DS=14.6 J K-1 mol-1, DG=-25.5 kJ mol-1.
Data also for trans- and square-NiL+oxalate.

Ni++ sp NaCl 25°C 0.50M U K1=20.1 1989EHb (76641)4873
From spectroscopic results: K1= 19.9; from potentiometric results: K1= 20.3

Ni++ sp NaClO4 25°C 0.10M C T H 1977AFb (76642)4874
K(NiL(H2O)2=NiL+2H2O)=0.39
From data for 19-49 C, DH(K)=23 kJ mol-1, DS(K)=84 J K-1 mol-1.

Ni++ sp KCl 25°C 0.10M U H K1=22.2 1974HMb (76643)4875
DH=-129.9 kJ mol-1 and DS=-8.4 J K-1 mol-1.
****
C10H24N4 L (4712)
1,4-Bis(3-aminopropyl)-1,4-diazacyclohexane, 1,4-Bis(3-aminopropyl)-piperazine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 7.00M C K1=10.84 2004BBb (76682)4876

Ni++ gl NaNO3 25°C 0.10M U K1=5.45 1990HNa (76683)4877
****
C10H24N4 L CAS 91135-29-4 (6516)
1,5-Bis(2-aminoethyl)-1,5-diazacyclooctane; NH2.CH2CH2.N(CH2CH2CH2)2N.CH2CH2.NH2

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

```
Ni++       gl  NaNO3  25°C 0.10M U        K1=15.60       1990HNa (76688)4878
********************************************************************************
C10H24N4                L                       CAS 90281-17-7  (722)
1,7-Dimethyl-1,4,7,10-tetraazacyclododecane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C   HM                   1990BBc (76694)4879
                                          K(NiL+oxalate)=4.17
DH=-12.13 kJ mol-1, DS=9.40 J K-1 mol-1, DG=-23.8 kJ mol-1
********************************************************************************
C10H24N4O               L                         (7051)
1-Oxa-4,7,10,13-tetraazacyclopentadecane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C        K1=14.76       1994CDa (76703)4880
                                          K(NiLOH+H)=8.34
--------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C 0.10M U        K1=13.33       1990HWa (76704)4881
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       cal oth/un 25°C    ?  U   H                    1981FMa (76726)4882
DH(K1)=-67.4 kJ mol-1
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       sp  oth/un 25°C 0.10M U        K1=3.94        1959BYa (76751)4883
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M C    M   K1=7.42   B2=10.87  2002GLc (76786)4884
                                          B(NiH3L)=33.19
                                          B(NiH2L)=24.77
                                          B(NiAH4L)=45.97
                                          B(NiAH2L)=28.66
H2A is adenosine-5'-monophosphoric acid.
--------------------------------------------------------------------------------
Ni++       gl  KNO3   20°C 0.10M C    M                   2002GLc (76787)4885
                                          K(Ni+H2L)=3.49
```

```
                                        K(NiA+H2L)=4.31
                                        K(NiA+H4L)=4.23
H2A is adenosine-5'-monophosphoric acid.
********************************************************************************
C10H26N4S4              L                       CAS 55677-43-5  (1178)
1,1,2,2-Tetramercaptoethylamine-ethane; (CH(S.CH2.CH2.NH2)2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U                      1976CJa (76812)4886
                                        K(Ni+H2L)=5.18
********************************************************************************
C10H28N2O12P4         H8L                       CAS 23605-74-5  (435)
(Hexamethylenedinitrilo)tetra(methylenephosphonic acid);
(CH2.CH2.CH2.N(CH2.PO3H2)2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M U        K1=5.40        1980ZRb (76835)4887
                                        K(NiL+H)=9.52
                                        K(NiHL+H)=7.58
                                        K(NiH2L+H)=6.25
                                        K(NiH3L+H)=5.61
********************************************************************************
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
--------------------------------------------------------------------------------
Ni++       cal KNO3   25°C 0.10M U   H    K1=19.16       1971PWa (76857)4888
                                        K(Ni+HL)=15.68
                                        K(NiL+H)=6.62
                                        K(NiHL+L=NiL+HL)=3.49
DH(K1)=-82.13 kJ mol-1, DS=89.87 J K-1 mol-1;  DH(Ni+HL)=-76.7, DS=41.8;
DH(NiL+H)=-41.8, DS=-13.79; DH(NiHL+L=NiL+HL)=-5.43, DS=48.07
--------------------------------------------------------------------------------
Ni++       cal KCl    25°C 0.10M U   H    K1=19.05       1964SPb (76858)4889
                                        B(NiHL)=15.65
K calculated. By calorimetry: DH(K1)=-82.3 kJ mol-1, DS=92.0 J K-1 mol-1;
DH(NiHL)=-76.7, DS=41.8
--------------------------------------------------------------------------------
Ni++       gl  KCl    20°C 0.10M U        K1=19.30       1953SMa (76859)4890
                                        K(Ni+HL)=15.85
                                        K(Ni+H2L)=10.0
                                        K(NiL+H)=6.75
********************************************************************************
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
```

```
-------------------------------------------------------------------------------
Ni++       gl  alc/w   RT   40%  M        K1=4.41   B2= 8.36  1993RAb (76890)4891
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
-------------------------------------------------------------------------------
Ni++       gl  alc/w   RT   40%  M        K1=7.66   B2=11.93  1993RAb (76898)4892
Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C 0.10M U        K1=3.98        1975FSb (76915)4893
                                         K(NiH-1L+H)=6.34
*******************************************************************************
C11H8N6O               HL                       (7009)
1-(5-Tetrazolyl)azo-2-naphthol;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 20°C 0.10M U        K1=10.48  B2=30.65  1978SSf (76923)4894
*******************************************************************************
C11H8N6O7S2          H4L                      CAS 35322-95-7  (909)
3-Hydroxy-4-(1H-tetrazol-5-ylazo)-2,7-naphthalenedisulfonic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M M        K1=10.7   B2=17.40  1977FBa (76934)4895
*******************************************************************************
C11H8N6O8S2          H5L                      CAS 74385-48-1  (897)
2-(1H-Tetrazol-5-ylazo)chromotropic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  NaClO4 25°C 0.10M U                        1984PSb (76946)4896
                                         K(Ni+HL)=7.42
                                         K(Ni+2HL)=12.20
*******************************************************************************
C11H8O2               HL                       CAS 3144-47-6  (3344)
3,4-Benzotropolone;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U        K1=7.8    B2=14.1   1954BFc (76971)4897
                                         K3=3.7
```

