SC-Database
Software version = 5.81 Data version = 4.62
Experiment list contains 1840 experiments for
 (no ligands specified)
 3 metals : Hg++, Hg2++, HgR+
 (no references specified)
 (no experimental details specified)

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e- HL Electron (442)

Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	non-aq	25°C	100%	C	IH	E0(Hg(l)/Hg2+)= -301 mV	1980APa (516)	1
Medium: DMSO, 1 M NH4ClO4. E0 referred to E0(aq)=0 for the Ag(s)/Ag+ elect.									
Hg++	sol	oth/un	25°C	dil	U	T	K(Hg(l)=Hg(aq))=-6.52	1974ONa (517)	2
K=-5.79(80 C)									
Hg++	EMF	non-aq	25°C	100%	U		K(Hg + Hg(l)=Hg2++)=1.6	1974SLa (518)	3
Medium: DMSO, 1 M MClO4(M=Li or Na)									
Hg++	EMF	non-aq	25°C	100%	U		K(Hg + Hg(l)=Hg2++)=2.70	1973CCa (519)	4
Medium: acetonitrile									
Hg++	EMF	non-aq	25°C	100%	U		K(Hg + Hg(l)=Hg2++)=3.4	1972FDa (520)	5
Medium: DMSO, 0.1 M LiClO4									
Hg++	sol	NaCl	25°C	6.10M	U	T	K(Hg(l)=Hg(aq))=-6.78	1972GHa (521)	6
Conc. of NaCl:in M units; K=-7.24(5 C), -6.38(45 C), -5.95(70 C); log K=-6.043 -1639.8/T+1.92301log T									
Hg++	EMF	oth/un	25°C	1.00M	U		K=-28.1(-0.83V) K'=-34.5(-1.02V)	1972GKa (522)	7
Medium: Na2SO4; K: HgSe(s)+2e=Hg(l)+Se--. K': HgTe(s)+2e=Hg(l)+Te--									
Hg++	EMF	oth/un	250°C	100%	U		K(Hg + Hg(l)=Hg2++)=2.18	1972SDa (523)	8
Medium: (Na,K)NO3									
Hg++	EMF	non-aq	25°C	100%	U		K(Hg + Hg(l)=Hg2++)=0.6	1971BGa (524)	9

Medium: N,N-dimethylacetamide, 0.1 M LiClO4

Hg++ sol none 25°C 0.00 U T 1971GHd (525) 10
K(Hg(l)=Hg(aq))=-6.54
K=-6.69(0 C), -6.58(20 C), -6.40(40 C), -6.17(60 C), -5.91(80 C), -5.62(100 C), -5.31(120 C)

Hg++ sp oth/un 125°C 100% U T H 1971TFa (526) 11
K(Hg + Hg(l)=Hg2++)=5.32
Medium: (Na,Al)Cl(n(Na):n(Al)=35:65); DH=-68.2 kJ mol-1; K=4.34(175 C), 3.18(250 C) M units; Method: also current-voltage studies and Raman

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Hg++ sp oth/un 125°C 100% U T H 1971TFa (527) 12
K=4.48
Medium: (Na,Al)Cl(n(Na):n(Al)=35:65); DH=-56.9 kJ mol-1;
K(Hg++ + Hg3++=2Hg2++)=3.65(175 C), 2.70(250 C). Raman also used

---

Hg++ EMF oth/un 135°C 100% U 1969APa (528) 13
K(Hg + Hg(l)=Hg2++)=4.6
Medium: (Na,K,Al)Cl

Hg++ EMF oth/un 150°C 100% U 1968HPa (529) 14
K(Hg + Hg(l)=Hg2++)=4.56
Medium: (Na,K,Al)Cl

Hg++ EMF non-aq 20°C 100% U 1967KBa (530) 15
K(Hg++ + Hg(l) = Hg2++)=0.7
Medium: Me2NCHO, 0.1 M HClO4

Hg++ EMF NaClO4 25°C 2.0M U I 1962ZSa (531) 16
K=30.95(915.44 mV)
K: 2Hg+2e=Hg2. In 2 M HClO4 K=31.12(920.36 mV)

Hg++ EMF none 25°C 0.0 U 1956HSa (532) 17
K=30.68(907.5 mV)
K: 2Hg+2e=Hg2. K(Hg+Hg(liq)=Hg2)=1.94

Hg++ EMF none 20°C 0.0 U H 1954SAa (533) 18
K(Hg+Hg(liq)=Hg2)=1.93
DH(K)=3.4 kJ mol-1, DS=25 J K-1 mol-1, 0 to 40 C

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Br- HL Bromide CAS 10035-10-6 (19)
Bromide;

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

---

Hg++ gl NaClO4 25°C 0.15M C H K1=6.49 2003AGb (1945) 19
Metal is CH3Hg+. By calorimetry, DH(K1)=-37.6 kJ mol-1, DS(K1)= -1.8 J K-1 mol-1.

```
Hg++       sp  alc/w  20°C 100%  U                        1991GAa  (1946)  20
                                        K3=3.08
Medium: MeOH
-------------------------------------------------------------------------------
Hg++       sp  oth/un 20°C  var  U    M                   1991GAb  (1947)  21
                                        K(HgI2+L)=1.92
                                        K(HgI2L+L)=0.84
-------------------------------------------------------------------------------
Hg++       sp  non-aq 20°C 100%  C                        1991GAc  (1948)  22
                                        K4=0.42
Medium: methanol.
-------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H    K1=16.2   B2=31.44  1990PDa  (1949)  23
                                        K3=5.74
                                        K4=3.26
Medium: Acetonitrile, 0.1 M (PyH)CF3SO3
DH(K1)=-58.9, DH(K2)=-49.1, DH(K3)=-31.1, DH(K4)=-31.9 kJ mol-1
-------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H    K1=10.01  B2=18.08  1985AIa  (1950)  24
                                        K3=5.13
                                        K4=2.35
Medium: DMSO,1 M NH4ClO4. DH(K1)=-24.0 kJ mol-1, DH(K2)=-32.9, DH(K3)=-27.7,
DH(K4)=-21.5. In 0.1 M: K1=10.81, B2=19.75, B3=25.34; DH(K1)=-20.0
-------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H    K1=10.73  B2=19.46  1985AIa  (1951)  25
                                        K3=4.71
                                        K4=1.9
Medium: Pyridine, 0.1 M (PyH)CF3SO3;
DH(K1)=-13.6, DH(K2)=-8.7,  DH(K3)=-14.4, DH(K4)=-7.5 kJ mol-1
-------------------------------------------------------------------------------
Hg++       sp  none   20°C  0.0  U    M                   1984BSe  (1952)  26
                                        B(HgBrI)=3.64
                                        B(HgBrCl)=2.46
-------------------------------------------------------------------------------
Hg++       sp  NaClO4 20°C  1.0M U  I                     1984GAc  (1953)  27
                                        K3=2.34
                                        K4=1.91
At I=0 corr. K3=2.23, K4=1.40
-------------------------------------------------------------------------------
Hg++       cal oth/un 25°C 0.50M U TIH                    1984VKc  (1954)  28
                                        K(HgBr2+Br)=2.10
                                        K(HgBr2+2Br)=3.89
DH(K3)=-10.96 kJ mol-1; DS(K3)=3.5 J mol-1 K-1;
DH(HgBr2+2Br)=-26.23 kJ mol-1; DS=-13.5
-------------------------------------------------------------------------------
Hg++       oth non-aq 25°C 100%  C   H    K1=12.92  B2=21.96  1981ABc  (1955)  29
                                        B3=27.62
                                        B4=30.22
Medium: DMSO, 0.1 M NH4ClO4. Mean values from potentiometry (amalgam) and
calorimetry. DH(B1)=-20.0; DH(B2)=-44.1; DH(B3)=-68.5; DH(B4)=-85.8 kJ mol-1
```

```
-------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H    K1=12.14  B2=20.20  1981APb  (1956)  30
                                          B3=25.33
                                          B4=27.87
Medium: DMSO, 1.0 M NH4ClO4. DH(K1)=-24.7; DH(B2)=-56.6; DH(B3)=-84.4;
DH(B4)=-103.5 kJ mol-1
-------------------------------------------------------------------------------
Hg++       sp  NaClO4 20°C  var  U    M                 1980GAc  (1957)  31
                                          K(HgI2+HgBr2=2HgIBr)=1.26
                                          K(HgCl2+HgBr2=2HgClBr)=0.70
                                          K(HgBr2+Cl)=0.23
-------------------------------------------------------------------------------
Hg++       cal NaClO4 25°C  0.5M U TI     K1=9.14   B2=17.33  1980VKb  (1958)  32
                                          DH(K1)=-41.8 kJ/mol
                                          DH(B2)=-85.8
For T=60 C: K1=8.43; B2=15.87; DH1=-34.9 kJ/mol; DH(Hg+2L)=-72.0 kJ/mol
Also data for 0 M and 2 M NaClO4; T=40 C
-------------------------------------------------------------------------------
Hg++       sp  oth/un 20°C 0.01M U    M                 1978BSa  (1959)  33
                                          K(Hg(SCN)2+HgBr2)=0.81
-------------------------------------------------------------------------------
Hg++       cal NaClO4 25°C 0.50M C   H                  1977EKc  (1960)  34
DH(K1)=-42.7 kJ mol-1, DH(K2)=-46.4, DH(K3)=-12.6, DH(K4)=-14.4.
-------------------------------------------------------------------------------
Hg++       vlt non-aq 25°C 100%  C                      1977GPb  (1961)  35
                                          K3=7.0
Medium: hexamethylphosphotriamide
-------------------------------------------------------------------------------
Hg++       sol NaClO4 20°C 1.00M U    M                 1975ZCa  (1962)  36
                                          B(Hg(Oxalate)Br)=9.09
                                          B(Hg(Oxalate)Br2)=8.91
-------------------------------------------------------------------------------
Hg++       oth non-aq 42°C 100%  U TIH                  1974EAa  (1963)  37
                                          K(2HgL2=Hg2L4)=1.2
Medium: C6H6. K=3.0(55.6 C). In C6H5CH3: K=2.3(42.1 C), K=1.7(55.6 C).
Also p-xylene, mesitylene. Method: Vapor phase osmometry
-------------------------------------------------------------------------------
Hg++       EMF non-aq 30°C 100%  U       K1=12.0   B2=15.1   1974JAc  (1964)  38
                                          B3=17.7
Medium: pyridine, containing 0.2 M LiClO4. m units
-------------------------------------------------------------------------------
Hg++       vlt NaClO4   ?   var  U                      1974KIb  (1965)  39
                                          B4=20.2
-------------------------------------------------------------------------------
Hg++       dis R4N.X  55°C    ?  U T H                  1974NGc  (1966)  40
                                          K3=2.15
                                          K4=1.79
Medium: NH4NO3(H2O)2. DH(K3)=-15.9 kJ mol-1, DH(K4)=-18.0; K3=2.04, K4=1.65
(70 C); K3=1.93, K4=1.54(85 C) m units
-------------------------------------------------------------------------------
```

```
Hg++       EMF non-aq 25°C 100%  U                        1974SLa  (1967)  41
                                      B3=28.32
                                      B4=29.20
Medium: DMSO, 1 M MClO4(M=Li,Na)
-------------------------------------------------------------------------------
Hg++       EMF non-aq 25°C 100%  U        B2=35.4         1973CCa  (1968)  42
                                      B3=42.4
                                      B4=46.7
Medium: MeCN
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.50M U  I     K1=9.04   B2=17.3   1972ALa  (1969)  43
                                      B(Hg(OH)L)=5.68
K1=9.3, B2=17.5, B(Hg(OH)L)=5.90(I=3). redox electrode also used
-------------------------------------------------------------------------------
Hg++       EMF non-aq   ?  100%  U        B2=20.2         1972BGa  (1970)  44
Medium: ethylene glycol, 0.1 M LiClO4
-------------------------------------------------------------------------------
Hg++       EMF non-aq 25°C 100%  U        B2=22.2         1972FDa  (1971)  45
                                      B3=28.0
                                      B4=30.4
Medium: DMSO, 0.1 M LiClO4
-------------------------------------------------------------------------------
Hg++       EMF non-aq 90°C 100%  U T H    B2=14.00        1972KRa  (1972)  46
                                      B4=18.18
Medium: (Me2NH2)2SO4. DH(B4)=-7.9 kJ mol-1; B2=14.83, B4=16.82(101 C);
B2=12.69, B4=15.75(115 C) x units
-------------------------------------------------------------------------------
Hg++       EMF non-aq   ?  100%  U                        1971BGa  (1973)  47
                                      B4=37.9
Medium: N,N-dimethylacetamide, 0.1 M LiClO4
-------------------------------------------------------------------------------
Hg++       sp  NaClO4 20°C 0.10M U    M                  1971BPd  (1974)  48
                                      K(HgCl2+L=HgL+2Cl)=2.37
                                      K(HgCl2+2L=HgL2+2Cl)=4.08
                                      K(HgCl3+L=HgL+3Cl)=2.40
                                      K(HgCl3+2L=HgL2+3Cl)=4.0
Medium: HClO4. K(HgCl3+3L=HgL3+3Cl)=5.4. K(HgCl4+L)=HgL+4Cl)=2.5, K(HgCl4+2L
=HfL2+4Cl)=4.3, K(HgCl4+3L=HgL3+4Cl)=5.4, K(HgCl4+4L=HgL4+4Cl)=6.2
-------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.40M U        K1=9.07   B2=17.21  1970DSe  (1975)  49
                                      B3=19.8
                                      B4=21.8
Medium: HClO4
-------------------------------------------------------------------------------
Hg++       vlt non-aq 25°C 100%  U        B2=24.17        1970MDa  (1976)  50
                                      B3=31.62
                                      B4=34.73
Medium: DMF, containing 0.1 M Et4NClO4
-------------------------------------------------------------------------------
Hg++       dis NaClO4 25°C 0.50M U                        1970SIa  (1977)  51
```

```
                                        K3=2.27
                                        K4=1.60
-------------------------------------------------------------------------------
Hg++       sp  oth/un   ?  0.10M U                      1969NOc  (1978)  52
                                        K(HgA+L)=5.8
Medium: KBr.H6A=methylthymol blue
-------------------------------------------------------------------------------
Hg++       sol oth/un 20°C 2.20M U                      1968GYa  (1979)  53
                                        Ks(HgBr2(s)+Hg=Hg2Br2)=-0.7
Medium: Ca(NO3)2
-------------------------------------------------------------------------------
Hg++       sp  NaClO4      0.10M U    M                 1968NOa  (1980)  54
                                        K(Hg(EDTA)+L)=5.5
-------------------------------------------------------------------------------
Hg++       ISE mixed  25?°C  20%  U  I     B2=8.1       1968PMe  (1981)  55
                                        B3=9.5
Also polarography. Medium:20% C5H5N. B2=12.1,B3=14.5(80%). Also 10,40,60%
-------------------------------------------------------------------------------
Hg++       oth oth/un 25°C  var  U                      1967JCa  (1982)  56
                                        K4=1.2
Method:from molar volumes.
-------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C  3.0M U   H    K1=9.40   B2=17.98  1965ARa  (1983)  57
                                        K3=2.76
                                        K4=1.49
By calorimetry: DH(K1)=DH(K2)=-40.1 kJ mol-1, DH(K3)=-10.9, DH(K4)=-18.4;
DS(K1)=45.6 J K-1 mol-1,DS(K2)=29.7,DS(K3)=16.7,DS(K4)=-33.9
-------------------------------------------------------------------------------
Hg++       cal NaClO4 24°C 0.60M U T H                  1964CIa  (1984)  58
Medium:0.5 M NaClO4,0.1 HClO4, DH(K1)=-46.4 kJ mol-1(7 C),-42.6(25 C),-41.8
(40 C); DH(B2)=-94.5(7 C),-88.7(25 C),-89.5(40 C). Also DS values
-------------------------------------------------------------------------------
Hg++       oth oth/un  0°C  var  U                      1964DOa  (1985)  59
                                        K(Hg(CF3)2+L)=0.2
-------------------------------------------------------------------------------
Hg++       dis non-aq 150°C 100%  U                     1964ZMb  (1986)  60
                                        Kd(HgBr2(salt melt)=0.96
                                        K3=0.90
                                        K4=0.95
Medium: (Li/K)NO3 eutectic. Distribution into "polyphenyleutectic"
-------------------------------------------------------------------------------
Hg++       cal oth/un 25°C  var  U   H                  1963BBc  (1987)  61
                                        K3=2.26
                                        K4=1.38
DH(K3)=-8.69 kJ mol-1, DH(K4)=-14.5
-------------------------------------------------------------------------------
Hg++       cal NaClO4 25°C 0.50M U   H                  1963BSc  (1988)  62
                                        K1/K2=ca.0.9
                                        K3=2.1
                                        K4=1.7
```

DH(K1)=-42.3, DH(K2)=-44.8, DH(K3)=-13, DH(K4)=-17, DH(B2)=87.0, DH(B4)=
-117 J K-1 mol-1.

Hg++ ix NaClO4 23°C 3.0M U I 1963EMb (1989) 63
K3=1.6
K4=1.0
Method:anion exchange. At I=0.3: K3=2.5, K4=2.1

Hg++ EMF NaClO4 40°C 0.60M U T K1=8.70 B2=16.46 1963HIa (1990) 64
Medium:0.5 M NaClO4,0.1 HClO4. At 7 C:K1=9.53, K2=8.85

Hg++ cal none 25°C 0.0 U H 1961MPa (1991) 65
I=0 corr. DH(K1)=-44.4 kJ mol-1. DS=40 J K-1 mol-1

Hg++ cal NaClO4 25°C 0.50M U H 1960GKa (1992) 66
Medium: HClO4. DH(B4)=-116 kJ mol-1. DS=13 J K-1 mol-1

Hg++ sp NaClO4 25°C 0.50M U T H 1958PAa (1993) 67
K3=2.10
K4=1.5
K(HgL2(s)=HgL2)=-1.18
K3=2.23(1.2 C), 2.20(13.8 C); K4=1.1(1.2 C), 1.91(13.8 C); K=-2.03(5.1 C),
-1.66(40 C). DH(K3)=-8.8 kJ mol-1, DH(K)=18 J K-1 mol-1, DS=26 J K-1 mol-1

Hg++ dis NaClO4 25°C 0.50M U T K1=2.13 1958STa (1994) 68
K4=1.36
K(HgL4+2L)=0.5
K3=2.36(5 C), 2.04(35 C). DH(K3)=-18 kJ mol-1, DS=-20; DH(K4)=-7.9, DS=0
K4=1.41(5 C), 1.26(35 C). m units

Hg++ sol oth/un ? var U 1957KPa (1995) 69
K(HgO(s)+H2O+3L=HgL3+2OH)=0.3

Hg++ dis NaClO4 25°C 0.0 U I 1957MAa (1996) 70
Kd(HgL2 into C6H6)=0.05
At I=0.5 M, Kd=0.15

Hg++ EMF NaClO4 25°C 0.50M U K1=8.94 B2=16.88 1957MAa (1997) 71
K3=2.27
K4=1.75

Hg++ con non-aq 25°C 100% U 1952ECa (1998) 72
K3=6.00
K4=2.04
K(2HgBr2+Br=Hg2Br5)=7.00
Medium:MeCN.

Hg++ ISE NaClO4 25°C 0.50M U K1=9.05 B2=17.33 1948BJb (1999) 73
K3=2.41
K4=1.26

```
                                        B4=21.00
--------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.50M C                      1946SIa  (2000)  74
                                        K(HgBr2+Hg=2HgBr)=0.76
Method: Pt/Hg(II),Hg(I) electrode.
--------------------------------------------------------------------------------
Hg++       sol none   25°C  0.0  U                     1939GAa  (2001)  75
                                        K3=2.04
                                        K(HgBr2(s)=HgBr2)=-1.77
                                        K(HgBr2(s)+Br=HgBr3)=0.27
--------------------------------------------------------------------------------
Hg++       sp  oth/un 22°C  var  U                     1933FLa  (2002)  76
                                        K3.K4=4.15
Medium: KBr
--------------------------------------------------------------------------------
Hg++       sp  oth/un 16°C  var  U                     1928JOa  (2003)  77
                                        K3.K4=5.80
Medium: KBr.
--------------------------------------------------------------------------------
Hg++       sol oth/un 34°C  dil  U T                   1924TPa  (2004)  78
                                        K(HgBr2(s)=HgBr2)=-1.72
K=-1.39(55.5 C), -1.15(78 C), -0.92(96.5 C)
--------------------------------------------------------------------------------
Hg++       dis oth/un 25°C  dil  U                     1906PAa  (2005)  79
                                        B4=21.89
--------------------------------------------------------------------------------
Hg++       ISE oth/un 25°C  var  U       B2=17.18      1903SHa  (2006)  80
                                        B4=21.63
                                        K3.K4=4.45
Method: Hg electrode. Medium: KBr. Kd(HgL2 into C6H6)=0.05
--------------------------------------------------------------------------------
Hg++       sol oth/un 25°C  var  U       K1=9.40   B2=17.7?  1902MOa  (2007)  81
Medium: Hg(NO3)2
********************************************************************************
CN-                    HL    Cyanide          CAS 74-90-8  (230)
Cyanide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 2.00M U       B2=34.01      1981BPb  (2690)  82
--------------------------------------------------------------------------------
Hg++       vlt oth/un 22°C 0.01M U       B2=35.3       1981KTc  (2691)  83
                                        B3=38.9
                                        B4=42.0
--------------------------------------------------------------------------------
Hg++       sp  oth/un 25°C 2.00M U    M                1980BPa  (2692)  84
                                        B(HgBr3(CN))=6.60
                                        B(HgBr2(CN)2)=14.40
                                        B(HgBr(CN)3)=17.18
                                        B(Hg(CN)4)=19.51
```

```
---------------------------------------------------------------------------
Hg++       sp  NaCl   25°C 2.00M U                      1977BPb  (2693)  85
                                      K(HgCl4+4CN=Hg(CN)4)=26.32
---------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 1.00M U                      1972FAa  (2694)  86
                                      K(Hg+Cr(III)CN=CrNCHg)=7.5
                                      K(CrCN+Cr(CN)Hg)=7.6
---------------------------------------------------------------------------
Hg++       sp  none   25°C  0.0  U    M                1971BPf  (2695)  87
                                      K(Hg(CN)2+Fe(II)(CN)6)=2.4
                                      K(Hg(CN)2+Mo(IV)(CN)8)=1.3
K(Hg(CN)2+Ru(II)(CN)6)=1.89. By potentiometry: K(Hg(CN)2+Fe(III)(CN)8)=2.2,
K(Hg(CN)2+Mo(V)(CN)8)=1.3
---------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 2.00M U                      1971EBa  (2696)  88
                                      K(Hg+Cr(III)CN)=1.45
Medium: LiClO4. By kinetics, K=1.38
---------------------------------------------------------------------------
Hg++       con oth/un  0°C  var  U                      1971GHf  (2697)  89
                                      K(2HgL2+2HF=Hg2L3+HL+HF2)=-0.5
Medium: HF
---------------------------------------------------------------------------
Hg++       sp  none   25°C  0.0  U                      1971GMa  (2698)  90
                                      B(Hg(SCN)(CN))=-0.28
---------------------------------------------------------------------------
Hg++       ISE KNO3   30°C  3.0M U                      1968ADc  (2699)  91
                                      B5=40.5
                                      B6=42.6
                                      B7=38.2(?)
---------------------------------------------------------------------------
Hg++       vlt NaNO3  25°C  2.0M U    M                 1968AMa  (2700)  92
                                      B(Hg(CN)2SCN)=36.3
                                      B(Hg(CN)3SCN)=38.7
                                      B(Hg(CN)2Cl)=36.2
                                      B(Hg(CN)3Cl)=39.4
B(Hg(CN)2Br)=36.0, B(Hg(CN)3Br)=39.1
---------------------------------------------------------------------------
Hg++       oth oth/un 25°C  5.0M U        K1=2.27   B2=5.99   1968CPa  (2701)  93
Method: Raman spectra. Medium: NaI
---------------------------------------------------------------------------
Hg++       sp  oth/un 25°C  var  U  I                  1968CPa  (2702)  94
                                      K(HgI2+HgL2=2HgLI)=-0.89
Medium: HgL2. In 0.4 M HgI2, by solubility: K=-0.85
---------------------------------------------------------------------------
Hg++       ISE mixed  25?°C  20%  U  I     K1=22.9   B2=26.5   1968PMe  (2703)  95
                                      B3=28.4
Also by: polarography.  Medium: pyridine/H2O. B2=28.6(80%) and other values
---------------------------------------------------------------------------
Hg++       vlt non-aq 195°C 100%  U        B2=6.50       1967ETa  (2704)  96
Medium: molten KSCN
```

```
---------------------------------------------------------------------------
Hg++       ISE oth/un 40°C  0.0  U T H  T K1=16.26  B2=31.28  1965CIa  (2705)  97
                                        K3=3.37
                                        K4=2.42
Medium:0 corr. 10 C: K1=17.97, K2=16.74, K3=3.81, K4=2.81; 25 C: K1=17.00,
K2=15.75, K3=3.56, K4=2.66
---------------------------------------------------------------------------
Hg++       cal oth/un 25°C  0.0  U   H                  1965CIa  (2706)  98
DH(K1)=-96.1 kJ mol-1, DH(K2)=-106.6, DH(K3)=-31.8, DH(K4)=-30.1;
DS(K1)=2.9 J K-1 mol-1, DS(K2)=-56.0, DS(K3)=-37.6, DS(K4)=-50.6
---------------------------------------------------------------------------
Hg++       ISE oth/un 25°C  var  U       B2=36.57       1964ASa  (2707)  99
                                        B3=40.64
                                        B4=43.54
                                        B5=44.40
                                        B6=45.19
---------------------------------------------------------------------------
Hg++       sp  oth/un 25°C  dil  U  I M                 1964BGb  (2708) 100
                                        K(HgL2+HgCl2=2HgLCl)=0.93
                                        K(HgL2+HgBr2=2HgLBr)=0.29
                                        K(HgL2+HgI2=2HgLI)=-0.96
In dioxan: K=1.08(Cl), 0.24(Br), -0.7(I)
---------------------------------------------------------------------------
Hg++       vlt none   25°C  0.0  U       B2=35.21       1961MUa  (2709) 101
                                        B3=38.85
                                        B4=41.47
---------------------------------------------------------------------------
Hg++       vlt NaNO3  30°C  2.0M U  I M                 1961NHa  (2710) 102
                                        K(HgL3+Cl)=-0.4
                                        K(HgL3+Br)=0.36
                                        K(HgL3+SCN)=0.46
In 4M NaClO4 (spectrophotometry) K(HgL2+Cl)=-0.25
---------------------------------------------------------------------------
Hg++       oth oth/un   ?   var  U                      1961PJa  (2711) 103
                                        K4/K3=-1
Method: ir.
---------------------------------------------------------------------------
Hg++       sol NaNO3  23°C  2.0M U                      1959NHa  (2712) 104
                                        K(Hg(OH)2+HgL2=2Hg(OH)L)=2.42
                                        K(HgO(s)+HgL2=2Hg(OH)L)=-0.99
By polarography: K(Hg(OH)2+HgL2=2Hg(OH)L)=2.45. At 30 C: B(Hg(OH)L)=28.86
---------------------------------------------------------------------------
Hg++       vlt NaNO3  30°C  2.0M U       B2=33.9        1958NCa  (2713) 105
                                        K3=4.2
                                        K4=2.5
---------------------------------------------------------------------------
Hg++       gl  NaNO3  20°C 0.10M U      T K1=18.00  B2=34.70  1957ANc  (2714) 106
                                        K3=3.83
                                        K4=2.98
                                        B4=41.52
```

```
-------------------------------------------------------------------------------
Hg++       EMF none   25°C  0.0  U                      1957TMb  (2715) 107
                                    B4=41.51
Method: emf with Hg electrode
-------------------------------------------------------------------------------
Hg++       vlt none   25°C  0.0  U       B2=35.25       1957TMb  (2716) 108
                                    K3=3.71
-------------------------------------------------------------------------------
Hg++       oth NaClO4 25°C  var  U                      1954WDa  (2717) 109
                                    K2/K1=-1.3
Medium: 0.01 to 1 M; method:chemical analysis;  0-25 C
-------------------------------------------------------------------------------
Hg++       sp  NaClO4   ?   1.0M U                      1953PEc  (2718) 110
                                    K1/K2=-0.95
-------------------------------------------------------------------------------
Hg++       cal oth/un   ?     ?  U   HM                1951YAa  (2719) 111
DH(B3)=-224.7, DH(B4)=-246.9 kJ mol-1. DH(HgL2Cl)=-195.8, DH(HgL2Br)=-197.5,
DH(HgL2I)=-205.9, DH(HgL2I2)=-210.9
-------------------------------------------------------------------------------
Hg++       gl  oth/un  rt   var  U       B2=21.7        1949GAa  (2720) 112
                                    B4=27.7(?)
-------------------------------------------------------------------------------
Hg++       gl  oth/un  2°C  dil  U                      1946BJa  (2721) 113
                                    K(HgL2+HL=HgL3+H)=-5.52
                                    K(HgL2+2HL=HgL4+2H)=-12
-------------------------------------------------------------------------------
Hg++       ISE oth/un 12°C  var  U                      1941BJa  (2722) 114
                                    K4=ca.3
-------------------------------------------------------------------------------
Hg++       ISE oth/un 12°C  var  U                      1932BDa  (2723) 115
                                    B4=41.7 to 43.2
-------------------------------------------------------------------------------
Hg++       oth oth/un 100°C  var  U                     1928BRa  (2724) 116
                                    K(HgL2+Cl)=-0.11
                                    K(HgL2+Br)=0.06
Method: boiling point
-------------------------------------------------------------------------------
Hg++       sol oth/un 20°C  var  U                      1909HWa  (2725) 117
                                    K(HgL2+NO3)=-0.36
                                    Ks(HgL2(s)=HgL2)=-0.40
                                    K(HgL2+OH=HgL2(OH))=0.2
-------------------------------------------------------------------------------
Hg++       EMF oth/un 25°C  var  U                      1906PAa  (2726) 118
                                    B4=41.65
Medium: not specified; method: emf with Hg electrode
-------------------------------------------------------------------------------
Hg++       EMF oth/un 25°C  var  U                      1905SSa  (2727) 119
                                    B4=41.66
Medium: not specified; method: emf with Hg electrode
-------------------------------------------------------------------------------
```

```
Hg++       EMF oth/un   ?   var  U                          1903BOa  (2728) 120
                                        B4=41.4
Medium: not specified; method: emf with Hg electrode.
-------------------------------------------------------------------------------
Hg++       EMF oth/un 25°C  var  U                          1903SHa  (2729) 121
                                        B4=41.4
Medium: not specified; method: emf with Hg electrode
-------------------------------------------------------------------------------
Hg++       dis oth/un 25°C  var  U                          1903SHa  (2730) 122
                                        K(HgL2(aq)=HgL2(Et2O))=-1.64
*******************************************************************************
CO3--                  H2L    Carbonate        CAS 465-79-6  (268)
Carbonate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  none   25°C    0  C      R                  2005PBa  (3237) 123
                                        K(Hg(OH)2+CO2(g)=HgCO3)=-0.70
                                        K(Hg(OH)2+HCO3=Hg(OH)CO3)=0.98
IUPAC evaluated. K(Hg(OH)2+CO2(g)+H=HgHCO3)=3.63
Ks(HgCO3.2H2O(s)+3H2O=3Hg(OH)2+CO2(g))=-11.27 (3M NaClO4)
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.50M U        K1=11.01  B2=14.50  1980BMb  (3238) 124
                                        B(HgHL)=15.08
                                        K(Hg+H2O+L=Hg(OH)L+H)=4.40
-------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 3.00M C                          1976HHa  (3239) 125
                                        *Ks=7.20
*Ks: HgL.2HgO(s)+6H=3Hg+3H2O+CO2(g)
-------------------------------------------------------------------------------
Hg++       sol NaClO4 25°C 3.00M C        K1=10.65          1976HHb  (3240) 126
                                        B(1,1,1)=15.05
                                        B(-1,1,1)=4.40
B(p,q,r): pH+qHg+rL=Hp(Hg)qLr
*******************************************************************************
Cl-                     HL    Chloride         CAS 7647-01-0  (50)
Chloride;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  none   25°C    0  C   H  R K1=7.31   B2=14.00  2005PBa  (4939) 127
                                        K3=0.93
                                        K4=0.61
                                        K(Hg+HgCl2=2HgCl)=0.61
                                        B(HgH-1Cl)=4.27
IUPAC evaluated (R). DH(K1)=-21.3 kJ mol-1, DH(B2)=-49.1, DH(K3)=0.5
DH(K4)=-10.5. D(SIT) values:K1=-0.22(04),B2=-0.39(03),K3=0.01(05)
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.15M C   H    K1=5.21          2003AGb  (4940) 128
Metal is CH3Hg+. By calorimetry, DH(K1)=-23.7 kJ mol-1, DS(K1)=
```

20.4 J K-1 mol-1.

Hg++ sp alc/w 20°C 100% U 1991GAa (4941) 129
K3=1.28
Medium: MeOH

Hg++ sp oth/un 20°C var U M 1991GAb (4942) 130
K(HgBr2+L)=3.17
K(HgBr2L+L)=0.25
K(HgI2+L)=0.99
K(HgI2L+L)=-0.64

Hg++ sp non-aq 20°C 100% C 1991GAc (4943) 131
K4=0.75
Medium: methanol.

Hg++ ISE non-aq 25°C 100% C H K1=15.1 B2=29.61 1990PDa (4944) 132
K3=2.81
K4=2.90
Medium: Acetonitrile, 0.1 M (PyH)CF3SO3
DH(K1)=-50.5, DH(K2)=-41.5, DH(K3)=-31.1, DH(K4)=-19.7 kJ mol-1

Hg++ ISE non-aq 25°C 100% C H K1=8.89 B2=15.94 1985AIa (4945) 133
K3=3.97
K4=1.97
Medium: Dimethylsulfoxide 1M NH4ClO4;
DH(K1)=-19.2, DH(K2)=-29.7, DH(K3)=-20.1, DH(K4)=-16.5 kJ mol-1

Hg++ ISE non-aq 25°C 100% C H K1=10.59 B2=18.99 1985AIa (4946) 134
K3=4.60
K4=2.64
Medium: Pyridine, 0.1 M (PyH)CF3SO3;
DH(K1)=-14.9, DH(K2)=-6.0, DH(K3)=-10.4, DH(K4)=-6.8 kJ mol-1

Hg++ sp NaClO4 20°C 0.50M U I 1984GAc (4947) 135
K3=0.81
At I=0 corr. K3=0.70, K4=0.50

Hg++ gl NaClO4 25°C 0.50M C K1=6.76 B2=13.24 1982NBb (4948) 136
B3=14.19
B4=15.24

Hg++ cal NaClO4 25°C 0.50M U TIH 1982VKa (4949) 137
K3=1.03
K(HgL2+2L)=1.98
DH(K3) = -0.25 kJ mol-1; DH(HgL2+2L) = -9.38 kJ mol-1.

Hg++ ISE non-aq 25°C 100% C H K1=10.87 B2=17.97 1981APb (4950) 138
B3=21.96
B4=24.04

Medium: DMSO, 1.0 M NH4ClO4. DH(K1)=-20.3 kJ mol-1, DH(B2)=-48.8,
DH(B3)=-68.9, DH(B4)=-82.9

Hg++ cal NaClO4 25°C 0.5M U TI K1=6.74 B2=13.22 1980VKb (4951) 139
DH(K1)=-23.6 kJ mol-1
DH(B2)=-51.7
For T=60 C: K1=6.37; B2=12.37; DH1=-16.8 kJ/mol; DH(Hg+2L)=-40.0 kJ/mol
Also data for 0 M and 2 M NaClO4; T=40 C

Hg++ sp alc/w 20°C 100% U M 1979GAa (4952) 140
K(HgI2+HgCl2=2HgICl)=1.09
K(HgBr2+HgCl2=2HgBrCl)=0.70
Medium: MeOH

Hg++ sp oth/un 20°C 0.01M U M 1978BSa (4953) 141
K(Hg(SCN)2+HgCl2)=1.0

Hg++ vlt non-aq 25°C 100% C 1977GPb (4954) 142
K3=5.8
Medium: hexamethylphosphotriamide

Hg++ gl NaClO4 25°C 3.00M C I M K1=7.22 B2=14.00 1977SJb (4955) 143
K3=1.07
K4=1.07
B(-1,1,-1)=-9.87
B(-1,2,-2)=-15.25
B(-2,3,-5)=-37.79
pH+qHgCl2+rCl=Hp(HgCl2)qClr; B(p,q,r)

Hg++ oth NaNO3 25°C 1.00M U 1976BAb (4956) 144
K3=0.894
K(HgCl2+2Cl)=2.025
Method: Refractometry.

Hg++ cal NaClO4 25°C 1.0M C K1=6.72 B2=13.23 1975CGe (4957) 145
K3=1.00
K4=0.97
DH(K1)=23.2 kJ mol-1, DS=51 J K-1 mol-1; DH(K2)=27.7, DS=32;
DH(K3)=1.0, DS=16; DH(K4)=7.6, DS=-7

Hg++ oth non-aq 42°C 100% U TIH 1974EAa (4958) 146
K(2HgL2=Hg2L4)=1.8
Medium: C6H6. Method: vapour phase osmometry. K=3.6(55.6 C).
In C6H5CH3: K=2.0(42 C), 1.8(55.6 C)

Hg++ EMF non-aq 30°C 100% U K1=8.8 B2=11.1 1974JAc (4959) 147
B3=13.1
Medium: pyridine, 0.2 M LiClO4; m units

Hg++ EMF oth/un ? var U 1974KIb (4960) 148

B4=15.1

Hg++ EMF R4N.X 55°C ? U T H K1=5.30 B2=10.30 1974NGb (4961) 149
Medium: NH4NO3(H2O)x(x=2). DH(K1)=-30.1 kJ mol-1,DS=10.5 J K-1 mol-1(x=2).
K1=5.12,K2=4.85(x=2,70 C),K1=4.92,K2=4.58(x=2,85 C) x units

Hg++ dis R4N.X 55°C ? U T H 1974NGc (4962) 150
K3=1.18
K4=0.68
Medium: NH4NO3(H2O)2.DH(K3)=-26.4 kJ mol-1;DH(K4)=27.2,K3=0.96,K4=0.88(70 C)
K3=0.81,K4=1.04(85 C) m units

Hg++ EMF non-aq 25°C 100% U B2=21.11 1974SLa (4963) 151
B3=26.93
B4=28.32
Medium: DMSO, 1 M (Li,Na)ClO4

Hg++ sp alc/w 25°C 60% U T K1=3.0 B2=9 1973ABd (4964) 152
Medium: 60% v/v EtOH/H2O, 0.5 M LiClO4. K or log K ?

Hg++ ISE none 25°C 0.0 C IH K2=6.53 1973ACa (4965) 153
K3=1.22
K(HgCl2(s)=HgCl2(aq))=-0.59
Data also for various MeOH/water mixtures

Hg++ ISE alc/w 25°C 8.1% U I K2=6.93 1973ACa (4966) 154
K3=1.06
Medium: 8.1% w/w MeOH/H2O. K2=6.53,K3=1.22(0%); K2=6.90,K3=1.30(16.5%)

Hg++ EMF non-aq 25°C 100% U B2=35.1 1973CCa (4967) 155
K3=6.0
K4=4.2
Medium: MeCN

Hg++ EMF non-aq ? 100% U B2=16.3 1972BGa (4968) 156
Medium: ethylene glycol, 0.1 M LiClO4

Hg++ EMF NaClO4 25°C 1.0M U 1972CIa (4969) 157
K(Hg+OH+L=HgOHL+H)=3.67

Hg++ EMF non-aq 25°C 100% U B2=21.2 1972FDa (4970) 158
B3=26.9
B4=23.5
Medium: DMSO, 0.1 M LiClO4, Et4NClO4

Hg++ EMF non-aq 90°C 100% U T H B2=12.20 1972KRa (4971) 159
B4=14.70
Medium: dimethylammoniumsulphate. DH(B4)=-5.1 kJ mol-1; B2=11.38, B4=13.51
(101 C); B2=9.85, B4=12.75(115 C) x units

```
Hg++       EMF non-aq 25°C 100%  U                        1971BGa  (4972) 160
                                       B3=37.7
Medium: N,N-dimethylacetamide
-------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.40M U                        1970DSe  (4973) 161
                                       K3=0.96
                                       K4=0.38
Medium: HClO4
-------------------------------------------------------------------------------
Hg++       vlt non-aq 25°C 100%  U        B2=24.16        1970MDa  (4974) 162
                                       B3=31.23
                                       B4=34.57
Medium: DMF, 0.1 M Et4NClO4
-------------------------------------------------------------------------------
Hg++       dis NaClO4 25°C 0.50M U                        1970SIa  (4975) 163
                                       K3=0.85
                                       K4=1.00
-------------------------------------------------------------------------------
Hg++       oth none   50°C  0.0  U T      K1=5.99   B2=12.51  1969HEa  (4976) 164
                                       B3=14.50
Evaluated from literature data. At 100 C: K1=5.65, B2=11.41, B3=13.25;
150 C: K1=5.50, B2=10.71, B3=12.46
-------------------------------------------------------------------------------
Hg++       sp  NaCl     ?  0.10M U    M                  1969NOc  (4977) 165
                                       K(HgA+L)=3.9
H6A=methylthymolblue
-------------------------------------------------------------------------------
Hg++       dis oth/un 200°C 100%  U T  M                 1969ZAa  (4978) 166
                                       Kd(HgLA(melt)=HgLA(org)=0.49
Medium: (Li,K)NO3, LiNO3 content 43%. org=polyphenol. A=Br. When X=I,K=0.78.
Many other data, 165 to 200 C
-------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C  1.0M U                       1968CGa  (4979) 167
                                       K(Hg(OH)2+2H+2L)=19.6
                                       K(HgOHL+H+L)=9.56
                                       K(HgClOH+H)=3.1
-------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C  1.0M U        K1=6.72   B2=13.23  1968CGb  (4980) 168
                                       K3=1.00
                                       K4=0.97
                                       B4=15.20
-------------------------------------------------------------------------------
Hg++       ISE mixed  25?°C  20%  U  I     K1=2.2    B2=4.3    1968PMe  (4981) 169
Also polarography. Medium:20% pyridine. B2=7.9,B3=10(80%). Also in 10,40,60%
-------------------------------------------------------------------------------
Hg++       oth oth/un 23°C  var  U        K2=>2          1968SCc  (4982) 170
                                       K3 > 1
Method:electrical migration or transference number.  Medium:LiCl var
-------------------------------------------------------------------------------
Hg++       vlt non-aq 25°C 100%  U T      B2=31.1        1966FSa  (4983) 171
```

B3=37.1
B4=39.3

Medium:MeCN

Hg++ EMF NaClO4 35°C 0.50M U T K2=6.35 1966VSb (4984) 172
K1/K2=0.24
K2=6.87(0 C),6.67(12.5 C),6.48(25 C); K1/K2=0.31(0 C),0.28(12.5 C),0.26(25C)

Hg++ ISE NaClO4 25°C 3.0M U H K1=7.07 B2=13.98 1965ARa (4985) 173
K3=0.75
K3K4=2.13
By calorimetry: DH(K1)=-24.2 kJ mol-1, DH(K2)=-27.2, DH(K3)=-4.18,
DH3+DH4=-10.5. DS(K1)=53.9 J K-1 mol-1,DS(K2)=41.4,DS(K3)=0, DS3+DS4=5.4

Hg++ EMF NaClO4 25°C 0.10M U B2=15.5 1965BPg (4986) 174
Medium:HClO4

Hg++ gl oth/un 25°C 0.0 U H 1965PIa (4987) 175
K(Hg(OH)2+Cl=HgClOH+OH)=-4.09
K(HgOHCl+Cl=HgCl2+OH)=-3.77
By calorimetry:DH(Hg(OH)2+Cl)=5.0 kJ mol-1, DS=-61.0 J K-1 mol-1;
DH(HgOH+Cl)=5.1, DS=-55.2

Hg++ cal NaClO4 24°C 0.60M U T H 1964CIa (4988) 176
DH(K1)=-28.2kJ mol-1, DS=37.6 J K-1 mol-1(8 C); -23.0,49.7(25 C); -23.4,
60.0(40 C). DH(B2)=-58.7,DS=57.3(8 C); -53.3,69.0(25 C); -52.3,76.9(40 C)

Hg++ dis non-aq 150°C 100% U H 1964ZMb (4989) 177
Kd(HgL2(melt)=HgL2(org))=0.38
K3=0.8
K4=0.8
Medium: (Li/K)NO3 eutectic; org=polyphenyl eutectic; m unit.
DH(Kd)=-15.5 kJ mol-1

Hg++ ix NaClO4 23°C 3.0M U I 1963EMb (4990) 178
K3=0.70
K4=0.60
Method:anion exchange. At I=0.3:K3=1.1, K4=1.2

Hg++ EMF NaClO4 40°C 0.60M U T K1=6.58 B2=12.76 1963HIa (4991) 179
K1=7.23(7 C),6.62(25 C); K2=6.72(7 C),6.36(25 C)

Hg++ ix oth/un 25°C 10.0M U I 1962MIa (4992) 180
K(H+HgL4)=0.6
K(H+HHgL4)=-0.05
Medium: LiCl.

Hg++ cal none 25°C 0.0 U H 1961MPa (4993) 181
I=0 corr. DH(K1)=-20 kJ mol-1, DS=71 J K-1 mol-1

```
Hg++       cal NaClO4 25°C 0.50M U   H                    1960GKa  (4994) 182
Medium: HClO4. DH(K1)=-25 kJ mol-1, DS=46.4 J K-1 mol-1; DH(K2)=-29, DS=26;
DH(K3)=-9.2, DS=-13; DH(K4)=0.4; DS=21; DH(B4)=-62.3, DS=81.6
-------------------------------------------------------------------------------
Hg++       vlt non-aq 20°C 100%  U                      1959GPa  (4995) 183
                                       B4=ca.30
Medium: HCONMe2, 1 M LiClO4
-------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.50M U T                    1958PAa  (4996) 184
                                       K3=0.66
                                       K3K4=1.76
K3=1.12(1.5C), 0.83(39.7C), K3K4=2.04(1.5C), 1.72(39.7C). DH(K3)=-10 kJ m-1,
DS=-2.5 J K-1 mol-1; DH(B2)=-56
-------------------------------------------------------------------------------
Hg++       dis NaClO4 25°C 0.50M U        K1=6.74   B2=13.22  1957MAa  (4997) 185
                                       K3=0.95
                                       K4=1.05
Kd(HgCl2=HgCl2(in C6H6))=-1.06 (I=0), -0.96(I=0.5)
-------------------------------------------------------------------------------
Hg++       gl  oth/un  RT   var  U    M   K1=6.8    B2=13.4   1955DWb  (4998) 186
                                       K3=0.57
                                       K4=1.46
                                       K(HgOH+H+2Cl=HgCl2+H2O)=12.40
-------------------------------------------------------------------------------
Hg++       sp  NaClO4 18°C  1.0M U                      1953PEc  (4999) 187
                                       K3=0.50
                                       K1/K2=0.40
-------------------------------------------------------------------------------
Hg++       con non-aq 25°C 100%  U                      1952ECa  (5000) 188
                                       K3=6.00
                                       K4=2.23
                                       K(2HgL2+L=Hg2L5)=6.70
Medium: MeCN
-------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.50M U        K1=6.74   B2=13.22  1947LJa  (5001) 189
                                       K3=0.85
                                       K4=1.00
                                       B4=15.07
-------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.50M C                      1946SIa  (5002) 190
                                       K(HgCl2+Hg=2HgCl)=0.255
Method: Pt/Hg(II),Hg(I) electrode.
-------------------------------------------------------------------------------
Hg++       sol none   25°C  0.0  U                      1939GAa  (5003) 191
                                       Ks(HgCl2(s)=HgCl2)=-0.57
                                       Ks(HgCl2(s)+Cl=HgCl3)=1.30
                                       K3=1.87
-------------------------------------------------------------------------------
Hg++       sol KCl    25°C  var  U T                    1934TOa  (5004) 192
                                       K(2HgL2+L=Hg2L5)=1.26
```

K=1.51(0 C), 1.16(34 C), 0.72(100 C); K3K4=1.66(34 C), 1.89(100 C)

Hg++ sp KCl 22°C var U 1933FLa (5005) 193
K3K4=2.06

Hg++ oth oth/un 100°C var U 1928BRa (5006) 194
K3K4=1
K(3HgL2=Hg3L6)=-0.41

Hg++ sp KCl 16°C var U 1928JOa (5007) 195
K3=0.70

Hg++ dis NaCl 25°C var U 1916LIa (5008) 196
K3=0.99
K4=0.69
K(Hg2L4+L=Hg2L5)=1.57
K(Hg2L5+L=Hg2L6)=1.28

Hg++ dis oth/un 25°C var U T 1915LIa (5009) 197
K(2HgL2+2L=Hg2L6)=-0.55
Medium: HgCl2. K=-0.44(40 C). By freezing point, 0 C, K=-0.79. 100 C(B. Pt) K=-0.17. Kd(HgL2 into C6H6)=-1.08(25 C), -1.03(40 C)

Hg++ dis oth/un 25°C var U 1912DRa (5010) 198
K3=1.13
By EMF B2=14.03

Hg++ sol oth/un 25°C var U K1=7.28 1908BHa (5011) 199

Hg++ dis KCl 25°C var U 1907SBa (5012) 200
K3=1.06

Hg++ ISE KCl 25°C var U 1906PAa (5013) 201
B4=16.20

Hg++ con oth/un 25°C var U 1904LHa (5014) 202
K(2HgL2+H2O=Hg2L2O+2H+2L)=-16

Hg++ EMF KCl 25°C var U B2=14.0 1903SHa (5015) 203
B4=15.95
K3K4=1.95

Hg++ sol oth/un 25°C var U K1=7.46 B2=14.01 1902MOa (5016) 204

Hg++ EMF oth/un 16°C var U B2=13.82 1901LUa (5017) 205

****

CrO4-- H2L Chromate CAS 7738-94-5 (2382)
Chromate;

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

```
--------------------------------------------------------------------------------
Hg++       sol non-aq 147°C 100%  U                      1969MBd  (6492) 206
                                          log Kso=-1.37-3537/T
Medium: fused (Li,K)NO3, 43% Li. Temp: 147-192 C
********************************************************************************
F-                      HL    Fluoride         CAS 7644-39-3  (201)
Fluoride;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       sp  oth/un 20°C  var  U    M                  1979GAb  (6949) 207
                                        K(HgCl2+L)=0.12
                                        K(HgBrL+L)=-0.85
                                        K(HgI2+L)=-0.96
--------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.50M U T H    K1=1.03        1955PAa  (6950) 208
K1=1.01(15 C), 1.05(35 C). DH(K1)=3.6 kJ mol-1, DS=33 J K-1 mol-1. At I=0
K1=1.56, DS=55
********************************************************************************
FClBrI                  HL                        (541)
Halides, comparative (for book data under ligand 80)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       vlt non-aq 20?°C 100%  U                      1966BKa  (7394) 209
                                        B4(Cl)=32.9
Medium: DMF, 0.1 M LiClO4. B4=35.2(Br), 36.6(I), 22.5(SCN), 26.5(SC(NH2)2)
--------------------------------------------------------------------------------
Hg++       sol oth/un 25°C  1.0M U  I M                  1966CZb  (7395) 210
                                        B(HgBrI2)=25.7
                                        B(HgBr2I2)=27.35
                                        Ks(HgI2)=-28.19
Medium: LiNO3. Data also in other nitrates
--------------------------------------------------------------------------------
Hg++       con alc/w       100%  U    M                  1965CEa  (7396) 211
                                        K((F3CSe)2Hg+HgCl2)=1.3
Also Raman spectra, solubility, infrared spectra. Medium:MeOH. K=1.18(Br),
0.31(I),0.39(SCN),low for CN
--------------------------------------------------------------------------------
Hg++       dis non-aq 25°C 100%  U  IHM                  1964ELa  (7397) 212
                                        K'(HgClBr)=1.16
                                        K'(HgClI)=1.50
                                        K'(HgBrI)=0.76
Medium:C6H6.   In 0.5 M NaClO4:K'(HgClBr)=1.20
--------------------------------------------------------------------------------
Hg++       dis non-aq 150°C 100%  U    M                  1964ZMa  (7398) 213
                                        K(HgCl2+Cl+Br)=2.79
                                        K(HgCl2+2Br)=2.61
                                        K(HgCl2+2I)=1.77
                                        K(HgBr2+2I)=1.52
```

Medium:(Li/K)NO3 eutectic. Data also for many other mixed complexes

---

Hg++ dis non-aq 150°C 100% U M 1964ZMb (7399) 214
Kd(HgClBr)=0.59
K(HgCl2+HgBr2=2HgClBr)=1.85
K(HgCl2+HgI2=2HgClI)=-0.35
Med:(Li/K)NO3 eutectic. Kd: HgXY(melt)=HgXY(polyphenyl eutectic)
Kd=1.95(HgClI), 2.57(HgBrI)

Hg++ sp oth/un 23°C 1.0M U M 1963SHa (7400) 215
K(HgBr4+I=HgBr3I+Br)=3.20
K(HgBr4+2I=HgBr2I2+2Br)=5.49
K(HgBr4+3I=HgBrI3+3Br)=7.40
K(HgBr4+4I=HgI4+4Br)=8.76

Hg++ sp NaClO4 25°C .001M U M 1961SHc (7401) 216
K(HgCl2+HgBr2=2HgClBr)=1.14
K(HgCl2+HgI2=2HgClI)=1.35
K(HgBr2+HgI2=2HgBrI)=1.07

Hg++ sol NaNO3 20°C 0.50M U M 1960CZa (7402) 217
K(Hg(SCN)2(s)+Br)=0.43 ?

Hg++ sp alc/w ? 100% U M 1957DEa (7403) 218
K(HgCl2+HgBr2=2HgClBr)=0.3
Medium: MeOH

Hg++ dis NaClO4 25°C 0.50M U M 1957MAa (7404) 219
K(HgCl2+HgBr2=2HgClBr)=2.0
K(HgCl2+HgI2=2HgClI)=1.75
K(HgBr2+HgI2=2HgBrI)=1.10
K(HgBrI+Br)=1.85
K(HgBr2I+Br)=1.49, K(HgBrI2+Br)=1.88, K(HgI3+Br)=1.10. Also Kd(C6H6) values

****

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

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

---

Hg++ gl NaClO4 25°C 0.15M C H K1=8.61 2003AGb (8030) 220
Metal is CH3Hg+. By calorimetry, DH(K1)=-54.8 kJ mol-1, DS(K1)=
-19 J K-1 mol-1.

Hg++ sp alc/w 20°C 100% U 1991GAa (8031) 221
K3=5.26
Medium: MeOH

Hg++ sp non-aq 20°C 100% C 1991GAc (8032) 222
K4=-0.40
Medium: methanol.

```
-------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H    K1=17.4   B2=34.27  1990PDa  (8033) 223
                                          K3=7.41
                                          K4=3.02
Medium: Acetonitrile, 0.1 M (PyH)CF3SO3
DH(K1)=-67.6, DH(K2)=-59.6, DH(K3)=-41.1, DH(K4)=-42.4 kJ mol-1
-------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H    K1=11.48  B2=21.23  1985AIa  (8034) 224
                                          K3=5.96
                                          K4=2.47
Medium: Dimethylsulfoxide 1M NH4ClO4;
DH(K1)=-32.4, DH(K2)=-40.4, DH(K3)=-28.1, DH(K4)=-23.0 kJ mol-1
-------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H    K1=11.72  B2=21.55  1985AIa  (8035) 225
                                          K3=4.83
                                          K4=2.0
Medium: Pyridine, 0.1 M (PyH)CF3SO3;
DH(K1)=-18.3, DH(K2)=-16.8, DH(K3)=-16.2, DH(K4)=-4.3 kJ mol-1
-------------------------------------------------------------------------------
Hg++       sp  none   20°C  0.0  U    M                 1984BSe  (8036) 226
                                          B(HgClI)=5.88
                                          B(HgBrI)=3.64
-------------------------------------------------------------------------------
Hg++       sp  NaClO4 20°C 0.50M U  I                   1984GAc  (8037) 227
                                          K3=3.69
                                          K4=2.38
At I=0 corr. K3=3.79, K4=2.03
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.50M C       K1=12.87  B2=23.82  1982NBb  (8038) 228
                                          B3=27.60
                                          B4=29.83
-------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H    K1=13.52  B2=23.27  1981APb  (8039) 229
                                          B3=29.28
                                          B4=31.91
Medium: DMSO, 0.1 M NH4ClO4. DH(K1)=-33.2; DH(B2)=-72.6; DH(B3)=-100.7;
DH(B4)=-121.8 kJ mol-1
-------------------------------------------------------------------------------
Hg++       sp  NaClO4 20°C  var  U    M                 1980GAc  (8040) 230
                                          K(HgCl2+HgI2=2HgClI)=1.40
                                          K(HgBr2+HgI2=2HgBrI)=1.26
                                          K(HgCl2+I)=0.98
                                          K(HgBr2+I)=0.52
-------------------------------------------------------------------------------
Hg++       ISE mixed  25°C  82%  U       K1=26.22  B2=29.23  1979TBc  (8041) 231
                                          B3=32.00
                                          B4=35.79
Medium: 82%(vol) DMF/H2O; In 82% Formamide, K1=22.38, B2=25.20,  B3=28.00,
B4=31.74
-------------------------------------------------------------------------------
```

```
Hg++       vlt non-aq 25°C 100%  C                        1977GPb  (8042) 232
                                       K3=7.2
Medium: hexamethylphosphotriamide
--------------------------------------------------------------------------------
Hg++       oth non-aq 42°C 100%  U T H                    1974EAa  (8043) 233
                                       K(2HgI2=(HgI2)2)=1.2
                                       K(3HgI2=(HgI2)3)=3.1
Medium: benzene, 42.1 C. At 55.6 C K(2HgI2=(HgI2)2)=0, K(3HgI2=(HgI2)3)=3.5.
Also toluene (0.9,2.4),p-xylene and mesitylene. Method:vapor phase osmometry
--------------------------------------------------------------------------------
Hg++       EMF non-aq 30°C 100%  U        K1=18.8   B2=23.6   1974JAc  (8044) 234
                                       B3=23.4
Medium:pyridine, 0.2 M LiClO4
--------------------------------------------------------------------------------
Hg++       EMF non-aq 25°C 100%  U                        1974SLa  (8045) 235
                                       B3=30.36
                                       B4=32.34
Medium: DMSO, 1 M (M)ClO4(M=Li,Na)
--------------------------------------------------------------------------------
Hg++       oth alc/w    ?  100%  U  I M                  1974YMc  (8046) 236
                                       K(HgBr4+L=HgBr3L+Br)=0.66
Medium: MeOH. K=1.15 in formamide. K=0.45 in DMF. Method: Raman
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.50M U                       1973AHa  (8047) 237
                                       K(Hg+I+H2O=Hg(OH)I+H)=8.9
--------------------------------------------------------------------------------
Hg++       sol NaClO4 25°C 0.50M U    M                  1973BPc  (8048) 238
                                       K(HgL2+Cl)=0.75
                                       K(HgL2+Br)=1.64
                                       K(HgL3+L)=5.7
                                       K(HgL2Cl+Cl)=1.18
K(HgI2Br+Br)=3.10
--------------------------------------------------------------------------------
Hg++       vlt non-aq 25°C 100%  U        B2=38.2         1973CCa  (8049) 239
                                       B3=45.9
                                       B4=48.7
Medium: MeCN
--------------------------------------------------------------------------------
Hg++       EMF oth/un 20°C  dil  U T HM                  1972BPe  (8050) 240
                                       K(HgCl2+L=HgClL+Cl)=5.77
                                       K(HgClL+L=HgL2+Cl)=4.87
DH(HgCl2+L=HgClL+Cl)=-46.9 kJ mol-1; K=6.05(10 C), 5.48(30 C)
DH(HgClL+L=HgL2+Cl)=-51.4; K=5.14(10 C), 4.52(30 C)
--------------------------------------------------------------------------------
Hg++       EMF non-aq 25°C 100%  U        B2=24.2         1972FDa  (8051) 241
                                       B3=30.4
                                       B4=32.6
Medium: DMSO, 0.1 M LiClO4
--------------------------------------------------------------------------------
Hg++       EMF non-aq 90°C 100%  U T      B2=19.46        1972KRa  (8052) 242
```

B4=22.46
Medium: dimethylammoniumsulphate; B2=17.49, B4=20.94(101 C); B2=16.00, B4=19.51(115 C) x units
---
Hg++ EMF non-aq ? 100% U 1971BGa (8053) 243
B4=38.3
Medium: N,N-dimethylacetamide

Hg++ sol alc/w 25°C 100% U I 1971PKd (8054) 244
Ks(HgI2(s)+I=HgI3)=0.43
Medium: MeOH; Ks=0.73 in acetone

Hg++ vlt non-aq 25°C 100% U B2=25.93 1970MDa (8055) 245
B3=33.34
B4=36.02
Medium: DMF, 0.1 M Et4NClO4

Hg++ sp non-aq 25°C 100% U 1970PLb (8056) 246
K3=5.74
K4=1.88
Medium: DMSO, 0 corr

Hg++ dis NaClO4 25°C 0.50M U 1970SIa (8057) 247
K3=3.78
K4=2.23

Hg++ vlt R4N.X 127°C 100% U K1=2.00 B2=3.95 1969PVa (8058) 248
B3=4.95
B4=5.09
Medium: Et4NCl

Hg++ sp alc/w 25°C 96% U 1968AJa (8059) 249
K3=4.87
Medium:96% MeOH

Hg++ ISE mixed 25?°C 20% U I B2=14 1968PMe (8060) 250
B3=17.5
B4=19.3
Also polarography. Medium:20% C5H5N. In 90%:B2=16.1,B3=20.1,B4=20.9
Also values for w=10,40,60% pyridine

Hg++ sol oth/un 20°C 5.20M U M 1968YGa (8061) 251
Ks(AgI(s)+Hg=AgIHg)=-1.14
Medium: Ca(NO3)2

Hg++ sol non-aq 25°C 100% U 1967KWb (8062) 252
Ks2=-3.99
Ks(Hg2I2(s)=Hg(l)+HgI2)=-5.85
Medium: iso-octane. In MeOH: Ks=-2.84

```
Hg++       dis NaClO4 25°C 0.50M U                      1967MWa  (8063) 253
                                        Kd(HgI2=HgI2(in CCl4))=1.1
-------------------------------------------------------------------------------
Hg++       cal NaClO4 24°C 0.60M U T H                  1964CIa  (8064) 254
Medium:0.5 NaClO4,0.1 HClO4. DH(K1)=-79.0(8 C) kJ mol-1, -75.2(25 C), -72.3
(40 C); DH(B2)=-142.1(8 C),-142.7(25 C),-144.2(40 C), with other values
-------------------------------------------------------------------------------
Hg++       sol NaClO4 25°C  1.0M U        B2=26.0        1964CZc  (8065) 255
                                        B3=27.65
                                        B4=29.3
                                        Kso=-28.19
-------------------------------------------------------------------------------
Hg++       dis non-aq 150°C 100%  U   H                 1964ZMb  (8066) 256
                                        Kd(HgI2(melt)=HrI2(org))=1.58
                                        K3=1.18
                                        K4=1.11
Medium:(Li/K)NO3 eutectic.  DH(D)=-11.3 kJ mol-1, org=polyphenyl eutectic
-------------------------------------------------------------------------------
Hg++       ix  NaClO4 23°C  3.0M U  I                   1963EMb  (8067) 257
                                        K3=3.0
                                        K4=1.4
Method:anion exchange. At I=0.3:K3=3.8, K4=2.6
-------------------------------------------------------------------------------
Hg++       EMF NaClO4 40°C 0.60M U        K1=12.40  B2=22.93  1963HIa  (8068) 258
                                        K(HgL2(s)=HgL2)=-3.87
                                        K(HgL2(s)=HgL+L)=-14.42
Also solubility.  Medium:0.5 NaClO4,0.1 HClO4. At 7 C: K1=13.58, K2=11.63,
K(HgL2(s)=HgL+L)=-16.20;  K(HgL2(s)=HgL2)=-4.43(8C),-4.09(25C)
-------------------------------------------------------------------------------
Hg++       sol NaClO4 24°C 0.60M U T H                  1963HIa  (8069) 259
Medium:0.5 NaClO4,0.1 HClO4.DH(HgL2(S)=HgL2)=31.8(16 C) kJ mol-1,29.3(25 C),
29.3(25 C), 26.8(32 C)
-------------------------------------------------------------------------------
Hg++       sp  alc/w  25°C 100%  U                     1961DWa  (8070) 260
                                        K3=4.9
Medium: MeOH
-------------------------------------------------------------------------------
Hg++       cal none   25°C  0.0  U   H                1961MPa  (8071) 261
I=0 corr. DH(K1)=-73.6 kJ mol-1, DS=10 J K-1 mol-1
-------------------------------------------------------------------------------
Hg++       cal NaClO4 25°C 0.50M U   H                  1960GKa  (8072) 262
Medium: HClO4, DH(B4)=-186 kJ mol-1, DS=-56.1 J K-1 mol-1
-------------------------------------------------------------------------------
Hg++       vlt non-aq 20°C 100%  U                      1959GPa  (8073) 263
                                        K3= ca.4 to 5
                                        K4=2.79
                                        B4=38.79
Medium: HCONMe2, 0.1 LiClO4
-------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.50M U T H                  1958PAa  (8074) 264
```

K3=3.64
K4=2.39
K3=3.70, K4=2.64(2.1 C); 3.47, 2.25(39.7 C); 3.33, 1.8(58.9 C). DH(K3)=-15 kJ mol-1, DH(K4)=-17. By solubility DH(HgL2(s)=HgL2)=28

Hg++ sol oth/un ? var U 1957KPa (8075) 265
K(HgO(s)+H2O+3L=HgL3+2OH)=3.97

Hg++ dis NaClO4 25°C 0.50M U I 1957MAa (8076) 266
Kd(HgL2 into benzene)=1.78
Kd=1.66(I=0)

Hg++ dis NaClO4 25°C 0.50M U K1=12.87 B2=23.82 1957MAa (8077) 267
K3=3.67
K4=2.37

Hg++ dis KNO3 25°C 0.03M U I 1957MVb (8078) 268
K3=3.70
K4=2.16
Kd(HgL2 into benzene)=1.67
At I=0 corr. K3=3.71, K4=2.02

Hg++ cal none 25°C 0.0 U H 1954WIa (8079) 269
DH(B4)=180.6 kJ mol-1, DS=-57.5 J K-1 mol-1

Hg++ cal oth/un 25°C var U H 1954YSa (8080) 270
DH(K1)=-69.5 kJ mol-1, DS=25 J K-1 mol-1

Hg++ ISE oth/un ? var U 1953GOa (8081) 271
B4=30.18

Hg++ con non-aq 25°C 100% U T 1952ECa (8082) 272
K3=5.95
K4=1.61
B(HgL2)2L)=6.95
Medium: MeCN. At 50 C K3=5.85, K4=1.48, B=6.85

Hg++ sol oth/un 25°C var U K1=13.15 1952YSa (8083) 273
B(Hg2L)=13.75

Hg++ sol oth/un 25°C var U K1=12.36 1951YAc (8084) 274
B(Hg2L)=13.62

Hg++ sol NaClO4 25°C 0.50M U I 1949BSb (8085) 275
K(HgL2(s)=HgL2)=-4.13
At I=0 corr. K=-3.98

Hg++ ISE NaClO4 25°C 0.50M U K1=12.87 B2=23.82 1949QSa (8086) 276
K3=3.78
K4=2.23

```
--------------------------------------------------------------------------------
Hg++       vlt oth/un 17°C  0.0  U                      1946MSa  (8087) 277
                                    B4=27
--------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.50M C                      1946SIa  (8088) 278
                                    K(HgI2+Hg=2HgI)=2.06
Method: Pt/Hg(II),Hg(I) electrode.
--------------------------------------------------------------------------------
Hg++       sol none   25°C  0.0  U                      1941BRa  (8089) 279
                                    K(HgL2(s)=HgL2)=-4.01
--------------------------------------------------------------------------------
Hg++       sol none   25°C  0.0  U                      1939GAa  (8090) 280
                                    K3=3.56
                                    K4=1.86
                                    K(HgL2(s)=HgL2)=-3.88
                                    K(HgL2(s)+L=HgL3)=-0.32
--------------------------------------------------------------------------------
Hg++       sol none   18°C  0.0  U                      1937TPa  (8091) 281
                                    K(HgL2(s)=HgL2)=-4.12
--------------------------------------------------------------------------------
Hg++       sp  oth/un 22°C  var  U                      1933FLa  (8092) 282
                                    K3.K4=5.04
--------------------------------------------------------------------------------
Hg++       sp  oth/un 16°C  var  U                      1928JOa  (8093) 283
                                    K3.K4=7.92
--------------------------------------------------------------------------------
Hg++       sol alc/w  25°C 100%  U  I                   1908HKa  (8094) 284
                                    K(HgL2(S)=HgL2)=-1.16
Medium: MeOH. In EtOH: K=-1.40
--------------------------------------------------------------------------------
Hg++       ISE oth/un 25°C  var  U                      1906PAa  (8095) 285
                                    B4=30.53
--------------------------------------------------------------------------------
Hg++       sol non-aq 25°C 100%  U                      1903SHa  (8096) 286
                                    K(HgL2(s)=HgL2)=-2.31
                                    Kd(HgL2 into C6H6)=1.58
Medium: C6H6. In KI var, by Hg electrode, B2=24.42, B4=30.28, K3.K4=5.86
--------------------------------------------------------------------------------
Hg++       sol oth/un 25°C  var  U       K1=13.40  B2=25?    1902MOa  (8097) 287
                                    K(HgL2(s)=HgL2)=-3.88
********************************************************************************
NH3                    L    Ammonia          CAS 7664-41-7  (414)
Ammonia
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       vlt non-aq 25°C 100%  U       B2=17.0        1973MTa  (9160) 288
Medium: Me2NCHO, 0.5 M Et4NClO4
--------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C  1.0M U       B2=17.8        1964WDa  (9161) 289
```

```
--------------------------------------------------------------------------------
Hg++       vlt R4N.X  25°C 0.10M U                      1962TRa  (9162) 290
                                        B4=19.26
Medium: NH4NO3.
--------------------------------------------------------------------------------
Hg++       cal R4N.X  27°C  2.0M U   H                  1957YMa  (9163) 291
Medium: NH4NO3. DH(B2)=-103.3 kJ mol-1; DH(K3)=-13.8; DH(K4)=-15.1;
DS(B2)=-9.6; DS(K3)=-26.8; DS(K4)=-34.7.
--------------------------------------------------------------------------------
Hg++       cal R4N.X   rt   3.0M U   H                  1952FYa  (9164) 292
Medium: NH4NO3. DH(B4)=-119.2 kJ mol-1; DS=-32.2 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       gl  R4N.X  22°C  2.0M U       K1=8.8    B2=17.5   1941BJa  (9165) 293
                                        K3=1.00
                                        K4=0.78
                                        B4=19.3
Medium: NH4NO3
********************************************************************************
NH3O                    L    Hydroxylamine;   CAS 5470-11-1  (1808)
Hydroxylamine; NH2.OH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       ISE mixed  20°C  50%  U       K1=10.94  B2=12.88  1980IPa  (9265) 294
                                        B3=14.87
                                        B4=15.78
Medium: 50% EtOH/acetone
********************************************************************************
NO2-                   HL    Nitrite          CAS 7782-77-6  (635)
Nitrite;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 1.00M C       K1=5.94   B2=9.91   1988EAa  (9373) 295
                                        B3=11.45
                                        B4=11.86
--------------------------------------------------------------------------------
Hg++       sol NaClO4 20°C 1.00M U    M                  1975ZCa  (9374) 296
                                        B(Hg(Oxalate)(NO2))=9.34
                                        B(Hg(Oxalate)(NO2)2)=9.32
--------------------------------------------------------------------------------
Hg++       sp  oth/un 20°C  0.0  U       K1=2.41   B2=3.85   1973CZa  (9375) 297
--------------------------------------------------------------------------------
Hg++       sp  oth/un 20°C  0.0  U    M                  1973CZa  (9376) 298
                                        B(HgClL)=5.35
                                        K(HgClL3)=23.15
                                        K(HgCl2L2)=20.59
--------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.01M U  I                    1971TLa  (9377) 299
                                        B4=11.6
```

I=0.012. When I=0.005, B4=11.2

Hg++ gl oth/un ? var U 1932BWa (9378) 300
B4=14.9

Hg++ ISE oth/un 25°C var U 1906PAa (9379) 301
B4=13.54

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	oth	oth/un	25°C	var	U		K1=0.11	B2=0.11	1968DIa (9702)	302

Methods: Raman spectra, infrared spectra.

Hg++	oth	mixed	23°C	90%	U		K1=0.83	B2=1.56	1966WFa (9703)	303

Medium: 90% i-PrOH, 0.5 M HNO3

Hg++	EMF	NaNO3	25°C	var	U		K1=0.35		1956HSd (9704)	304

Hg++	EMF	NaClO4	25°C	3.0M	U		K1=0.11	K2=-0.1	1946ISa (9705)	305

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	sp	NaClO4	25°C	1.00M	U	H	K1=6.98	B2=14.39	1976AAa (10229)	306

DH(K1)=-30.4 kJ mol-1; DH(K2)=-37.1

Hg++ EMF non-aq 25°C 100% U 1971BGa (10230) 307
B4=28.5

Medium: MeCONMe2, 0.1 M LiClO4

Hg++	sp	NaClO4	28°C	0.25M	U	I	K1=7.15	B2=14.12	1965MKa (10231)	308

K1=7.30(I=0.15),7.48(I=0.05),7.75(I=0); K2=7.08(I=0.15),7.26(0.05),7.49(I=0)

Hg++ cal oth/un 25°C 0.0 U H 1956GWc (10232) 309
DH(Kso(Hg2L2(s))=125 kJ mol-1

Hg++ ISE oth/un 25°C 0.0 U 1952SUa (10233) 310
Kso(Hg2L2(s))=-9.15

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	vlt	alc/w	25°C	25%	U		B2=29.8		1970KSb (10298)	311

B4=36.4

Medium:25% MeOH

****

OH- HL Hydroxide (57)

Hydroxide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	none	25°C	0	C	H R	*K1=-3.40 *B2=-5.98 *B3=-21.1	2005PBa (11558)	312

IUPAC evaluated (R). DH(*K1)=26.2 kJ mol-1, DH(*B2)=51.5
*Kso(HgO(s)+2H=Hg+H2O)=2.37, DH=-25.3. D(SIT): *K1=-0.14(3),*K2=-0.14(2)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	0.15M	C	H	K1=9.18 K(CH3Hg+CH3HgOH)=2.32	2003AGb (11559)	313

Metal is CH3Hg+. By calorimetry, DH(K1)=-35.8 kJ mol-1, DS(K1)=55.7
J K-1 mol-1; DH(K)=-16.1, DS(K)=-9.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	oth/un	25°C	0.10M	C		K1=10.20 B2=21.20	1987GGc (11560)	314

Medium: KSO3CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	0.10M	U		*K1=-3.10	1984PTa (11561)	315

Additional method: Hg electrode.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	oth	none	25°C	0.0	U		K1=10.6 B2=21.83	1983RCa (11562)	316

Recalculation of literature data

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	3.0M	C		*K1=-3.48 *B2=-6.18	1979CFb (11563)	317

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	3.00M	C		*K1=-3.48 *B2=-6.18	1979CIa (11564)	318

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	30°C	1.00M	U		*K1=-3.2 *K2=-3.0	1978THa (11565)	319

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	3.00M	C		*K1=-3.58 *B(1,2)=-6.228 *B(2,2)=-4.84	1977SJb (11566)	320

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	NaClO4	25°C	1.00M	U	HM	K(HgClOH+H)=3.05 K(HgSCNOH+H)=3.4	1976CGb (11567)	321

K(Hg(OH)2+H)=2.6
K(.5HgCl2+.5Hg(OH)2)=-0.5,DH=0
K(HgCl+HgOH=HgClOH+Hg)=0.6, DH=-0.8 kJ mol-1. DH(HgClOH+H)=-20,
K(HgSCN+HgOH=Hg(SCN)(OH)+Hg)=0.3,DH=1. DH(HgSCNOH+H)=-22,DH(Hg(OH)2+H)=-20.7

Hg++ cal NaClO4 25°C 1.0M C 1975CGe (11568) 322
*K1=-3.65
*K2=-2.64
DH(*K1)=-20.7 kJ mol-1, DS=0 J K-1 mol-1; DH(*K2)=-20.7, DS=20

Hg++ EMF NaClO4 25°C 1.00M U 1970CGc (11569) 323
*K1=-3.65
*B2=-6.29

Hg++ EMF NaClO4 25°C 1.00M U 1968CGa (11570) 324
*K1=-3.84
*B2=-6.38

Hg++ cal NaClO4 25°C 3.00M U H 1967AKb (11571) 325
DH(*K1)=30.2 kJ mol-1, DS=33 J K-1 mol-1; DH(*K2)=10.9, DS=-14;
DH(*B(2,1)=12.8, DS=-9; DH(*B(2,2)=53.0, DS=79

Hg++ gl NaClO4 25°C 0.50M U 1963KOb (11572) 326
*K1=-3.68
*K2=-2.57

Hg++ gl NaClO4 25°C 3.0M U 1962AHa (11573) 327
*K1=-3.55
*B2=-6.21
*B(2,1)=-2.67
*B(2,2)=-5.16
*B(4,3)?=-6.40. *B(m,n): mHg+nH2O=Hgm(OH)n+nH)
In 3M Ca(ClO4)2 *K1=-3.49, *B2=-5.96, *B(2,1)=-2.67, *B(2,2)=-4.95

Hg++ cal NaClO4 25°C 0.88M U H 1962LGa (11574) 328
Medium: HClO4. DH(*Kso)=-23.6 kJ mol-1. Data also for I=8.76: DH(*Kso)=-28.1
Also DH for mixtures HClO4-HCl,HBr,HI;HgO(s)

Hg++ sol none 25°C 0.0 U T 1961AHb (11575) 329
Ks(HgO(s)+H2O=Hg(OH)2)=-3.65
HgO(s)=rh,red; Ks=-3.50(35 C),-3.29(50 C),-3.13(60 C)
HgO(s)rh,yellow: Ks=-3.63(35 C), -3.12(60 C) plus others

Hg++ sol NaClO4 25°C 3.0M U 1961DTa (11576) 330
*Kso=2.41
Ks(HgO(s)+H2O=Hg(OH)2)=-3.75
*K1=-3.23
*B2=-6.16
Kso=-26.0

```
Hg++       sol NaNO3  23°C  2.0M U                        1959NHa (11577) 331
                                      Ks(HgO(s)+H2O=Hg(OH)2)=-3.41
-------------------------------------------------------------------------------
Hg++       vlt NaNO3  30°C  2.0M U        B2=21.40       1959NHa (11578) 332
-------------------------------------------------------------------------------
Hg++       sol oth/un 35°C  var  U                        1959SAa (11579) 333
                                      Ks(HgO(s)+H2O=Hg(OH)2)=-3.5
-------------------------------------------------------------------------------
Hg++       cal NaClO4 25°C 5.50M U   H                    1959SLd (11580) 334
Medium:HClO4. DH(*Kso=-18.7 kJ mol-1. DH(*Kso)=-19.2(I=4.2), -20.1(I=3.3),
-21.4(I=2.21), -22.80(I=1.12))
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U TIH                    1958ASa (11581) 335
                                      *B2=-6.52
DH(*B2)=45.2 kJ mol-1. *B2=-6.72(13 C),-6.26(30 C),-6.00(40 C)
-------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C  1.0M U                        1954GOa (11582) 336
                                      *K1=-3.5
                                      *K2=-4.05
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.50M U                        1952HSa (11583) 337
                                      *K1=-3.70
                                      *K2=-2.60
-------------------------------------------------------------------------------
Hg++       oth none   25°C  0.0  U                        1952LAb (11584) 338
                                      Kso=-25.52
-------------------------------------------------------------------------------
Hg++       con oth/un 25°C  var  U                        1941BJa (11585) 339
                                      *K1=-2.4
-------------------------------------------------------------------------------
Hg++       gl  oth/un 21°C  dil  U                        1941BJa (11586) 340
                                      *K1=-2.8
                                      *K2=-3.5
-------------------------------------------------------------------------------
Hg++       sol none   25°C  0.0  U        K1=11.51  B2=22.66  1939GHa (11587) 341
                                      *K1=-2.49
                                      *K2=-2.85
                                      *Kso=1.72
                                      *Ks(HgO+H=HgOH)=-0.77
-------------------------------------------------------------------------------
Hg++       sol none   25°C  0.0  U                        1938GHa (11588) 342
                                      *K3=-14.85
                                      Ks(HgO+H2O=Hg(OH)2)=-3.65
                                      Ks(HgO+H2O+OH=Hg(OH)3)=-4.50
-------------------------------------------------------------------------------
Hg++       sol none   25°C  0.0  U                        1920FUa (11589) 343
                                      *K3=-14.77
                                      Ks(HgO+H2O=Hg(OH)3)=-3.61
                                      Ks(Hg)+H2O+OH=Hg(OH)3)=-4.30
-------------------------------------------------------------------------------
```

```
Hg++       sol oth/un 18°C  var  U        K1=11.86  B2=22.13  1917KOa (11590) 344
                                         Kso=-25.86
                                         Ks(HgO+H2O=Hg(OH)2)=-3.73
-------------------------------------------------------------------------------
Hg++       ISE oth/un 18°C  var  U                          1910ALa (11591) 345
                                         Kso=-25.4
-------------------------------------------------------------------------------
Hg++       oth oth/un   ?     ?  U                          1904FAa (11592) 346
                                         Kso=-25.82
-------------------------------------------------------------------------------
Hg++       sol oth/un 25°C  dil  U                          1902SCa (11593) 347
                                         Ks(HgO+H2O=Hg(OH)2=-3.63
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       EMF non-aq 227°C 100%  U                          1969ETa (12629) 348
                                         Kso=-13.3 (M units)
Ligand=Oxide, O--; Medium: Fused(Na,K)OH (51% Na)
*******************************************************************************
PO4---                 H3L    Phosphate        CAS 7664-38-2  (176)
Phosphate;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C  3.0M C      P                    2005PBa (13208) 349
                                         K(Hg+HPO4)=8.8
                                         K(Hg+HPO4=HgPO4+H)=3.25
IUPAC evaluated(P). *Ks(Hg3(PO4)2(s)+2H=3Hg+2HPO4)=-24.6
*Ks((HgOH)3PO4(s)+4H=3Hg+HPO4+3H2O)=-9.4, Ks(HgHPO4(s)=Hg+HPO4)=-13.1
-------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 3.00M C                          1975QDa (13209) 350
                                         K(Hg+HL)=8.80
                                         K(Hg+HL=HgL+H)=3.25
                                         K(HgHL(s)=Hg+HL)=-13.1
K(Hg3L2(s)+2H=3Hg+2HL)=-24.6; K((HgOH)3L(s)+4H=3Hg+HL+3H2O)=-9.4
-------------------------------------------------------------------------------
Hg++       sol oth/un 20°C  var  U                          1972GOd (13210) 351
K(Hg3L2(s)+4H=3Hg+2H2L)=-6.0
-------------------------------------------------------------------------------
Hg++       ISE none   25°C  0.0  U                          1949VCa (13211) 352
                                         Ks(HgHL(s)=Hg+HL)=-12.40
-------------------------------------------------------------------------------
Hg++       ISE none   25°C  0.0  U                          1929BRa (13212) 353
                                         Ks(HgHL(s)=Hg+HL)=-14.52
-------------------------------------------------------------------------------
Hg++       sol oth/un 20°C  dil  U                          1929LAa (13213) 354
                                         Kso=-6.6
```

****
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
---
Hg++ EMF NaNO3 27°C 0.75M U 1960YDa (13595) 355
B(Hg(OH)L)=17.45
****
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
---
Hg++ ISE oth/un 25°C 1.00M U I K1=7.16 B2=8.90 1962SIb (13864) 356
B(Hg2(OH)L)=13.65
B(Hg2(OH)2L)=20.05
K(Hg2+HL)=4.34
Medium: Na+. In K+: K1=7.84, B2=9.47, B(Hg2(OH)L)=14.22, B(Hg2(OH)2L)=20.35
****
S-- H2L Sulfide CAS 7783-06-4 (705)
Sulfide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sol oth/un 25°C 0.3M C 2000JMa (14377) 357
Ks(HgS+(x-1)S=HgSxOH+H)=-15.7
Dissolution of cinnibar in H2S solutions containing S(orth), pH 6-10, to
form polysulfides. Medium not stated. Ks(HgS+HS+2(x-1)S=Hg(Sx)2+H)=-11.7.