****

C11H8O2 HL (3345)

4,5-Benzotropolone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	30°C	50%	U		K1=7.8 B2=14.0	1954BFc (76976)	4898

****

C11H8O2S2 HL CAS 1138-14-3 (3352)

Di-2-thenoylmethane; C4H3S.CO.CH2.CO.C4H3S

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	sp	mixed	25°C	30%	U		B2=11.4	1965CAa (76982)	4899
Medium: 30% THF, 1 M NaClO4									
Ni++	gl	diox/w	30°C	75%	U		K1=9.93 B2=19.16	1953UFe (76983)	4900

****

C11H8O3 H2L CAS 86-48-6 (1129)

1-Hydroxy-2-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	alc/w	RT	40%	M		K1=10.65 B2=16.94	1993RAb (76998)	4901
Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.									
Ni++	gl	alc/w	25°C	50%	U	M	K1=6.99	1980DCa (76999)	4902
							K(Ni(phen)+L)=6.59		
Ni++	gl	KNO3	25°C	0.10M	M		K1=6.99	1980DCb (77000)	4903
							K(Ni(nta)+L)=3.68		

****

C11H8O3 H2L CAS 2083-08-1 (1131)

2-Hydroxy-1-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	alc/w	25°C	50%	U	M	K1=6.96	1980DCa (77055)	4904
							K(Ni(phen)+L)=6.17		
Ni++	gl	KNO3	25°C	0.10M	M		K1=6.96	1980DCb (77056)	4905
							K(Ni(nta)+L)=3.40		