Hg++ sol KCl 25°C 0.70M M 1997PHa (14378) 358
K(HgS(s)+H2S=Hg(HS)2)=-5.36
K(HgS(s)+HS=Hg(HS)S)=-5.34
K(HgS(s)+2HS=HgS2+H2S)=-7.14
K(HgS+HS+nS(0)=HgHS(Sn)=-3.97
For K(HgS(s)+HS+nS(rhom)): n=4-6.

Hg++ sol KCl 25°C 0.7M C 1995PHa (14379) 359
Ks(HgS+H2S(aq)=Hg(HS)2)=-5.76
Ks(HgS(s)+HS=HgS2H)=-4.82
Ks(HgS(s)+HS=HgS2+H)=-13.41
Ks(2HgS+H+H2O=Hg2SOH+H2S)-8.4
Method: dissolution of cinnabar, red HgS, in 0.7 m KCl, 0.5-30 mM NaHS,
buffered to pH 1-13. Ks(Hg3S2Cl2+H2S=3HgS(s)+2H+2Cl)=-1.26.

Hg++ sol KCl 25°C 0.7M C 1995PHa (14380) 360
Ks(2Hg(s)+2HS+nS=Hg2S4SnH2)=1.
Method: dissolution of cinnabar, red HgS, in 0.7 m KCl, 0.5-30 mM NaHS,
buffered to pH 1-13, in presence of S(s).The product is Hg2(S(II)4(S(0)nH2

```
Hg++       vlt NaCl   25°C    ?  U                        1994ZMa (14381) 361
                                      K1eff=7.8
                                      K2eff=5.0
Medium: sea water, pH=8. Method: cathodic stripping square wave voltammetry
-------------------------------------------------------------------------------
Hg++       oth none     ?     0  U                        1990DKa (14382) 362
                                      *Ks(HgS(black)+H=Hg+HS)=-38.9
                                      *Ks(HgS(red)+H=Hg+HS)=-39.5
From recalculation of literature data.
-------------------------------------------------------------------------------
Hg++       oth none   25°C  0.0  C                      1989DYa (14383) 363
                                      KHg+HS=HgS+H)=28.5
                                      *Kso(HgS)=-38.5
                                      Kso(ZnS)=-10
Calculated from literature data, based on K(H+S)=17.0. HgS is metacinnabar
For cinnabar, *Kso(HgS)=-39.8, Kso(HgS)=-11.3.
-------------------------------------------------------------------------------
Hg++       oth none   25°C    0  U                      1988LIa (14384) 364
                                      Kso(HgS,red)=-56.4
                                      *Kso(HgS,red)=-39.1
                                      Kso(HgS,black)=-56.1
                                      *Kso(HgS,black)=-38.7
Derived from thermodynamic data and K(H+S=HS)=17.3.
-------------------------------------------------------------------------------
Hg++       oth none   25°C    0  U                      1988SBc (14385) 365
                                      Kso(HgS,cinnabar)=-58.36
                                      Kso(HgS,metacinnabar)=-57.07
Method: recalc. from literature data using K(H+S=HS)=18.57 and K(H+HS)=6.99
-------------------------------------------------------------------------------
Hg++       dis oth/un 25°C 0.69M U                      1985DYa (14386) 366
                                      K(Hg+2H2S=HgHS2+3H)=17.77
                                      K(Hg+2H2S=Hg(HS)2+2H)=23.96
-------------------------------------------------------------------------------
Hg++       sol oth/un 150°C 0.00  U                     1981SZb (14387) 367
                                      K(HgS(s)+H2S=Hg(HS)2)=-4.63
-------------------------------------------------------------------------------
Hg++       oth none   50°C  0.0  M T                    1969HEa (14388) 368
Estimated from literature data. Cinnabar: Kso=-50.02(50 C); -44.25(100 C);
-39.91(150 C); -36.51(200 C); -33.83(250 C); -31.72(300 C)
-------------------------------------------------------------------------------
Hg++       sol none   25°C  0.0  U       B2=50.23       1964PCa (14389) 369
                                      K(HgL(s)+L=HgL2)=-1.5
                                      K(HgL(s)+2H=HgL+H2S(g))=-30.76
                                      K(HgL(s)+H2L(g)=Hg(HL)2)=-6.2
Also by Hg electrode. I=0 corr.
-------------------------------------------------------------------------------
Hg++       ISE KCl    20°C  1.0M U                     1963SWa (14390) 370
                                      Kso(black HgS)=-50.96
                                      K(HgS(s)+H2S=Hg(SH)2)=-5.97
                                      K(HgHS2+H)=6.19
```

```
                                        K(HgS2+H)=-8.30
-------------------------------------------------------------------------
Hg++       oth none   25°C  0.0  U T                    1959CZa (14391) 371
                                        Kso(HgL)=-52.73
From thermodynamic data. Kso=-43.40(100 C), -35.57(200 C), -26.89(400 C),
-22.16(600 C)
-------------------------------------------------------------------------
Hg++       sol oth/un  rt   var  U                      1959DGc (14392) 372
                                        K(HgL(s)+L=HgL2)=1.08
                                        K(HgL2+2H)=20.88?
-------------------------------------------------------------------------
Hg++       ISE none   25°C  0.0  U                      1952GGc (14393) 373
                                        Kso(HgL)=-51.52
-------------------------------------------------------------------------
Hg++       oth none   25°C  0.0  U                      1952LAb (14394) 374
                                        Kso(HgL)=-53.8
                                        K(HgL(s)+L=HgL2)=0.58
From thermodynamic data. HgL(s)=metacinnabarite
-------------------------------------------------------------------------
Hg++       sol oth/un 25°C  var  U                      1950MAa (14395) 375
                                        K(HgL(s)+L=HgL2)=ca.0
-------------------------------------------------------------------------
Hg++       oth none   25°C  0.0  U  I                   1946TSa (14396) 376
                                        K(HgL(s)+2H=Hg+H2S(g))=-31.1
                                        K(HgS2+2H=Hg(SH)2)=7.0
From thermodynamic data. HgL(s)=metacinnabarite
-------------------------------------------------------------------------
Hg++       sol oth/un 25°C  var  U                      1931KOa (14397) 377
                                        Kso(HgL)=-53.5
                                        K(HgS(s)+2H=Hg+H2S(g))=-30.6
Also by Hg electrode
-------------------------------------------------------------------------
Hg++       ISE oth/un 18°C  var  U                      1909BZa (14398) 378
                                        Kso(HgL)=-47.17
-------------------------------------------------------------------------
Hg++       sol oth/un 25°C  var  U       B2=54.7        1908KNa (14399) 379
                                        Kso(HgL)=-53.5
Also by Hg electrode
*************************************************************************
SCN-                   HL    Thiocyanate      CAS 463-56-9  (106)
Thiocyanate;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.10M U        B2=16.53       1986ECa (15023) 380
-------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H  T K1=6.77   B2=11.8   1985AIa (15024) 381
                                        K3=3.1
Medium: pyridine, 0.1 M Et4NClO4. DH(K1)=-2.5 kJ mol-1, DH(K2)=3.1, DH(K3)=
0.1; DS(K1)=121 J K-1 mol-1, DS(K2)=102, DS(K3)=60
```

```
--------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H  T K1=7.49   B2=13.08  1985AIa (15025) 382
                                        K3=2.95
                                        K4=2.24
Medium: DMSO, 1 M NH4ClO4. DH(K1)=-29.7 kJ mol-1, DH(K2)=-31.4, DH(K3)=-9.8,
DH(K4)=-17.5; DS(K1)=50 J K-1 mol-1, DS(K2)=2, DS(K3)=24, DS(K4)=-16
--------------------------------------------------------------------------------
Hg++       cal NaClO4 25°C 0.50M U TI                    1984VKa (15026) 383
DH(K1)=-50.08 kJ mol-1; DS(K1)=5.9 J K-1 mol-1; DH(B2)=-102.4; DS(B2)=-22.8
--------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H    K1=9.33   B2=14.99  1981APb (15027) 384
                                        B3=17.95
                                        B4=20.26
Medium: DMSO, 0.1 M NH4ClO4. DH(K1)=-28.1; DH(B2)=-59.1; DH(B3)=-68.9;
DH(B4)=-85.6 kJ mol-1
--------------------------------------------------------------------------------
Hg++       cal NaClO4 25°C  1.0M C        K1=9.08   B2=16.86  1975CGe (15028) 385
                                        K3=2.80
                                        K4=0
DH(K1)=51.2 kJ mol-1, DS=2 J K-1 mol-1; DH(K2)=51.2, DS=23;
DH(K3)=18, DS=-7; DH(K4)=18, DS=-22
--------------------------------------------------------------------------------
Hg++       sol NaClO4 20°C 1.00M U    M                  1975ZCa (15029) 386
                                        B(Hg(Oxalate)(SCN))=8.37
--------------------------------------------------------------------------------
Hg++       EMF oth/un   ?   var  U                      1974KIb (15030) 387
                                        B4=20.3
--------------------------------------------------------------------------------
Hg++       cal NaClO4 25°C  1.0M U   H                  1974KUe (15031) 388
DH(B4)=-145.31 kJ mol-1; DS=-72.0 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       EMF non-aq 25°C 100%  U        B2=16.08       1974SLa (15032) 389
                                        B3=19.00
                                        B4=20.41
Medium: DMSO, 1 M (Li,Na)ClO4
--------------------------------------------------------------------------------
Hg++       EMF non-aq   ?  100%  U        B2=16.85       1972BGa (15033) 390
Medium: ethylene glycol, 0.1 M LiClO4
--------------------------------------------------------------------------------
Hg++       EMF non-aq 25°C 100%  U        B2=16.1        1972FDa (15034) 391
                                        B3=19.1
                                        B4=21.2
Medium: DMSO, 0.1 M LiClO4
--------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C  1.0M U T H                  1971AKb (15035) 392
                                        K(Hg+CrL)=4.22
Medium: HClO4; B=4.42(15 C)
--------------------------------------------------------------------------------
Hg++       cal NaClO4 25°C  1.0M U   H                  1971AKb (15036) 393
DH(K1)=-49.8 kJ mol-1, DS=7.1 J K-1 mol-1; DH(K2)=-50.6, DS=-20.1;
```

DH(K3)=-20.5, DS=-14.2; DH(K4)=-20.9, DS=-33.1

Hg++ EMF non-aq ? 100% U 1971BGa (15037) 394
B4=26.8
Medium: N,N-dimethylacetamide, 0.1 M LiClO4

Hg++ sp none 25°C 0.0 U M 1971GMa (15038) 395
K(HgL2+HgCl2=2HgClL)=0.91
K(HgL2+HgBr2=2HgBrL)=0.10
K(HgL2+HgI2=2HgIL)=-0.96

Hg++ sp oth/un 25°C dil U 1971GMa (15039) 396
B(HgLCl)=0.91
B(HgLBr)=0.10
B(HgLI)=-0.96

Hg++ EMF NaClO4 25°C 1.0M U T K1=9.08 B2=16.86 1970CGb (15040) 397
B3=19.70
B4=21.67
By solubility: Kso=-19.00, Ks(HgL(s)+L)=-2.70, K3=2.80, K3.K4=4.8

Hg++ gl NaClO4 25°C 1.0M U 1970CGc (15041) 398
K(Hg2+L+H2O=Hg(OH)L+H)=5.65

Hg++ dis NaClO4 25°C 0.50M U 1970SIa (15042) 399
K3=2.73
K4=2.02

Hg++ sp oth/un ? 0.10M U M 1969NOc (15043) 400
K(HgA+L)=5.7
Medium: KSCN. A=methyl thymol blue

Hg++ vlt non-aq 40°C 100% U I T K1=16.2 1969PVb (15044) 401
B4=22.7
Medium: 20% w/w N-methylacetamide-DMF. K1=17.7,B4=25.2(0%); K1=15.0, B4=21.1 (40%); K1=14.4, B3=17.3, B4=19.52(w=80); K1=14.6, B4=20.5(100%)

Hg++ sol oth/un 20°C 4.60M U 1968GYa (15045) 402
Ks(HgL2(s)+Hg=Hg2L2)=-0.81
Medium: Ca(NO3)2

Hg++ sp NaClO4 ? 0.10M U 1968NOa (15046) 403
K(Hg(EDTA)+L)=5.9

Hg++ ISE mixed 25?°C 20% U I B2=7.6 1968PMe (15047) 404
B3=9.2
B4=10
Also polarography. Medium: 20% C5H5N. In 80%: B3=9.7. Also 10%,40%,60%

Hg++ sol NaNO3 20°C 2.0M U 1968YGa (15048) 405

```
                                        Ks(HgL2(s)+Br=HgL2Br)=0.56
                                        Ks(HgL2(s)+2NO2)=-1.03
-------------------------------------------------------------------------------
Hg++       sol KNO3   20°C 4.60M U                      1966GBb (15049) 406
                                        Ks(HgL2(s)=HgL2)=-1.83
                                        Ks(HgL2(s)+Hg=Hg2L2)=-0.70
-------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C  1.0M U                      1964CZb (15050) 407
                                        K(HgI2(s)+2L=HgI2L2)=-0.27
                                        B(HgI2L2)=27.92
                                        Ks(HgI2)=-28.19
-------------------------------------------------------------------------------
Hg++       vlt oth/un 30°C  var  U        B2=17.60       1964SKa (15051) 408
                                        B3=20.40
                                        B4=21.23
-------------------------------------------------------------------------------
Hg++       sol NaNO3  20°C 0.50M U                      1962CSa (15052) 409
                                        B(HgL2(NO2))=5.98
                                        B(HgL2Cl)=6.82
                                        B(HgL2Br)=7.57
                                        B3=7.24
K(HgL2(s)=Hg+2L)=-7.15 assumed
-------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.20M U TI   T B2=16.43       1962TEa (15053) 410
                                        B3=19.14
                                        B4=21.12
B2=17.26, B3=19.85, B4=22.05(15 C); B2=15.74, B3=18.39, B4=20.23(35 C);
At I=0 corr B2=18.08, B3=20.66, B4=22.61(15 C)); 16.58, 19.23, 20.83(35 C)
-------------------------------------------------------------------------------
Hg++       sol NaNO3  20°C 0.50M U      T               1960CZa (15054) 411
                                        K(HgL2(s)+Br=HgL2Br)=0.43
                                        B(HgL2Br)=7.59(?)
-------------------------------------------------------------------------------
Hg++       ISE KNO3   20°C 3.5?M U                      1960GRd (15055) 412
                                        B5=22.05
                                        B6=21.67
-------------------------------------------------------------------------------
Hg++       ISE alc/w  20°C 100%  U  I                   1960GRd (15056) 413
                                        B4=24.36
Medium: MeOH, 1.5?M KNO3. B5=21.41(2.5 M MeOH), 22.29(10 M MeOH). Data also
in acetone/H2O mixtures
-------------------------------------------------------------------------------
Hg++       vlt NaClO4 25°C  1.0M U      T B2=16.07       1960NAb (15057) 414
                                        K3=2.88
                                        K4=1.99
                                        B4=20.94
-------------------------------------------------------------------------------
Hg++       sol NaNO3  20°C 0.50M U                      1959CFd (15058) 415
                                        K(HgL2(s)+Cl=HgL2Cl)=-0.39
                                        B(HgL2Cl)=7.00(?)
```

```
-------------------------------------------------------------------------------
Hg++       sol R4N.X  20°C 1.40M U  I   T                1959CZb (15059) 416
                                       K(HgL2(s)=HgL2)=-2.47
                                       K(HgL2(s)+L=HgL3)=0.13
                                       K(HgL2(s)=Hg+2L)=-6.80(?)
                                       B3=6.94(?)
Medium: NH4NO3; also K(HgL2+L) for other nitrate solutions with I=4
-------------------------------------------------------------------------------
Hg++       sp  oth/un 20°C  var  U                        1957GTa (15060) 417
                                       B4=21.65
                                       B5=21.67
Also Hg electrode
-------------------------------------------------------------------------------
Hg++       dis non-aq 25°C 100%  U  I                     1957MAa (15061) 418
                                       Kd(HgL2(aq)=HgL2(org))=-2.2
Media: C6H6, NaClO4(I=0.5); Kd=-2.5(I=0). Also in toluene: Kd=-2.2(I=0)
K(HgL2(s)=HgL2)=-2.66(I=0). Also solubility
-------------------------------------------------------------------------------
Hg++       sol oth/un   ?   dil  U                       1956KSc (15062) 419
                                       K(ZnHgL4(s)=Zn+HgL4)=-6.66
-------------------------------------------------------------------------------
Hg++       sol none   20°C  0.0  U                       1956KSd (15063) 420
                                       K(CoHgL4(s)=Co+HgL4)=-5.82
-------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 0.30M U TIH  T                1956TOa (15064) 421
                                       B4=21.23
B4=21.67(20 C), 20.80(30 C). At I=0 corr: B4=21.89; DH(B4)=-146 kJ mol-1,
DS(B4)=-84 J K-1 mol-1 at 25 C
-------------------------------------------------------------------------------
Hg++       sp  oth/un 25°C  var  U    M   B2=17.47       1956YTa (15065) 422
                                       B(HgLBr)=17.80
                                       B(HgLCl)=16.08
B(HgBr2)=17.33, B(HgCl2)=13.22 assumed
-------------------------------------------------------------------------------
Hg++       sol oth/un 18°C  dil  U                       1955SCb (15066) 423
                                       K(CoHgL4(s)=Co+HgL4)=-6.54
                                       K(CuHgL4(s)=Cu+HgL4)=-7.48
                                       K(ZnHgL4(s)=Zn+HgL4)=-7.51
                                       K(CdHgL4(s)=Cd+HgL4)=-5.42
-------------------------------------------------------------------------------
Hg++       vlt oth/un 18°C  var  U                       1949KSb (15067) 424
                                       B4=19.30
-------------------------------------------------------------------------------
Hg++       oth oth/un 16°C  var  U                       1946GMa (15068) 425
                                       K3=1.68
                                       K4=0.62
Method: magneto-optical data
-------------------------------------------------------------------------------
Hg++       ISE oth/un 18°C  var  U                       1905GRa (15069) 426
                                       B4=22.4
```

```
--------------------------------------------------------------------------------
Hg++       ISE oth/un 25°C  var  U                        1905SSa (15070) 427
                                          B4=21.99
********************************************************************************
SO3--                  H2L    Sulfite          CAS 7782-99-2  (801)
Sulfite;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.50M C   H    B2=23.33       1976MHc (15457) 428
                                          B3=24.1
Method: Hg electrode. By calorimetry: DH(B2)=91 kJ mol-1.
--------------------------------------------------------------------------------
Hg++       sol NaNO3        var  U                        1972PBg (15458) 429
K(HgO(s)+2L+H2O=HgL2+2OH)=0.43
--------------------------------------------------------------------------------
Hg++       sol oth/un 25°C  var  U  I M                   1966CZb (15459) 430
                                          Ks(HgI2(s)+L)=0.12
                                          B(HgI2L)=28.31
In 3 M NaClO4: B(HgI3L)=29.77, K(HgI4+L=HgI3L+I)=0.47
--------------------------------------------------------------------------------
Hg++       sol NaClO4 21°C 0.50M U    M                  1964CZa (15460) 431
                                          K(Hg(SCN)2(s)+L)=3.95
--------------------------------------------------------------------------------
Hg++       ISE oth/un 18°C  3.0M U  I     B2=22.85       1955TBa (15461) 432
Method: Hg electrode. Medium: Na2SO4. At I=0 corr.: B2=24.07, K3=0.89
********************************************************************************
SO4--                  H2L    Sulfate          CAS 7664-93-9  (15)
Sulfate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C  0.5M C      P K1=1.4    B2= 2.4   2005PBa (16235) 433
IUPAC evaluated(P).  B2 uncertain
--------------------------------------------------------------------------------
Hg++       con oth/un 25°C  0.0  U    M                  1968YMa (16236) 434
                                          K(Hg(en)+L)=2.47
--------------------------------------------------------------------------------
Hg++       EMF oth/un 25°C  var  U        B2=1.5         1957KSb (16237) 435
--------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.33M U        K1=1.42        1957PTa (16238) 436
--------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.50M U        K1=1.34   B2=2.44   1946ISa (16239) 437
********************************************************************************
S2O3--                 H2L    Thiosulfate      CAS 73686-28-7  (177)
Thiosulfate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       cal NaClO4 25°C  1.0M U   H                   1974KUe (16852) 438
```

DH(B3)=-160.9 kJ mol-1, DS=97.9 J K-1 mol-1

Hg++ sol NaNO3 var U 1972PBg (16853) 439
K(HgO(s)+2L+H2O=HgL2+2OH)=0.48

Hg++ vlt NaNO3 25°C 0.20M U 1970MSc (16854) 440
K3=2.48

Hg++ sp NaClO4 25°C 3.0M U M 1966CZa (16855) 441
K(HgI4+L=HgI3L+I)=0.36
B(HgI3L)=29.66

Hg++ sol NaClO4 25°C 1.0M U 1964CZc (16856) 442
K(HgI2(s)+L)=0.66
B(HgI2L)=28.86
Kso(HgL2)=-28.19

Hg++ ISE none 25°C 0.0 U B2=29.18 1961NSa (16857) 443
B3=30.3
Method: Hg electrode. By polarography B2=29.27, B3=30.8

Hg++ sol oth/un 25°C var U B2=29.4 1957TOa (16858) 444

Hg++ ISE none 25°C 0.0 U B2=29.86 1954TOb (16859) 445
K3=2.40
K4=1.35

****

Se-- H2L Selenide (6335)
Selenide;

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

---

Hg++ EMF oth/un 25°C 1.0M U 1972GKa (16941) 446
Kso=-58
Medium: Na2SO4

Hg++ sol oth/un 25°C dil C 1971MGd (16942) 447
Kso(HgSe)=-51.9
K(Hg+HSe+OH)=51.2
K(Hg+2HSe+2OH)=61.0
K(Hg+2HSe+OH)=52.8
Method: 203Hg radiometric measurement of HgSe dissolution in selenide media, 0.015-0.081 M.

Hg++ oth none 25°C 0.0 U 1964BUe (16943) 448
Kso=-64.5

Hg++ vlt oth/un 25°C var U 1948LNa (16944) 449
Kso(HgL)=-59

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	NaClO4	25°C	1.0M	U	H		1974KUe (16984)	450

DH(B4)=-192.5 kJ mol-1, DS=-96.2 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	25°C	0.30M	U	T	B2=21.4 B3=25.7	1972MTa (16985)	451

35 C: B2=20.4, B3=24.5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sol	NaClO4	25°C	1.0M	U	M	B(HgI2L)=28.0 B(HgI2L2)=29.42 Ks(HgI2)=-27.19 B(HgI3L)=29.74	1965CZa (16986)	452

K(HgI4+L=HgI3L+I)=0.44

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sol	oth/un	18°C	dil	U		K(CuHgL4(s)=Cu+HgL4)=-9.80	1960LCa (16987)	453

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	NaNO3	25°C	0.30M	U	TIH	B3=26.40 K4=2.47 B4=28.87	1956TOa (16988)	454

B4=30.07(15 C), 29.46(20 C), 28.33(30 C). In 0.8 M NaNO3 B4=28.73
At I=0 corr: B4=29.95, DH(B4)=-194.6 kJ mol-1, DS=-87.0 J K-1 mol-1

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sol	NaNO3	25°C	1.0M	U		B2=12.48 Kso(HgL)=-13.82	1957TOa (17061)	455

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sol	oth/un	25°C	var	U		K(HgL(s)+L=HgL2)=-1.38	1909RPa (17062)	456

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	NaNO3	25°C	1.0M	U		B2=36.8	1957TOa (17102)	457

Ligand: selenosulfate, SeSO3--

****

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
-------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 3.00M U  I     K1=3.62   B2=5.90   1982KCd (17611) 458
                                          B3=6.72
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C  3.0M C        K1=3.61   B2=7.10   1977RWa (17612) 459
-------------------------------------------------------------------------------
Hg++       EMF oth/un 25°C 0.10M U        K1=5.43        1973PZa (17613) 460
*******************************************************************************
CH3NO                   L    Formamide        CAS 75-12-7  (3536)
Methanoic acid amide; HCO.NH2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  20°C  1.0M U        K1=2.06        1976BMg (17677) 461
*******************************************************************************
CH4N2O                  L    Urea             CAS 57-13-6  (2018)
Carbamide, Urea; (H2N)2CO
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  20°C  1.0M U        K1=2.06        1976BMg (17719) 462
-------------------------------------------------------------------------------
Hg++       ISE oth/un 30°C 0.10M U        B2=2.1         1969GLa (17720) 463
*******************************************************************************
CH4N2S                  L    Thiourea         CAS 62-56-6  (51)
Thiocarbamide, Thiourea; (H2N)2CS
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       EMF KNO3   25°C 0.09M U T H    K1=12.07  B2=16.83  1988MMe (17827) 464
                                          B3=20.70
DH(K1)=-218 kJ mol-1; DH(B2)=-170.9; DH(B3)=-198
-------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.10M U        B2=22.43       1986ECa (17828) 465
-------------------------------------------------------------------------------
Hg++       ISE mixed  25°C  82%  U                      1979MTd (17829) 466
                                          B4=28.42
Medium: 82% DMF/H2O
-------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U        K1=18.60       1978SGd (17830) 467
                                          K(Hg+HL)=13.27
                                          B(Hg(OH)L)=25.37
-------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.50M C   H    K1=11.4   B2=22.11  1976MHc (17831) 468
                                          B3=25.15
                                          B4=27.10
                                          B(Hg2L3)=36.0
Method: Hg electrode. By calorimetry: DH(K1)=-74 kJ mol-1; DH(B2)=-144,
```

DS(B2)=-60 J K-1 mol-1; DH(B3)=-188, DS(B3)=-148, DH(B4)=-203, DS(B4)=-161

Hg++ sp oth/un 20°C 4.10M U 1973SUa (17832) 469
B(HgBr3L)=22.87

Hg++ cal none 25°C 0.0 C H 1972EIa (17833) 470
K(Hg(CN)2+L)=2.074
K(Hg(CN)2+2L)=2.644
DH(Hg(CN)2+L)=-5.35 kJ mol-1, DH(Hg(CN)2+2L)=-41.7.

Hg++ ISE oth/un 30°C 0.10M U B2=21.3 1969GLa (17834) 471
B3=24.2
B4=25.8

Hg++ cal alc/w 25°C 20% U IH 1968IEb (17835) 472
K'(Hg(CN)2+L)=2.03
K"(Hg(CN)2L+L)=0.77
Medium: 20% EtOH. DH'=-10.0 kJ mol-1,DS=5.4 J K-1 mol-1; DH"=-35.9,DS=-107
40%: K'=1.94,DH'=-18.9,DS'=-26.3; K"=1.04, DH"=-34.3,DS"=-95. Data to 92%

****

CH4N2Se L Selenourea CAS 630-10-4 (4207)
Selenocarbamide; (H2N)2CSe

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

---

Hg++ ISE oth/un 30°C 0.10M U B2=24.0 1969GLa (17865) 473
B3=30.2
B4=32.9

****

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

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

---

Hg++ gl NaClO4 25°C 0.15M C H K1=7.78 2003AGb (18016) 474
Metal is CH3Hg+. By calorimetry, DH(K1)=-39.6 kJ mol-1, DS(K1)=
16 J K-1 mol-1.

Hg++ vlt non-aq 25°C 100% U B2=17.0 1973MTa (18017) 475
Medium: 0.5 Et4N.ClO4 in HCON(CH3)2

Hg++ gl KNO3 25°C 0.50M U K1=8.66 B2=17.86 1972BJa (18018) 476

Hg++ gl oth/un 25°C 0.0 U H 1966PCa (18019) 477
K(HgCl2+L=HgClL+Cl)=2.40
K(HgClL+L=HgL2+Cl)=2.21
Medium: 0 corr, By calorimetry: DH(HgCl2+L)=-28.4 kJ mol-1, DS=-50.2;
DH(HgClL)=-4.2, DS=29.3

Hg++ gl oth/un 25°C 0.50M U K1=8.6 B2=17.9 1950BJa (18020) 478

K3=0.4

****

CH5N3 L Guanidine (3535)

Diaminomethylimine; H2N.C(:NH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	27°C	1.0M	U		B2=24.96	1964WDa (18045)	479

****

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
Hg++	ISE	oth/un	30°C	0.10M	U		B2=11.6	1969GLa (18053)	480
							B3=15.2		

****

CH5N3S L CAS 79-19-6 (372)

Thiosemicarbazide; H2N.CS.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	oth/un	30°C	0.10M	U		B2=22.4	1969GLa (18078)	481
							B3=24.8		
Hg++	ISE	alc/w	25°C	40%	U			1961TKb (18079)	482
							B4=27.3		

Medium: 40% EtOH, 0.05 NaC2H3O2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	NaNO3	20°C	0.80M	U	T		1960TKa (18080)	483
							B4=26.77		

B4=26.25(25 C), 25.75(30 C), 24.80(40 C), 23.93(50 C)

****

CH5N3Se L CAS 21198-79-8 (371)

Selenosemicarbazide; H2N.CSe.NH.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	oth/un	30°C	0.10M	U		B2=26.9	1969GLa (18088)	484
							B3=30.4		
							B4=32.4		

****

C2HO2Cl3 HL Trichloroacetic CAS 76-03-9 (1205)

Trichloroethanoic acid; Cl3C.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	oth/un	25°C	0.10M	U		K1=3.08	1973LUa (18334)	485

****

C2H2 L Acetylene CAS 74-85-1 (703)

Ethyne; HCCH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sol	oth/un	25°C	0.0	U			1965TUa (18356)	486
							Kso(HgL2(OH)2)=-37.10		

****

C2H2N2S3 H2L Bismuthiol I CAS 1072-71-5 (6261)
2,5-Dimercapto-1,3,4-thiadiazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KCl	25°C	0.10M	U	M		1970GSb (18369)	487
							K(HgCl2+L=HgClL+Cl)=7.15		
							K(HgClL+L=HgL2+Cl)=6.54		
							K(HgClL+OH=HgLOH+Cl)=4.86		

****

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
Hg++	sol	NaClO4	20°C	1.00M	U	I M	K1=7.25	1975ZCa (18918)	488
							B(HgLNO2)=9.34		
							B(HgL(NO2)2)=9.32		
							B(HgLBr)=9.09		
							B(HgLBr2)=8.91		
							B(HgL(SCN))=8.37, B(HgL(acetate))=8.31, B(HgL(acetate)2))=8.57		
							B(HgL(Tartrate))=7.66, B(HgL(Tartrate)2)=9.16		
Hg++	ISE	oth/un	25°C	0.05M	U		K1=9.87	1973CSd (18919)	489
Hg++	ISE	oth/un	25°C	0.10M	U		K1=9.66	1973LUa (18920)	490
Hg++	dis	NaClO4	20°C	0.10M	U		K1=<4	1963STc (18921)	491

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	3.0M	C		K1=2.95 B2=5.61	1977RWa (19365)	492
Hg++	ISE	oth/un	25°C	0.10M	U		K1=4.64	1973LUa (19366)	493

****

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

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

```
Hg++       kin NaClO4 25°C  1.0M U                          1953BPa (19426) 494
                                          K(Hg+L=HgLOH+H)=6.54
********************************************************************************
C2H4N2                  L                       CAS 6011-14-9  (5501)
(Cyanomethyl)amine;   CN.CH2.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  oth/un 25°C 0.50M U  I     K1=5.69   B2=10.56  1983HNa (19441) 495
Medium: 0.5 M LHNO3
********************************************************************************
C2H4N2S3                HL                      CAS 97049-30-4  (4220)
5-Mercapto-1,3,4-thiadiazolidine-2-thione; cyclo(-NH.NH.CS.S.C(SH)-)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       sp  oth/un 20°C 0.10M U        K1=4.15        1970GKc (19456) 496
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M U  I                    1997DBa (19478) 497
                                          K(Hg+HL)=3.28
Data also for I=0.5 and 1.0 M
********************************************************************************
C2H4OS2                 HL                      CAS 2042-42-4  (592)
(Methoxy)dithiomethanoic acid; CH3O.CS.SH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       sp  oth/un 25°C  var  U    M                  1970AFa (19513) 498
                                        B(HgL(CN)2)=35.18
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.15M C   H    K1=3.36        2003AGb (19983) 499
Metal is CH3Hg+. By calorimetry, DH(K1)=-3.35 kJ mol-1, DS(K1)=
53 J K-1 mol-1.
--------------------------------------------------------------------------------
Hg++       gl  alc/w  25°C 100%  M        K1=8.5    B2=16.1   1994MPc (19984) 500
Medium: MeOH
--------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 3.00M U  I     K1=4.00   B2=7.39   1982KCd (19985) 501
                                          B3=8.30
--------------------------------------------------------------------------------
```

```
Hg++       gl  NaNO3  30°C 1.00M U        K1=3.32   B2=7.01   1978THa (19986) 502
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C  3.0M C        K1=4.22   B2=8.45   1977RWa (19987) 503
Also measured by redox. K1=4.15, B2=8.44
-------------------------------------------------------------------------------
Hg++       con NaNO3  25°C 0.10M U        K1=6.1    B2=8.60   1975LBa (19988) 504
-------------------------------------------------------------------------------
Hg++       sol NaClO4 20°C 2.00M U    M                  1975ZCa (19989) 505
                                        B(Hg(Oxalate)L)=8.31
                                        B(Hg(Oxalate)L2)=8.57
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  34°C 1.00M U TI     K1=3.48   B2=6.09   1974KBa (19990) 506
                                        B3=9.24
In EtOH, K1=5.60, B2=10.62
-------------------------------------------------------------------------------
Hg++       ISE oth/un 25°C 0.10M U        K1=5.89        1973LUa (19991) 507
-------------------------------------------------------------------------------
Hg++       EMF oth/un 20°C 0.02M U  I     K1=4.65   B2=5.65   1972KBa (19992) 508
                                        B3=6.00
Medium: 0.02-0.5 acetate.  In MeOH: K1=7.00, B2=9.60, B3=11.00
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 30°C  1.0M U        K1=5.55   B2=9.30   1964BSe (19993) 509
                                        B3=13.28
                                        B4=17.06
-------------------------------------------------------------------------------
Hg++       sol oth/un   ?     ?  U        B2=8.43        1953MAa (19994) 510
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.15M C   H    K1=16.72       2003AGb (20326) 511
                                        K(CH3Hg+CH3HgL)=6.25
                                        K'(CH3Hg+HL)=10.26
                                        K"(CH3Hg+(CH3Hg)2L)=5.2
Metal is CH3Hg+. Calorimetry: DH(K1)=-71 kJ mol-1, DS(K1)=82 J K-1 mol-1;
DH(K)=-38, DS(K)=-8; DH(K')=-43.1, DS(K')=52; DH(K")=-49, DS(K")=-64.
-------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.10M U        K1=34.5   B2=40.50  1981BCc (20327) 512
                                        K(Hg+HL)=36.1
-------------------------------------------------------------------------------
Hg++       nmr oth/un 28°C    ?  U    M                  1975HMa (20328) 513
                                        K(HgLCl+OH=HgLOH+Cl)=3.16
                                        K(HgLCl+His=HgL(His)+Cl)=2.61
-------------------------------------------------------------------------------
Hg++       EMF KNO3   12°C  1.0M U T      B2=45.52       1954SKa (20329) 514
25 C: B2=43.82
*******************************************************************************
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
Hg++	gl	NaClO4	25°C	3.0M	C	T	K1=3.06 B2=7.05	1977RWa (20555)	515

****

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
Hg++	gl	NaClO4	25°C	0.15M	C	H	K1=7.85	2003AGb (21571)	516
							K(CH3Hg+CH3HgL)=2.33		
							K'(CH3Hg+HL)=2.00		

Metal is CH3Hg+. Calorimetry: DH(K1)=-43.7 kJ mol-1, DS(K1)=4 J K-1 mol-1
DH(K)=-6.2, DS(K)=24; DH(K')=-2.9, DS(K')=28.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	35°C	0.10M	C	M	K1=9.71 B2=18.25	1998ZWa (21572)	517

Data for ternary complexes with 3,3,9,9-tetramethyl-4,8-diazaundecane-
2,10-dione dioxime

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaCl	37°C	0.15M	U	TI	K1=3.962 B2=7.33	1992MTa (21573)	518

at 0.5 M KNO3, 20 C: B1=10.3, B2=19.2; at 0.6 M NaNO3, 25 C: B2=18.36

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	nmr	KNO3	25°C	0.10M	U	M	K1=10.5 B2=19.10	1988RPa (21574)	519

Medium: D2O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	25°C	0.10M	U		K1=12.2 B2=19.20	1974VBa (21575)	520

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	oth/un	25°C	0.0	U	HM		1966PCa (21576)	521
							K'(HgCl2+L=HgClL+Cl)=3.42		
							K"(HgClL+L=HgL2+Cl)=2.61		

Medium:0 corr. By calorimetry:DH(K')=-25.5 kJ mol-1, DS=-20.9 J K-1 mol-1;
DH(K")=-12.3, DS=8.4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	25°C	0.60M	U		B2=18.36	1966TAb (21577)	522

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	oth/un	22°C	0.01M	U		B2=18.2	1952PEa (21578)	523

Medium: Hg(NO3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	20°C	0.50M	U		K1=10.3 B2=19.2	1945FLa (21579)	524

****

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
Hg++	gl	NaClO4	25°C	0.01M	U	T H	K1=10.90	1979SBa (21851)	525

DH(K1)=-136 kJ mol-1

Hg++ gl NaClO4 25°C 0.01M U K1=10.90 1975SSb (21852) 526

****

C2H6N2 L CAS 124-42-5 (4215)

Acetamidine; CH3.C(:NH)NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KCl	25°C	0.10M	U	M	K(HgCl2+L=HgClL+Cl)=5.06 K(HgClL+L=HgL2+Cl)=4.49 K(HgClL+OH=HgLOH+Cl)=4.98	1970GSb (21903)	527

****

C2H6N2S L Methyl-Thiourea CAS 598-52-7 (1077)

N-Methylthiourea; CH3.NH.CS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	KNO3	25°C	0.09M	U	T H	K1=14.19 B2=18.64 B3=21.48	1988MMe (22010)	528

DH(K1)=-19.7 kJ mol-1; DH(B2)=-63; DH(B3)=-175

****

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
Hg++	nmr	oth/un	28°C	?	U	M	K(HgLCl+OH=HgLOH+Cl)=3.69	1975HMa (22066)	529

****

C2H6O2S2 CAS 51554-68-8 (2123)

Ethylthiosulfonic acid; C2H5.S2O2H HL

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	KNO3	20°C	1.00M	U		B2=17.98 B3=20.51 B4=22.89	1974GSb (22163)	530

****

C2H7N L Dimethylamine CAS 124-40-3 (802)

Dimethylamine; CH3.NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	0.15M	C	H	K1=7.82	2003AGb (22225)	531

Metal is CH3Hg+. By calorimetry, DH(K1)=-31.8 kJ mol-1, DS(K1)=
43 J K-1 mol-1.