****

C11H8O3 HL CAS 483-35-6 (3347)

2-Hydroxy-3-methyl-1,4-naphthoquinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	diox/w	30°C	75%	U		K1=6.46 B2=12.07	1960KFc (77071)	4906

****

C11H8O3 H2L CAS 92-70-6 (1130)
2-Hydroxy-3-naphthoic acid (3-Hydroxy-2-naphthoic acid);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w RT 40% M K1=11.23 B2=18.21 1993RAb (77101)4907
Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

Ni++ gl diox/w 25°C 50% C K1=7.07 1987CFb (77102)4908
In 50% dioxan/H2O; 0.2 M KNO3.

Ni++ gl diox/w 20°C 50% M TIH K1=7.20 B2=13.65 1978SKk (77103)4909
Medium: 50% v/v dioxane/H20, 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=7.03, K2=8.82.
****
C11H8O3 HL Plumbagin CAS 81402-06-4 (882)
6-Hydroxy-2-methyl-1,4-naphthoquinone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 30°C 50% U K1=6.02 B2=10.96 1981RRc (77143)4910
****
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
---
Ni++ gl diox/w 30°C 75% U K1=10.20 B2=19.16 1953UFe (77150)4911
****
C11H8O4 HL CAS 7555-37-5 (4812)
3-Acetyl-4-hydroxycoumarin

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 35°C 50% U K1=2.72 B2=4.82 1971MAa (77164)4912
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; CHO.C9H3O(:O)(CH3)(OH)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 35°C 70% U M K1=5.15 B2=8.54 1984CEa (77193)4913
K(Ni(bpy)+L)=4.90
K(Ni(phen)+L)=4.70
****
C11H9N L CAS 1008-89-5 (3934)
2-Phenylpyridine; C6H5.C5H4N

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

---
Ni++ gl NaClO4 25°C 0.10M U K1=<1 1964KSb (77301)4914
****
C11H9N L Phenylpyridine CAS 939-23-1 (2794)
4-Phenylpyridine; C6H5.C5H4N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ sp alc/w 25°C 100% U K1=2.8 1980CKc (77307)4915
Medium: EtOH. In MeOH: K1=1.9; n-PrOH: 3.1; iso-PrOH: 3.9
****
C11H9NO HL CAS 21783-68-0 (3354)
2-(2'-Hydroxyphenyl)pyridine; HO.C6H4.C5H4N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 20°C 0.01M U K1=6.1 1956ARb (77309)4916
****
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
---
Ni++ gl diox/w 25°C 50% U K1=7.67 B2=16.22 1984YAa (77312)4917
****
C11H9NO2 HL CAS 92609-55-3 (4827)
5-Acetyl-8-hydroxyquinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 60% U K1=9.91 B2=19.15 1973SCd (77322)4918
Medium: 60% dioxan, 0.1 M NaClO4
****
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
---
Ni++ gl diox/w 25°C 50% U M K1=5.02 B2=11.03 1984ABb (77340)4919
B(NiL(bpy))=14.00
B(NiL(phen))=15.98

Ni++ gl NaClO4 25°C 0.10M U K1=6.32 B2=11.31 1975BLa (77341)4920
****
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
---
Ni++ gl diox/w 30°C 0.10M U B2=13.54 1981KSa (77358)4921

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
Ni++	sp	NaClO4	25°C	0.10M	U		K1=5.77		1977HCa	(77368)4922

Using kinetic methods, K1=5.72

****

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
Ni++	gl	diox/w	25°C	?	M	T HM	K1=5.92	B2=10.93	1988ABa	(77381)4923
							K(Ni(phen)+L)=6.01			
							K(NiL+NiA=NiLA+Ni)=0.09			
							K(NiL2+NiA2=2NiLA)=1.42			

Data also given for ternary complexes with many substituted furohydroxamic acids with 1,10-phenanthroline (A)