****

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

Ethylamine; CH3.CH2.NH2

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  oth/un 25°C 0.50M U        K1=8.90   B2=18.44  1983HNa (22272) 532
Medium: 0.5 M LHNO3
-------------------------------------------------------------------------
Hg++       gl  oth/un 25°C 0.10M U    M                  1976PBa (22273) 533
                                          K(Hg(CN)2+L)=0.75
-------------------------------------------------------------------------
Hg++       vlt non-aq 25°C 100%  U        B2=16.5        1973MDb (22274) 534
Medium: HCON(CH3)2, 0.4 M Et4NClO4
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       cal none   25°C  0.0  U        K1=8.86   B2=17.63  1970EAa (22403) 535
-------------------------------------------------------------------------
Hg++       ISE mixed  25°C  20%  U  I     K1=16.32  B2=17.78  1969MPe (22404) 536
                                          B3=17.90
                                          B4=18.43
Medium:EtOH, 0.4 LiNO3. K1=16.29, B2=17.72, B3=18.16 (0% EtOH). K1=16.61,
B2=17.81, B3=18.08, B4=18.93 (40%). K1=16.83, B2=18.17,B3=18.4,B4=19.09(60%)
-------------------------------------------------------------------------
Hg++       ISE mixed  25°C  80%  U  I     K1=16.95  B2=18.25  1969MPe (22405) 537
                                          B3=18.8
                                          B4=19.48
Medium:EtOH, 0.4M LiNO3. K1=17.00, B2=18.33, B3=19.15, B4=19.94 (90%),
B2=18.34, B3=19.65, B4=20.0 (95%). B3=19.71,B4=20.49 (100%)
-------------------------------------------------------------------------
Hg++       gl  NaClO4 30°C  1.0M U T      K1=8.92   B2=17.56  1964PCa (22406) 538
Medium: KClO4. 50 C: K1=8.64, K2=8.26
-------------------------------------------------------------------------
Hg++       oth KNO3   25°C 0.40M U        K1=8.51   B2=17.32  1956BJb (22407) 539
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       sp  NaClO4 20°C 1.00M U    M                  1972GSh (22493) 540
                                          K(Hg+NiL2)=7.11
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       EMF alc/w  25°C  40%  U        B2=25.5        1970TCa (22544) 541
                                          B3=28.0
```

B4=30.5

Medium: 40% EtOH, 0.3 N KNO3

****

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
Hg++	gl	NaClO4	25°C	0.15M	C	H	K1=8.17 K(CH3Hg+CH3HgL)=4.85 K'(CH3Hg+HL)=5.41	2003AGb (23164)	542

Metal is CH3Hg+. By calorimetry, DH(K1)=-48.6 kJ mol-1, DS(K1)=-7 J K-1 mol-1. DH(K)=-35.2, DS=-25; DH(K')=-42.5, DS=-39.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	20°C	0.10M	C	M	B(HgAL)=18.43 K(HgA+L)=11.72 K(HgA+L=HgAL(OH)+H)=11.07	2003LBa (23165)	543

A is cytidine.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	20°C	0.10M	U		K1=13.85 B2=22.22 B(HgHL)=16.95	1999LBa (23166)	544
Hg++	gl	NaClO4	25°C	3.00M	U		K1=16.749 B2=25.970 B(HgHL)=8.82 B(HgHL2)=20.75	1988WIa (23167)	545
Hg++	oth	NaClO4	25°C	0.10M	U		K1=14.179 B2=23.34 K(Hg+OH+L)=23.865 K(Hg+HL+L)=18.459 K(Hg+2HL+L)=21.994 K(Hg+2HL)=13.1012	1988WIa (23168)	546

Recalculation of literature data.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	25°C	0.10M	U		B2=22.92	1986ECa (23169)	547
Hg++	gl	KNO3	25°C	0.10M	C	TIH R	K1=14.3 B2=23.3	1984PAa (23170)	548

IUPAC evaluation

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	NaNO3	20°C	1.0M	U		K1=10.79	1980BMc (23171)	549
Hg++	vlt	non-aq	25°C	100%	U		B2=14.00	1979SZa (23172)	550

Medium: DMSO, 0.1 M NaClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	20°C	1.0M	U		K1=12.13	1976BMg (23173)	551
Hg++	gl	oth/un	25°C	0.10M	U	M	K(Hg(CN)2+L)=2.12 K(Hg(CN)2+HL)=0.60	1976PBa (23174)	552

```
Hg++       vlt non-aq 25°C 100%  U        B2=23.5        1973MKa (23175) 553
Medium: HCON(CH3)2, 0.5 M Et4NClO4
-------------------------------------------------------------------------------
Hg++       gl  oth/un 25°C  0.0  U   HM                  1966PCa (23176) 554
                                        K'(HgCl2+L=HgClL+Cl)=5.54
                                        K"(HgClL+L=HgL2+Cl)=4.19
Medium: 0 corr.By calorimetry: DH(K')=-36.4 kJ mol-1, DS=-16.7 J K-1 mol-1;
DH(K")=-37.6, DS=-46.0
-------------------------------------------------------------------------------
Hg++       vlt KNO3   40°C 0.10M U T H    B2=21.94       1961RMa (23177) 555
                                        B3=21.74
B2=24.36(10 C), 23.18(25 C); B3=24.1(10 C),23.09(25 C).
DH(B2)=-137.5 kJ mol-1, DS=-20.9 J K-1 mol-1
-------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.10M U        K1=14.3   B2=23.3   1956WMc (23178) 556
                                        B(HgL(OH))=23.8
                                        K(Hg+L+HL)=18.6
                                        K(Hg+L+2HL)=22.2
                                        K(Hg+2HL)=12.9
-------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.10M U        B2=23.18       1955NMa (23179) 557
                                        B3=23.06
-------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C  1.0M U        B2=23.42       1950BJa (23180) 558
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.30M C TIH  T K1=9.18   B2=18.18  1997SJa (23898) 559
IUPAC evaluation. I=0.5 M: DH(K1)=-75.0 kJ mol-1, DH(K2)=-32.1; B2=18.19
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.50M U   H    K1=9.18   B2=18.18  1978MHa (23899) 560
                                        B(Hg(OH)L)=21.86
By calorimetry, DH1=-75 kJ mol-1, DS1=77, DH(B2)=-107, DH(HgOHL)=-114
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 3.00M C  I M   K1=9.18   B2=18.19  1977SJc (23900) 561
                                        K(HgL+Cl)=7.23
                                        K(HgL+2Cl)=7.95
                                        K(HgL+3Cl)=8.97
                                        K(HgL+OH)=12.68
K(HgL2+Cl=HgL2Cl=0.70; K(HgL2+2Cl=HgL2Cl2)=1.0
-------------------------------------------------------------------------------
Hg++       gl  KCl    25°C .058M U T      K1=3.57   B2=6.95   1961SMa (23901) 562
K1=3.84(0 C), 3.26(45 C)
-------------------------------------------------------------------------------
Hg++       ISE oth/un 27°C 0.15M U        B2=16.74       1960BDa (23902) 563
*******************************************************************************
C3H4N2S                 HL    Imidazolethiol   CAS 872-35-5  (1823)
```

2-Mercaptoimidazole; C3H3N2.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	0.10M	U		K1=8.34	1977STc (23971)	564

****

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
Hg++	vlt	NaClO4	30°C	0.20M	C		K1=1.28	1989GMc (24053)	565

Method: polarography. Medium pH 2.5.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	0.11M	U	TIH	K1=1.63	1984GMc (24054)	566

Data for 30-50 C. Also data for 0.03-0.11 M NaClO4. At I=0.0 M, K1=2.32
DH(K1)=31.9 kJ mol-1, DS(K1)=138 J K-1 mol-1.

****

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
Hg++	con	oth/un	25°C	var	U			1968SAa (24466)	567
							B(Hg+2HL)=4.58		

****

C3H5NO2S2 H2L CAS 29596-83-6 (3558)
N-(Dithiocarboxy)aminoethanoic acid; HS.CS.NH.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	KNO3	20°C	1.00M	U		B2=32.0	1968TTa (24658)	568
							B3=33.72		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	mixed	25°C	82%	U			1979MTd (24772)	569
							B4=19.05		

Medium: 82% DMF/H2O

****

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
Hg++	ISE	KNO3	25°C	0.40M	U		B2=14.7	1963LOa (24795)	570
							K(Hg(H-1L)2+H)=5.93		

K(Hg(H-1L)L+H)=5.44

****

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
Hg++	sp	oth/un	25°C	var	U	M		1970AFa (24874)	571

B(HgL(CN)2)=35.26

****

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
Hg++	gl	NaClO4	25°C	3.0M	C		K1=4.33 B2=8.80	1977RWa (25008)	572

****

C3H6O2S HL CAS 2444-37-3 (1074)
(Methylthio)ethanoic acid; CH3.S.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	25°C	0.10M	U		B2=11.93	1986ECa (25091)	573

****

C3H6O3 HL Methoxyacetic CAS 625-45-6 (29)
Methoxyethanoic acid; CH3.O.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	3.00M	C		K1=3.54 B2=6.91	1977RWa (25599)	574

****

C3H7NOS2 HL CAS 59333-68-5 (4240)
N-(2-Hydroxyethyl)dithiocarbamic acid; HO.CH2.CH2.NH.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	KNO3	20°C	1.00M	U		B2=31.7	1968TTa (25670)	575

B3=34.55

****

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
Hg++	gl	NaNO3	25°C	0.10M	U		K1=12.4 B2=19.60	1974VBa (26185)	576
Hg++	vlt	KNO3	25°C	0.60M	U		B2=18.5	1966TAb (26186)	577
Hg++	gl	oth/un	21°C	.005M	U		B2=18.8	1953PEa (26187)	578

Medium: 0.005 M Hg(NO3)2

Hg++ gl oth/un 21°C 0.01M U B2=18.4 1952PEa (26188) 579
Medium: Hg(NO3)2

****

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
Hg++	gl	NaCl	37°C	0.15M	U		K1=3.49 B2=6.77	1992MTa (26455)	580
Hg++	gl	NaClO4	25°C	0.50M	C	T	K1=11.306 B2=19.481 B(HgH-1L)=6.51 B(HgH-1L2)=10.02	1986GGa (26456)	581

****

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
Hg++	gl	oth/un	20°C	0.01M	U		B2=18.7	1952PEa (26603)	582

Medium: Hg(NO3)2

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	0.15M	C	H	K1=16.60 K(CH3Hg+CH3HgL)=8.70 K'(CH3Hg+HL)=15.18	2003AGb (26783)	583

Metal is CH3Hg+. Calorimetry: DH(K1)=-76.2 kJ mol-1, DS(K1)=62 J K-1 mol-1; DH(K)=-57, DS(K)=-25; DH(K')=-86.2, DS(K')=1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	0.15M	C	H	K(CH3Hg+(CH3Hg)2L)=3.47 K'(CH3Hg+CH3HgHL)=4.15 K"(CH3Hg+H2L)=8.96	2003AGb (26784)	584

Metal is CH3Hg+. Calorimetry: DH(K)=-22 kJ mol-1, DS(K)=-8 J K-1 mol-1; DH(K')=-36.2, DS(K')=-42; DH(K")=-56, DS(K")=-16.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	nmr	KNO3	25°C	0.30M	U		K3=0.87 K(HgL2+HL)=1.01 K(HgHL2+HL)=1.49	1988CAb (26785)	585

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	dis	NaClO4	25°C	1.0M	C		B2=42.7 K(Hg+2HL)=40.0	1988SKf (26786)	586

Method: extraction of 203Hg-labelled complex into dithizone/CCl4 solution.

```
Hg++       EMF NaClO4 25°C 0.10M U        K1=37.8   B2=44.00  1981BCc (26787) 587
                                          K(Hg+2HL)=38.3
-------------------------------------------------------------------------------
Hg++       gl  oth/un 25°C 1.00M U        K1=43.68       1977NZa (26788) 588
Medium: KI
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        B2=39.4        1974VBa (26789) 589
-------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M U        K1=14.21       1964LMa (26790) 590
-------------------------------------------------------------------------------
Hg++       gl  oth/un 20°C 0.00  U        B2=20.5        1953PEa (26791) 591
Medium: 0.0025 M Hg(NO3)2
-------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C  1.0M U T      K1=43.57       1953SKb (26792) 592
K1=45.40(12 C)
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  KNO3   35°C 0.10M C    M   K1=8.96   B2=17.60  1998ZWa (27139) 593
Data for ternary complexes with 3,3,9,9-tetramethyl-4,8-diazaundecane-
2,10-dione dioxime
-------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M M    M   K1=4.42        1996AEa (27140) 594
Data for ternary complexes with dipicolinic acid.
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        K1=11.7   B2=19.10  1974VBa (27141) 595
-------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.60M U        B2=17.34       1966TAb (27142) 596
-------------------------------------------------------------------------------
Hg++       gl  oth/un 20°C .005M U        B2=17.5        1953PEa (27143) 597
Medium: 0.005 Hg(NO3)2
*******************************************************************************
C3H7NS2                HL                    CAS 128-04-1  (2125)
Dimethyldithiocarbamic acid; (CH3)2N.CSSH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.10M U        B2=36.0        1991BSe (27275) 598
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  oth/un 25°C 0.10M U        K1=8.48   B2=15.90  1971HMd (27551) 599
                                          K(Hg+HL)=4.56
                                          K(Hg+L+HL)=12.32
```

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ EMF KNO3 25°C 0.09M U T H K1=13.45 B2=17.62 1988MMe (27627) 600
B3=21.02
DH(K1)=-194 kJ mol-1; DH(B2)=-216; DH(B3)=-195
****
C3H8N2S L Ethyl-thiourea CAS 625-53-6 (1079)
N-Ethylthiourea; C2H5.NH.CS.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ EMF KNO3 25°C 0.09M U T H K1=14.42 B2=18.66 1988MMe (27633) 601
B3=22.46
DH(K1)=-110 kJ mol-1; DH(B2)=-28; DH(B3)=-93
****
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
---
Hg++ EMF NaClO4 25°C 0.10M U K1=44.1 B2=51.90 1981BCc (27659) 602
K(Hg+2HL)=45.1

Hg++ ISE NaClO4 25°C 0.10M U K1=44.8 B2=51.91 1980CJa (27660) 603

Hg++ gl NaClO4 25°C 0.10M U K1=25.74 B2=34.35 1977CJb (27661) 604
****
C3H8O3S3 H3L (1324)
1,3-Dimercaptopropanesulfonic acid; HS.CH2.CH2.CH(SH).SO3H

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ EMF NaClO4 25°C 0.10M U K1=41.8 B2=53.10 1981BCc (27763) 605
K(Hg+2HL)=41.0

Hg++ EMF KNO3 ? 0.10M U K1=41.29 1966PRa (27764) 606
****
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
---
Hg++ gl KNO3 25°C 0.50M U TI K1=26.47 B2=35.45 1995NUa (27787) 607
Data also for I=0, I=1.0, I=1.5

Hg++ ISE NaClO4 25°C 0.10M U K1=42.2 B2=53.10 1980CJa (27788) 608

Hg++ dis oth/un ? ? U B2=53.1 1973RPa (27789) 609

Hg++ EMF KNO3 ? 0.10M U K1=39.71 1966PRa (27790) 610

****

C3H8S HL Propylmercaptan CAS 75-33-2 (2515)
2-Propanethiol, Isopropylmercaptan; CH3.CH(SH).CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	alc/w	20°C	25%	U	T H	K1=7.84	1978SKf (27807)	611

DH=-44.02 kJ mol-1. Data also available when T=10 and 30. Alternative methods: Conductivity and amperometric techniques.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	con	alc/w	20°C	25%	C	TIH	Kso(HgL2)=-7.84	1978SKj (27808)	612

Medium: 25% v/v EtOH/H2O. Additional methods: potentiometry (25% EtOH/H2O) polarography (25% EtOH/H2O, 0.2 M NaClO4). Data for 10 and 30 C. DH values

****

C3H9As L CAS 593-88-4 (2296)
Trimethylarsine; (CH3)3.As

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGb (27809)	613

In benzene. DH(HgCl2L)=-74.8 kJ mol-1; DH(HgBr2L)=-71.9.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H	K(HgI2+L=0.5(HgI2L)2)=5.78	1976GGb (27810)	614

In benzene. DH=-70.0 kJ mol-1(Hg); DS=-120.

****

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
Hg++	vlt	non-aq	25°C	100%	U		B2=16.7	1973MTa (27832)	615

Medium: DMF, 0.5M (C2H5)4NClO4

****

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
Hg++	gl	oth/un	25°C	0.50M	U		K1=8.75 B2=18.27	1983HNa (27845)	616

Medium: 0.5 M LHNO3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	non-aq	25°C	100%	U		B2=16.3	1973MTa (27846)	617

Medium: DMF, 0.5M (C2H5)4NClO4

****

C3H9NO L CAS 109-85-3 (1575)
2-Methoxyethylamine; CH3O.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	30°C	1.0M	U	T	K1=9.19 B2=17.84	1964PCa (27903)	618

50 C: K1=8.27, K2=8.36

****

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
Hg++	EMF	alc/w	25°C	40%	U		B2=28.3 B3=30.3	1970TCa (27993)	619

Medium: 40% EtOH, 0.3 M KNO3

****

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
Hg++	vlt	non-aq	25°C	100%	U		B2=24.0	1973MKa (28165)	620

Medium: DMF, (C2H5)4NClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	40°C	0.10M	U	T H	B2=22.23 B3=21.85	1961RMa (28166)	621

B2=24.75(10 C), 23.51(25 C); B3=24.57(10 C), 23.30(25 C).
DH(B2)=-141.3 kJ mol-1, DS=-25.1 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	25°C	0.10M	U		B2=23.53 B3=23.25	1955NRa (28167)	622

****

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
Hg++	gl	NaClO4	25°C	0.15M	C	H	K1=7.81 K(CH3Hg+CH3HgL)=3.92 K'(CH3Hg+HL)=6.77	2003AGb (28304)	623

Metal is CH3Hg+. By calorimetry, DH(K1)=-51 kJ mol-1, DS(K1)=-23 J K-1 mol-1. DH(K)=-38.6, DS=-56; DH(K')=-45.9, DS=-24.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	20°C	0.10M	C	M	B(HgAL)=19.55 K(HgA+L)=12.84 K(HgA+L=HgAL(OH)+H)=11.07	2003LBa (28305)	624

A is cytidine.

```
Hg++       gl  KNO3   20°C 0.10M U        K1=15.42  B2=19.90  1999LBa (28306) 625
                                         B(HgH2L2)=37.50
-------------------------------------------------------------------------------
Hg++       vlt non-aq 25°C 100%  U        B2=11.85       1979SZa (28307) 626
Medium: DMSO, 0.1 M NaClO4
-------------------------------------------------------------------------------
Hg++       gl  oth/un 25°C 0.10M U    M                  1976PBa (28308) 627
                                         K(Hg(CN)2+L)=1.08
                                         K(Hg(CN)2+HL)=0.25
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 1.00M C   H    B2=22.45       1982ABc (28362) 628
By calorimetry:  DH(B2)=-110.5 kJ mol-1, DS(B2)=58.6
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.15M C   H    K1=8.54        2003AGb (28487) 629
                                         K(CH3Hg+CH3HgL)=6.11
                                         K'(CH3Hg+HL)=7.30
                                         K"(CH3Hg+H2L)=2.99
                                         K'"(CH3Hg+(CH3Hg)2L)=2.65
Metal is CH3Hg+. Calorimetry: DH(K1)=-46.8 kJ mol-1, DS(K1)=7 J K-1 mol-1;
DH(K)=-36, DS=-4; DH(K')=-44.4, DS=-9; DH(K")=-32, DS=-32, DH(K"')=-12.
-------------------------------------------------------------------------------
Hg++       gl  KCl    20°C 0.50M U  I     K1=19.6        1950PSa (28488) 630
                                         K(Hg+HL)=17.9
In 0.5 M KBr: K1=21.8, K(Hg+HL)=21.3
*******************************************************************************
C4H2N2O4                L                      CAS 50-71-5  (8155)
1,3-Diazacyclohexane-2,4,5,6-tetraone, Pyramidine-2,4,5,6-tetrone;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  20°C  1.0M U        K1=7.09        1976BMg (28617) 631
*******************************************************************************
C4H2N2S2              H2L                      CAS 104409-71-4  (569)
1,2-Dicyano-1,2-dimercaptoethylene, Dimercaptomaleonitrile; (NC.C(SH):)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.30M U        B2=43.31       1981ISa (28619) 632
*******************************************************************************
C4H4N2                  L    Pyrimidine        CAS 289-95-2  (4247)
```

1,3-Diazine, pyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	20°C	1.0M	U		K1=1.99	1976BMg (28778)	633

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
Hg++	gl	NaNO3	25°C	0.10M	U		K1=8.10 B2=14.96	1989MPa (28858)	634
Hg++	gl	NaClO4	30°C	0.10M	U		K1=7.30 B2=13.59	1978SSa (28859)	635

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
Hg++	gl	KNO3	30°C	0.50M	U		K1=6.88 B2=11.88 B3=15.0	1989WIa (28937)	636

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	25°C	0.10M	U		K1=7.85 B2=14.12	1989MPa (29411)	637
Hg++	ISE	NaClO4	27°C	0.10M	U		B2=10.90	1961FBa (29412)	638

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
Hg++	gl	NaNO3	20°C	1.0M	U		K1=3.31	1976BMg (29503)	639

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
Hg++	gl	NaClO4	25°C	0.10M	U		K1=8.50	1977STc (29663)	640

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

```
--------------------------------------------------------------------------------
Hg++       ISE oth/un 27°C 0.75M U        B2=7.28        1960YDa (29980) 641
                                          B(HgL(OH))=13.45
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.10M U        B2=13.51       1986ECa (30218) 642
--------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.50M C        K1=8.83   B2=15.95  1976NAb (30219) 643
                                          B(HgHL)=10.68
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M U        K1=9.94   B2=18.07  1965LMa (30335) 644
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 1.00M U        K1=6.7         1985MMa (30881) 645
                                          B(HgHL)=8.50
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       sol NaClO4 20°C 3.00M U    M                   1975ZCa (31024) 646
                                          B(Hg(Oxalate)L)=7.66
                                          B(HgOxL2)=9.16
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       con NaNO3  25°C 0.10M U        K1=7.0         1975LBa (31274) 647
--------------------------------------------------------------------------------
Hg++       dis NaClO4 20°C 0.10M U        K1=<4          1963STc (31275) 648
********************************************************************************
C4H7NO2                HL                        (8137)
(S)-Azetidine-2-carboxylic acid;
--------------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M C        K1=10.55  B2=20.97  1989ARa (31442) 649
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M M    M   K1=6.72        1996AEa (31865) 650
Data for ternary complexes with dipicolinic acid.
-------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M M        K1=6.10   B2=10.18  1981GVa (31866) 651
-------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        K1=13.2   B2=20.00  1974VBa (31867) 652
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.15M C   H    K1=7.86        2003AGb (32271) 653
                                          K(CH3Hg+CH3HgL)=2.50
                                          K'(CH3Hg+HL)=2.33
Metal is CH3Hg+. Calorimetry: DH(K1)=-41.5 kJ mol-1, DS(K1)=11 J K-1 mol-1
DH(K)=-5.8, DS=28; DH(K')=-2.8, DS=35.
-------------------------------------------------------------------------
Hg++       con NaNO3  25°C 0.10M U        K1=13.1   B2=20.20  1975LBa (32272) 654
-------------------------------------------------------------------------
Hg++       sol NaClO4 25°C 0.10M U        K1=11.76       1967SKg (32273) 655
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M M    M   K1=4.16        1996AEa (32701) 656
Data for ternary complexes with dipicolinic acid.
-------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        K1=11.4   B2=18.60  1974VBa (32702) 657
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  KCl    20°C 0.20M U        K1=2.58        1982RRd (33029) 658
-------------------------------------------------------------------------
Hg++       gl  oth/un 21°C 0.01M U        B2=12.4        1952PEa (33030) 659
Medium: Hg(NO3)2
```

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	KNO3	25°C	0.09M	U	T H	K1=15.03 B2=18.53	1988MMe (33156)	660

DH(K1)=9 kJ mol-1; DS(K1)=320 J K-1 mol-1; DH(B2)=-73.6; DS(B2)=107

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	30°C	0.50M	U		K1=4.2 B2=11.50	1989WIa (33163)	661

****

C4H8O2 L Dioxan CAS 123-91-1 (2281)
1,4-Diethylene dioxide; cyclo(-CH2.CH2.O.CH2.CH2.O-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H	K(HgCl2+L)=0.58 K(HgBr2+L)=2.36	1974FGa (33201)	662

In benzene. For HgCl2, DH=-26.9 kJ mol-1; DS=-77.
For HgBr2, DH=-22.7; DS=-68.

****

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
Hg++	gl	NaClO4	25°C	3.00M	C		K1=4.25 B2=8.36	1977RWa (33622)	663

****

C4H8O3 HL CAS 2544-06-1 (28)
3-Methoxypropanoic acid; CH3.O.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	3.00M	C		K1=4.24 B2=8.45	1977RWa (33634)	664

****

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
Hg++	gl	NaClO4	25°C	3.0M	C		K1=4.35 B2=8.45	1977RWa (33655)	665

****

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
--------------------------------------------------------------------------------
Hg++       gl  alc/w  25°C  50%  C        K1=>3.6        1979SRa (33735) 666
--------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                   1976FGa (33736) 667
                                          K(Hg(SCN)2+L)=1.36
Medium: MeCN. DH=-38.6 kJ mol-1; DS=-102
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  KNO3   35°C 0.10M C    M   K1=9.04   B2=18.09  1998ZWa (33839) 668
Data for ternary complexes with 3,3,9,9-tetramethyl-4,8-diazaundecane-
2,10-dione dioxime
--------------------------------------------------------------------------------
Hg++       gl  oth/un 19°C 0.01M U        B2=18.3        1952PEa (33840) 669
Medium: Hg(NO3)2
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K1=6.55   B2=12.02  1976SSf (33915) 670
--------------------------------------------------------------------------------
Hg++       gl  oth/un 17°C 0.01M U        B2=18.5        1952PEa (33916) 671
Medium: 0.005-0.01 M Hg(NO3)2, 15-20 C
********************************************************************************
C4H9NO2                HL                    CAS 927-60-6  (4268)
Hydroxyisobutyramide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.10M U    M                   1970GSb (34005) 672
                                       K(HgCl2+L=HgClL+Cl)=5.48
                                       K(HgClL+L=HgL2+Cl)=5.09
                                       K(HgClL+OH=HgLOH+Cl)=4.69
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M U        K2=6.33        1969PPd (34057) 673
                                       K(2HgL+L=Hg2L3)=9.89
                                       K(3HgL+L=Hg3L4)=12.86
```

****
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
---
Hg++ dis NaClO4 35°C 0.10M U M K1=7.43 B2=13.38 1990TSb (34096) 674
Method: electrophoresis. Ternary complexes with NTA

Hg++ gl KNO3 25°C 0.10M U K1=7.20 B2=13.01 1964LMa (34097) 675
****
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
---
Hg++ gl NaNO3 25°C 0.10M U K1=11.7 B2=18.70 1974VBa (34307) 676

Hg++ gl oth/un 20°C .005M U B2=17.5 1953PEa (34308) 677
Medium: 0.005 Hg(NO3)2
****
C4H9N3S L (3587)
5-Methyl-2-thioxo-1,3,4-triazahex-4-ene (acetone thiosemicarbazone)

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ ISE alc/w 25°C 40% U 1961TKb (34433) 678
B4=27.3
Medium: 40% EtOH, 0.052 M NaC2H3O2
****
C4H10N2O HL CAS 27620-10-6 (4273)
alpha-Hydroxyisobutyramidine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl KCl 25°C 0.10M U M 1970GSb (34516) 679
K(HgCl2+HL=HgClHL+Cl)=4.02
K(HgClHL+HL=Hg(HL)2+Cl)=3.57
K(HgClHL+OH=Hg(OH)HL+Cl)=4.86
****
C4H10N2O2 L (3588)
2,3-Diaminopropanoic acid methyl ester; CH2(NH2).CH(NH2).CO.OCH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl oth/un 25°C 0.10M U K1=6.38 B2=11.48 1971HMd (34523) 680
K(HgLOH+H)=7.81

Hg++ gl oth/un 25°C 0.10M U K1=6.38 B2=11.48 1968HMb (34524) 681
K(HgLOH+H)=7.81

****
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
---
Hg++ gl NaNO3 25°C 1.0M C K1=>3.85 1979SRa (34684) 682

Hg++ EMF NaClO4 25°C 0.50M C H K1=6.37 B2=10.47 1976MHc (34685) 683
B3=11.5
B4=14.1
Method: Hg electrode. By calorimetry: DH(K1)=-33.3 kJ mol-1; DH(B2)=-69.6, DS(B2)=-33 J K-1 mol-1; DH(B3)=-62, DS(B3)=13, DH(B4)=-70, DS(B4)=34
****
C4H11N L Butylamine CAS 109-73-9 (159)
1-Aminobutane; CH3.CH2.CH2.CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ vlt non-aq 25°C 100% U B2=16.8 1973MTa (34766) 684
Medium: DMF, 0.5 M Et4NClO4

Hg++ gl KNO3 25°C 0.50M U K1=8.74 B2=18.14 1972BJa (34767) 685
K3=0.9
K4=1.0

Hg++ gl oth/un 25°C 0.50M U K1=8.7 B2=18.1 1950BJa (34768) 686
K3=0.9
K4=1
Medium: C4H11N.HNO3
****
C4H11N L t-Butylamine CAS 75-64-9 (158)
2-Amino-2-methylpropane; H2N.C(CH3)3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl oth/un 25°C 0.50M U K1=8.77 B2=26.77 1983HNa (34789) 687
Medium: 0.5 M LHNO3
****
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
---
Hg++ gl NaClO4 30°C 1.0M U T K1=10.51 B2=18.26 1953MCa (34889) 688
50 C: K1=8.99, K2=7.32
****
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
Hg++	gl	NaClO4	25°C	0.50M	U	H	K1=7.84	B2=15.66	1978MHa (34958)	689

By calorimetry, DH1=-80 kJ mol-1, DS1=117 J K-1 mol-1, DH(B2)=-115, DS(B2)=87

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	ISE	alc/w	25°C	60%	U	I	B2=18.79		1969MPe (34959)	690
							B3=19.6			

Medium: 0-100% EtOH, 0.4 M LiNO3
B2(0%)=17.70, B3(0%)=19.14, B3(100%)=20.26, B4(100%)=20.42

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	KNO3	25°C	0.50M	U		K1=7.84	B2=15.66	1956BJb (34960)	691

****

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
Hg++	gl	NaClO4	25°C	0.15M	C	H	K1=6.71		2003AGb (35056)	692

Metal is CH3Hg+. By calorimetry, DH(K1)=-44.6 kJ mol-1, DS(K1)=-21 J K-1 mol-1.

****

C4H11NS HL CAS 108-02-1 (1792)
1-Mercapto-2-(N,N-dimethyl)aminoethane; HS.CH2.CH2.N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	KNO3	20°C	0.25M	U	I	K1=10.36	B2=20.28	1973MSd (35136)	693

O.25 KNO3, 25% MeOH: K1=10.52, K2=9.93; 25% EtOH: K1=10.55, K2=10.32

****

C4H11OPS HL CAS 866-53-5 (3595)
Diethylphosphinothioic acid; (C2H5)2.POSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	ISE	alc/w	25°C	40%	U		B2=26.2		1967TSa (35201)	694
							B3=29.8			
							B4=33.5			

Medium: 40% EtOH, 0.8 M KNO3

****

C4H11OPS2 HL CAS 999-87-1 (4284)
O-(1-Methylethyl) hydrogen P-methylphosphonodithioate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	EMF	alc/w	25°C	40%	U		B2=28.5		1970TCa (35202)	695
							B3=31.0			

Medium: 40% EtOH, 0.3 M KNO3

****

C4H11OPS2 HL CAS 995-79-9 (4283)

O-Ethyl hydrogen P-ethylphosphonodithioate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	alc/w	25°C	40%	U		B2=29.0 B3=31.6	1970TCa (35206)	696

Medium: 40% EtOH, 0.3 M KNO3

****

C4H11OPS2 HL CAS 1000-53-9 (4285)

O-Propyl hydrogen P-methylphosphonodithioate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	alc/w	25°C	40%	U		B2=28.6 B3=31.2	1970TCa (35208)	697

Medium: 40% EtOH, 0.3 M KNO3

****

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
Hg++	EMF	alc/w	25°C	40%	U		B2=27.7 B3=28.2 B4=29.9	1970TCa (35232)	698
Hg++	ISE	alc/w	25°C	40%	U		B2=29.1 B3=30.9 B4=33.7	1967TSa (35233)	699

Medium: 40% EtOH, 0.8 M KNO3

****

C4H11O3P HL CAS 762-04-9 (1329)

Diethylphosphonic acid; (C2H5.O)2P(O)H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	nmr	non-aq	25°C	100%	U	I M	K(HgCl2+HL)=0.11 K(HgBr2+HL)=-0.60 K(HgI2+HL)=-1.04 K(Hg(SCN)2+HL)=0.76	1981PEa (35245)	700

Medium: pyridine: K(Hg(CN)2+HL)=-2.0: K(HgCl2+HL)=-0.17, K(HgBr2+HL)=-0.32,
In DMSO: K(HgI2+HL)=-0.54, K(Hg(SCN)2+HL)=0.11

****

C4H11O3PS HL CAS 2465-65-8 (3596)

Phosphorothioic acid OO-diethyl ester; (C2H5O)2.POSH

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

```
Hg++       ISE alc/w  25°C  40%  U        B2=24.0        1967TSa (35250) 701
                                         B3=26.4
                                         B4=27.7
Medium: 40% EtOH, 0.8 M KNO3
-------------------------------------------------------------------------------
Hg++       vlt oth/un 25°C  1.0M U        B2=23.5        1961TSa (35251) 702
                                         B3=22.6
                                         B4=20.1
*******************************************************************************
C4H11O3PSe             HL                    CAS 41118-97-2  (3597)
Phosphoroselenoic acid OO-diethyl ester; (C2H5O)2.POSeH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C  1.0M U        B2=28.6        1966TSa (35253) 703
                                         B3=30.3
                                         B4=32.7
*******************************************************************************
C4H11PS2               HL                    CAS 886-54-6  (3591)
Diethylphosphinodithioic acid; (CH3.CH2)2PSSH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       EMF alc/w  25°C  40%  U        B2=31.1        1970TCa (35294) 704
Medium: 40% EtOH, 0.3 M KNO3
-------------------------------------------------------------------------------
Hg++       ISE alc/w  25°C  40%  U        B2=33.6        1967TSa (35295) 705
                                         B3=36.0
                                         B4=38.2
Medium: 40% EtOH, 0.8 M KNO3
*******************************************************************************
C4H12N2                 L    Putrescine       CAS 110-60-1  (360)
1,4-Diaminobutane; H2N.(CH2)4.NH2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M C    M                   2003LBa (35363) 706
                                         B(HgAL)=20.50
                                         K(HgA+L)=13.79
                                         K(HgA+L=HgAL(OH)+H)=11.36
A is cytidine.
-------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U        K1=16.94       1999LBa (35364) 707
                                         B(HgH2L2)=39.44
-------------------------------------------------------------------------------
Hg++       gl  oth/un 20°C  1.0M U        K1=17.96       1962SSc (35365) 708
                                         K(Hg+HL)=10.99
                                         K(HgHL+HL)=6.83
Medium: Ba(ClO4)2
*******************************************************************************
```

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
Hg++	vlt	KNO3	20°C	0.10M	U		K1=21.51	1962SKa	(35379) 709

****

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
Hg++	vlt	non-aq	25°C	100%	U		B2=11.78	1979SZa	(35421) 710

Medium: DMSO, 0.1 M NaClO4

****

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
Hg++	vlt	KNO3	20°C	0.10M	U		K1=20.33	1962SKa	(35489) 711

****

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
Hg++	gl	KNO3	20°C	0.10M	C	M		2004LBa	(35784) 712
							B(HgAL)=21.60		
							K(HgA+L)=9.80		
							B(HgAHL)=28.15		
							K(HgA+HL)=6.39		

H2A is cytidine-5'-monophosphoric acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	20°C	0.10M	C	M		2003LBa	(35785) 713
							B(HgAL)=22.08		
							K(HgA+L)=15.37		
							K(HgA+L=HgAL(OH)+H)=14.21		
							B(HgAHL)=27.47		

A is cytidine. B(HgA+HL)=10.80.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	20°C	0.10M	U		K1=17.62 B2=24.41	1999LBa	(35786) 714
							B(HgHL)=20.72		
							B(HgHL2)=32.86		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	oth/un	25°C	0.10M	U	M		1976PBa	(35787) 715
							K(Hg(CN)2+L=2.52		
							K(Hg(CN)2L+Hg(CN)2)=0.52		
							K(Hg(CN)2+HL)=1.68		

```
--------------------------------------------------------------------------------
Hg++       vlt KNO3   40°C 0.10M U T H    B2=23.76       1961RMa (35788) 716
                                          B3=23.43
At 25 C: B2=25.02,B3=24.5; DH(B2)=-150.5kJ mol-1, DS=-29.3 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.10M U        B2=25.06       1955NRa (35789) 717
                                          B3=24.00
--------------------------------------------------------------------------------
Hg++       gl  KCl    20°C 0.50M U        K1=21.8        1950PSa (35790) 718
                                          K(HgOHL+H)=7.7
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        K1=8.6         1987MPa (36113) 719
                                          B(Hg2L3)=20.03
                                          K(Hg+L2)=13.2
L2=orotic acid dimer
********************************************************************************
C5H4N4O                HL    Hypoxanthine     CAS 68-94-0  (1174)
6-Hydroxypurine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 35°C 0.10M U TIH    K1=7.37        1979RPa (36191) 720
Medium: KClO4. DH(K1)=-9.37 kJ mol-1, DS(K1)=109 J K-1 mol-1.
At 45 C, K1=7.46. At 35 C, I=0.0 M: K1=9.55.
********************************************************************************
C5H5N                   L    Pyridine         CAS 110-86-1  (31)
Pyridine, Azine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.50M U   H    K1=5.1    B2=10.0   1978MHa (36639) 721
By calorimetry, DH1=-36 kJ mol-1, DS1=23, DH(B2)=-69, DS(B2)=40
--------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U    M                   1976AGa (36640) 722
                                          K(HgI2+Py)=1.74
Medium: MeCN
--------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                    1976FGa (36641) 723
                                          K(Hg(SCN)2+L)=1.84
Medium: MeCN. DH=-41.5 kJ mol-1; DS=-102.
--------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                    1974DGa (36642) 724
                                          K(HgA2+2L)=0.52
In benzene. HA=thiobenzoyl-1,1,1-trifluoroacetone; DH=-31 kJ mol-1; DS=-93
--------------------------------------------------------------------------------
```

```
Hg++       gl  KNO3   25°C 0.50M U        K1=5.1    B2=10.00  1972BJa (36643) 725
                                          K3=0.3
                                          K4=0.3
-------------------------------------------------------------------------------
Hg++       gl  oth/un 25°C 0.50M U        K1=5.1    B2=10.0   1950BJa (36644) 726
                                          K3=0.4
Medium: 0.5 M C5H5N.HNO3
*******************************************************************************
C5H5N5                  L    Adenine          CAS 73-24-5  (237)
6-Aminopurine; H2N.C5H3N4
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       dis NaClO4 35°C 0.10M C    M   K1=7.81   B2=13.92  1989MMf (36971) 727
                                          K(Hg(nta)+L)=5.95
                                          B(Hg(nta)L)=19.25
Method: paper electrophoresis. Medium pH=8.5.
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K1=10.65  B2=20.70  1984PTa (37276) 728
Additional method: Hg electrode.
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 30°C 0.10M U        K1=7.93   B2=14.70  1978SSa (37277) 729
-------------------------------------------------------------------------------
Hg++       ISE NaClO4 27°C 0.10M U        B2=21.2        1961FBa (37278) 730
*******************************************************************************
C5H7NO2                HL    Glutarimide      CAS 1121-89-7  (4312)
Piperidine-2,6-dione;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  alc/w  45°C  50%  C        K1=8.69   B2=15.77  1996MMc (37509) 731
Medium: 50% v/v MeOH/H2O, 0.10 M KNO3.
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       EMF KNO3   20°C 1.00M U        B2=30.92       1968TTa (37557) 732
                                          B3=32.33
*******************************************************************************
C5H8N2S                 L                     (6089)
N,N'-Divinylthiourea; CH2:CH.NH.CS.NH.CH:CH2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

Hg++ EMF KNO3 25°C 0.09M U T H K1=13.38 B2=17.04 1988MMe (37724) 733
DH(K1)=-141 kJ mol-1; DS(K1)=-218 J K-1 mol-1; BH(B2)=-196; DS(B2)=-332
****
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
---
Hg++ con NaNO3 25°C 0.10M U K1=12.9 B2=20.10 1975LBa (37985) 734
****
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
---
Hg++ vlt KNO3 25°C 0.10M U B2=10.25 1986ECa (38395) 735
****
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
---
Hg++ gl KNO3 35°C 0.10M C K1=9.44 B2=18.74 1998ZWa (38618) 736
Data for ternary complexes with 3,3,9,9-tetramethyl-4,8-diazaundecane-
2,10-dione dioxime.

Hg++ gl NaNO3 25°C 0.10M U K1=12.2 B2=20.10 1974VBa (38619) 737

Hg++ vlt KNO3 25°C 0.60M U B2=19.25 1966TAb (38620) 738

Hg++ gl oth/un 17°C 0.01M U B2=20.5 1952PEa (38621) 739
Medium: Hg(NO3)2
****
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
---
Hg++ gl oth/un 17°C 0.01M U B2=17.7 1952PEa (38735) 740
Medium: Hg(NO3)2
****
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
---
Hg++ EMF NaClO4 25°C 0.10M U K1=38.4 B2=45.60 1981BCc (38816) 741
K(Hg+2HL)=35.0
****

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
Hg++	gl	KNO3	25°C	0.10M	M		K1=5.60	B2= 9.66	1981GVa (39087)	742
Hg++	gl	NaNO3	25°C	0.10M	U		K1=12.8	B2=19.20	1974VBa (39088)	743
Hg++	EMF	oth/un	25°C	?	U		K1=6.30	B2=11.36	1972SSe (39089)	744

****

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
Hg++	gl	KCl	20°C	0.10M	U		K1=5.47	B2=9.15	1955SAa (39256)	745
							K(HgL(OH)2+H=HgLOH)=9.18			

****

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
Hg++	vlt	KNO3	25°C	0.10M	U		B2=37.5		1991BSe (39333)	746

****

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
Hg++	gl	KCl	25°C	.058M	U	T	K1=6.01	B2=10.63	1961SMa (39539)	747

0 C: K1=6.82, K2=4.52; 45 C: K1=5.26, K2=4.36

****

C5H9N3S HL (1822)
2-Mercaptohistamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	NaClO4	25°C	0.10M	U		K1=12.45		1977STc (39608)	748

****

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
Hg++	oth	KNO3	RT	0.10M	C		K1=>16		1980MVa (39678)	749

Method: paper electrophesis.

****

C5H10N2O2 HL CAS 2762-32-5 (3041)

Piperazine-2-carboxylic acid; C4H9N2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KCl	22°C	0.10M	U		K1=4.1	1960REb (39723)	750

C5H10N2O2S L CAS 29061-28-7 (2621)
4,5-Dimethoxyimidazolidine-2-thione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	mixed	25°C	82%	U		K1=15.43 B2=18.02 B3=20.87	1979MTd (39728)	751

Medium: 82% DMF/H2O

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
Hg++	gl	NaNO3	25°C	0.10M	U		K1=11.5 B2=18.70	1974VBa (39818)	752
Hg++	gl	NaClO4	25°C	0.10M	U		K1=5.70 B2=10.35	1973TSb (39819)	753

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
Hg++	gl	KCl	20°C	0.20M	U		K1=2.42	1982RRd (39889)	754

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
Hg++	gl	KCl	20°C	0.20M	U		K1=2.80 B2=5.00	1982RRd (39938)	755

C5H10OS2 HL CAS 110-50-9 (591)
(Butoxy)dithiomethanoic acid; CH3.CH2.CH2.CH2O.CSSH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	dis	oth/un	25°C	0.25M	U		B2=>27	1982SAa (40159)	756
Hg++	sp	oth/un	25°C	var	U	M	B(HgL(CN)2)=35.43	1970AFa (40160)	757

C5H10O2 HL Pivalic acid CAS 75-98-9 (3026)
Trimethylethanoic acid, 2,2-Dimethylpropanoic acid; (CH3)3C.COOH

```
---------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
---------------------------------------------------------------------------
Hg++       ISE oth/un 25°C 0.10M U        K1=5.92        1973LUa (40216) 758
***************************************************************************
C5H11N                  L                     CAS 1003-03-8  (304)
Cyclopentylamine;
---------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
---------------------------------------------------------------------------
Hg++       gl  oth/un 25°C 0.50M U        K1=8.89   B2=18.51  1983HNa (40394) 759
Medium: 0.1 M LHNO3
***************************************************************************
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
---------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  U   H    K1=5.48   B2=11.92  1989PSa (40447) 760
                                         B3=13.5
In DMSO; ionic medium: 0.1M Et4NClO4
---------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.50M U   H    K1=8.70   B2=17.44  1978MHa (40448) 761
By calorimetry, DH(K1)=-45 kJ mol-1, DS=23 J K-1 mol-1; DH(B2)=-74, DS=87
---------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.50M U        K1=8.74   B2=17.44  1972BJa (40449) 762
---------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.50M U        K1=8.70   B2=17.44  1950BJa (40450) 763
***************************************************************************
C5H11NO                 L                     CAS 109-02-4  (2279)
N-Methyl-tetrahydro-1,4-oxazine, N-methyl-morpholine;
---------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
---------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                    1974FGa (40464) 764
                                        K(HgCl2+L)=2.44
                                        K(HgBr2+L)=2.61
                                        K(HgI2+L)=2.45
In benzene. For HgCl2, DH=-37.9 kJ mol-1; DS=-79 J K-1 mol-1. For HgBr2,
DH=-37.1; DS=-73. For HgI2, DH=-33.6; DS=-64.
***************************************************************************
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
---------------------------------------------------------------------------
Hg++       gl  KNO3   35°C 0.10M C    M   K1=8.90   B2=17.42  1998ZWa (40715) 765
Data for ternary complexes with 3,3,9,9-tetramethyl-4,8-diazaundecane-
2,10-dione dioxime
---------------------------------------------------------------------------
```

```
Hg++       gl  NaNO3  25°C 0.10M U        K1=3.46   B2=6.83   1989MPa (40716) 766
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        K1=11.7   B2=18.90  1974VBa (40717) 767
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  oth/un 19°C .005M U        B2=17.7        1953PEa (40837) 768
Medium: 0.005 Hg(NO3)2.
-------------------------------------------------------------------------------
Hg++       gl  oth/un 20°C 0.00  U        B2=17.6        1952PEa (40838) 769
Medium: 0.0005 Hg(NO3)2.
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        K1=12.8   B2=19.50  1974VBa (41098) 770
-------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.60M U        B2=17.62?      1966TAb (41099) 771
-------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M U        K1=6.52   B2=11.45  1964LMa (41100) 772
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M C         K1=18.86  B2=24.95  1983SLc (41187) 773
                                          K(Hg+HL+L)=22.83
-------------------------------------------------------------------------------
Hg++       EMF NaClO4 25°C 0.10M U         K1=37.8   B2=44.50  1981BCc (41188) 774
                                          K(Hg+2HL)=37.8
*******************************************************************************
C5H11NO2S             H2L    Penicillamine    CAS 52-66-4  (350)
DL-2-Amino-3-mercapto-3-methylbutanoic acid; (CH3)2C(SH)CH(NH2)COOH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.50M U                        1999KPa (41261) 775
                                          B(HgHL2)=52.03
                                          B(HgH3L3)=72.43
By solvent extraction: B(HgH2L2)=59.03, B(HgH3L2)=61.02, B(HgH4L2)=62.47.
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M M    M                   1990SHa (41262) 776
                                          K(HgL2+H)=8.88
                                          K(HgL2+2H)=16.35
```

```
                                        K(HgL2+3H)=19.06
                                        K(HgL2+Ni)=8.22
K(HgL2+H+Ni)=13.53; K(HgL2+Co)=5.95
--------------------------------------------------------------------------------
Hg++       nmr KNO3   25°C 0.30M U                      1988CAb (41263) 777
                                        K3=3.59
                                        K(HgL2+HL)=3.35
                                        K(HgHL2+HL)=3.11
--------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 0.10M U        K1=38.3   B2=44.40  1980CJa (41264) 778
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M U        K1=16.15       1964LMa (41265) 779
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.15M U        K1=17.5   B2=23.50  1962KRa (41266) 780
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       ISE KNO3   20°C 1.00M U        K1=31.96  B2=34.92  1968TTa (41298) 781
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.10M U        B2=38.2        1991BSe (41352) 782
Also data for n-Pr(K1=38.0), i-Pr(42.9), n-Bu(39.4), i-Bu(42.0) and many
other N-disubstituted dithiocarbamic acids.
--------------------------------------------------------------------------------
Hg++       vlt non-aq 25°C 100%  U        K1=42.3        1977ZCa (41353) 783
Medium: DMSO, 0.2 M Bu4NClO4
--------------------------------------------------------------------------------
Hg++       sp  non-aq   ?  100%  U    M                  1968SRg (41354) 784
                                           K(Hg(HA)2+2HL=HgL2+2H2A)=2.31
Medium: CCl4.  H2A=dithizone
********************************************************************************
C5H12N2O                HL                      CAS 62626-14-6  (4329)
2-Hydroxy-2-methylbutyramidine; H2N.C(:NH).C(OH)(CH3).CH2.CH3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.10M U    M                  1970GSb (41462) 785
                                           K(HgCl2+HL=HgClHL+Cl)=4.27
                                           K(HgClHL+HL=Hg(HL)2+Cl)=3.95
                                           K(HgClHL+OH=Hg(OH)HL+Cl)=4.76
********************************************************************************
C5H12N2O                 L    TMU             CAS 632-22-4  (146)
Tetramethylurea; (CH3)2N.CO.N(CH3)2
```

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       cal oth/un 25°C    ?  U   H                    1980ACa (41478) 786
HgX2(s)+2L=HgL2X2(s)  DH = -36.5 X = Cl,  DH = -29.4 X = Br
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M U  I                    1970CMc (41576) 787
                                        K(Hg+HL)=4.83
                                        K(HgHL+HL)=4.32
I=1.0 M, K(Hg+HL)=4.52, K(HgHL+HL)=3.29
********************************************************************************
C5H12N2S                L                     CAS 105-55-5  (2379)
1,3-Diethylthiourea; C2H5.NH.CS.NH.C2H5
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       EMF KNO3   25°C 0.09M U T H    K1=14.52  B2=18.67  1988MMe (41623) 788
                                        B3=21.88
DH(K1)=-155 kJ mol-1; DH(B2)=-170; DH(B3)=-133
********************************************************************************
C5H12N2S                L                     CAS 2782-91-4  (6088)
N,N,N',N'-Tetramethylthiourea; (CH3)2N.CS.N(CH3)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       EMF KNO3   25°C 0.09M U T H    K1=14.04  B2=18.36  1988MMe (41628) 789
                                        B3=21.90
DH(K1)=-190 kJ mol-1; DH(B2)=-133; DH(B3)=-134
********************************************************************************
C5H12O3S4              H3L                   CAS 19872-38-9  (4331)
2,3-Dimercaptopropylthioethanesulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       dis oth/un   ?     ?  U        B2=52.4        1973RPa (41654) 790
--------------------------------------------------------------------------------
Hg++       EMF KNO3     ?  0.10M U        K1=41.33       1968PRc (41655) 791
********************************************************************************
C5H12O4S3              H3L                   CAS 19872-36-7  (4332)
2,3-Dimercaptopropanoxyethanesulfonic acid; HS.CH2.CH(SH).CH2.O.CH2.CH2.HSO3
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       dis oth/un   ?     ?  U        B2=54.5        1973RPa (41668) 792
--------------------------------------------------------------------------------
```

```
Hg++       EMF KNO3     ?  0.10M U        K1=41.45       1968PRc (41669) 793
**************************************************************************
C5H12O5S4             H3L                     CAS 35617-14-2  (4333)
2,3-Dimercaptopropanesulfonethanesulfonic acid; HS.CH2.CH(SH).CH2.SO2.CH2CH2.HSO3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Hg++       dis oth/un   ?     ?  U        B2=52.5        1973RPa (41699) 794
--------------------------------------------------------------------------
Hg++       EMF KNO3     ?  0.10M U        K1=42.16       1968PRc (41700) 795
**************************************************************************
C5H13N                 L                     CAS 616-24-0  (5502)
3-Aminopentane CH3.CH2.CH(NH2).CH2.CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Hg++       gl  oth/un 25°C 0.50M U        K1=8.67   B2=18.08  1983HNa (41716) 796
Medium: 0.1 M LHNO3
**************************************************************************
C5H13OPS               L                     CAS 14806-54-3  (3640)
Diethylphosphinothioic acid O-methyl ester
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Hg++       ISE alc/w  25°C  40%  U        B2=13.7        1967TSa (41805) 797
                                         B3=16.0
                                         B4=17.4
Medium: 40% EtOH; 0.8 M KNO3
**************************************************************************
C5H13OPS2              HL                    CAS 24392-61-8  (4340)
O-(1-Methylethyl-hydrogen-P-ethylphosphonodithioate;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
Hg++       EMF alc/w  25°C  40%  U        B2=29.7        1970TCa (41806) 798
                                         B3=32.3
Medium: 40% EtOH, 0.3 M KNO3
**************************************************************************
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
--------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M C    M                   2004LBa (42004) 799
                                        B(HgAL)=24.27
                                        K(HgA+L)=12.47
                                        B(HgAHL)=30.43
                                        K(HgA+HL)=8.23
H2A is cytidine-5'-monophosphoric acid.
--------------------------------------------------------------------------
```

Hg++ gl KNO3 20°C 0.10M C M 2003LBa (42005) 800
B(HgAL)=28.59
K(HgA+L)=21.88
B(HgAHL)=33.95
K(HgA+HL)=16.84
A is cytidine. B(HgAH2L)=39.34, K(HgA+H2L)=12.91.

****

C6HF5 L CAS 363-72-4 (4345)
Pentafluorobenzene; C6HF5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	25°C	100%	U	M	K(HgL2+py)=1.30 K(HgL2+bpy)=1.74	1973PHa (42021)	801

Medium: CCl4. In benzene, K(HgL2+py)=0.32, K(HgL2+bpy)=1.28

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	alc/w	20°C	50%	U		K1=5.45 B2=10.10	1987SIa (42547)	802
Hg++	sp	NaNO3	20°C	1.00M	U		K1=8.16 B2=15.34	1984CPb (42548)	803
Hg++	ISE	NaNO3	20°C	0.10M	U		K1=7.7 B2=15.4	1960ANb (42549)	804

****

C6H5NO3 H2L CAS 609-71-2 (5910)
2-Hydroxypyridine-3-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	alc/w	20°C	50%	C		K1=10.81 B2=21.22 K(Hg+HL)=7.02 B(Hg(OH)2L)=29.16	1991ISb (42724)	805

Medium: 50% v/v EtOH/H2O; 0.1M NaClO4

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	1.00M	C		K1=6.29 B2=12.35	1990ERa (42808)	806

****

C6H6 L Benzene CAS 71-43-2 (2143)
Benzene, cyclohexatriene;

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

```
Hg++       sp  non-aq 25°C 100%  U    M                  1974VPb (43167) 807
                                        K(L+HgCl2)=-0.69
                                        K(L+HgBr2)=-0.521
Medium: dichloromethane
-------------------------------------------------------------------------------
Hg++       sp  NaClO4 22°C 1.10M U                       1964WDa (43168) 808
                                        K(Hg+L=HgH-1L+H)=2.5
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  KNO3   24°C 0.10M U        K1=6.5    B2=12.20  1962BEa (43300) 809
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  20°C  1.0M U        K1=3.16        1976BMg (43342) 810
*******************************************************************************
C6H6N4O4               HL    Furacilin        CAS 59-87-0  (4360)
5-Nitro-2-furfurylidene semicarbazone; NO2.C4H2O.CH:N.NH.C0.NH2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       sp  oth/un   ?     ?  U        B2=9.56        1968BAa (43503) 811
                                        B(Hg2L3)=9.43
*******************************************************************************
C6H6O                  HL    Phenol           CAS 108-95-2  (457)
Hydroxybenzene, phenol; C6H5.OH
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 1.00M C        K1=8.24   B2=15.75  1990ERa (43539) 812
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 0.10M U        K1=19.86       1972GKc (44458) 813
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U    M                  1976AGa (44824) 814
```

K(HgI2+L)=1.80
Medium: MeCN

Hg++ cal non-aq 30°C 100% U H 1976FGa (44825) 815
K(Hg(SCN)2+L)=2.07
Medium: MeCN. DH=-45.4 kJ mol-1; DS=-110
****
C6H7N L Aniline CAS 62-53-3 (583)
Aminobenzene, aniline; C6H5.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	NaClO4	27°C	1.0M	U		K1=4.61	B2=9.21	1964WDa (44872)	816
****
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
Hg++	EMF	NaNO3	20°C	0.10M	U		B2=20.08	1971ANa (45356)	817
****
C6H8N2O2S HL (8159)
4-Aminobenzenesulfamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	alc/w	20°C	1.0M	U		K1=14.45	1976BMg (45394)	818
Medium: 1.0 M NaNO3 in 60% v/v EtOH/H2O
****
C6H8N2O3 HL (8157)
6-Methyl-5-methoxyuracil, 6-Methyl-5-methoxy-2,4-pyrimidinedione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	20°C	1.0M	U		K1=8.14	1976BMg (45399)	819
****
C6H8N2O4 H2L (3100)
Cyanomethyliminodiethanoic acid; NC.CH2.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	KNO3	20°C	0.10M	U		K1=2.77	B2=4.97	1955SAa (45417)	820
****
C6H8N4O2S L CAS 42026-60-8 (8288)
6-Amino-3-methyl-2-(methylthio)-5-nitroso-4(3H)-pyrimidinone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	KCl	25°C	0.1M	U	IH	K1=5.76	B2=11.07	1984MMh (45442)	821
Data for I=0.01-0.20 M and 25-40 C. At I=0.0 M, K1=7.01, K2=6.73.

DH(K1)=-29.7 kJ mol-1, DS(K1)=11.3 J K-1 mol-1; DH(K2)=-20.7, DS(K2)=32.7.

****

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
Hg++	con	NaNO3	25°C	0.10M	U		K1=13.3 B2=18.80 K(Hg+HL)=6.1 K(Hg+H2L)=4.1	1975LBa (46131)	822
Hg++	ISE	NaClO4	25°C	0.10M	U		K1=10.9	1967SKe (46132)	823

****

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
Hg++	dis	NaClO4	25°C	0.10M	C		K1=13.30	1989MMf (46849)	824
Method: paper electrophoresis. Medium pH=8.5.									
Hg++	sp	NaCl	20°C	0.10M	U		K1=13.51	1980KVa (46850)	825
Hg++	ISE	NaClO4	25°C	0.50M	U		K1=13.48	1977GGb (46851)	826
Hg++	ISE	KNO3	25°C	0.10M	U		K1=14.31	1977GNb (46852)	827
Method: Hg-electrode									
Hg++	sp	oth/un	20°C	?	U		K1=16.39 K(Hg+HL)=6.60	1969CAd (46853)	828
Hg++	ISE	NaClO4	25°C	0.10M	U	T	K1=14.6	1967SKe (46854)	829

****

C6H9N3OS L (7299)
4-Amino-6-methoxy-2-methylthio-pyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KCl	25°C	0.10M	C		K1=13.76 B(HgH2L2)=38.4	1996LGc (47145)	830

****

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
Hg++	gl	NaNO3	25°C	0.10M	U		B2=21.6	1974VBa (47565)	831
Hg++	vlt	KNO3	25°C	0.60M	U		B2=20.62	1966TAb (47566)	832

```
Hg++       gl  KCl    25°C .058M U T      K1=7.38   B2=12.38  1961SMa (47567) 833
0 C, K1=7.90, K2=5.50; 45 C, K1=6.85, K2=4.43
--------------------------------------------------------------------------------
Hg++       ISE NaClO4 27°C 0.15M U        B2=21.22       1960BDa (47568) 834
                                          K(Hg+L+HL)=18.4
                                          K(Hg+2HL)=15.0
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K1=12.43       1982TSb (47640) 835
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 0.10M U  I     K1=19.93  B2=32.27  1979PPc (47658) 836
                                          B3=34.16
Method: Hg electrode. In 50% v/v dioxan/H2O: K1=22.8; B2=33.76; B3=34.93
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M C  I     K1=19.93  B2=32.27  1979PPd (47659) 837
                                          B3=34.16
Additional methods: polarography and Hg electrode.
In 50% dioxane/H2O: K1=22.8, B2=33.76, B3=34.93.
********************************************************************************
C6H10                   L    Cyclohexene      CAS 110-83-8  (3054)
Cyclohexene; C6H10
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       dis KNO3   25°C  1.0M U        K1=4.34        1939LHa (47669) 838
********************************************************************************
C6H10N2O4             H2L                     CAS 96705-91-8  (3103)
Piperazine-2,5-dicarboxylic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KCl    22°C 0.10M U        K1=3.8    B2=7.1    1964PCa (47727) 839
********************************************************************************
C6H10N2O4             H2L                       (3104)
Piperazine-2,6-dicarboxylic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KCl    22°C 0.10M U        K1=5.1    B2=9.2    1964PCa (47737) 840
********************************************************************************
C6H10N2O4             H2L                     CAS 89601-09-2  (3102)
```

trans-Piperazine-2,3-dicarboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KCl	22°C	0.10M	U		K1=5.6 B2=9.6	1964PCa (47748)	841

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
Hg++	gl	KNO3	25°C	0.10M	M	M	K1=6.44	1996AEa (47843)	842
Data for ternary complexes with dipicolinic acid									
Hg++	gl	KCl	20°C	0.10M	U		K1=3.82 B2=6.47	1955SAa (47844)	843

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
Hg++	ISE	mixed	25°C	82%	U		K1=15.77 B2=18.59 B3=21.22	1979MTd (47891)	844
Medium: 82% DMF/H2O									

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
Hg++	vlt	KNO3	25°C	0.10M	U		B2=12.78	1986ECa (48182)	845

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
Hg++	vlt	KNO3	25°C	0.10M	U		B2=18.05	1986ECa (48243)	846
Hg++	gl	NaClO4	25°C	0.50M	U		B2=18.99	1980NAc (48244)	847
Hg++	gl	NaClO4	25°C	0.50M	C		K(HgL2+H)=2.10 K(HgHL2+H)=0.41	1978NAb (48245)	848

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

Hg++ gl NaNO3 25°C 0.05M C K1=2.86 B2= 5.28 2002SFa (48437) 849
B(HgH-1L)=-3.22
B(HgH-2L)=-10.40
B(HgH-1L2)=-3.17
B(HgH-2L2)=-12.95

****

C6H11NO2 HL CAS 37910-65-9 (6018)
2-Aminocyclopentane-1-carboxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	0.50M	C		K1=11.166 B2=17.907 B(HgH-1L)=6.88	1986GGa (48517)	850

cis isomer

****

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
Hg++	gl	KCl	20°C	0.10M	U		K1=16.16 B2=22.33 K(Hg+HL)=5.05	1955SAa (48612)	851

****

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
Hg++	gl	KCl	20°C	0.10M	U		K1=5.48 B2=8.83 K(HgLOH+H)=9.56 K(HgL(OH)2+H)=10.51	1955SAa (48742)	852

****

C6H11NO5 H2L (7174)
N-Carboxymethylthreonine; HOOCCH2NHCH(CH(OH)CH3)COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	25°C	0.10M	C		K1=10.11 B2=19.22 B(HgHL2)=22.48 B(HgH-1L)=6.50	2001MTb (48824)	853

****

C6H11O4P H2L CAS 85931-58-4 (5652)
Ethylphosphinediethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	0.10M	U		B4=40.9 B(HgHL4)=44.8 B(HgH2L4)=47.9	1983NPa (49010)	854

B(HgH3L4)=50.7
Additional method: spectrophotometry. B(HgH4L4)=53.2, B(HgH5L4)=55.3, B(HgH6L4)=57.2.

****

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
Hg++	gl	KCl	20°C	0.20M	U		K1=2.83		1982RRd (49129)	855

****

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
Hg++	sp	oth/un	25°C	0.10M	U	M	K1=15.4	B2=24.2	1975NKa (49244)	856

Beff(MLCl)=9.9; Beff(MLBr)=12.0; Beff(MLSCN)=10.8. Conditions not stated.

****

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
Hg++	gl	KCl	20°C	0.10M	U		K1=9.75	B2=15.80	1955SAa (49303)	857
							K(HgLOH+H)=10.15			

****

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
Hg++	gl	NaNO3	25°C	0.10M	C				1996ESa (49723)	858
							B(HgH-1L)=-0.9			
							B(HgH-2L)=-4.03			

****

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
Hg++	gl	KNO3	35°C	0.10M	C	M	K1=9.01	B2=17.30	1998ZWa (49904)	859

Data for ternary complexes with 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	NaNO3	25°C	0.10M	U		K1=12.4	B2=19.80	1974VBa (49905)	860
Hg++	gl	oth/un	20°C	0.01M	U		B2=17.6		1952PEa (49906)	861

Medium: Hg(NO3)2.

****

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
Hg++	gl	NaNO3	25°C	0.10M	U		K1=11.9	B2=19.50	1974VBa (50077)	862
Hg++	gl	oth/un	20°C	0.01M	U		B2=17.5		1952PEa (50078)	863

Medium: Hg(NO3)2

****

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
Hg++	gl	NaClO4	20°C	0.10M	U	T H	K1=6.81	B2=12.40	1981SDb (50181)	864

Data for 20-40 C. DH(B2)=-59.5 kJ mol-1, DS(B2)=33.8 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	oth/un	19°C	0.00	U		B2=17.8		1952PEa (50182)	865

Medium: 0.0005-0.005 Hg(NO3)2

****

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
Hg++	gl	KNO3	25°C	0.10M	U		K1=7.25	B2=13.17	1964LMa (50265)	866

****

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
Hg++	vlt	KNO3	20°C	0.10M	U		K1=14.17		1962SKa (50369)	867

****

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
Hg++	gl	KNO3	25°C	0.10M	U		K1=6.02	B2=10.95	1970CMc (50578)	868
Hg++	gl	oth/un	20°C	.005M	U		B2=18.8		1953PEa (50579)	869

Medium: 0.005 Hg(NO3)2

****

C6H14N2 L CAS 25155-35-5 (2282)
N,N-Dimethylpiperazine;

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

Hg++ cal non-aq 30°C 100% U H 1974FGa (50656) 870
K(HgI2+L)=3.35
In benzene. DH=-41.1 kJ mol-1; DS=-72 J K-1 mol-1.
****
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
---
Hg++ gl NaNO3 25°C 0.10M U K1=11.3 B2=18.70 1974VBa (50825) 871
****
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
---
Hg++ gl NaNO3 25°C 0.10M U K1=11.5 B2=18.80 1974VBa (51010) 872

Hg++ gl KNO3 25°C 0.10M U K1=5.34 B2=10.21 1970CMc (51011) 873

Hg++ gl oth/un 19°C 0.00 U B2=17.4 1953PEa (51012) 874
Medium: 0.005 Hg(NO3)2
****
C6H14S L Isopropyl sulfi CAS 625-80-9 (5674)
2,2'-Thiodipropane, diisopropyl sulfide; (CH3)2CH-S-CH(CH3)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ ISE non-aq 25°C 100% U K1=7.84 B2=13.29 1986MMb (51138) 875
B3=15.92
B4=16.95
Medium: acetone, Bu4NClO4
****
C6H15N L Hexylamine CAS 111-26-2 (4352)
Hexylamine; CH3.CH2.CH2.CH2.CH2.CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ ISE non-aq 25°C 100% U B2=13.43 1989PSa (51159) 876
In DMSO; ionic medium: 0.1M Et4NClO4
****
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
---
Hg++ gl oth/un 25°C 0.40M U K1=7.8 B2=14.8 1950BJa (51178) 877
Medium: 0.4 C6H15N,HNO3
****
C6H15NO3 Triethanolamine CAS 102-71-6 (447)

Tris-(2-hydroxyethyl)amine; L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	alc/w	25°C	20%	U	I	B2=16.88 B3=17.31 B4=17.52	1969MPe (51293)	878

Medium: 0-100% EtOH, 0.4 M LiNO3. 0%: B2=16.9, B3=16.63, B4=17.27
B3(60%)=18.14, B4(100%)=18.96, B5(100%)=19.57

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	25°C	0.50M	U		K1=6.90 B2=13.08	1950BJa (51294)	879

****

C6H15OPS2 HL CAS 996-17-8 (4400)
O-Butyl hydrogen P-ethylphosphonodithioate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	alc/w	25°C	40%	U		B2=29.8 B3=32.4	1970TCa (51478)	880

****

C6H15O2PS2 HL (2059)
O,O'-Dipropyl dithiophosphoric acid; (C3H7O)2P(S)SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U		K(2HgL2=Hg2L4)=0.00	1971DGb (51488)	881

Medium: benzene

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	alc/w	25°C	40%	U		B2=28.0 B3=29.4 B4=31.3	1970TCa (51489)	882

Medium: 40% EtOH, 0.3 M KNO3

****

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
Hg++	ISE	alc/w	25°C	40%	U		B2=28.4 B3=29.7 B4=31.8	1970TCa (51501)	883

Medium: 40% EtOH, 0.3 M KNO3

****

C6H15O15P3 H6L Ins(1,2,6)P3 CAS 28841-62-5 (6479)
D-myo-Inositol 1,2,6-trisphosphoric acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.10M	U			1991LSa (51535)	884

B(HgHL)=18.75
B(Hg2L)=20.92
B(Hg3L)=25.54

****

C6H15PS2 HL CAS 32338-34-4 (4394)
P,P-Di-(1-methylethyl)phosphinodithioic acid; ((CH3)2CH)2.PS.SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	EMF	alc/w	25°C	40%	U		B2=33.2		1970TCa (51550)	885

Medium: 40% EtOH, 0.3 M KNO3

****

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
Hg++	EMF	alc/w	25°C	40%	U		B2=32.8		1970TCa (51555)	886

Medium: 40% EtOH, 0.3 M KNO3

****

C6H16N2 L CAS 124-09-4 (358)
1,6-Diaminohexane; H2N.(CH2)6.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	vlt	NaNO3	20°C	1.0M	U		K1=10.89		1980BMc (51584)	887
Hg++	gl	NaNO3	20°C	1.0M	U		K1=21.9		1976BMg (51585)	888

****

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
Hg++	vlt	non-aq	25°C	100%	U		K1=2.60	B2=5.95	1979SZa (51645)	889

Medium: DMSO, 0.1 M NaClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H	K(Hg(SCN)2+L)=4.48		1976FGa (51646)	890

Medium: MeCN. DH=-64.0 kJ mol-1; DS=-126

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H	K(HgCl2+L)=6.0 K(HgBr2+L)=6.60 K(HgI2+L)=6.30		1974FGa (51647)	891

In benzene. For HgCl2, DH=-90.2 kJ mol-1; DS=-182 J K-1 mol-1. For HgBr2, DH=-94.7; DS=-187. For HgI2, DH=-96.3; DS=-196.

****

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
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        K1=12.10       1986TSa (51688) 892
*******************************************************************************
C6H16N2O2               L                      CAS 929-59-4  (915)
3,6-Dioxaoctane-1,8-diamine; H2N.CH2.CH2.O.CH2.CH2.O.CH2.CH2.NH2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  R4N.X  25°C 0.10M C   H    K1=18.55       1975ANa (51701) 893
Medium: Me4NNO3. DH(K1)=-102.5 kJ mol-1, DS=11.3
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U        K1=19.17       1999LBa (51849) 894
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M C    M                  2004LBa (51899) 895
                                        B(HgAHL)=30.63
                                        K(HgA+HL)=8.08
                                        B(HgAH2L2)=46.69
H2A is cytidine-5'-monophosphoric acid.
-------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M C    M                  2003LBa (51900) 896
                                        B(HgAL)=23.28
                                        K(HgA+L)=16.57
                                        K(HgA+L=HgAL(OH)+L)=12.52
A is cytidine.
-------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U        K1=19.75       1999LBa (51901) 897
                                        B(HgHL)=25.10
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       EMF KNO3   25°C  1.0M C        K1=24.53       1983DWa (52106) 898
Method: Hg electrode.
-------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 1.00M C   H    K1=24.15       1982ABc (52107) 899
                                        B(HgHL)=26.35
```

By calorimetry: DH1=-123.8 kJ mol-1, DS1=47.2

Hg++ EMF non-aq 25°C 100% U B2=18.00 1979SZa (52108) 900
Medium: DMSO

Hg++ vlt NaClO4 25°C 0.20M U H K1=24.5 1976KKb (52109) 901
DH=-126.3 kJ mol-1, DS=45.2

Hg++ gl oth/un 25°C 0.10M U M 1976PBa (52110) 902
K(Hg(CN)2+L)=2.73
K(Hg(CN)2L+Hg(CN)2)=1.81
K(Hg(CN)2+HL)=2.19
K(Hg(CN)2HL+Hg(CN)2)=0.82
K(Hg(CN)2+H2L)=0.90

Hg++ gl KCl 25°C 0.10M U K1=25.0 1957RSb (52111) 903

Hg++ gl KCl 20°C 0.50M U K1=26.26 1950SCa (52112) 904
K(Hg+HL)=20.9
In 0.5 M KBr K1=26.35, K(Hg+HL)=23.6. Corected for Hg-halide complexes

****

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

---

Hg++ gl KCl 20°C 0.50M U I K1=25.8 1950PSa (52199) 905
In 0.5 M KBr K1=27.3. Values corrected for Hg-halide complexes
In 0.1 M KCl K(Hg+HL)=4.5

****

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

---

Hg++ gl alc/w 25°C 70% U K1=7.24 B2=12.15 1985ARa (52483) 906

Hg++ gl KNO3 35°C 0.10M U K1=3.20 1970DDa (52484) 907

****

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

---

Hg++ gl alc/w 25°C 70% U K1=9.64 B2=5.65 1985ARa (52542) 908

****

C7H4O3I2 H2L CAS 133-91-5 (4431)
3,5-Iodosalicylic acid; I2.C6H2.(OH)COOH

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

---
Hg++ gl alc/w 25°C 70% U K1=9.52 B2=16.47 1985ARa (52559) 909
****
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
---
Hg++ gl KNO3 25°C 0.10M M M K1=5.45 1996AEa (52778) 910
Data for ternary complexes with aspartic acid, serine, asparagine and
N-(2-acetamido)iminodiacetic acid

Hg++ ISE NaNO3 20°C 0.10M U B2=20.28 1960ANb (52779) 911
****
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
---
Hg++ gl alc/w 25°C 70% U K1=11.52 B2=6.66 1985ARa (53345) 912
****
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
---
Hg++ ISE KNO3 20°C 0.10M U K1=15.80 B2=24.49 1965ABa (53509) 913
****
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
---
Hg++ nmr oth/un 28°C ? U M 1975HMa (53836) 914
K(LHgCl+OH=LHgOH+Cl)=4.04
K(LHgCl+His=LHgHis+Cl)=1.74

Hg++ nmr oth/un 28°C ? U M 1975HMa (53837) 915
K(LHgBr+OH=LHgOH+Br)=2.47
****
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
---
Hg++ gl alc/w 20°C 50% U K1=12.35 B2=21.1 1987SIa (53907) 916
Medium: 50% EtOH/H2O, 0.1 M NaClO4

Hg++ gl alc/w 25°C 70% U K1=15.98 B2=25.74 1985ARa (53908) 917

Hg++ sol oth/un 25°C 0.10M U K1=24.84 B2=33.47 1973KDb (53909) 918
****
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
---
Hg++ gl alc/w 25°C 100% M K1=7.5 B2=13.8 1994MPc (54232) 919

Hg++ gl alc/w 25°C 70% U K1=11.62 B2=19.53 1985ARa (54233) 920
****
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
---
Hg++ gl diox/w 30°C 50% U T H K1=4.61 B2= 8.36 1973PSc (55330) 921
Medium: 50% dioxane/H2O, 0.3 M KNO3. DH and DS values reported.
Data for 40 C.
****
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
---
Hg++ gl NaNO3 20°C 1.00M M K1=6.68 B2=10.60 1984CPa (55349) 922
B(HgL(OH))=16.76
B(HgL2(OH))=19.12
B(HgL(OH)2)=22.91
****
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
---
Hg++ ISE NaNO3 20°C 0.10M U B2=16.2 1960ANb (55429) 923
****
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
---
Hg++ gl NaNO3 25°C 0.10M M K1=4.88 B2= 9.66 1996KSc (55503) 924
****
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
---
Hg++ gl NaNO3 25°C 0.10M M K1=6.01 B2= 9.51 1996KSc (55598) 925

****
C7H7NS L Thiobenzamide CAS 2227-79-4 (1660)
Thiobenzamide; C6H5.CS.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp non-aq 25°C 100% U 1977SWa (55705) 926
K(HgCl2+L)=3.63
K(HgBr2+L)=3.88
Medium: Et2O
****
C7H7N2O2F3S HL CAS 73255-69-3 (559)
2-(Trifluoromethanesulfonamidomethyl)pyridine; C5H4NCH2S(:O)2NHCF3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl diox/w 30°C 45% U K1=7.03 B2=12.56 1982MYb (55714) 927
Medium: 45% v/v dioxan/H2O, 0.01 M KNO3
****
C7H8 L CAS 108-88-3 (2144)
Toluene; C6H5.CH3

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp non-aq 25°C 100% U M 1974VPb (55784) 928
K(L+HgCl2)=-0.555
K(L+HgBr2)=-0.435
Medium: dichloromethane
****
C7H8N2OS L CAS 3394-05-6 (3182)
N-3-Hydroxyphenylthiourea; HO.C6H4.NH.CS.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ ix KNO3 20°C 0.50M U K1=5.8 1958HOb (55851) 929
****
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
---
Hg++ gl diox/w 25°C 25% U K1=5.87 B2=9.20 1975GSb (55875) 930
****
C7H8N2S HL Phenylthiourea CAS 103-85-5 (625)
1-Phenyl-2-thiourea; C6H5.NH.CS.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ vlt KNO3 25°C 0.10M U B2=20.43 1986ECa (55945) 931

Hg++ ISE mixed 25°C 82% U 1979MTd (55946) 932
B4=26.48
Medium: 82% DMF/H2O
****
C7H8N4O2 H2L Theobromine CAS 83-67-0 (5388)
3,7-Dimethylxanthine, 2,6-Dihydroxy-3,7-dimethylpurine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl NaNO3 20°C 1.0M U K1=10.06 1976BMg (56015) 933
****
C7H8N4S L CAS 3608-75-1 (1799)
2-Pyridinecarboxaldehyde thiosemicarbazone; C5H4N.CH:N.NH.CS.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp oth/un 25°C 0.10M U M 1975LMb (56023) 934
B(HgHL)=23.6
B(HgH2L2)=42.1
B(HgH2L(EDTA))=44.0
****
C7H9N L Benzylamine CAS 100-46-9 (3132)
Benzylamine; C6H5.CH2.NH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl oth/un 25°C 0.50M U K1=7.51 B2=16.52 1983HNa (56360) 935
Medium: 0.1 M LHNO3
****
C7H9NO2 L CAS 1195-59-1 (2754)
2,6-Di(hydroxymethyl)pyridine; C5H3N.(CH2OH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl NaNO3 20°C 0.50M C K1=24.01 1979CPb (56407) 936
K(Hg+HL)=16.71
K(Hg+2HL)=11.69
Protonation constants (Bull. Soc. Chim. Fr., 1972, 4534) B2=13.5, B3=14.6
****
C7H9NO8 H4L CAS 4379-32-2 (5702)
2-Aminopropane-1,3-dioic-N-2-butane-1,4-dioic acid; (HOOC)2CH.NH.CH(COOH)CH2.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ ISE KNO3 25°C 0.10M U K1=14.36 1988KMa (56473) 937
B(Hg(OH)L)=22.35
****
C7H10N2O2S HL (560)
2-(Methanesulfonamidomethyl)pyridine; C5H4N.CH2S(:O)2NHCH3

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  diox/w 30°C  45%  U        K1=9.51   B2=17.61  1982MYb (56685) 938
In 45% v/v dioxan/H2O, 0.01 M KNO3 K1=9.67, B2=17.90
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.50M C        K1=15.901 B2=22.342 1986GGa (56768) 939
                                          B(HgH-1L)=9.67
                                          B(HgH-1L2)=13.39
cis isomer. For trans isomer K1=25.184, B2=31.625, B(HgH-1L)=18.93,
B(HgH-1L2)=22.65
*************************************************************************
C7H11NO6              H3L                       (2926)
2-Aminobutanoic-N-propane-1,3-dioic acid; HOOC.CH(C2H5)NH.CH(COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U        K1=13.03       1985KKb (56845) 940
*************************************************************************
C7H11N3O               HL                     CAS 18259-63-7  (2265)
N,N-Dimethyl-1-methyl-4-aminopyrimidin-2-one;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       nmr non-aq 25°C 100%  U    M                   1980MCb (56963) 941
                                       K(HgCl2+L)=0.11
Medium: DMSO-d6
*************************************************************************
C7H11N3O2               L                     CAS 7389-87-9  (3162)
Histidine methyl ester
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  oth/un 25°C 0.10M U        K1=5.33   B2=9.47   1971HMc (57003) 942
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  KCl    20°C 0.20M U        K1=3.13   B2=5.28   1982RRd (57123) 943
*************************************************************************
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
```

Hg++ gl KCl 20°C 0.20M U K1=3.28 1982RRd (57149) 944
****
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
---
Hg++ gl NaClO4 25°C 0.50M C K1=11.457 B2=18.93 1986GGa (57445) 945
B(HgH-1L)=6.89
B(HgH-1L2)=13.45
cis isomer. For trans isomer K1=11.291, B2=18.656, B(HgH-1L)=6.61,
B(HgH-1L2)=9.30
****
C7H13NO3 HL (7175)
3,3'-Dimethylglutaramide; HOOCCH2C(CH3)2CH2CONH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl KNO3 25°C 0.10M U K1=1.61 B2=8.61 1995MWb (57473) 946
****
C7H13NO3S H2L CAS 59-53-0 (1269)
N-Acetyl-penicillamine; CH3.CO.NH.CH(COOH)C(CH3)2SH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ EMF NaClO4 25°C 0.10M U K1=35.5 B2=41.90 1981BCc (57490) 947
K(Hg+2HL)=34.6

Hg++ ISE NaClO4 25°C 0.10M U K1=35.41 B2=41.61 1980CJa (57491) 948
****
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
---
Hg++ gl KCl 20°C 0.10M U K1=8.01 B2=13.83 1955SAa (57547) 949
K(Hg(OH)L+HL)=9.82
****
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
---
Hg++ gl KCl 20°C 0.10M U K1=5.94 B2=10.03 1955SAa (57575) 950
K(HgLOH+H)=9.62
K(HgL(OH)2+H)=-10.75
K(HgL2OH+H)=10.35
****
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
Hg++	gl	KNO3	20°C	0.10M	U		B2=12.57	1980MRc (57613)	951

****

C7H14OS2 HL Hexylxanthic ac CAS 6791-11-3 (4456)
Hexylxanthogenic acid; CH3(CH2)5.O.CSSH (hexoxydithioformic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	oth/un	25°C	var	U	M	B(HgL(CN)2)=35.54	1970AFa (57850)	952

****

C7H16S L CAS 26158-99-6 (5696)
Pentyl-ethylsulfide; C2H5.S.C5H11

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	non-aq	25°C	100%	U		K1=7.96 B2=13.40 B3=16.04 B4=17.11	1986MMb (58095)	953

Medium: acetone, Bu4NClO4

****

C7H18N2 L CAS 110-95-2 (2277)
N,N,N',N'-Tetramethyl-1,3-diaminopropane; (CH3)3N.CH2.CH2.CH2.N(CH3)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H	K(HgCl2+L)=4.48 K(HgBr2+L)=4.85 K(HgI2+L)=5.00	1974FGa (58243)	954

In benzene. For HgCl2, DH=-80.0 kJ mol-1; DS=-179 J K-1 mol-1. For HgBr2, DH=-84.8; DS=-184. For HgI2, DH=-83.6; DS=-180.