Ni++	gl	diox/w	25°C	50%	U	M	K1=5.86	B2=10.83	1984ABb	(77382)4924
							B(NiL(bpy))=13.84			
							B(NiL(phen))=15.83			

Ni++	gl	NaClO4	25°C	0.10M	U		K1=6.25	B2=11.78	1975BLa	(77383)4925

****

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
Ni++	gl	NaClO4	25°C	0.10M	U		K1=4.47	B2=7.70	1982MSa	(77397)4926

****

C11H9NO4 H2L CAS 4321-82-7 (4829)
3-Acetyl-4-hydroxycoumarin oxime;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	diox/w	35°C	50%	U				1971MAa	(77406)4927
							K(Ni+HL)=7.89			
							K(Ni+2HL)=15.94			

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

---

Ni++ gl alc/w 35°C 70% U K1=7.45 B2=13.11 1984CEa (77434)4928
****
C11H9N2O2F3S HL CAS 33354-16-4 (1681)
2-Methyl-8-(Trifluoromethanesulfonamido)quinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 75% U K1=6.3 B2=11.8 1984NYa (77441)4929
****
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
---
Ni++ sp alc/w 20°C 50% U B2=22.8 1967ANa (77450)4930
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
---
Ni++ sp alc/w 24°C 5% U B2=8.95 1973BJb (77467)4931
K(NiL2+OH)=4.58
Medium: 5% EtOH, 0.1 M NaClO4

Ni++ gl alc/w 25°C 50% U K1=5.0 B2=9.50 1967ANa (77468)4932
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
---
Ni++ sp alc/w 25°C 30% U K1=13.61 1987LSb (77504)4933
B(NiHL)=20.46
Medium: 30% v/v EtOH/H2O, 0.1 M KNO3

Ni++ vlt oth/un 25°C ? U B2=9.58 1986HSa (77505)4934

Ni++ sp NaNO3 25°C 0.10M U K1=14.05 1986OHa (77506)4935
K(Ni+HL)=7.70

Ni++ sp NaNO3 ? 0.10M U 1970NEa (77507)4936
K(Ni+HL+2L)=25.1 at pH 8

Ni++ gl diox/w 25°C 50% U 1962CYa (77508)4937
K(Ni+HL)=13.2
K(NiHL+HL)=12.8
K(NiL+H)=7.7

K(NiOHL+H)=9.2
****
C11H9N3O4 H2L CAS 82628-26-0 (1379)
1-(2-Tolyl)violuric acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl alc/w 18°C 50% U T K1=6.10 B2=10.68 1982SGa (77618)4938
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
---
Ni++ gl alc/w 18°C 50% U T K1=6.30 B2=11.02 1982SGa (77625)4939
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
---
Ni++ gl alc/w 18°C 50% U T K1=6.64 B2=11.54 1982SGa (77632)4940
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
---
Ni++ gl NaClO4 28°C 0.10M U T H K1=4.87 B2=9.42 1980MGd (77638)4941
****
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
---
Ni++ gl KCl 25°C 0.20M C K1=4.72 B2= 9.57 2001OVa (77649)4942
B(NiH-1L)=-3.57
B(NiHL)=7.63

Ni++ gl NaClO4 25°C 0.10M C M 1979FSa (77650)4943
B(NiL(pyrocatecholate))=14.34
K(NiL+pyrocatecholate)=9.32
K(Ni(pyrocatecholate)+L)=5.45

Ni++ gl KNO3 20°C 0.10M U K1=5.02 B2=9.17 1970BAa (77651)4944
****
C11H10N2O L (7591)