****

C7H19N3 L Spermidine CAS 124-20-9 (13)
1,5,10-Triazadecane, 4-Azaoctane-1,8-diamine; H2N.(CH2)3.NH.(CH2)4.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	20°C	0.10M	C	M	B(HgAL)=23.32 K(HgA+L)=11.52 B(HgAHL)=31.47 K(HgA+HL)=8.81	2004LBa (58308)	955

B(HgAH2L)=38.38, K(HgA+H2L)=5.80, B(HgH-1AL)=12.65.
H2A is cytidine-5'-monophosphoric acid.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	20°C	0.10M	C	M		2003LBa (58309)	956

B(HgAL)=21.62
K(HgA+L)=14.91
K(HgA+L=HgAL(OH)+L)=11.40
B(HgAHL)=29.12
A is cytidine. K(HgA+HL)=11.55.

Hg++ gl KNO3 20°C 0.10M U K1=18.20 1999LBa (58310) 957
B(HgHL)=25.50
****
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
---
Hg++ vlt NaClO4 25°C 0.20M U H K1=22.1 1976KKb (58357) 958
DH=-114.6 kJ mol-1, DS=38.1
****
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
---
Hg++ ISE oth/un 25°C 0.10M U K1=8.73 B2=14.97 1968EHa (58803) 959
****
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
---
Hg++ gl NaClO4 25°C 0.10M U TI K1=2.41 1985GMc (58973) 960
Data for 0.02-0.10 M NaClO4 and for 25-45 C.
At I=0.0 M, K1=3.40
****
C8H7N3 L CAS 18653-75-3 (3792)
2-(2'-Pyridyl)imidazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ EMF KNO3 25°C 0.10M U K1=10.07 B2=18.28 1967EHc (59184) 961
****
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
---
Hg++ gl diox/w 30°C 45% M K1=4.4(5) B2=7.9(2) 1984MYa (59290) 962
****
C8H8O4 L (601)
4,5-Dimethoxy-1,2-benzoquinone;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       nmr non-aq 34°C 100%  U    M                   1981KKc (60112) 963
                                       K(HgCl2+L)=0.63
Medium: nitromethane
*************************************************************************
C8H9NO2                HL                      CAS 4410-31-5  (4513)
2-Hydroxy-2-phenylacetamide; C6H5.CH(OH).CO.NH2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.10M U    M                   1970GSb (60182) 964
                                       K(HgCl2+L=HgClL+Cl)=5.41
                                       K(HgClL+L=HgL2+Cl)=5.05
                                       K(HgClL+OH=HgLOH+Cl)=4.93
*************************************************************************
C8H9NO3                HL                      CAS 2292-53-7  (8860)
Mandelohydroxamic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U        K1=5.46   B2=10.82  1989SMc (60445) 965
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  diox/w 30°C  45%  M        K1=6.7(1) B2=8.5(0) 1984MYa (60531) 966
*************************************************************************
C8H10                   L    o-Xylene         CAS 95-47-6  (3072)
1,2-Dimethylbenzene, 2-Xylene; CH3.C6H4.CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       sp  non-aq 25°C 100%  U    M                   1974VPb (60676) 967
                                       K(L+HgCl2)=-0.485
                                       K(L+HgBr2)=-0.376
Medium: dichloromethane
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.10M U    M                   1970GSb (60716) 968
                                       K(HgCl2+HL=HgClHL+Cl)=3.86
                                       K(HgClHL+HL=Hg(HL)2+Cl)=3.96
                                       K(HgClHL+OH=Hg(OH)HL+Cl)=4.42
*************************************************************************
```

C8H10N2OS HL (4577)
N-Methylaminothioformyl-N-phenylhydroxylamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	oth	NaClO4	30°C	0.10M	U		K1=11.30 B2=22.20	1972MBe (60727)	969

****
C8H10N2O3S HL CAS 144-80-9 (8160)
4-Aminobenzenesulfonylacetamide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	20°C	1.0M	U		K1=8.22	1976BMg (60749)	970

****
C8H10N2S L CAS 538-28-3 (2599)
2-Benzyl-2-thiopseudourea; C6H5.CH2.S.C(:NH)(NH2)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	mixed	25°C	82%	U		K1=18.89 B2=21.82 B3=24.53	1979MTd (60768)	971

Medium: 82% DMF/H2O

****
C8H10N2S L (2598)
2-Tolylthiocarbamide; CH3.C6H4.NH.CS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	mixed	25°C	82%	U		B4=27.30	1979MTd (60774)	972

Medium: 82% DMF/H2O

****
C8H10O2 L CAS 589-29-7 (3801)
1,4-Dimethoxybenzene (4-methoxyanisole); C6H4(OCH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	NaClO4	26°C	1.0M	U		K(Hg+L=HgH-1L+H)=2.7	1964WDa (60831)	973

****
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
Hg++	gl	KCl	25°C	0.10M	C		K1=13.82 K(HgL+H)=5.89 K(HgHL+H)=4.62 K(HgH2L+H)=3.16 K(Hg+HL)=13.75	1992MMa (60904)	974

K(Hg+H2L)=13.57, K(Hg+H3L)=13.33

****

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
Hg++	gl	KCl	25°C	0.10M	C		K1=14.37 K(HgL+H)=5.72 K(HgHL+H)=4.70 K(HgH2L+H)=3.72 K(Hg+HL)=14.12	1992MMa	(60916) 975

K(Hg+H2L)=13.97, K(Hg+H3L)=13.72

****

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
Hg++	gl	KCl	25°C	0.10M	C		K1=14.18 K(HgL+H)=5.57 K(HgHL+H)=4.33 K(HgH-1L+H=8.66 K(HgH-2L+H)=8.86	1989MMd	(60928) 976

K(HgH-3L+H)=9.88

****

C8H11As L CAS 696-26-4 (2297)
Dimethylphenylarsine; (CH3)2.As.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H	K(HgCl2+L) > 5 K(HgBr2+L) > 5 K(HgI2+L)=3.61	1976GGb	(60933) 977

In benzene. DH(HgCl2L)=-75.1 kJ mol-1; DH(HgBr2L)=-66.7; DH(HgI2L)=-55.0, DS=-113.

****

C8H11P L CAS 672-66-2 (2290)
Dimethyl-phenyl-phosphine; (CH3)2.P.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa	(61322) 978

HgCl2+L in benzene. DH(K1)=-109; DH(K2)=-37 kJ mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa	(61323) 979

HgBr2+L in benzene. DH(K1)=-103; DH(K2)=-43 kJ mol-1

Hg++ cal non-aq 30°C 100% U H 1976GGa (61324) 980
HgI2+L in benzene. DH(K1)=-92; DH(K2)=-36 kJ mol-1
****
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
---
Hg++ gl KCl 25°C 0.50M U K1=7.07 B2=12.25 1976EEa (61421) 981
****
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
---
Hg++ ISE KNO3 25°C 0.10M U K1=18.64 1972GBd (61507) 982
K(Hg+HL)=14.08
B(HgL(OH))=25.41
****
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
---
Hg++ ISE KNO3 25°C 0.10M U K1=14.38 1985KKb (61788) 983
K(Hg+HL)=7.04
****
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
---
Hg++ gl KCl 20°C 0.20M U K1=3.19 B2=6.11 1982RRd (61928) 984
****
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
---
Hg++ gl NaClO4 25°C 0.50M U B2=19.05 1980NAc (62124) 985

Hg++ gl NaClO4 25°C 0.50M C 1979NPb (62125) 986
K(HgL2+H)=3.76
K(HgHL2+H)=1.58
****
C8H14O6S2 H2L (1227)
3,6-Dithia-1,8-octanediol-4,5-dicarboxylic acid; (HO.C2H4.S.CH(COOH))2

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

Hg++ gl NaClO4 25°C 0.10M U K1=4.67 1978MJa (62138) 987
****
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
---
Hg++ gl KCl 20°C 0.20M U K1=2.77 B2=4.61 1982RRd (62388) 988
****
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
---
Hg++ gl KCl 20°C 0.20M U K1=2.31 1982RRd (62433) 989
****
C8H16N2O4S2 H2L (1226)
3,6-Dithiaoctanediamine-4,5-dicarboxylic acid; (H2N.C2H4.S.CH(COOH))2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl NaClO4 25°C 0.10M U K1=17.53 B2=28.66 1978MJa (62558) 990
****
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
---
Hg++ gl NaNO3 20°C 0.10M U K1=12.50 1981ESa (62614) 991
****
C8H18N2OS L [12]aneN2OS CAS 124775-44-6 (7839)
1-Oxa-7-thia-4,10-diazacyclododecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl R4N.X 25°C 0.10M C K1=10.5 1999AMa (62822) 992
Medium: 0.10 M Et4NClO4.
****
C8H19N L CAS 111-92-2 (849)
Dibutylamine, 5-azanonane; (C4H9)2NH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ ISE non-aq 25°C 100% U H K1=4.46 B2=10.08 1989PSa (63023) 993
B3=11.6
In DMSO; ionic medium: 0.1M Et4NClO4
****
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
Hg++	gl	NaClO4	25°C	0.20M	C		K1=24.32	1984KKa (63146)	994

****

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
Hg++	cal	non-aq	30°C	100%	U	M	K(HgL2+py) = 0.79	1971DGb (63156)	995

Medium: benzene

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	alc/w	25°C	40%	U		B2=29.40 B3=30.20 B4=32.0	1970TCa (63157)	996

Medium: 90% EtOH, 0.3 M KNO3

****

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
Hg++	cal	non-aq	30°C	100%	U	M	K(HgL+py)=0.84	1971DGb (63167)	997

Medium : benzene

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	alc/w	25°C	90%	U		B2=29.70 B3=30.20 B4=32.0	1970TCa (63168)	998

Medium: 90% EtOH, 0.3 M KNO3

****

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
Hg++	EMF	alc/w	25°C	40%	U		B2=33.6	1970TCa (63207)	999

Medium: 40% EtOH, 0.3 M KNO3

****

C8H20N2 L CAS 111-51-3 (2278)
N,N,N',N'-Tetramethyl-1,4-diaminobutane; (CH3)2N.CH2.CH2.CH2.CH2.N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H	K(HgCl2+L)=5.30 K(HgBr2+L)=5.30 K(HgI2+L)=4.30	1974FGa (63218)	1000

In benzene. For HgCl2, DH=-85.3 kJ mol-1; DS=-179 J K-1 mol-1. For HgBr2,

DH=-74.3; DS=-143. For HgI2, DH=-78.7; DS=-177.
****
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
---
Hg++ vlt NaClO4 25°C 0.20M U H K1=25.5 1976KKb (63292)1001
DH=-98.7 kJ mol-1, DS=157.7
****
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
---
Hg++ ISE KNO3 25°C 1.00M C H K1=23.28 1982ABc (63382)1002
By calorimetry: DH1=-109.6 kJ mol-1, DS1=77.8
****
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
---
Hg++ vlt NaClO4 25°C 0.20M M H K1=24.8 1978KKb (63472)1003
DH1=-139.7 kJ mol-1

Hg++ gl KNO3 25°C 0.10M U K1=27.7 1958RHa (63473)1004
****
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
---
Hg++ sp diox/w ? 2% U K1=6.21 B2=12.31 1969KAb (63925)1005
Medium: 2% dioxan, 0.1 M KNO3
****
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
---
Hg++ gl NaNO3 25°C 0.10M U M K1=3.01 B2= 5.73 2001SMa (65056)1006
B(Hg(bpy)L)=17.59
B(Hg(bpy)H-1L)=11.66
****
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
---

```
Hg++       gl  NaNO3  25°C 0.10M U        K1=12.4   B2=19.60  1974VBa (65943)1007
--------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.60M U        B2=18.06       1966TAb (65944)1008
--------------------------------------------------------------------------------
Hg++       gl  oth/un 20°C .005M U        B2=18.7        1953PEa (65945)1009
Medium: 0.005 Hg(NO3)2
********************************************************************************
C9H11NO2               HL                      CAS 6052-10-4  (4647)
2-Hydroxy-2-phenylpropionamide; CH3.C(C6H5)(OH)CO.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.10M U                        1970GSb (65992)1010
                                       K(HgCl2+L=HgClL+Cl)=5.60
                                       K(HgClL+L=HgL2+Cl)=5.45
                                       K(HgClL+OH=HgLOH+Cl)=4.71
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       vlt oth/un 25°C 0.10M C                        2002MRa (66225)1011
                                       Beff(Hg2L)=2.80
Method: oxidation of tyrosine at a Pt electrode. Medium: phosphate buffer,
pH 7.0. Complex is adsorbed on electrode.
--------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        K1=12.3   B2=19.50  1974VBa (66226)1012
--------------------------------------------------------------------------------
Hg++       gl  oth/un 20°C .002M U        B2=17.1        1953PEa (66227)1013
Medium: 0.002 Hg(NO3)2
********************************************************************************
C9H11NO3               HL    Phenylserine     CAS 2180-37-2  (2546)
2-Amino-3-hydroxy-3-phenylpropanoic acid; C6H5.CH(OH).CH(NH2)COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  oth/un 17°C .005M U        B2=17.3        1953PEa (66259)1014
Medium: 0.005 Hg(NO3)2
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U    M   K1=2.97   B2= 5.28  2001SMa (66421)1015
                                          K(Hg+2H-1L)=16.91
                                          B(Hg+bpy+H-1L)=19.08
Also data for 4-nitrophenylsulfonylglycine complexes.
--------------------------------------------------------------------------------
```

```
Hg++       gl  diox/w 30°C  45%  U        K1=13.15       1984MYa (66422)1016
-------------------------------------------------------------------------
Hg++       vlt oth/un 25°C 0.10M U                      1968RFa (66423)1017
                                        B4=15.46
*************************************************************************
C9H11NO4S2            H3L                    CAS 97512-83-9  (1330)
N-Benzenesulfonyl-L-cysteine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  diox/w 30°C  50%  M                        1980MDc (66443)1018
                                        *K(HgH2L2)=-10.49
                                        *K(HgHL2)=-11.55
Medium: 50% v/v dioxane/H2O, 0.50 M NaClO4.
-------------------------------------------------------------------------
Hg++       gl  alc/w  30°C  50%  M                        1978GMf (66444)1019
                                        *K(Hg(H2L)2)=-3.13
                                        *K(Hg(HL)H2L)=-4.19
                                        *K(Hg(HL)2)=-10.49
                                        *K(HgHL2)=-11.54
Medium: 50% EtOH/H2O, 0.50 M NaClO4.
*************************************************************************
C9H12                   L    Mesitylene       CAS 108-67-8  (3242)
1,3,5-Trimethylbenzene; C6H3(CH3)3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       sp  non-aq 25°C 100%  U    M                   1974VPb (66541)1020
                                        K(L+HgCl2)=-0.368
                                        K(L+HgBr2)=-0.269
Medium: dichloromethane
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.10M U                      1970GSb (66559)1021
                                        K(HgCl2+HL=HgClHL+HL)=4.0
                                        K(HgClHL+HL=Hg(HL)2+Cl)=3.93
                                        K(HgClHL+OH=Hg(OH)HL+Cl)=4.65
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U        K1=17.64       1983KBd (66736)1022
                                        B(Hg(OH)L)=24.27
```

Method: Hg-electrode

Hg++ ISE KNO3 25°C 0.10M U K1=17.64 1982KBb (66737)1023

****

C9H13NO8 H4L (7012)

1,3-Dicarboxypropane-1-iminodiethanoic acid; HOOC.CH(N(CH2COOH)2)CH2CH2COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	KNO3	25°C	0.10M	U		K1=14.33	1977GNb (66908)	1024

Method: Hg-electrode

****

C9H13N3O4 HL CAS 3992-42-5 (2266)

Deoxycytidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	nmr non-aq		25°C	100%	U	M		1980MCb (66991)	1025
							K(HgCl2+L)=1.30		

Medium: DMSO-d6

****

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
Hg++	gl	KNO3	20°C	0.10M	U		K1=6.71 B2=11.89	1999LBa (67058)	1026
Hg++	nmr non-aq		32°C	100%	U			1980MCa (67059)	1027
							K(HgCl2+L)=1.3		

Medium: DMSO-d6

Hg++	nmr non-aq		36°C	100%	U		K1=1.53	1970KLc (67060)	1028

Medium: (CH3)2SO. method: nmr

****

C9H14N2O3 L (8153)

5-(2-Propyl)-5-ethyl-2,4,6-trihydroxypyrimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	20°C	1.0M	U		K1=9.20	1976BMg (67124)	1029

****

C9H14N2O9 H4L CAS 56360-11-3 (2576)

2-Hydroxy-1,3-diaminopropane-N,N'-di(1,3-propanedioic acid)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	KNO3	25°C	0.10M	U		K1=19.32	1976GKb (67136)	1030
							B(Hg(OH)L)=26.45		

****

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
Hg++	gl	KNO3	20°C	0.10M	U		K1=11.80	1999LBa (67253)	1031

****

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
Hg++	gl	KNO3	25°C	0.10M	U		K1=8.08 K(Hg+HL)=5.27	1964LMa (67318)	1032

****

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
Hg++	gl	KCl	20°C	0.10M	U		K1=4.5 B2=8.0	1955SAa (67628)	1033

****

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
Hg++	gl	KCl	20°C	0.20M	U		K1=2.79	1982RRd (67907)	1034

****

C9H19N2O4+ H2L (3277)
2-Di(carboxymethyl)aminoethyltrimethylammonium cation
+

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KCl	20°C	0.10M	U		K1=2.77 B2=5.0	1955SAa (68002)	1035

****

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
Hg++	gl	NaNO3	25°C	0.10M	U		K1=13.30	1986TSa (68037)	1036

****

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
Hg++	gl	NaNO3	25°C	0.10M	U		K1=18.05	1986TSa (68203)	1037

****
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
---
Hg++ vlt NaClO4 25°C 0.20M U H K1=25.3 1976KKb (68248)1038
DH=-103.3 kJ mol-1, DS=139.3
****
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
---
Hg++ gl KCl 25°C 1.0M U K1=23.0 1984KMa (68321)1039
K(Hg+HL)=17.2
****
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
---
Hg++ ISE KNO3 25°C 1.00M C H K1=22.2 1982ABc (68335)1040
B(HgH2L)=31.5
By calorimetry: DH1=-98.7 kJ mol-1, DS1=93.7
****
C9H24N4 L CAS 4963-47-7 (546)
Tris-(3-aminopropyl)amine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl NaNO3 20°C 0.10M U K1=20.49 1962TAb (68389)1041
****
C10H6O3 HL CAS 83-72-7 (3294)
2-Hydroxy-1,4-naphthoquinone;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp alc/w 20°C 40% U K1=8.77 B2=16.75 1990SIb (68461)1042
K(Hg+HL)=4.805
B(Hg(OH)2L)=32.37
Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4
****
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
---
Hg++ gl KNO3 35°C 0.10M U K1=4.32 1974LSa (68885)1043
****

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
Hg++	gl	NaClO4	10°C	0.10M	U	H	K1=6.15	B2=8.87	1979GBf (69014)	1044

****

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
Hg++	dis	NaClO4	25°C	0.1M	U		K1=8.65	B2=15.10	1981MIc (69150)	1045

Distribution into CCl4 with trioctylphosphate

****

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
Hg++	gl	oth/un	25°C	0.10M	C		K1=8.30	B2=16.33	1987GGc (69581)	1046
							B3=19.04			
							B(HgLOH)=18.15			
							B(HgL2OH)=20.65			

Medium: KSO3CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	M			1976AGa (69582)	1047
							K(HgI2+L)=ca.4			

Medium: MeCN

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H			1976FGa (69583)	1048
							K(Hg(SCN)2+L)=4.30			

Medium: MeCN. DH=-40.7 kJ mol-1; DS=-52

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H			1974DGa (69584)	1049
							K(HgA2+L) < 0.0			

In benzene. HA=thiobenzoyl-1,1,1-trifluoroacetone; DH=<-5 kJ mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H			1974FGa (69585)	1050
							K(HgCl2+L) > 4			
							K(HgBr2+L) > 4			
							K(HgI2+L)=3.63			

In benzene. For HgCl2, DH=-32.8 kJ mol-1, DS=<-32. For HgBr2, DH=-40.1, DS=<-56. For HgI2, DH=-48.8, DS=-91.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	ISE	NaNO3	20°C	0.10M	U		K1=9.64	B2=16.74	1963ANg (69586)	1051
							K3=2.8			

****

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
-------------------------------------------------------------------------------
Hg++       EMF none   30°C  0.0  U        K1=3.93        1985TZa (70235)1052
-------------------------------------------------------------------------------
Hg++       gl  oth/un 30°C    ?  U        K1=4.30   B2=8.24   1985TZa (70236)1053
*******************************************************************************
C10H9NS                 L                      CAS 46000-25-3  (4721)
1,4-Dihydro-1-methyl-4-thioquinoline;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       kin oth/un 20°C 0.10M U                         1973GEb (70240)1054
                                          K(CH3Hg+L)=9.70
*******************************************************************************
C10H9N3OS              HL                      CAS 1823-44-5  (4780)
2-(2'-Thiazolylazo)-4-methylphenol; CH3.C6H3(OH).N:N.C3H3NS
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  diox/w 25°C  10%  U        K1=6.11   B2=12.22  1969KAa (70348)1055
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       sp  diox/w 25°C  10%  U T      K1=16.07       1973KSd (70361)1056
Medium: 10% dioxan, 0.1 M KNO3.  15 C: K1=16.10; 35 C: K1=16.03
*******************************************************************************
C10H9N3O2S             HL                      CAS 3012-52-0  (217)
2-(2'-Thiazolylazo)-4-methoxyphenol; CH3O.C6H3(OH).N:N.C3H2N2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       sp  NaClO4   ?  0.01M U  I                     1972LHa (70400)1057
                                          K(Hg+2HL)=8.56
Medium: 0.01-2 M HClO4. In 50% EtOH: K1=11.05, B2=20.4
*******************************************************************************
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
-------------------------------------------------------------------------------
Hg++       dis NaClO4 25°C  0.1M U        K1=12.08  B2=23.69  1981MIc (70734)1058
Distribution into CCl4 with trioctylphosphate
*******************************************************************************
C10H11NO3S            H2L    Benzoylcysteine  CAS 60199-84-0  (2580)
N-Benzoyl-2-amino-3-mercaptopropanoic acid;C6H5.CO.NHCH(COOH)CH2SH
-------------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.15M U                         1979ZNa (70955)1059
                                    K(Hg+2HL)=37.45
                                    K(HgHL2+H)=7.39
                                    K(HgL2+H)=8.17
-------------------------------------------------------------------------
Hg++       gl  oth/un 25°C 1.00M U        B2=41.33       1977NZa (70956)1060
Medium: KI
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       ISE KNO3   20°C 0.10M U        B2=12.9        1964PIa (71003)1061
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       ISE KNO3   20°C 0.10M U        K1=14.7   B2=19.92  1964PIa (71130)1062
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 0.10M U  I     K1=19.7   B2=31.92  1979PPc (71138)1063
                                          B3=34.21
Method: Hg electrode. In 50% v/v dioxan/H2O: K1=22.2; B2=33.27; B3=35.14
-------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M C  I     K1=19.7   B2=31.92  1979PPd (71139)1064
                                          B3=34.21
Additional methods: polarography and Hg electrode.
In 50% dioxane/H2O: K1=22.2, B2=33.27, B3=35.14.
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M C   H    K1=14.90  B2=24.10  1981ANb (71261)1065
DH(K1)=-50.0 kJ mol-1, DH(K2)=-48.5 kJ mol-1
*************************************************************************
C10H12N4O4            H2L    Thymine-thymine  CAS 3660-32-0  (8529)
Hexahydrodimethyl-Cyclobuta[1,2:4,3]dipyramidine-2,4,5,7-tetrone, cis-syn Thymine
dimer;
-------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K1=13.55       1984PTa (71325)1066
                                         B(HgH-1L)=6.73
                                         B(HgH-2L)=-1.69
Additional method: Hg electrode.
*************************************************************************
C10H13NO4S            H2L    N-Tosylalanine     (1584)
N-(4-Toluenesulfonyl)-3-aminopropanoic acid; CH3.C6H4.SO2.NH.CH2.CH2.COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U    M   K1=3.20   B2= 5.99  2001SMa (71771)1067
                                         K(Hg+2H-1L)=16.42
                                         B(Hg+bpy+H-1L)=18.88
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       nmr non-aq 25°C 100%  U    M                   1980MCb (71942)1068
                                         K(HgCl2+L)=0.079
Medium: DMSO-d6
-------------------------------------------------------------------------
Hg++       nmr non-aq 36°C 100%  U        K1=0.86        1970KLc (71943)1069
Medium: (CH3)2SO
-------------------------------------------------------------------------
Hg++       ISE NaClO4 27°C 0.10M U        B2=8.50        1961FBa (71944)1070
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       nmr non-aq 25°C 100%  U    M                   1980MCb (72010)1071
                                         K(HgCl2+L)=0.23
Medium: DMSO-d6
-------------------------------------------------------------------------
Hg++       nmr non-aq 21°C 100%  U                        1973SFa (72011)1072
                                         K(Hg+HL)=0.44
Medium: (CH3)2SO
-------------------------------------------------------------------------
Hg++       nmr non-aq 36°C 100%  U                        1970KLc (72012)1073
                                         K(Hg+HL)=0.77
Medium: (CH3)2SO
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        K1=7.88   B2=14.94  1987MPa (72103)1074
-------------------------------------------------------------------------
Hg++       ISE NaClO4 27°C 0.10M U        B2=21.2        1961FBa (72104)1075
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U        K1=12.57       1999LBa (72454)1076
                                         B(HgHL)=17.68
*************************************************************************
C10H15NO                L    Ephedrine        CAS 299-42-3  (1836)
(1-Methylaminoethyl)benzyl alcohol; C6H5.CH(OH)CH(CH3)NHCH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KCl    25°C .058M U T      K1=4.24   B2=8.03   1961SMa (72645)1077
At 0 C: K1=4.50, B2=8.54; 45 C: K1=4.04, B2=7.68
*************************************************************************
C10H15N3O4             HL                    CAS 838-07-3  (2267)
5-Methyldeoxycytidine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       nmr non-aq 25°C 100%  U    M                  1980MCb (72711)1078
                                      K(HgCl2+L)=1.3
Medium: DMSO-d6
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M U        K1=14.40       1993VZa (73140)1079
                                         K(Hg+HL)=8.44
                                         B(Hg(OH)L)=23.58
-------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U        K1=17.50       1972GSi (73141)1080
                                         K(Hg+HL)=12.49
                                         K(Hg+OH+L)=24.69
*************************************************************************
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
-------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.10M U        K1=19.98       1986ECa (73834)1081
```

```
--------------------------------------------------------------------------------
Hg++       EMF NaNO3  29°C  1.0M C   H                  1986IKb (73835)1082
                                        K(Hg+H4L=HgL+4H)=6.8
Method: Hg/Hg++ electrode. Medium: pH 2.2. DS(K1)=-25 J K-1 mol-1.
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M C T H    K1=21.55       1985HWc (73836)1083
Data for 5-35 C. Method: Hg and glass electrodes.
DH(K1)=-54.8 kJ mol-1, DS(K1)=229 J K-1 mol-1.
--------------------------------------------------------------------------------
Hg++       sol KNO3   25°C 1.00M U                      1979JPb (73837)1084
                                        K(HgL+H)=3.27
                                        K(HgHL+H)=2.21
--------------------------------------------------------------------------------
Hg++       vlt KNO3   20°C 0.10M U        K1=21.80       1978NLb (73838)1085
--------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 0.50M U        K1=20.80       1977GGb (73839)1086
--------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.10M U    M   K1=21.75       1975TTa (73840)1087
                                        K(HgL+p-anisidine)=3.40
                                        K(HgL+p-toluidine)=3.11
                                        K(HgL+p-chloroaniline)=2.34
                                        K(HgL+p-nitroaniline)=1.18
K(HgL+aniline)=2.98,  K(HgL+m-toluidine)=2.73, K(HgL+m-chloroaniline)=2.44
K(HgL+m-nitroaniline)=2.29,  K(HgL+p-iodoaniline)=2.74)
--------------------------------------------------------------------------------
Hg++       vlt KNO3   20°C 0.10M U        K1=21.78       1970SNa (73841)1088
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M U        K1=22.02       1969BNa (73842)1089
                                        K(HgL+H)=3.07
                                        K(Hg+HL)=14.56
--------------------------------------------------------------------------------
Hg++       ISE KNO3   20°C 0.10M U T H    K1=21.7        1966MCa (73843)1090
                                        K(HgL+H)=3.19
K1=21.44(30 C),21.23(40 C). At 25 C: DH(K1)=-37.6 kJ mol-1, DS=280 J K-1 m-1
--------------------------------------------------------------------------------
Hg++       cal KNO3   25°C 0.10M U   H                  1965WHa (73844)1091
DH(K1)=-80.2 kJ mol-1, DS=155 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U        K1=21.8        1964ANa (73845)1092
                                        K(Hg+HL)=14.6
--------------------------------------------------------------------------------
Hg++       cal KNO3   20°C 0.10M U   H                  1963ANf (73846)1093
DH(K1)=-79.1 kJ mol-1, DS=151 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       oth none     ?   0.0  U                      1959SRb (73847)1094
                                        K(HgL+NH3)=6.4
                                        K(H+HgLOH)=8.9
Method: vol
--------------------------------------------------------------------------------
Hg++       ISE NaNO3  22°C 0.10M U      T K1=21.78       1957SAb (73848)1095
```

```
--------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 0.10M U        K1=22.1        1956SRb (73849)1096
                                         K(HgL+H)=3.3
--------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U      T K1=21.64       1956WMd (73850)1097
                                         K(HgL+H)=14.62
--------------------------------------------------------------------------------
Hg++       vlt none     ?   0.0  U        K1=21.6        1955MDa (73851)1098
--------------------------------------------------------------------------------
Hg++       ISE KNO3   20°C 0.10M U        K1=21.80       1954SGa (73852)1099
                                         K(Hg+HL)=14.6
                                         K(Hg+HL)=8.48
                                         K(HgLOH+H)=9.11
--------------------------------------------------------------------------------
Hg++       vlt oth/un 25°C .065M U        K1=22.15       1953GMa (73853)1100
--------------------------------------------------------------------------------
Hg++       vlt KNO3   20°C 0.10M U        K1=15.16       1951MKa (73854)1101
********************************************************************************
C10H16N2O8S2          H4L                      CAS 20206-12-1  (996)
2,9-Diamino-5,6-dicarboxy-4,7-dithiadecanedioic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K2=12.00       1978MJa (74366)1102
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U        K1=19.90       1979KBe (74376)1103
                                         K(Hg+HL)=15.24
                                         B(Hg(OH)L)=25.74
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M C        B2=38.85       1992PPb (74948)1104
                                         B(HgH2L2)=49.94
                                         B(HgH4L2)=57.5
                                         B(HgH6L2)=63.7
Additional method: polarography
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M C                       1982PPc (74949)1105
                                         B(HgH2L2)=49.4
********************************************************************************
C10H17N3O6S           H3L    Glutathione      CAS 70-18-8  (333)
```

Glutamyl-cysteinyl-glycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	25°C	0.10M	M	M	K(HgL2+H)=9.89 K(HgL2+2H)=19.13 K(HgL2+3H)=23.43 K(HgL2+4H)=26.78	1990SHa (75121)	1106
K(HgL2+5H)=29.26, K(HgL2+6H)=31.47; K(HgL2+Ni)=9.10, K(HgL2+H+Ni)=15.82; K(HgL2+Co)=7.21, K(HgL2+H+Co)=14.48									
Hg++	nmr	non-aq	25°C	100%		U	K(HgL2+L)=3.18	1988SCa (75122)	1107
Hg++	vlt	KNO3	25°C	1.0M	U	T	B2=41.58	1953SKb (75123)	1108
B2=43.47(12 C)									

****

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
Hg++	ISE	NaClO4	25°C	0.50M	U		K1=19.35	1977GGb (75412)	1109
Hg++	gl	KNO3	25°C	0.10M	U		K1=19.97	1969BNa (75413)	1110
2nd method: calorimetry									
Hg++	ISE	KNO3	20°C	0.10M	U	T H	K1=19.47 K(HgL+H)=2.57	1966MCa (75414)	1111
K1=19.3(30 C),19.1(40 C). At 25 C: DH(K1)=-29.3 kJ mol-1, DS=272 J K-1 mol-1									
Hg++	cal	KNO3	25°C	0.10M	U	H		1965WHa (75415)	1112
DH(K1)=-83.6 kJ mol-1, DS=105 J K-1 mol-1									
Hg++	ISE	KNO3	25°C	0.10M	U		K1=20.1	1960HRa (75416)	1113
Hg++	oth	R4N.X	25°C	0.10M	U		K(HgL+NH3)=6.1 K(HgLOH+H)=8.4	1959SRb (75417)	1114

****

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
Hg++	gl	KCl	20°C	0.10M	U		K1=5.91 B2=10.71	1955SAa (75639)	1115

****

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
--------------------------------------------------------------------------------
Hg++       cal oth/un 25°C 0.10M U   H  T K1=1.68        1976ITb (76005)1116
DH=-15.0 kJ mol-1.
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       dis non-aq 24°C 100%  U    M                  1977SMa (76158)1117
                                        K(HgLClO4+ClO4)=3.18
                                        K(HgL+ClO4)=3.87
********************************************************************************
C10H21NO4               L                     CAS 66943-05-3  (5818)
1-Aza-4,7,10,13-tetraoxacyclopentadecane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       EMF alc/w  25°C  95%  U        K1=10.3        1993BDd (76184)1118
Medium: 95% v/v MeOH/H2O, 0.1 M Et4NClO4
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  NaNO3  20°C 0.10M U        K1=20.25       1981ESa (76212)1119
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  R4N.X  25°C 0.10M U        K1=16.65       1982NSb (76318)1120
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.50M U        K1=23.0        1997BLd (76666)1121
--------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.50M U    M                  1997GHb (76667)1122
                                      Keff(Hg+L+I)=30.8 (0.1 M OH-)
Data also for 3,6,10,13,16,19-Hexaazabicyclo[6.6.6]icosane and its 1,8-diami
no derivative
--------------------------------------------------------------------------------
Hg++       vlt NaClO4 25°C 0.20M U   H    K1=23.0        1976KKb (76668)1123
```

DH=-137.6 kJ mol-1, DS=-20.5

****

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
Hg++	gl	NaClO4	25°C	0.20M	M	H	K1=28.5	1978KKb	(76734)1124

DH1=-136.8 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
Hg++	gl	oth/un	25°C	0.10M	U		K1=9.51	1959BYa	(76759)1125

****

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
Hg++	gl	KNO3	20°C	0.10M	U		K1=18.40	1999LBa	(76795)1126
							B(HgHL)=26.56		

****

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
Hg++	gl	NaClO4	25°C	0.10M	U			1976CJa	(76818)1127
							K(Hg+H2L)=18.57		

****

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
Hg++	gl	KNO3	25°C	0.10M	U		K1=9.51	1980ZRb	(76839)1128
							K(HgL+H)=7.30		
							K(HgHL+H)=6.51		
							K(HgH2L+H)=5.97		
							K(HgH3L+H)=5.46		

****

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

```
Hg++       gl  NaClO4 25°C  1.0M C        K1=29.3        2001GLb (76874)1129
                                         B(HgHL)=37.76
B(HgH2LCl)=43.7, B(HgH-1L)=18.5
--------------------------------------------------------------------------------
Hg++       gl  KCl    20°C 0.50M U        K1=29.59       1953SMa (76875)1130
                                         K(Hg+HL)=27.93
                                         K(Hg+H2L)=23.7
                                         K(HgL+H)=8.59
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.10M U                        1983PEa (76938)1131
                                         K(Hg+H2L=HgHL+H)=2.06
                                         K(Hg+H2L=HgH-2L+4H)=-10.77
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.10M U                        1983PEa (76951)1132
                                         K(Hg+H3L=HgH2L+H)=0.22
********************************************************************************
C11H8O3               H2L                    CAS 86-48-6  (1129)
1-Hydroxy-2-naphthoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KNO3   30°C 0.10M U T H    K2=0.89        1976SSb (77011)1133
********************************************************************************
C11H8O3                L                      CAS 18916-57-9  (581)
4-Methoxy-1,2-naphthoquinone;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       sp  non-aq 34°C 100%  U   HM                   1981KKb (77139)1134
                                         K(HgCl2+L)=0.49
Medium: nitromethane
********************************************************************************
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
--------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        K1=11.7   B2=18.70  1974VBa (78209)1135
********************************************************************************
C11H13NO6S            H3L                    CAS 20531-36-6  (4872)
```

N-Benzenesulfonyl-1-glutamic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	none	30°C	0.0	U			1970GDb (78698)	1136
							K(HgL2+H)=5.68		
							K(HgHL2+H)=4.80		

****

C11H14N2O L CAS 51036-80-7 (444)
1-(1-Ethoxyethyl)benzimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	kin	oth/un	80°C	0.20M	C			1980LKa (78771)	1137
							K(HgCL2+HL=HgCl2L+H)=4.05		

Medium: 0.2 M HgCL2

****

C11H14N2O L (4854)
Methylglyoxal 4-dimethylaminoanil

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	oth/un	?	?	U		K1=6.08	1969SMa (78776)	1138

****

C11H14N2O4 H2L (1880)
N-(6-Methyl-2-pyridylmethyl)iminodiethanoic acid; CH3C5H3NCH2N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	NaNO3	20°C	0.10M	C	H	K1=14.90 B2=24.00	1981ANb (78884)	1139

DH(K1)=-48.7 kJ mol-1, DS=119 J K-1 mol-1; DH(K2)=-49.6, DS=5

****

C11H15NO3 L (6281)
Benzaldehyde:tris-buffer Schiff's base; C6H5.CH:N.C(CH2.OH)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	alc/w	26°C	60%	U		K1=5.17 B2=8.78	1978TPb (79032)	1140

****

C11H15NO4 HL CAS 18212-81-2 (6280)
Salicylaldehyde:tris-buffer Schiffs base;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	alc/w	26°C	60%	U		K1=6.23	1978TPb (79044)	1141

****

C11H15N5O5 HL CAS 2140-65-0 (2184)
1-Methylguanosine;

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

---

Hg++ nmr non-aq 25°C 100% U M 1980MCb (79074)1142
K(HgCl2+L)=0.48
Medium: DMSO-d6

****

C11H16N2O10 H5L CEDTA CAS 62394-58-5 (1080)
1-Carboxy-1,2-diaminoethane-N,N,N',N'-tetraethanoic acid;
(HOOCCH2)2NCH(COOH)CH2N(CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	KNO3	25°C	0.10M	U		K1=20.33 K(Hg+HL)=15.15 B(Hg(OH)L)=27.30	1980KBe (79109)1143	

Method: Hg-electrode

****

C11H16N2S2 L CAS 771500-52-8 (9193)
2,8-Dithia-5-aza-2,6-pyridinophane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.10M	C		K1=10.68 K(HgL+OH)=3.24	2004BBe (79118)1144	

Medium: 0.1 M Me4NO3

****

C11H16O8S4 H4L CAS 51865-18-0 (1138)
(Propanediylidenetetrathio)tetra-ethanoic acid; ((HOOC.CH.S)2.CH)2.CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaClO4	25°C	0.10M	U		K1=16.61	1975JBa (79146)1145	

The species has not been identified but it is thought to be Hg+H4L=HgH4L.

****

C11H18N2O3 L CAS 76-74-4 (8154)
5-(1-Methylbutyl)-5-ethyl-2,4,6-trihydroxypyimidine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	20°C	1.0M	U		K1=9.23	1976BMg (79203)1146	

****

C11H18N2O8 H4L PDTA CAS 4408-81-5 (1655)
1,2-Diaminopropane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	20°C	0.10M	U		K1=20.20	1981NSc (79290)1147	
Hg++	ISE	KNO3	25°C	0.10M	U		K1=20.33	1980KBc (79291)1148	
Hg++	vlt	KNO3	20°C	0.10M	U		K1=22.52	1978NLb (79292)1149	