4'-(Imidazol-1-yl)acetophenone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaNO3 25°C 0.50M M K1=2.60 1998KSa (77662)4945
****
C11H10N2O2 HL CAS 75793-37-6 (1669)
N-(8-Quinolyl)aminoethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl NaClO4 25°C 0.10M U K1=3.8 B2=7.70 1969TKa (77675)4946
****
C11H10N3OClS HL (1294)
2-(4',5'-Dimethyl-2'-thiazolylazo)-4-chlorophenol;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 25°C 60% U K1=8.25 B2=17.09 1981KTa (77686)4947
****
C11H10N4 L PAPHY CAS 2215-33-0 (1305)
Pyridine-2-aldehyde-2'-pyridyl-hydrazone; C5H4N.CH:N.NH.C5H4N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl oth/un 25°C 0.0 U B2=32 1964GHd (77698)4948
K(Ni+HL)=8.3
K(Ni+2HL)=18.5
K(NiHL2+H)=7.37
K(NiL2+H)=8.50
By spectrophotometry: K(NiHL2+H)=7.42, K(NiL2+H)=8.61
****
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
---
Ni++ gl alc/w 25°C 50% U K1=10.7 B2=18.80 1967ANd (77713)4949
Medium: 50% MeOH, 0.1 M NaClO4
****
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
---
Ni++ gl alc/w 25°C 70% C K1=12.16 B2=19.50 1982SDa (77719)4950
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
-------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  75%  U        K1=4.26   B2=8.17   1986MIa (77724)4951
*******************************************************************************
C11H10N4O4             HL                     CAS 92265-26-4  (6210)
5-(2'-Methoxyphenylazo)barbituric acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  75%  U        K1=6.52   B2=11.48  1986MIa (77738)4952
*******************************************************************************
C11H10N4O5S2          H2L                     CAS 83767-79-7  (558)
2-(2'-Thiazolylazo)-5-sulfomethylaminobenzoic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       sp  KNO3   25°C 0.10M U        K1=4.8         1979IWa (77754)4953
*******************************************************************************
C11H11NO               HL                     CAS 39892-35-8  (3940)
2-Ethyl-8-hydroxyquinoline;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  oth/un 25°C  0.0  U        K1=9.35   B2=18.26  1966KUc (77762)4954
*******************************************************************************
C11H11NO2              HL                     CAS 830-96-6  (892)
Indole-3-propanoic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  diox/w 25°C  50%  U        K1=3.18   B2=5.58   1981SKc (77777)4955
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
-------------------------------------------------------------------------------
Ni++       gl  alc/w  22°C  80%  U T H    K1=7.85   B2=14.30  1985SAb (77784)4956
30 C: K1= 7.70, K2=6.35; 40 C: K1= 7.55, K2=6.30
DH(K1)=-25.1 kJ mol-1, DS=62 J K-1 mol-1; DH(K2)=-14.2, DS=77
*******************************************************************************
C11H11NO6              H3L                    CAS 1147-65-5  (425)
N-(2'-Carboxyphenyl)iminodiethanoic acid; HOOC.C6H4.N(CH2.COOH)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.10M C    M   K1=9.48        1990DAb (77801)4957
                                          K(NiL+A)=4.39
```

B(NiLA)=13.87

H2A: salicylaldoxime

Ni++	gl	KNO3	25°C	0.10M	C M	K1=9.48	1990DAc	(77802)4958
						K(NiL+A)=3.65		
						B(NiAL)=13.13		

HL: benzohydroxamic acid

Ni++	gl	KNO3	25°C	0.10M	U	K1=9.48	1983FSa	(77803)4959
Ni++	vlt	KNO3	25°C	0.10M	U	K1=9.48	1967UKa	(77804)4960
Ni++	gl	KCl	22°C	0.10M	U	K1=9.6	1961UHa	(77805)4961
						K(Ni+HL)=3.9		

****

C11H11NS HL CAS 54128-50-6 (1033)
2,7-Dimethyl-8-mercaptoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	gl	non-aq	25°C	100%	U		K1=8.2	B2=14.2	1984UBa	(77851)4962

Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

Ni++	EMF	non-aq	25°C	100%	U	K1=8.2	B2=14.20	1983UBa	(77852)4963

Medium: DMF, 0.1 M LiClO4

****

C11H11NS2 HL CAS 54487-80-8 (5694)
2-Methyl-(5-thiomethyl)-8-mercaptoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Ni++	EMF	non-aq	25°C	100%	U		K1=7.3	B2=12.60	1986UBa	(77863)4964

Medium: dimethylformamide, LiClO4

****

C11H11N2O2Br HL (9228)
3-[4-Bromophenylazo]penta-2,4-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ni++	gl	alc/w	25°C	0.1M	U		K1=7.67	2004GMc	(77870)4965

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
Ni++	gl	alc/w	25°C	0.1M	U		K1=7.70	2004GMc	(77882)4966

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
---
Ni++ gl alc/w 25°C 0.1M U K1=8.31 2004GMc (77893)4967
Medium: 0.1 mol/L KCl in 3:7 EtOH/H2O mixture
****
C11H11N3O2 HL CAS 51451-00-4 (4831)
3-Methyl-4-(2'-methylphenylazo)isoxazol-5-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 75% U K1=4.07 B2=8.60 1971SYa (77907)4968
****
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
---
Ni++ gl diox/w 30°C 75% U K1=4.68 B2=9.59 1971SYa (77910)4969
****
C11H11N3O2S HL (4866)
3-Methyl-4-(4'-methylthiophenylazo)isoxazol-5-one;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Ni++ gl diox/w 30°C 75% U K1=4.8 B2=9.74 1971SYa (77914)4970
****
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
---
Ni++ gl alc/w 30°C 50% C M 1999MBc (77924)4971
B(Ni(gly)L)=11.79
B(NiAL)=10.84
B(Ni(met)L)=9.70
B(NiH-1(gly)L)=3.61
In 50% v/v EtOH/H2O, 0.10 M NaNO3. B(NiH-2(gly)L)=-5.64; B(NiH-1AL)=2.84,
B(NiH-2AL)=-6.16; B(NiH-1(met)L)=2.22, B(NiH-2(met)L)=-5.68. A: Beta-ala
---
Ni++ gl diox/w 30°C 50% U K1=3.96 B2= 7.48 1993MBc (77925)4972
*K(NiL)=-8.18
*K(NiL2)=-5.32
*K(Ni(OH)L2)=-10.88
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
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=6.21   B2=11.88  1971SYa (77938)4973
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=4.55   B2=9.59   1971SYa (77943)4974
*******************************************************************************
C11H11N3O3S            L                      CAS 67665-24-1  (8341)
Furoin thiosemicarbazone;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  alc/w  30°C  50%  U T H    K1=10.11  B2=19.45  1991HRa (77947)4975
Medium: 50% v/v EtOH/H2O, 0.1 M NaClO4. Data for 40 and 50 C.
DH(K1)=-112 kJ mol-1, DS(K1)=177 J K-1 mol-1; DH(K2)=-137, DS(K2)=275.
*******************************************************************************
C11H11N3O4             HL                       (9230)
3-[4-Nitrophenylazo]penta-2,4-dione;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  0.1M U        K1=7.07        2004GMc (77953)4976
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
-------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  70%  U        K1=7.15        1992CGd (77976)4977
Medium: 70% EtOH/H2O. For 4-fluoro K1=5.19; 4-bromo 7.18; 4-iodo 7.73
-------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  50%  U        K1=9.97   B2=17.10  1961MJa (77977)4978
*******************************************************************************
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
-------------------------------------------------------------------------------
Ni++       gl  KNO3   25°C 0.50M U        K1=0.72   B2=1.23   1980LWa (77999)4979
                                          B3=1.54
*******************************************************************************
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
Ni++	gl	NaClO4	25°C	0.10M	U	TIH	B2=20.92		1988GRb (78011)	4980

35 C:B2=21.05, 45 C:21.15. DH(B2)=20.9 kJ mol-1, DS=470.8 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
Ni++	gl	KNO3	35°C	0.10M	C	M	K1=5.15		1999DSb (78119)	4981
							B(NiAL)=5.25			

A is thiamine hydrochloride.

Ni++	gl	KNO3	35°C	0.10M	C	M	K1=5.50		1997PSb (78120)	4982
							K(NiL+A)=5.21			

H2A is thiamine orthophosphoric acid.

Ni++	gl	NaClO4	30°C	0.20M	U	M	K1=5.25	B2=9.96	1990MBa (78121)	4983
							B(NiL(HTyr))=10.13			
							B(NiL(Phe))=10.25			
							B(NiL(H2DOPA))=10.69			
Ni++	gl	KNO3	35°C	0.10M	U		K1=5.37		1990RSe (78122)	4984
Ni++	gl	KNO3	35°C	0.10M	U	M	K1=5.56		1989RSb (78123)	4985
							K(Ni(thiodipropanoate)+L)=5.31			
Ni++	gl	KNO3	35°C	0.20M	U	M	K1=5.25	B2=9.70	1989RVa (78124)	4986
							K(NiA+L)=5.28			

A=bis(imidazol-2-yl)methane

Ni++	gl	KNO3	25°C	0.20M	U	M	K1=5.50		1988BSc (78125)	4987
							K(Ni(bpy)+L)=5.89			
Ni++	gl	KNO3	25°C	0.10M	U	M	K1=5.47	B2=10.68	1988MBa (78126)	4988
Ni++	gl	KNO3	35°C	0.10M	C	M	K1=5.35		1983KSc (78127)	4989
							K(NiHA+L)=5.62			
							K(NiHB+L)=5.27			

A is adenine; HB is cytosine.

Ni++	vlt	NaClO4	25°C	0.10M	C		K1=7.2		1981KVa (78128)	4990

Method: polarography. Medium pH 7.0

Ni++	gl	KNO3	25°C	0.10M	U	M	K1=5.48	B2=10.40	1980OFa (78129)	4991
							K3=3.83			
							B(NiL(ATP))=8.45			
							K(Ni(ATP)+L)=5.84			
							K(NiL+ATP)=2.97			