```
--------------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 1.00M U                      1977HDa (79293)1150
                                      K1eff=18.82
Keff at pH 7
--------------------------------------------------------------------------------
Hg++       ISE KNO3   20°C 0.10M U       K1=22.81       1964ICb (79294)1151
                                      K(Hg+HL)=3.12
********************************************************************************
C11H18N2O8            H4L                    CAS 38539-29-0  (2573)
1,3-Diaminopropane-N,N'-di(1,4-butanedioic acid)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U       K1=17.09       1976GKb (79365)1152
                                      K(Hg+HL)=12.78
                                      K(Hg+H2L)=9.59
                                      B(Hg(OH)L)=24.92
********************************************************************************
C11H18N2O8            H4L                    CAS 4408-81-5  (923)
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.)2.CH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C  1.0M C  I                   1999ANa (79448)1153
                                      B(Hg2L2)=40.43
Method: Glass electrode plus Hg electrode. At I = 0.1 M, B(Hg2L2)=42.1.
--------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U   H                  1964ANa (79449)1154
                                      K(Hg+HL)=13.46
By calorimetry: DH(K1)=-79.0 kJ mol-1, DS=111 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U                      1964LAa (79450)1155
                                      K(HgL+H)=4.00
By ion-selective electrode: K1=19.92
--------------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M C       K1=19.70       1957SSa (79451)1156
                                      K(Hg+HL)=12.53
********************************************************************************
C11H18N2O9            H4L    HDPTA           CAS 3148-72-9  (431)
1,3-Diamino-2-hydroxypropane-N,N,N',N'-tetraethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.10M U       K1=18.35       1975HAa (79558)1157
                                      B(HgHL)=13.34
                                      K(Hg+HgL=Hg2L)=8.0
--------------------------------------------------------------------------------
Hg++       vlt KNO3   20°C 0.10M U       K1=20.59       1962SKa (79559)1158
********************************************************************************
C11H18N2O9            H4L                    CAS 668-21-1  (2562)
```

2-Hydroxy-1,3-diaminopropane-N,N'-di(1,4-butanedioic) acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	KNO3	25°C	0.10M	U		K1=17.73 K(Hg+HL)=12.90 B(Hg(OH)L)=25.10	1976GKb (79596)	1159

C11H20N2O3 HL Pro-Leu CAS 52899-07-7 (258)
Prolyl-leucine; C4H8N.CO.NH.CH(CH2.CH(CH3)2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KCl	20°C	0.20M	U		K1=3.13 B2=6.02	1982RRd (79706)	1160

C11H22N4O2S L CAS 91328-04-4 (1610)
1,5,8,14-Tetraaza-11-thiacyclohexadecane-2,4-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	NaNO3	25°C	0.20M	C	M	B(HgH-1L)=8.40	1989KKa (79838)	1161

C11H23N5O2 L CAS 76201-28-0 (1606)
1,4,8,11,14-Pentaazacyclohexadecane-5,7-dione;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	NaNO3	25°C	0.20M	C	M	B(HgH-1L)=10.14	1989KKa (79896)	1162

C11H25N5O L CAS 91328-02-8 (1605)
1,5,8,11,14-Pentaazacyclohexadecane-2-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	NaNO3	25°C	0.20M	C	M	K1=22.82 B(HgH-1L)=14.10	1989KKa (79949)	1163

C11H26N4 L CAS 15439-16-4 (7)
1,4,8,12-Tetraazacyclopentadecane; cyclo(-(NH.CH2.CH2.(N.(CH2)3.)3-)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	NaClO4	25°C	0.20M	U	H	K1=23.7	1976KKb (79992)	1164

DH=-103.3 kJ mol-1, DS=106.7

C11H26N4S L CAS 80846-36-2 (720)
1-Thia-4,7,11,14-tetraazacyclohexadecane;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.20M C        K1=25.15       1984KKa (80023)1165
*************************************************************************
C11H27N5               L                      CAS 29783-72-0  (98)
1,4,7,10,13-Pentaazacyclohexadecane; cyclo(-(NH.CH2.CH2)5.CH2-)
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.20M M   H    K1=27.4        1978KKb (80033)1166
DH1=-143.9 kJ mol-1
*************************************************************************
C11H28N4S4             L                      CAS 55677-44-6  (1179)
1,1,3,3,-Tetramercaptoethylamine-propane; CH2(CH(S.CH2.CH2.NH2)2)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U                       1976CJa (80041)1167
                                       K(Hg+H2L)=18.79
*************************************************************************
C12H7N2Cl              L                      CAS 4199-89-7  (2751)
5-Chloro-1,10-phenanthroline;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   35°C 0.10M C    M   K1=12.64  B2=16.48  1998LYa (80146)1168
                                       B(HgLA)=21.71
                                       B(HgHLA)=29.78
A is 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime.
*************************************************************************
C12H7N3O2              L                      CAS 4199-88-6  (449)
5-Nitro-1,10-phenanthroline;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   35°C 0.10M C    M   K1=11.40  B2=14.96  1998LYa (80177)1169
                                       B(HgLA)=20.46
                                       B(HgHLA)=28.32
A is 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime.
*************************************************************************
C12H8N2                L    Phenanthroline   CAS 66-71-7  (144)
1,10-Phenanthroline;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   35°C 0.10M C    M   K1=13.23  B2=18.12  1998LYa (80459)1170
                                       B(HgLA)=22.86
                                       B(HgHLA)=30.60
A is 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime.
-------------------------------------------------------------------------
```

```
Hg++       gl  oth/un 25°C 0.10M C        K1=9.85   B2=19.04  1987GGc (80460)1171
                                         B3=23.13
                                         B(HgLOH)=19.85
                                         B(HgL2OH)=23.35
                                         B(HgL(OH)2)=24.2
Medium: KSO3CH3
-------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                  1976FGa (80461)1172
                                         K(Hg(SCN)2+L)=4.30
Medium: MeCN. DH=-50.5 kJ mol-1; DS=-84
-------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                  1974FGa (80462)1173
                                         K(HgBr2+L) > 4
                                         K(HgI2+L) > 4
In benzene. For HgBr2, DH=-70.8 kJ mol-1, DS=<-158. For HgI2, DH=-68.5,
DS=<-150
-------------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M U        B2=19.65       1963ANg (80463)1174
                                         K3=3.7
-------------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M U        B2=19          1959ANc (80464)1175
                                         Kso=-24.70
*******************************************************************************
C12H10N2O              HL                      CAS 10354-53-7  (3970)
2-Benzoylpyridine oxime; C5H4N.C(:N.OH).C6H5
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  mixed  40°C  40%  U TIH    K1=10.16  B2=17.98  1965SSa (80659)1176
Medium: 40% acetone, 0.05 NaClO4. K1=9.44(20 C),9.79(30 C); K2=6.94(20 C),
7.20(30 C). Also at I=0 to 0.1.
*******************************************************************************
C12H12N2                L                      CAS 4916-40-9  (4895)
1,2-Bis(2-pyridyl)-ethane; C5H4N.CH2.CH2.C5H4N
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U        K1=7.0    B2=11.40  1970BAa (80992)1177
*******************************************************************************
C12H12N2O3            H2L    Phenobarbital    CAS 50-06-6  (5924)
5-Ethyl-5-phenyl-barbituric acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  alc/w  20°C  1.0M U        K1=10.13       1976BMg (81088)1178
Medium: 1.0 M NaNO3 in 60% v/v EtOH in H2O
*******************************************************************************
C12H13N3               L                      CAS 1539-42-0  (932)
bis-((2-Pyridyl)methyl)-amine (Di-2-picolylamine); C5H4N.CH2NHCH2.C5H4N
-------------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M C   H    B2=22.25       1977AHc (81285)1179
Calorimetry:  DH(B2)=-101.9 kJ mol-1, DS(B2)=52.5
*************************************************************************
C12H14O14            H6L                    CAS 111451-17-3  (5895)
3,6-Dioxaoctane-1,2,4,5,7,8-hexacarboxylic acid; (CH2(COOH).CH(COOH).O.CH(COOH)-)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.10M C        K1=15.49       1989MMd (81417)1180
                                          K(HgL+H)=5.48
                                          K(HgHL+H)=5.20
                                          K(HgH2L+H)=4.04
                                          K(HgL+Hg)=8.9
K(HgH-1L+H)=8.26, B(Hg2H-1L)=22.33, B(Hg2H-3L)=5.16, B(Hg2H-5L)=-13.18
*************************************************************************
C12H15NO6S           H2L                    CAS 34605-45-3  (4959)
4-Toluenesulfonyl glutamic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       vlt KCl    25°C 0.10M U                        1968RFa (81523)1181
                                          B4=16.10
*************************************************************************
C12H16N2O8S4         H6L                      (7852)
N,N'-Bis(dithiocarboxy)-N,N'-bis-1,1'-(1,2-dicarboxyethyl)ethylenediamine;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   20°C  0.1M U       K1=27.0        1999SAa (81616)1182
*************************************************************************
C12H16O4S6             L                    CAS 66785-63-5  (7805)
1,4,7,10,13,16-Hexathiacyclooctadecane-2,3,11,12-tetraone;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       con none   25°C  0.0  C T H    K1=7.5         1998GRa (81690)1183
DH(K1)=-108 kJ mol-1, DS(K1)=-240 J K-1 mol-1.
Also data for 15-45 C.
*************************************************************************
C12H18N2O8           H4L                    CAS 76079-31-7  (2587)
trans-1,2-Diaminocyclohexane-N,N'-di(propanedioic acid)
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U        K1=19.62       1978SGb (81866)1184
                                          K(Hg+HL)=12.31
                                          K(Hg+H2L)=9.7
*************************************************************************
```

C12H18O8S4 H4L CAS 51865-19-1 (1140)
(Butanediylidenetetrathio)tetraethanoic acid; ((HOOC.CH2.S)2.CH.CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	NaClO4	25°C	0.10M	U			1975JBa (81966)1185	
							K(Hg+H4L)=16.88		

****
C12H19P L CAS 7650-83-1 (2291)
Dipropyl-phenyl-phosphine; (CH3.CH2.CH2)2P.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa (81995)1186	
HgI2+L in benzene. DH(K1)=-87; DH(K2)=-51 kJ mol-1									
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa (81996)1187	
HgBr2+L in benzene. DH(K1)=-105; DH(K2)=-48 kJ mol-1									
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa (81997)1188	
HgCl2+L in benzene. DH(K1)=-100; DH(K2)=-37 kJ mol-1									

****
C12H20N2O8 H4L CAS 40623-42-5 (1101)
1,2-Diaminoethane-N,N'-di(2-pentane-1,5-dioic acid); (CH2NHCH(COOH)CH2CH2COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	KNO3	25°C	0.10M	U		K1=16.66	1972GBe (82074)1189	
Hg++	ISE	KNO3	25°C	0.10M	U		K1=16.64	1972GSi (82075)1190	
							K(Hg+HL)=12.0		
							K(HgHL+HL)=8.15		
							B(Hg(OH)L)=23.20		

****
C12H20N2O8 H4L CAS 61368-60-3 (3389)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-propanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	20°C	0.10M	U		K1=21.33	1970SNa (82134)1191	

****
C12H20N2O8 H4L CAS 2458-58-4 (922)
1,4-Diaminobutane-N,N,N',N'-tetraethanoic acid; (HOOC.CH2)2N.(CH2)4.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	25°C	1.0M	C	I		1999ANa (82220)1192	
							B(Hg2L2)=42.50		
Method: Glass electrode plus Hg electrode. At I = 0.1 M, B(Hg2L2)=44.3.									

```
Hg++       cal KNO3   20°C 0.10M U   H                  1964ANa (82221)1193
DH(K1)=-79.8 kJ mol-1, DS=129 J K-1 mol-1
-------------------------------------------------------------------------
Hg++       ISE KNO3   20°C 0.10M U        K1=20.99       1964LAa (82222)1194
-------------------------------------------------------------------------
Hg++       EMF NaNO3  20°C 0.10M C        K1=20.80       1957SSa (82223)1195
Method: H electrode
-------------------------------------------------------------------------
Hg++       EMF NaNO3  20°C 0.10M C        K1=20.81       1955SAc (82224)1196
Method: H electrode
*************************************************************************
C12H20N2O8            H4L    BDTA             CAS 868-43-9  (1742)
DL-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       ISE KNO3   20°C 0.10M U        K1=24.13       1971ISa (82305)1197
                                         K(Hg+HL)=3.58
-------------------------------------------------------------------------
Hg++       vlt KNO3   20°C 0.10M U        K1=21.51       1962SKa (82306)1198
*************************************************************************
C12H20N2O8            H4L                      CAS 63818-08-6  (2584)
meso-2,3-Diaminobutane-N,N'-di(1,4-butanedioic acid);
(CH(CH3).NH.CH(COOH)(CH2.COOH))2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U        K1=17.10       1978SGd (82352)1199
                                         K(Hg+HL)=11.39
                                         K(Hg+H2L)=7.74
                                         B(Hg(OH)L)=23.62
*************************************************************************
C12H20N2O8            H4L                      CAS 22968-57-6  (3992)
meso-2,3-Diaminobutane-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH(CH3).CH(CH3).N(CH2.COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       ISE KNO3   20°C 0.10M U        K1=22.06       1971ISa (82399)1200
                                         K(Hg+HL)=3.31
-------------------------------------------------------------------------
Hg++       vlt KNO3   20°C 0.10M U        K1=20.33       1962SKa (82400)1201
*************************************************************************
C12H20N2O8S           H4L    TEDTA             CAS 923-74-0  (3394)
2,2'-Thiobis(ethyliminodiethanoic acid); S(CH2.CH2.N(CH2.COOH)2)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U   H    K1=23.9        1964ANa (82459)1202
```

```
                                        K(Hg+HL)=17.5
By calorimetry: DH(K1)=-95.3 kJ mol-1, DS=132 J K-1 mol-1
-------------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M C        K1=23.81       1957SSa (82460)1203
                                        K(Hg+HL)=17.57
*******************************************************************************
C12H20N2O9            H4L    EEDTA            CAS 923-73-9  (2112)
Oxa-bis(ethyleneimino)diethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2O
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       cal KNO3   25°C 0.10M U   H                    1965WHa (82538)1204
DH(K1)=-81.5 kJ mol-1, DS=167 J K-1 mol-1
-------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U   H    K1=23.09       1964ANa (82539)1205
                                        K(Hg+HL)=16.1
By calorimetry: DH(K1)=-85.7 kJ mol-1, DS=149 J K-1 mol-1
-------------------------------------------------------------------------------
Hg++       ISE KNO3   20°C 0.10M U        K1=22.88       1962MMc (82540)1206
-------------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M U        K1=23.1        1960HRa (82541)1207
-------------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M U        K1=23.09       1957SSa (82542)1208
                                        K(Hg+HL)=16.14
*******************************************************************************
C12H20O8N2            H4L                       (6908)
2-Methyl-1,2-diaminopropane-N,N,N'N'-tetraethanoic acid;
(HOOC.CH2)2N.CH2.C(CH3)2.N(CH2.COOH)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       vlt KNO3   20°C 0.10M C        K1=22.51       1978NLa (82675)1209
*******************************************************************************
C12H22O12              HL    Lactobionic acd  CAS 96-82-2  (2487)
4-O-Beta-D-Galactopyranosyl-D-gluconic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  NaNO3  20°C 0.10M C                         1997FEb (82931)1210
                                        B(HgH-2L)=-6.64
                                        B(HgH-1L)=-0.29
*******************************************************************************
C12H22S                 L                       CAS 7133-46-2  (5698)
S,S-Dicyclohexylsulfide; C6H11.S.C6H11
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  U        K1=8.04   B2=13.56  1986MMb (82937)1211
                                        B3=15.94
                                        B4=16.87
```

Medium: acetone, Bu4NClO4

****

C12H24N2O12P4 H8L (1351)

1,3-Diaminomethylbenzene-N,N,N'N'-tetra(methylenephosphonic) acid;
C6H4(CH2.N(CH2.PO3H2)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KCl	25°C	0.10M	U		K1=9.78 H(Hg+HL)=8.98 K(Hg+H2L)=5.14 K(Hg+H3L)=4.01 K(Hg+H4L)=4.61 (?)	1982PBa	(83059)1212

****

C12H24N4O4 H2L (7522)

1,4,8,11-Tetraazacyclotetradecane-6,13-dicarboxylic acid

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KCl	25°C	0.50M	U		K1=21.8 K(HgL+H)=8.2 K(HgHL+H)=5.9 *K(HgL)=-13.4	1997BLd	(83102)1213

****

C12H24O2S4 L (6657)

1,4,7,10-Tetrathia-13,16-dioxacyclooctadecane, 1,4,7,10-Tetrathia-18-crown-6;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ix	none	25°C	0.0	U		K1=17.4	1991BTa	(83118)1214

****

C12H24O4S2 L CAS 296-39-9 (4938)

1,4,10,13-Tetraoxa-7,16-dithiacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	oth/un	25°C	0.50M	M	H	K1=19.5	1990IWa	(83137)1215

Medium: 0.5M HNO3. DH(K1)=-74.0 kJ mol-1, DS(K1)= 125 J K-1 mol-1.

****

C12H24O4S2 L (6528)

7,10,13,16-Tetraoxa-1,4-dithiacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	oth/un	25°C	0.50M	M	H	K1=22.2	1990IWa	(83150)1216

Medium: 0.5M HNO3. DH(K1)=-116.5 kJ mol-1, DS(K1)= 34.9 J K-1 mol-1.

****

C12H24O6 L 18-Crown-6 CAS 17455-13-9 (577)

1,4,7,10,13,16-Hexaoxacyclooctadecane;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       nmr non-aq 27°C 100%  C    M                  2003JLa (83367)1217
                                        K(Hg(CN)2+L=HgL(CN)2)=-0.8
Medium: DMSO. Method:199Hg nmr.
-------------------------------------------------------------------------
Hg++       nmr non-aq  RT   0.0  C                      1991LBa (83368)1218
                                        K(Hg(CN)2+L)=>4
Method: 1H nmr. Medium: acetone/CDCl3 1:0.8.
-------------------------------------------------------------------------
Hg++       vlt R4N.X  22°C 0.03M C  I     K1=2.91        1991PSa (83369)1219
Medium: 0.025 M Et4NClO4. Method: differential pulse polarography. Data
for 15-75% w/w CH3CN/H2O, 0.025 M Et4NClO4.
-------------------------------------------------------------------------
Hg++       cal oth/un 25°C 0.10M U   H  T K1=2.42        1976ITb (83370)1220
DH=-19.6 kJ mol-1.
*************************************************************************
C12H26N2O4              L    Cryptand 2,2     CAS 23978-55-4  (925)
4,7,13,16-Tetraoxa-1,10-diazacyclooctadecane;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  R4N.X  25°C 0.10M C        K1=15.38       1985CSb (83843)1221
Medium: 0.10 M Et4NClO4.
-------------------------------------------------------------------------
Hg++       gl  R4N.X  25°C 0.10M C   H    K1=17.85       1975ANa (83844)1222
Calorimetry:  DH1=-71.8 kJ mol-1, DS1=101.7
*************************************************************************
C12H26N6O2              L                     CAS 72975-82-7  (1612)
1,4,7,10,13,16-Hexaazacyclooctadecane-2,6-dione;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       vlt NaNO3  25°C 0.20M C    M                  1989KKa (83963)1223
                                        B(HgH-1L)=9.64
*************************************************************************
C12H26N12               L                       (7007)
1,10-Di(2-(5-tetraazolyl)ethyl)-1,4,7,10-tetraazadecane;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  NaNO3  20°C 0.10M U        K1=16.94       1981ESa (83971)1224
*************************************************************************
C12H26OS                L                     CAS 2180-20-3  (5699)
S,S-Dihexylsulfoxide; C6H13.SO.C6H13
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  U        K1=2.37   B2=4.11   1986MMb (83975)1225
                                        B3=5.06
```

B4=5.40
Medium: acetone, Bu4NClO4
****
C12H26S L CAS 6294-31-3 (5697)
S,S-Dihexylsulfide; C6H13.S.C6H13

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ ISE non-aq 25°C 100% U K1=7.80 B2=13.31 1986MMb (84032)1226
B3=15.90
B4=16.98
Medium: acetone, Bu4NClO4
****
C12H27N5O2 HL (7521)
6-Methyl-1,4,8,11-tetraazacyclotetradecane-6-amino-3-carboxylic acid
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl KCl 25°C 0.50M U K1=17.3 1997BLd (84111)1227
K(HgL+H)=6.8
K(HgHL+H)=6.0
*K(HgL)=-7.8
****
C12H27P L CAS 998-40-3 (170)
Tri-n-butylphosphine; (CH3.(CH2)3)3P

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ EMF non-aq 25°C 100% U H K1=11.5 B2=19.5 1987HPc (84136)1228
B3=21.7
Medium: pyridine, 0.1M Et4NClO4

Hg++ cal non-aq 30°C 100% U H 1976FGa (84137)1229
K(Hg(SCN)2+L) > 5
K(Hg(SCN)2L+L)=1.81
Medium: MeCN. DH(Hg(SCN)2L)=-83 kJ mol-1; DS=<-178. DH(Hg(SCN)2L2)=-117;
DS=-348
****
C12H28N4O L (7305)
1-(2-Hydroxyethyl)-1,4,8,11-tetraazacyclotetradecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl R4N.X 25°C 0.10M C K1=17.4 1997RWa (84208)1230
Medium: Et4NClO4
****
C12H29N5 L CAS 82583-20-6 (97)
1,4,7,11,14-Pentaazacycloheptadecane; cyclo(-(NH.C2H4)3.CH2(NH.C2H4)2.CH2-)

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

```
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.20M M   H    K1=26.5        1978KKb (84259)1231
DH1=-139.7 kJ mol-1
********************************************************************************
C12H30N4S4              L                      CAS 55677-45-7  (1180)
1,1,4,4-Tetramercaptoethylamine-butane; (CH2.CH(S.CH2.CH2.NH2)2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U                        1976CJa (84306)1232
                                        K(Hg+H2L)=19.36
********************************************************************************
C12H30N6                L                      CAS 296-35-5  (143)
1,4,7,10,13,16-Hexaazacyclooctadecane; cyclo(-(NH.CH2.CH2)6-)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.20M C        K1=29.7        1991KKa (84331)1233
--------------------------------------------------------------------------------
Hg++       vlt NaClO4 25°C 0.20M U   H    K1=29.1        1980KKb (84332)1234
DH=-176 kJ mol-1, DS=-17 J K mol-1
********************************************************************************
C12H30N6                L                        (6409)
6,13-Dimethyl-1,4,8,11-tetraazacyclotetradecane-6,13-diamine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.50M U        K1=10.5        1997BLd (84376)1235
                                        K(HgL+H)=7.5
                                        K(HgHL+H)=5.7
--------------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.50M U  I     K1=12.2        1994LLb (84377)1236
                                        K(HgL+H)=6.8
                                        K(HgHL+H)=6.8
                                        K(HgH-1L+H)=8.0
Data are for the syn isomer.  For the anti isomer, K1=10.5, K(HgL+H)=7.5,
K(HgHL+H)=5.7, K(Hg2+L)=11.2, K(Hg2L+H)=9.1, K(Hg2H-1L+H)=7.7.
********************************************************************************
C12H32N4O12P4         H8L    DOTPH            CAS 91987-74-5  (229)
1,4,7,10-Tetraazacyclododecane-N,N',N",N"'-tetramethylenephosphonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C  1.0M U        K1=25.1        1984KMb (84411)1237
                                        K(Hg+HL)=21.1
********************************************************************************
C13H9N3O7S3           H3L                    CAS 2172-27-2  (5007)
1-(2-Thiazolylazo)-2-naphthol-3,6-disulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

```
--------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.10M U                      1983PEa (84652)1238
                                      K(Hg+HL=HgL+H)=3.34
                                      K(2Hg+HL=Hg2H-1L+2H)=6.38
********************************************************************************
C13H9N3O8S3           H3L                    CAS 28467-51-8  (898)
2-(2-Thiazolylazo)chromotropic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.10M U                      1983PEa (84664)1239
                                      K(2Hg+H2L=Hg2HL+H)=5.28
********************************************************************************
C13H10NO2Cl            HL                      (8130)
N-(2-Chlorophenyl)benzohydroxamic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  diox/w 25°C  50%  U        K1=7.00   B2=12.40  1986ARb (84709)1240
Also data for the N-(2-chlorophenyl)-3-methoxy, 3-methyl, 3-fluoro,
3-chloro, 3-bromo-, 3-iodo and 3-nitro-benzohydroxamic acids.
********************************************************************************
C13H10N2               L                      CAS 3003-78-6  (2752)
5-Methyl-1,10-phenanthroline;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KNO3   35°C 0.10M C    M   K1=14.03  B2=19.03  1998LYa (84815)1241
                                      B(HgLA)=23.86
                                      B(HgHLA)=31.61
A is 3,3,9,9-tetramethyl-4,8-diazaundecane-2,10-dione dioxime.
********************************************************************************
C13H10N2O5S           H2L                    CAS 98789-35-6  (5012)
4-Hydroxy-3-formylazobenzene-4'-sulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       EMF alc/w  25°C  42%  U                      1972DSc (84921)1242
                                      K(Hg+HL=HgL+H)=3.73
                                      K(HgL+HL=HgL2+H)=3.22
Medium: 42% EtOH, 0.2 M NaClO4
********************************************************************************
C13H11N3O5S           H3L                      (5019)
4-Hydroxy-3-oximinomethylazobenzene-4'-sulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  alc/w  25°C  50%  U        K1=3.65   B2=6.88   1973DSa (85298)1243
Medium: 42% EtOH, 0.2 M NaClO4
********************************************************************************
```

C13H12N2S L diPh-thiourea CAS 102-08-9 (1075)
1,3-Diphenyl-2-thiourea; C6H5.NH.CS.NH.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	25°C	0.10M	U		B2=21.34	1986ECa (85388)1244	

****
C13H12N2S L (2601)
N,N-Diphenylthiocarbamide; (C6H5)2N.CS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	mixed	25°C	82%	U			1979MTd (85393)1245	
							B4=23.17		

Medium: 82% DMF/H2O
****
C13H12N4S L Dithizone CAS 60-10-6 (1801)
Diphenylthiocarbazone; C6H5.NH.NH.CS.N:N.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	NaClO4	25°C	0.10M	U		K1=20.64 B2=40.30	1973BSe (85459)1246	
Hg++	sp	non-aq	?	100%	U		B2=20.7	1971BBa (85460)1247	

Medium: N-methylpyrrolidone, 0.1 M

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	dis	oth/un	25°C	var	U			1960DTa (85461)1248	
							K(Hg+2HL)=40.34		
							K(Hg(HL)2=(Hg(HL)2)org)=3.54		

At 35 C: K(Hg(HL)2=(Hg(HL)2)org)=3.57

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	NaClO4	25°C	0.50M	U			1956BRa (85462)1249	
							K(Hg+2H2L=Hg(HL)2+2H)=26.85		

****
C13H13As L CAS 954-48-2 (2298)
Methyldiphenylarsine; CH3.As.(C6H5)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGb (85487)1250	
							K(HgCl2+L)=3.47		
							K(HgBr2+L)=3.05		
							K(HgI2+L)=2.05		

In benzene. DH(HgCl2L)=-72.4 kJ mol-1; DS=-173. DH(HgBr2L)=-77.3; DS=-198.
DH(HgI2L)=-71.7; DS=-198.
****
C13H13P L CAS 1486-28-8 (1731)
Diphenyl-methyl-phosphine; CH3(C6H5)2P

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

```
--------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                   1976GGa (85550)1251
HgCl2+L in benzene: DH(K1)=-92; DH(K2)=-37 kJ mol-1
--------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                   1976GGa (85551)1252
HgBr2+L in benzene: DH(K1)=-89; DH(K2)=-39 kJ mol-1.
********************************************************************************
C13H14N2                L                       CAS 104986-55-2  (4972)
1,3-Bis(2'-pyridyl)-propane; C5H4N.CH2.CH2.CH2.C5H4N
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U        K1=7.8    B2=11.80  1970BAa (85574)1253
********************************************************************************
C13H14N2O3             HL    Antineoplaston   CAS 91531-30-5  (8098)
3-(N-Phenylacetylamino)-2,6-piperidinedione;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  alc/w  45°C  50%  C        K1=8.23   B2=13.82  1996MMc (85627)1254
Medium: 50% v/v MeOH/H2O, 0.10 M KNO3.
********************************************************************************
C13H14N4                L                       CAS 13103-75-8  (473)
4-(2-Pyridylazo)-N,N-dimethylaniline; C5H4N.N:N.C6H4.N(CH3)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       sp  NaNO3  25°C 0.15M U        K1=5.06        1953KMa (85683)1255
********************************************************************************
C13H17N3O4S            HL    Analgin          CAS 57904-20-8  (6340)
1-Phenyl-2,3-dimethylaminopyrazolon-5-N-methansulfonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       ISE NaNO3  25°C 0.10M U  I     K1=3.11   B2=5.40   1988GAa (86004)1256
                                         B3=8.80
                                         B4=12.40
In 5.7 Mol EtOH/H2O: B1=3.40; B2=6.60; B3=9.10; B4=12.40
********************************************************************************
C13H20N2O8           H4L                       CAS 22991-70-4  (3413)
trans-1,2-Cyclopentane-iminodiethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       EMF NaNO3  20°C 0.10M U        K1=23.24       1971PSc (86113)1257
                                         B(HgHL)=26.01 (DL isomer)
********************************************************************************
C13H20O8S4           H4L                       CAS 51865-20-4  (1139)
(Pentanediylidenetetrathio)tetra-ethanoic acid; ((HOOCCH2S)2CHCH2)2.CH2
--------------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K1=18.97       1975JBa (86156)1258
*************************************************************************
C13H22N2O8            H4L                      CAS 1798-14-7  (921)
(Pentamethylenedinitrilo)tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2)2CH2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   25°C  1.0M C  I                    1999ANa (86196)1259
                                      B(Hg2L2)=43.5
Method: Glass electrode plus Hg electrode.
*************************************************************************
C13H22N2O8            H4L                        (7164)
2,4-Diaminopentane-N,N,N',N'-tetraethanoic acid;
(HOOCCH2)2NCH(CH3)CH2CH(CH3)N(CH2COOH)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       vlt KNO3   20°C 0.10M U        K1=20.68       1981NSc (86255)1260
*************************************************************************
C13H23N3O8            H4L                        (3414)
N-Methyl-2,2'-iminobis(ethyliminodiethanoic acid);
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M C        K1=7.21        1957SSa (86396)1261
                                      K(Hg+HL)=2.61
*************************************************************************
C13H26O4S2              L                        (6656)
1,5-Dithia-8,11,14,17-tetraoxacyclononadecane, 1,5-Dithia-19-crown-6;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       ix  none   25°C  0.0  U        K1=13.9        1991BTa (86461)1262
*************************************************************************
C13H28N4O2              L                      CAS 17023-02-8  (7247)
3,3,9,9-Tetramethyl-4,8-diazaundecane-2,10-dione dioxime;
(HON:C(CH3)C(CH3)2NHCH2)2CH2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   35°C 0.10M C    M   K1=11.79       1998LYa (86534)1263
                                      B(HgHL)=18.60
Ternary complexes with 5-substituted-1,10-phenanthrolines.
*************************************************************************
C13H32N4S4              L                        (1181)
1,1,5,5-Tetramercaptoethylamine-pentane; CH2(CH2.CH(S.CH2.CH2.NH2)2)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

```
------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U                      1976CJa (86581)1264
                                          K(Hg+H2L)=19.55
******************************************************************************
C14H8O7S              H3L    DASA            CAS 83-61-4  (950)
1,2-Dihydroxyanthraquinone-3-sulfonic acid, Alizarin Red S;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Hg++       gl  NaClO4 30°C  0.0  U  I     K1=8.38   B2=15.28  1972GDa (86735)1265
I=0.02: K1=8.43, K2=6.68;  0.05: K1=8.64, K2=6.33;
0.15: K1=8.56, K2=6.25;  0.2: K1=8.04, K2=6.10
******************************************************************************
C14H11N5O8S2          H5L                      CAS 1105-53-9  (5084)
1,5-Bis(2-hydroxy-5-sulfophenyl)-3-cyanoformazan;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Hg++       gl  NaNO3  20°C 0.10M U        K1=12.11       1971SEa (87019)1266
******************************************************************************
C14H12O2               HL                       CAS 119-53-9  (2739)
2-Hydroxydeoxybenzoin, 2-hydroxyphenylacetophenone; HO.C6H5.CH2.CO.C6H5
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Hg++       gl  alc/w  30°C  50%  U        K1=7.10        1986SBa (87330)1267
******************************************************************************
C14H12O3              H2L                      CAS 3669-41-8  (2740)
2,4-Dihydroxydeoxybenzoin, 2,4-dihydroxyphenylacetophenone;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Hg++       gl  alc/w  30°C  50%  U        K1=3.65        1986SBa (87341)1268
******************************************************************************
C14H12O4              H3L                        (2741)
2,4,6-Trihydroxydeoxybenzoin, 2,4,6-trihydroxyphenylacetophenone;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Hg++       gl  alc/w  30°C  50%  U        K1=4.65        1986SBa (87357)1269
******************************************************************************
C14H13N5OS             HL                         (5394)
1-(2-Pyridylmethylideneamino)-3-(salicylideneamino)thiourea;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Hg++       sp  mixed  25°C  40%  U                      1985RGa (87615)1270
                                        K1eff=6.43
                                        B2eff=12.31
Medium: 40% DMF, pH 4.5
```

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ ISE NaClO4 25°C 0.10M U I K1=18.7 B2=28.91 1979PPc (87634)1271
B3=35.38
B4=37.2
Method: Hg elec. In 50% v/v dioxan/H2O: K1=19.4; B2=30.3 ; B3=35.39; B4=36.5

Hg++ gl NaClO4 25°C 0.10M C I K1=18.7 B2=28.90 1979PPd (87635)1272
B3=35.35
B4=37.2
Additional methods: polarography and Hg electrode.
In 50% dioxane/H2O: K1=19.4, B2=30.3, B3=35.39, B4=36.5
****
C14H13P L CAS 2155-96-6 (2289)
Diphenyl-ethenyl-phosphine; (C6H5)2.P.CH:CH2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ cal non-aq 30°C 100% U H 1976GGa (87638)1273
HgI2+L in benzene. DH(K1)=-60; DH(K2)=-49 kJ mol-1

Hg++ cal non-aq 30°C 100% U H 1976GGa (87639)1274
HgBr2+L in benzene. DH(K1)=-78; DH(K2)=-42 kJ mol-1

Hg++ cal non-aq 30°C 100% U H 1976GGa (87640)1275
HgCl2+L in benzene. DH(K1)=-85; DH(K2)=-38 kJ mol-1
****
C14H16N2 L CAS 1620-43-7 (5033)
1,4-Bis(2'-pyridyl)butane; C5H4N.CH2.CH2.CH2.CH2.C5H4N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl KNO3 20°C 0.10M U K1=8.3 B2=11.50 1970BAa (87837)1276
****
C14H16N2O8 H4L CAS 40774-59-2 (1901)
1,2-Diaminobenzene-N,N,N',N'-tetraethanoic acid; C6H4(N(CH2.COOH)2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl NaClO4 25°C 1.00M C H K1=17.38 1992ANb (87953)1277
By calorimetry: DH(K1)=-50.6 kJ mol-1, DS=165 J K-1 mol-1
****
C14H16N4O HL PAAC CAS 13059-69-3 (5067)
5-Ethylamino-4-methyl-2-(2'-pyridylazo)phenol;

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

```
--------------------------------------------------------------------------------
Hg++       sp  oth/un   ?     ?  U                        1968GKb (88017)1278
                                        K(Hg+HL)=5.77
********************************************************************************
C14H18N4                L    DPEN             CAS 4608-34-3  (1850)
N,N'-Bis-(2-pyridylmethyl)-1,2-diaminoethane; (C5H4N.CH2.NH.CH2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U   H    K1=19.1   B2=24.68  1975APc (88113)1279
DH(K1)=-92.0 kJ mol-1, DS(K1)=57.3 J K-1 mol-1
DH(K2)=-23.0 kJ mol-1   DS(K2)=30.1 J K-1 mol-1
********************************************************************************
C14H21NO7               HL                       CAS 85906-10-1  (6635)
2-(Benzylamino)-2-deoxy-D-glycero-D-gulo-heptonic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K1=5.41   B2=9.78   1992VDa (88409)1280
                                        B(HgH-1L)=-1.80
                                        B(HgHL2)=16.51
                                        B(HgH2L2)=21.6
********************************************************************************
C14H22N2O8            H4L    CDTA             CAS 482-54-2  (200)
trans-1,2-Diaminocyclohexane-N,N,N',N'-tetraethanoic acid;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M C T H    K1=22.56       1985HWc (88674)1281
Data for 5-35 C. Method: Hg and glass electrodes.
DH(K1)=-71.6 kJ mol-1, DS(K1)=192 J K-1 mol-1.
--------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 0.50M U        K1=23.28       1977GGb (88675)1282
--------------------------------------------------------------------------------
Hg++       sp  NaClO4 25°C 0.10M U    M                  1966JMa (88676)1283
                                        K(HgL+OH)=3.20
                                        K(HgL+Cl)=2.16
                                        K(HgL+Br)=3.20
                                        K(HgL+I)=5.3
K(HgL+SCN)=4.29
--------------------------------------------------------------------------------
Hg++       ISE KNO3   30°C 0.10M U T H    K1=23.47       1965HWa (88677)1284
K1=24.16(10 C),23.77(20 C). At 25 C:DH(K1)=-57.3 J K-1 mol-1,DS=259 J K-1m-1
--------------------------------------------------------------------------------
Hg++       cal KNO3   25°C 0.10M U   H                  1965WHa (88678)1285
DH(K1)=-79.0 kJ mol-1, DS=201 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       cal KNO3   20°C 0.10M U T H                  1963ANb (88679)1286
DH(K1)=-69.4 kJ mol-1, DS=246.6 J K-1 mol-1
--------------------------------------------------------------------------------
```

```
Hg++       ISE KNO3   20°C 0.10M U   H    K1=24.95       1963ANf (88680)1287
By calorimetry: DH(K1)=-69.5 kJ mol-1, DS=247 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U T H    K1=23.43       1962MHa (88681)1288
DH(K1)=-58.9 kJ mol-1, DS=247 J K-1 mol-1. At 20 C: K(HgL+H)=3.51
--------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U        K1=24.4        1960HRa (88682)1289
--------------------------------------------------------------------------------
Hg++       oth oth/un   ?     ?  U                       1959SRb (88683)1290
                                          K(HgL+NH3)=5.5
--------------------------------------------------------------------------------
Hg++       vlt oth/un   ?     ?  U        K1=24.3        1955MDa (88684)1291
--------------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M U        K1=24.30       1954SGa (88685)1292
                                          K(HgLOH+H)=10.46
                                          K(HgL+H)=9.50
********************************************************************************
C14H22O8S4            H4L                          (1160)
Ethane-tetramercaptopropanoic acid; (CH.(S.CH2.CH2.COOH)2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K1=17.3        1975PJa (89000)1293
********************************************************************************
C14H23N3O10           H5L    DTPA             CAS 67-43-6  (238)
Diethylenetriamine-pentaethanoic acid; HOOC.CH2.N(CH2.CH2.N(CH2.COOH)2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M C T H    K1=27.23       1985HWc (89273)1294
Data for 5-35 C. Method: Hg and glass electrodes.
DH(K1)=-109.0 kJ mol-1, DS(K1)=155 J K-1 mol-1.
--------------------------------------------------------------------------------
Hg++       ISE NaClO4 25°C 0.50M U        K1=26.08       1977GGb (89274)1295
--------------------------------------------------------------------------------
Hg++       sp  oth/un 20°C <0.1  U        K1=28.4        1967KAb (89275)1296
--------------------------------------------------------------------------------
Hg++       cal KNO3   20°C 0.10M U T H                   1965ANa (89276)1297
DH(K1)=-99.1 kJ mol-1, DS=172.6 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       cal KNO3   25°C 0.10M U   H                   1965WHa (89277)1298
DH(K1)=-98.6 kJ mol-1, DS=184 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U   H    K1=26.27       1962MTc (89278)1299
DH(K1)=-92.5 kJ mol-1, DS=193 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       vlt KNO3   20°C 0.10M U        K1=25.4        1962SKa (89279)1300
--------------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U        K1=27.0        1960HRa (89280)1301
--------------------------------------------------------------------------------
```