```
------------------------------------------------------------------------------
Ni++       gl  NaNO3  25°C  1.0M U        K1=5.47   B2=10.09  1973BJd (78130)4992
                                         B3=13.56
------------------------------------------------------------------------------
Ni++       vlt KNO3   25°C 0.10M U        K1=3.0    B2=7.18   1971LCb (78131)4993
                                         B3=9.83
------------------------------------------------------------------------------
Ni++       gl  NaNO3  20°C 0.37M U      T K1=5.68   B2=10.95  1971WSa (78132)4994
------------------------------------------------------------------------------
Ni++       gl  NaClO4 25°C  3.0M U      T K1=5.76   B2=10.98  1970WIa (78133)4995
                                         B3=15.46
------------------------------------------------------------------------------
Ni++       gl  oth/un 20°C 0.01M U        K2=10.2        1950ALa (78134)4996
******************************************************************************
C11H12N2O2             HL                        (9226)
3-[Diphenylazo]penta-2,4-dione;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Ni++       gl  alc/w  25°C  0.1M U        K1=8.65        2004GMc (78244)4997
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
------------------------------------------------------------------------------
Ni++       gl  diox/w 30°C  75%  U        K1=8.8    B2=18.3   1984NYa (78255)4998
******************************************************************************
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
------------------------------------------------------------------------------
Ni++       gl  KCl    25°C 0.10M C        K1=3.65   B2=6.89   1994JBa (78264)4999
                                        B(NiH-1L)=-4.17
                                        B(NiH-1L2)=-1.03
                                        B(NiH-2L2)=-9.23
```

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EXPLANATORY NOTES

DATA Flags are :-

T Data at other TEMPERATURES
I Data with various BACKGROUNDS
H Data for THERMOCHEMICAL quantities
M Data for TERNARY Complexes

EVALUATION Flags are :-

T or IUP=T signifies EVALUATION RATING = Tentative by IUPAC
R or IUP=R signifies EVALUATION RATING = Recommended by IUPAC

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