```
Hg++       gl  KNO3   25°C 0.10M C        K1=27.0        1960WAa (89281)1302
                                         K(HgL+H)=3.6
-------------------------------------------------------------------------------
Hg++       EMF oth/un 20°C 0.10M U        K1=26.70       1959ANd (89282)1303
                                         K(Hg+HL)=20.36
*******************************************************************************
C14H23N3S2              L                      CAS 771500-58-4  (9194)
5-(3-Aminopropyl)-2,8-dithia-5-aza-2,6-pyridinophane;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  R4N.X  25°C 0.10M C        K1=13.1        2004BBe (89459)1304
                                         K(HgL+H)=4.9
                                         K(HgL+OH)=2.9
Medium: 0.1 M Me4NO3
*******************************************************************************
C14H23P                 L                      CAS 6372-44-7  (2292)
Dibutyl-phenyl-phosphine; (C4H9)2(C6H5)P
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                    1976GGa (89479)1305
HgCl2+L in benzene. DH(K1)=-108; DH(K2)=-49 kJ mol-1
-------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                    1976GGa (89480)1306
HgI2+L in benzene. DH(K1)=-86; DH(K2)=-46 kJ mol-1.
*******************************************************************************
C14H24N2O7           H3L                      (3440)
N-(2-Hydroxycyclohexyl)ethylenediamine-N,N',N'-triethanoic acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       ISE oth/un 25°C 0.10M U        K1=20.14       1960SAc (89495)1307
                                         K(Hg+HL)=12.56
*******************************************************************************
C14H24N2O8           H4L                      (5075)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-butyric acid;
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       vlt KNO3   20°C 0.10M U        K1=20.53       1970SNa (89510)1308
*******************************************************************************
C14H24N2O8           H4L    HMDTA            CAS 1633-00-7  (920)
1,6-Diaminohexane-N,N,N',N'-tetraethanoic acid; ((HOOC.CH2)2N.CH2.CH2.CH2)2
-------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C  1.0M C  I                    1999ANa (89579)1309
                                         B(Hg2L2)=43.4
Method: Glass electrode plus Hg electrode. At I = 0.1 M, B(Hg2L2)=45.5.
```

```
--------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U   H    K1=21.58       1964ANa (89580)1310
By calorimetry: DH(K1)=-87.7 kJ mol-1, DS=114.1 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M U        K1=21.38       1957SSa (89581)1311
********************************************************************************
C14H24N2O8S2          H4L                        (3441)
2,2'-Ethylenebisthio(ethyliminodiethanoic acid);
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M U        K1=23.93       1957SSa (89697)1312
                                         K(Hg+HL)=18.50
********************************************************************************
C14H24N2O9            H4L                      CAS 87720-52-3  (1593)
2,2'-Oxybis(propyliminodiethanoic acid)
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KCl    20°C 0.10M U        K1=21.67       1961ISa (89711)1313
                                         K(Hg+HL)=15.0
********************************************************************************
C14H24N2O9            H4L    BPETA             CAS 87720-52-3  (5077)
Bis-(3-di(carboxymethyl)aminopropyl)ether;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KCl    20°C 0.10M U        K1=21.67       1961ISa (89730)1314
                                         K(Hg+HL)=15.0
********************************************************************************
C14H24N2O10                  EGTA             CAS 67-42-5  (349)
Ethyleneglycol-O,O'-bis(2-aminoethyl ether)-N,N,N',N'-tetraethanoic acid; H4L
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M C T H    K1=22.62       1985HWc (89870)1315
Data for 5-35 C. Method: Hg and glass electrodes.
DH(K1)=-70.0 kJ mol-1, DS(K1)=212 J K-1 mol-1.
--------------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M U        K1=23.6        1982JGa (89871)1316
                                         K(HgL+H)=3.8
                                         K(HgL+2H)=3.1
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K1=23.86       1970FTa (89872)1317
                                         K(HgL+H)=3.06
--------------------------------------------------------------------------------
Hg++       cal KNO3   25°C 0.10M U   H                   1965WHa (89873)1318
DH(K1)=-97.4 kJ mol-1, DS=129.6 J K-1 mol-1
--------------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U   H    K1=23.2        1964ANa (89874)1319
```

K(Hg+HL)=16.8
By calorimetry: DH(K1)=-99.1 kJ mol-1, DS=105.3 J K-1 mol-1

Hg++ ISE KNO3 20°C 0.10M U K1=23.12 1962MMc (89875)1320

Hg++ ISE KNO3 25°C 0.10M U K1=23.8 1960HRa (89876)1321

Hg++ ISE NaNO3 20°C 0.10M U K1=23.20 1957SRa (89877)1322
K(Hg+HL)=16.76
By glass electrode K1=23.8
****
C14H28N2O4 L Cryptand 2,1,1 CAS 31250-06-3 (836)
1,10-Diaza-4,7,13,18-tetraoxabicyclo[8,5,5]eicosane (2,1,1);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl R4N.X 25°C 0.10M U K1=15.97 1982NSb (90369)1323
B(HgHL)=18.71

Hg++ EMF non-aq 25°C 100% C K1=15.9 1979BLb (90370)1324
Method: Ag electrode; competition with Ag+. Medium: MeOH, 0.05 M Me4NClO4.
****
C14H28O7 L 21-Crown-7 CAS 33089-36-0 (2264)
1,4,7,10,13,16,19-Heptaoxacycloheneicosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ nmr non-aq RT 0.0 C 1991LBa (90521)1325
K(Hg(CN)2+L)=3.18
Method: 1H nmr. Medium: acetone/CDCl3 1:0.8.
****
C14H30N2O5 L (6722)
7,13-Bis(2-hydroxyethyl)-1,4,10-trioxa-7,13-diazacyclopentadecane
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl R4N.X 25°C 0.10M C K1=15.07 1995LLa (90628)1326
Medium: Et4NClO4
****
C14H32N2O4 L CAS 102-60-3 (2678)
Tetra(2-hydroxypropyl)-N,N,N',N'-diaminoethane;(-CH2.N(CH2.CH(OH).CH3)2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl oth/un 27°C 0.05M U K1=8.08 1959KEc (90744)1327
****
C14H32N4 L 4-Mecyclam-14 CAS 41203-22-9 (935)
1,4,8,11-Tetramethyl-1,4,8,11-tetraazacyclotetradecane;

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M U        K1=20.3        1983NWa (90803)1328
*************************************************************************
C15H11N3O4S           H2L    1-PAN-4S          (7010)
2-(2-Pyridylazo)-1-naphthol-4-sulfonic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       sp  alc/w  25°C  30%  U        K1=12.4        1979KKd (91325)1329
                                         K(Hg+HL)=4.7
Medium: 30% EtOH/H2O, 1.0 M HClO4
*************************************************************************
C15H14N4O6S           H3L                          (5132)
3-Methyl-(2'-hydroxy-5'-sulfophenyl)-(2''-carboxyphenyl)formazan;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       EMF NaNO3  20°C 0.10M U        B2=14.57       1970VEb (91749)1330
                                         K(Hg+HL)=7.62
                                         K(HgHL+HL)=6.95
*************************************************************************
C15H17P                L                        CAS 7650-84-2  (2287)
Diphenyl-propyl-phosphine; (C6H5)2PCH2.CH2.CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                  1976GGa (91989)1331
HgCl2+L in benzene: DH(K1)=-90; DH(K2)=-41 kJ mol-1
*************************************************************************
C15H18N2               L                        CAS 25382-73-6  (5106)
1,5-Bis(2-pyridyl)-pentane; C5H4N.(CH2)5.C5H4N
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U        K1=9.6         1970BAa (92003)1332
*************************************************************************
C15H20N4               L    DPTN             CAS 63671-70-5  (1851)
N,N'-Bis-(2-pyridylmethyl)-1,3-diaminopropane; (C5H4N.CH2.NH.CH2)2CH2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U   H    K1=18.8        1975APc (92182)1333
DH(K1)=-94.5 kJ mol-1, DS=42.3 J K-1 mol-1
*************************************************************************
C15H24O8S4             H4L                      CAS 53480-91-4  (1161)
Propane-1,1,3,3-tetramercaptopropanoic acid; CH2(CH(S.CH2.CH2.COOH)2)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
```

Hg++ gl NaClO4 25°C 0.10M U K1=17.5 1975PJa (92353)1334
****
C15H32N4S3 L CAS 150148-73-5 (7926)
1-Methyl-3,13,16-trithia-6,10,19-triazabicyclo[6.6.6]eicosan-8-amine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl KNO3 25°C 0.10M C K1=17.7 2001SGa (92559)1335
K(HgL+H)=5.3
****
C16H9N2OBr3 HL CAS 84317-74-8 (5169)
1-(2,4,6-Tribromophenylazo)-2-hydroxynaphthalene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl mixed 25°C 75% U K1=5.90 B2=10.43 1972MCb (92654)1336
Medium: 75% acetone, 0.1 M KNO3
****
C16H11N2OBr HL CAS 7150-24-5 (5172)
1-(4-Bromophenylazo)-2-hydroxynaphthalene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl mixed 25°C 75% U K1=6.74 B2=12.70 1972MCb (92699)1337
Medium: 75% acetone, 0.1 M KNO3
****
C16H11N2OCl HL CAS 24390-65-6 (5170)
1-(2-Chlorophenylazo)-2-hydroxynaphthalene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl mixed 25°C 75% U K1=6.24 B2=11.44 1972MCb (92714)1338
Medium: 75% acetone, 0.1 M KNO3
****
C16H11N2OCl HL CAS 10149-93-6 (5171)
1-(4-Chlorophenylazo)-2-hydroxynaphthalene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl mixed 25°C 75% U K1=6.68 B2=12.60 1972MCb (92729)1339
Medium: 75% acetone, 0.1 M KNO3
****
C16H11N2OI HL CAS 25023-35-2 (5173)
1-(4-Iodophenylazo)-2-hydroxynaphthalene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl mixed 25°C 75% U K1=6.88 B2=12.89 1972MCb (92744)1340
Medium: 75% acetone, 0.1 M KNO3
****

C16H11N3O3 HL CAS 6410-09-9 (5151)
1-(2-Nitrophenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	mixed	25°C	75%	U		K1=3.17	1972MCb (92798)	1341

Medium: 75% acetone, 0.1 M KNO3

****

C16H11N3O3 HL CAS 6410-46-1 (5152)
1-(4-Nitrophenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	mixed	25°C	75%	U		K1=3.98 B2=7.45	1972MCb (92813)	1342

Medium: 75% acetone, 0.1 M KNO3

****

C16H12N2O HL CAS 842-07-9 (5156)
1-Phenylazo-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	mixed	25°C	75%	U		K1=7.46 B2=13.88	1972MCb (92919)	1343

Medium: 75% acetone, 0.1 M KNO3

****

C16H12N2O2 H2L CAS 9486-98-2 (3462)
1-(2-Hydroxyphenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	mixed	25°C	75%	U		K(Hg+HL)=7.65 K(HgHL+HL)=6.87	1972MCb (92953)	1344

Medium: 75% acetone, 0.1 M KNO3

****

C16H12N2O2 H2L CAS 14934-27-1 (5157)
1-(4-Hydroxyphenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	mixed	25°C	75%	U		K(Hg+HL)=7.26 K(HgHL+HL)=6.04	1972MCb (92971)	1345

Medium: 75% acetone, 0.1 M KNO3

****

C16H12N2O4S H2L CAS 13964-82-4 (3475)
1-(4-Sulfophenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	mixed	25°C	75%	U		K1=3.70 B2=6.66	1972MCb (92999)	1346

Medium: 75% acetone, 0.1 M KNO3

****

C16H18O8S4 H4L CAS 51865-21-5 (239)

1,2-Dimethylbenzene-tetrathioethanoic acid; C6H4(CH(S.CH2.COOH)2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	NaClO4	25°C	0.10M	U		K1=45.0 K1eff=18.8 (pH < 3.8)	1975JBa	(93887)1347
Hg++	ISE	KNO3	25°C	0.10M	U		K(Hg+H2L)=18.8 B(HgL(OH)2)=45	1974JBa	(93888)1348

****

C16H19P L CAS 6372-41-4 (2288)

Diphenyl-butyl-phosphine; (C6H5)2P(C4H9)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa	(93944)1349

HgCl2+L in benzene. DH(K1)=-90; DH(K2)=-37 kJ mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa	(93945)1350

HgBr2+L in benzene. DH(K1)=-92; DH(K2)=-43 kJ mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa	(93946)1351

HgI2+L in benzene. DH(K1)=-80; DH(K2)=-48 kJ mol-1

****

C16H20N2 L (5146)

1,6-Bis(2-pyridyl)-hexane; C5H4N.(CH2)6.C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	20°C	0.10M	U		K1=9.2	1970BAa	(93957)1352

****

C16H20N2O8 H4L CAS 6411-02-5 (1919)

1-Phenyl-ethylenediamine-N,N,N',N'-tetraethanoic acid (DL)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	20°C	0.10M	U		K1=22.06	1989SLa	(94039)1353

****

C16H22N4 L DPTE CAS 81747-99-1 (1852)

N,N-Bis-(2-pyridyl-methyl)-1,4-diaminobutane; (C5H4N.CH2.NH.CH2.CH2)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	KNO3	25°C	0.10M	U	H	K1=17.52	1975APc	(94181)1354

DH(K1)=-87.0 kJ mol-1 DS=43.1 J K-1 mol-1

****

C16H22N4O L (3471)
2-(N-(2-Dimethylaminoethyl)-N-(4-methoxybenzyl)amino)pyrimidine;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl KCl 25°C 0.06M U T K1=3.61 B2=7.05 1961SMa (94199)1355
K1=4.02(0 C), 3.54(45 C)
****
C16H25NO4 L (7444)
1-Aza-4,7,10,13-tetraoxa-1-phenyl-cyclopentadecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ con mixed 25°C 80% C IH 1999MFa (94517)1356
K(Hg(NO3)2+L)=4.66
Medium: 80% acetonitrile/H2O. Also data for 95% acetonitrile/H2O, and for
20-35 C. DH(K)=-51.85 kJ mol-1, DS(K)=-78.4 J K-1 mol-1.
****
C16H26O8S4 H4L CAS 53480-92-5 (1162)
Butane-1,1,4,4-tetramercaptopropanoic acid; (CH2.CH(S.CH2.CH2.COOH)2)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl NaClO4 25°C 0.10M U K1=17.7 1975PJa (94639)1357
****
C16H28N2O8 H4L (5167)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-(3-methyl)butanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ vlt KNO3 20°C 0.10M U K1=18.03 1970SNa (94712)1358
****
C16H28N2O8 H4L (5168)
1,2-Diaminoethane-N,N'-diethanoic-N,N'-di-2-pentanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ vlt KNO3 20°C 0.10M U K1=20.54 1970SNa (94738)1359
****
C16H28N2O8 H4L (5138)
1,2-Diaminooctane-N,N,N',N'-tetraethanoic acid;
(HOOCCH2)2N.CH2.CH(C6H13)N(CH2COOH)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ vlt KNO3 20°C 0.10M U K1=22.77 1979MBd (94764)1360
****
C16H28N2O8 H4L (2850)
1,8-Diaminooctane-N,N,N',N'-tetraethanoic acid; ((HOOCCH2)2N(CH2)4)2

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  KNO3   20°C 0.10M U   H    K1=21.83       1964ANa (94792)1361
By calorimetry: DH(K1)=-82.5 kJ mol-1, DS=136 J K-1 mol-1
-------------------------------------------------------------------------
Hg++       oth NaNO3  20°C 0.10M U        K1=21.83       1957SSa (94793)1362
*************************************************************************
C16H28N4O8            H4L    DOTA             CAS 60239-18-1  (1017)
1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraethanoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.20M C   H    K1=26.4        1994KOb (94904)1363
DH(K1)=-86 kJ mol-1, DS=79 J K-1 mol-1
*************************************************************************
C16H30N4O8            H4L                       (3473)
N,N'-Dimethyl-2,2'-ethylenedi-iminobis(ethylenediethanoic acid);
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       ISE NaNO3  20°C 0.10M U        K1=27.68       1957SSa (95083)1364
                                        K(Hg+HL)=21.24
*************************************************************************
C16H30N4S4            H4L                       CAS 55677-47-9  (1203)
Tetramercaptoethylamine-1,2-dimethylbenzene; C6H4(CH(NH.CH2.CH2.SH)4)2
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K1=19.65       1976CJa (95090)1365
*************************************************************************
C16H32N2O5              L    Cryptand 2,2,1   CAS 31364-42-8  (837)
1,10-Diaza-4,7,13,16,21-pentaoxabicyclo[8,8,5]tricosane  (2,2,1);
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  R4N.X  25°C 0.10M U        K1=19.97       1982NSb (95209)1366
*************************************************************************
C16H32N8O4              L                       CAS 157599-02-5  (8676)
1,4,7,10-Tetraazacyclododecane-1,4,7,10-tetraacetamide;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.10M C        K1=15.53       1995MHa (95376)1367
*************************************************************************
C16H34N2O5              L                         (6953)
7,13-Bis(2-methoxyethyl)-1,4,10-trioxa-7,13-diazacyclopentadecane;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       gl  R4N.X  25°C 0.10M C        K1=15.2        1995LLa (95414)1368
```

Medium: Et4NClO4
****
C16H34N2O6 L CAS 69930-74-1 (1321)
N,N'-Bis(2-hydroxyethyl)-1,7,10,16-tetraoxa-4,13-diazacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.10M	C		K1=14.58	1995LLa	(95448)1369

Medium: Et4NClO4
****
C16H34N4O2 L CAS 60598-04-1 (1530)
4,7-Dimethyl-1,4,7,10-tetraaza-13,18-dioxabicyclo[8,5,5]eicosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.10M	U		K1=26.6 K(Hg+HL)=19.3	1978LMa	(95470)1370

****
C16H34OS L CAS 1986-89-6 (5700)
S,S-Dioctylsulfoxide; C8H17.SO.C8H17

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	ISE	non-aq	25°C	100%	U		K1=2.44 B2=4.08 B3=5.20 B4=5.61	1986MMb	(95483)1371

Medium: acetone, Bu4NClO4
****
C16H36N4O2 L (7297)
1,11-Bis(2-hydroxyethyl)-4,8-dimethyl-1,4,8,11-tetraazacyclotetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.10M	C		K1=18.1 B(HgH-1L)=10.8	1996BCc	(95549)1372

Medium: Et4NClO4
****
C16H36N4O2 L (7296)
1,4-Bis(2-hydroxyethyl)-8,11-dimethyl-1,4,8,11-tetraazacyclotetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.10M	C		K1=17.3 B(HgH-1L)=10.0	1996BCc	(95557)1373

Medium: Et4ClO4
****
C16H40N4O12P4 H8L CAS 41007-47-0 (2070)
1,4,7,10-Tetraethylphosphonic acid-1,4,7,10-tetraazacyclododecane;
C8H16N4(CH2CH2.PO(OH)2)4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	KNO3	25°C	1.00M	U		K1=29.6		1989PBb	(95638)1374
							K(Hg+HL)=25.1			
							K(Hg+H2L)=21.4			
							K(Hg+H3L)=19.6			
							K(Hg+H4L)=17.2			

****

C17H13NO3S H2L CAS 119516-70-0 (6185)
7-Hydroxy-8((2-mercaptophenyl)iminomethyl)-4-methyl-2H-1-benzopyran-2-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	diox/w	20°C	70%	U	T H	K1=22.40		1988KOb	(95749)1375

25 C:K=21.27; 32 C: K=19.76; 45 C:K=17.25. DH=-382 kJ mol-1, DS=-876

****

C17H14N2O HL CAS 2046-17-5 (5214)
1-(2-Methylphenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	mixed	25°C	75%	U		K1=7.76	B2=14.12	1972MCb	(95796)1376

Medium: 75% acetone, 0.1 M KNO3

****

C17H14N2O HL CAS 6756-41-8 (5215)
1-(4-Methylphenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	mixed	25°C	75%	U		K1=7.94	B2=14.88	1972MCb	(95811)1377

Medium: 75% acetone, 0.1 M KNO3

****

C17H14N2O2 HL CAS 1229-55-6 (5216)
1-(2-Methoxyphenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	mixed	25°C	75%	U		K1=8.19	B2=15.64	1972MCb	(95830)1378

Medium: 75% acetone, 0.1 M KNO3

****

C17H14N2O2 HL CAS 13441-91-1 (5217)
1-(4-Methoxyphenylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values		Reference	ExptNo
Hg++	gl	mixed	25°C	75%	U		K1=7.74	B2=14.90	1972MCb	(95845)1379

Medium: 75% acetone, 0.1 M KNO3

****

C17H14N4 L CAS 24929-06-4 (2810)
2-(6-Benzoylpyridine)-2'-pyridylhydrazone C6H5.CO.C5H3N.N(NH2)C5H4N

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       sp  none   25°C  0.0  U        K1=8.1    B2=15.0   1974GSd (95949)1380
********************************************************************************
C17H19N3                L    Antazoline       CAS 91-75-8  (3486)
2-(N-(Benzyl)-N-phenylaminomethyl)-1,4,5H-1,3-diazole, antistine;
C3H5N2.CH2.N(C6H5)CH2.C6H5
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.06M U T      K1=6.38   B2=11.44  1961SMa (96266)1381
K1=7.16(0 C), 5.80(45 C); K2=5.44(0 C), 4.88(45 C)
********************************************************************************
C17H21NO                L    Benadryl         CAS 58-73-1  (3492)
N,N-Dimethyl-2-(diphenylmethoxy)ethylamine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  KCl    25°C 0.06M U T      K1=4.02   B2=7.56   1961SMa (96373)1382
At 0 C: K1=4.26, K2=3.60; 45 C: K1=3.82, K2=3.56
********************************************************************************
C17H28O8S4            H4L                        (1163)
Pentane-1,1,5,5-tetramercaptopropionic acid; CH2(CH2.CH(S.CH2.CH2.COOH)2)2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K1=17.9        1975PJa (96564)1383
********************************************************************************
C17H38N4O3              L                          (7318)
1,4,8-Tris(2-hydroxyethyl)-11-methyl-1,4,8,11-tetraazacyclotetradecane;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       gl  R4N.X  25°C 0.10M C        K1=18.4        1997RWa (96797)1384
                                         B(HgH-1L)=10.8
Medium: Et4NClO4
********************************************************************************
C18H15As                L                      CAS 603-32-7  (2653)
Triphenylarsine; (C6H5)3As
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H    K1=6.77   B2=8.97   1978ABb (96971)1385
Medium: DMSO, 0.1 M NH4ClO4; DH(K1)=-34, DH(K2)=-27 kJ mol-1
--------------------------------------------------------------------------------
Hg++       sp  alc/w  25°C  75%  U    M                 1966OBa (96972)1386
                                       K(HgCl2+L=HgClL+Cl)=1.11
                                       K(HgClL+L=HgL2+Cl)=0.83
Medium: 74.5% MeOH, 0.10 M NaClO4
```

****
C18H15AsS L CAS 3937-40-4 (2303)
Triphenylarsine sulfide; (C6H5)3AsS

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ cal non-aq 30°C 100% U H 1976GGb (96973)1387
K(HgCl2+L)=2.94
K(HgBr2+L)=3.70
K(HgI2+L)=2.90
In benzene. DH(HgCl2L)=-35.3 kJ mol-1; DS=-61. DH(HgBr2L)=-25.0; DS=-11.
DH(HgI2L)=-29.5; DS=-40.
****
C18H15O3PS HL CAS 16704-71-5 (3365)
3-Diphenylphosphino-benzene sulfonic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ ISE KNO3 25°C 1.0M U K1=14.3 B2=24.6 1962SBa (97108)1388
B3=29.7
B4=33.0
****
C18H15O3PS HL CAS 54262-24-7 (327)
4-(Diphenylphosphino)benzenesulfonic acid; (C6H5)2P.C6H4.SO3H

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ cal NaClO4 25°C 0.10M U H K1=14.5 B2=24.8 1976HMa (97113)1389
B3=29.9
B4=33.2
DH(K1)=-86 kJ mol-1, DS=-10; DH(B2)=-174, DS=-107; DH(B3)=-217, DS=-154;
DH(B4)=-236
****
C18H15O9AsS3 H3L CAS 103953-83-9 (326)
Tris-(3-sulfophenyl)arsine; (HO3S.C6H4)3As

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ cal NaClO4 25°C 0.50M U H K1=9.3 B2=14.36 1976HMa (97118)1390
B3=17.0
Calorimetry: DH(K1)=-43 kJ mol-1, DS=34 J K-1 mol-1, DH(B2)=-73, DS=30
****
C18H15P L CAS 603-35-0 (621)
Triphenylphosphine; (C6H5)3P

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ EMF non-aq 25°C 100% U H K1=4.62 B2=6.21 1987HPc (97135)1391
Medium: pyridine, 0.1M Et4NClO4

```
Hg++       nmr non-aq -90°C 100%  U    M                1979AGa (97136)1392
                                       K(HgL+A)=1.21
                                       K(HgL+B)=1.36
                                       K(HgL+C)=0.72
                                       K(HgL+D)=0.22
Medium: CH2Cl2. A=(Ph3P)2(O2CCF3)2, B=(Ph3P)(O2CCHF2)2, C=(Ph3P)(O2CCH2F)2,
D=(Ph3P)2(O2CCH3)2
--------------------------------------------------------------------------------
Hg++       ISE non-aq 25°C 100%  C   H    K1=11.06  B2=17.61  1978ABb (97137)1393
Medium: DMSO, 0.1 M NH4ClO4; DH(K1)=-57, DH(K2)=-51 kJ mol-1
--------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U    M                1976AGa (97138)1394
                                       K(HgI2+L)=ca. 4
                                       K(HgI2L+L)=ca. 7
Medium: MeCN
--------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                 1976FGa (97139)1395
                                       K(Hg(SCN)2+L) > 5
                                       K(Hg(SCN)2L+L)=4.0
Medium: MeCN. DH(Hg(SCN)2L)=-57.0 kJ mol-1; DS=<-93. DH(Hg(SCN)2L2)=-35.3;
DS=-41
********************************************************************************
C18H15PS                L                      CAS 3878-45-3  (2301)
Triphenylphosphinesulfide; (C6H5)3PS
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                 1976GGb (97150)1396
                                       K(HgCl2+L)=2.08
                                       K(HgBr2+L)=2.26
                                       K(HgI2+L)=1.93
In benzene. DH(HgCl2L)=-12.9 kJ mol-1; DS=-4. DH(HgBr2L)=-13.8; DS=-3.
DH(HgI2L)=-13.3; DS=-6.
********************************************************************************
C18H15PSe               L                      CAS 3878-44-2  (2302)
Triphenylphosphine selenide; (C6H5)3PSe
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       cal non-aq 30°C 100%  U   H                 1976GGb (97151)1397
                                       K(HgI2+L)=2.30
In benzene. DH(HgI2L)=-45 kJ mol-1; DS=-105.
********************************************************************************
C18H18N2OS2             L                      CAS 350014-32-3  (8596)
3,5,6,8,9,11-Hexahydro-2,17:12,14-dietheno-7,4,10,1,13-benzoxadithiadiazacyclopenta
decine;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg++       sp  non-aq 25°C 100%  C        K1=5.34   B2= 8.03  2002AAa (97221)1398
```

Medium: CH3CN. Method: fluorescence.
****
C18H18N2S3 L CAS 183310-21-6 (8595)
2,5,8-Trithia[9],(2,9)-1,10-phenanthrolinophane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp non-aq 25°C 100% C K1=5.95 B2= 8.88 2002AAa (97236)1399
Medium: CH3CN. Method: fluorescence.
****
C18H18N4 L CAS 16858-01-8 (1528)
Tris(2-pyridylmethyl)amine; (C5H4NCH2)3N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ ISE KNO3 20°C 0.10M C H K1=17.15 B2=24.10 1977AHc (97261)1400
K(HgL(OH)+H)=7.21
DH1=-91.4 kJ mol-1, DS1=16.7DH(K2)=-53.6, DS(K2)=27.6
****
C18H20N2OS2 L CAS 244271-40-7 (8949)
2,2'-Oxybis[N-(phenylmethyl)]-ethanethioamide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp non-aq 25°C 100% C K1=5.8 B2=10.70 1999RPa (97322)1401
Medium: acetonitrile.
****
C18H20N2O6 H4L EHPG CAS 10328-28-6 (429)
N,N'-Ethylene-bis-(2-(2'-hydroxyphenyl))glycine; (HOOCCH(C6H4OH)NHCH2.)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ EMF KNO3 25°C 0.10M C T 1985HWb (97430)1402
K(HgHL+H)=6.68
K(Hg+HL)=21.53
Method: Hg (and glass) electrode, using Hg(II) as competitive indicator
ion. Data for 10-35 C.
****
C18H21N5 L (7482)
2,5,8-Triaza[9]-[9](2,9)[1,10]-phenanthrolinophane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp R4N.X 25°C 0.10M U 2004BBa (97500)1403
B(HgLCl)=28.7
Medium: Me4NCl. Method: spectrofluorimetry.
****
C18H30N4O12 H6L TTHA CAS 869-52-3 (694)
Triethylenetetraaminehexaethanoic acid;((HOOC.CH2)2N.CH2.CH2.N(CH2.COOH).CH2)2

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       EMF KNO3   25°C 0.10M C                        1987HCa (98046)1404
                                     K(HgL+H)=6.10
                                     K(HgHL+H)=3.54
Method: Hg electrode.
-------------------------------------------------------------------------
Hg++       gl  KNO3   25°C 0.10M U        K1=19.3        1971YMb (98047)1405
                                     K(HgL+H)=6.03
                                     K(HgHL+H)=3.52
                                     K(HgH2L+H)=2.96
                                     B(Hg3L)=26.7
-------------------------------------------------------------------------
Hg++       ISE KNO3   25°C 0.10M U        K1=26.8        1970HAa (98048)1406
                                     B(Hg2L)=39.1
By glass electrode: K(HgL+H)=6.3, K(HgHL+H)=3.6, K(Hg2L+H)=3.6
K(Hg2HL+H)=2.7, K(Hg2L+2OH)=12.8
-------------------------------------------------------------------------
Hg++       EMF KNO3   25°C 0.10M U    M                   1970LAd (98049)1407
                                     K(Hg2L+2NH3)=10.9
                                     K(Hg2L+NH3)=5.6
                                     K(Hg2L+2A)=10.1
                                     K(Hg2L+A)=5.4
K(Hg2L+2B)=3.8, K(Hg2L+B)=2.2.  A=imidazole, B=hexamethylenetetramine
-------------------------------------------------------------------------
Hg++       gl  NaClO4 25°C 0.10M U        K1=25.27  B2=33.67  1966SCb (98050)1408
                                     K(HgL+H)=6.55
                                     K(HgHL+H)=3.30
                                     K(Hg2L+OH)=6.1
                                     K(Hg2LOH+OH)=5.9
*************************************************************************
C18H30N6O2              L                        (1607)
6-(2-(2Pyridyl)ethyl)-1,4,8,11,14-Pentaazacyclohexane-5,7-dione;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       vlt NaNO3  25°C 0.20M C    M                   1989KKa (98112)1409
                                     B(HgH-1L)=11.46
*************************************************************************
C18H32N4O8            H4L    TETA             CAS 60239-22-7  (1019)
1,4,8,11-Tetraazacyclotetradecane-1,4,8,11-tetraethanoic acid;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg++       vlt KNO3   25°C 0.20M C   H    K1=25.7        1994KOb (98207)1410
DH(K1)=-123 kJ mol-1, DS=101 J K-1 mol-1
-------------------------------------------------------------------------
Hg++       gl  NaNO3  25°C 0.20M C        K1=25.71       1991KKa (98208)1411
*************************************************************************
C18H33P                 L                      CAS 2622-14-2  (169)
```

Tri-(cyclohexyl)phosphine; (C6H11)3P

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	non-aq	25°C	100%	U	H	K1=11.8 B2=18.0 B3=20.5	1987HPc (98309)	1412

Medium: pyridine, 0.1M Et4NClO4

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa (98310)	1413

HgI2+L in benzene. DH(K1)=-102; DH(K2)=-58 kJ mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa (98311)	1414

HgBr2+L in benzene. DH(K1)=-111; DH(K2)=-60 kJ mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa (98312)	1415

HgCl2+L in benzene. DH(K1)=-119; DH(K2)=-59 kJ mol-1

****

C18H36N2O6 L Cryptand 2,2,2 CAS 23978-09-8 (514)

1,10-Diaza-4,7,13,16,21,24-hexaoxabicyclo[8.8.8]hexacosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	R4N.X	22°C	0.03M	C	I	K1=17.07	1991PSa (98580)	1416

Medium: 0.025 M Et4NClO4. Method: differential pulse polarography. Data for 15-75% w/w CH3CN/H2O, 0.025 M Et4NClO4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	R4N.X	25°C	0.05M	C		K1=18.2	1979BLb (98581)	1417

Method: Ag electrode; competition with Ag+. Medium: 0.05 M Me4NClO4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.10M	C	H	K1=18.2	1975ANa (98582)	1418

Medium: Me4NNO3. DH(K1)=-66.7 kJ mol-1, DS=125

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.05M	C		K1=18.2	1975LSc (98583)	1419

****

C18H40N4O4 L CAS 89066-60-2 (867)

N,N',N",N"'-Tetrakis(2-hydroxyethyl)-1,4,8,11-tetraazacyclotetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	25°C	0.10M	U		K1=17.94	1984MMc (98922)	1420

****

C19H20N2S2 L CAS 403819-60-3 (8597)

3,6,7,8,9,11-Hexahydro-2,17:12,14-Dietheno-5H-4,10,1,13-benzodithiadiazacyclopentadecine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	non-aq	25°C	100%	C		K1=5.56	2002AAa (99302)	1421

Medium: CH3CN. Method: fluorescence.

****

C19H31N5O2 L (1614)
3-(2-Phenylethyl)-1,5,8,11,14-pentaazacyclohexadecane-2,4-dione;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ vlt NaNO3 25°C 0.20M C M 1989KKa (99451)1422
B(HgH-1L)=10.03
****
C19H39N3O5 L CAS 60598-00-7 (1537)
4-Methyl-1,4,10-triaza-7,13,16,21,24-pentaoxa-bicyclo[8,8,8]hexacosane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl R4N.X 25°C 0.10M U K1=21.7 1978LMa (99491)1423
K(Hg+HL)=16.7
****
C20H13N7 HL CAS 30842-84-3 (5288)
1,5-Bis(8-quinolyl)-3-cyanoformazan;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp NaClO4 25°C 0.10M U 1971BSf (99589)1424
B(HgHL2)=32.0
****
C20H14N2O HL (5291)
1-(1-Naphthylazo)-2-hydroxynaphthalene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl mixed 25°C 75% U K1=6.70 B2=12.72 1972MCb (99600)1425
Medium: 75% acetone, 0.1 M KNO3
****
C20H14N2O HL CAS 2653-64-7 (5292)
1-(2-Naphthylazo)-2-hydroxynaphthalene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl mixed 25°C 75% U K1=7.32 B2=13.67 1972MCb (99615)1426
Medium: 75% acetone, 0.1 M KNO3
****
C20H16N4O6S H3L Zincon CAS 135-52-4 (990)
2-Carboxy-2'-hydroxyl-5'-sulfoformazylbenzene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ EMF NaNO3 20°C 0.10M U B2=14.59 1970VEb (99803)1427
K(Hg+HL)=8.03
K(HgHL+HL)=6.56
****
C20H24O6 L DiBz-18-Crown-6 CAS 14187-32-7 (604)

2,3:11,12-Dibenzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2,11-diene

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	nmr	non-aq	RT	0.0	C			1991LBa	(100123)1428
							K(Hg(CN)2+L)=>4		

Method: 1H nmr. Medium: acetone/CDCl3 1:0.8.

****

C20H26N6 L CAS 303955-27-3 (9162)
5-Aminoethyl-2,5,8-triaza-[9]-10,23-phenanthrolinophane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.10M	U		K1=30.28	2004BBa	(100342)1429
							K(HgL+H+Cl)=7.79		
							K(HgHLCl+H+Cl)=4.49		

Medium: Me4NCl. Combined with spectrofluorimetric measurements.

****

C20H35N5O10 H5L (6545)
1,4,7,10,13-Pentaazacyclopentadecane-N,N',N",N"',N""-pentaethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	25°C	0.20M	C	H	K1=27.7	1994KOb	(100537)1430

DH(K1)=-128 kJ mol-1, DS=101 J K-1 mol-1

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	25°C	0.20M	C		K1=27.76	1991KKa	(100538)1431

****

C20H36O6 L DiCy-18-crown-6 CAS 16069-36-6 (1653)
2,3:11,12-Dicyclohexyl-1,4,7,10,13,16-hexaoxacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	con	non-aq	25°C	100%	C	TIH	K1=1.8	2001RKa	(100648)1432

Medium: DMF. Data for 15-55 C. Also data for 25-75% mol% DMF/AN.
DH(K1)=-50 kJ mol-1, DS(K1)=-205 J K-1 mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	oth/un	25°C	0.10M	U	H		1976ITb	(100649)1433
							K1=2.75 (cis-syn-cis isomer)		
							K1=2.60 (cis-anti-cis isomer)		

DH(K1)=-3.0 kJ mol-1 for the cis-syn-cis isomer, -10.7 for cis-anti-cis.

****

C20H39N5O2 HL CAS 333309-52-7 (8662)
16-Aminodocosahydro-16-methyl-dibenzo[b,i][1,4,8,11]tetraazacyclotetradecine-7-carb
oxylic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KCl	25°C	0.5M	U		K1=11.55	2002WHa	(100769)1434
							K(HgL+H)=5.8		

K(HgL=HgH-1L+H)=-10.7
Data for the trans isomer. For the cis-isomer K1=11.2, K(HgL+H)=5.2
K(HgL=HgH-1L+H)=-7.5
****
C20H42N4O4 L CAS 39678-14-3 (1543)
4,7-Dimethyl-1,4,7,10-tetraaza-13,16,21,24-tetraoxa-bicyclohexacosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.10M	U		K1=24.9	1978LMa	(100887)1435
							K(Hg+HL)=18.6		

K1 is corrected for HgClx complexes
****
C21H14N4O2 HL CAS 194480-84-7 (8524)
2-Hydroxy-1-naphthalenecarboxaldehyde benzofuro[2,3-d]pyrimidin-4-ylhydrazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	diox/w	30°C	10%	U		K1=6.673	1997HVa	(101035)1436

Medium: 10% v/v dioxane/H2O, 0.10 M NaClO4.
****
C21H24N4 L (931)
Tris((6-methyl-2-pyridyl)methyl)-amine; (CH3.C5H3N.CH2)3N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	20°C	0.10M	C	H	K1=15.55	1977AHc	(101246)1437
							K(HgL(OH)+H)=5.76		

Calorimetry: DH1=-64.9 kJ mol-1, DS1=72.8
****
C22H17P L (2293)
1,2,5-Triphenylphosphole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa	(101589)1438
							K(HgCl2+L)=2.18		

In benzene. DH = -67 kJ mol-1.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa	(101590)1439
							K(HgBr2+L)=2.20		

In benzene. DH = -61 kJ mol-1.
****
C22H24N2O8 H2L Tetracycline CAS 60-54-8 (2201)
Tetracycline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	25°C	0.10M	C		K1=6.5	1992GAa	(101817)1440

****

C22H24N2O8 H4L CAS 91044-24-5 (1920)
meso-1,2-Diphenyl-1,2-diaminoethane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	20°C	0.10M	U		K1=17.50	1989SLa (101840)	1441

****
C22H24N2O8 H4L CAS 91044-25-6 (1921)
rac-1,2-Diphenyl-1,2-diaminoethane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	vlt	KNO3	20°C	0.10M	U		K1=23.04	1989SLa (101857)	1442

****
C22H24N2O10 H4L CAS 132796-79-3 (8113)
1,2-Bis(2-aminophenoxy)ethane-N,N,N',N'-tetraethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	EMF	KNO3	25°C	0.10M	C	T H	K1=18.75	1990HLa (101897)	1443
							K(HgL+H)=2.94		

Method: Hg indicator electrode. Data for 15-35 C.
DH(K1)=-102.1 kJ mol-1, DS(K1)=16.4 J K-1 mol-1.

****
C22H37N5O14 H7L CAS 3234-59-1 (2425)
Tetraethylenepentaminehеptaethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	25°C	0.10M	C		K1=27.0	1999LLa (102329)	1444
							K(HgL+H)=12.0		
							K(HgH2L+H)=3.3		
							K(HgHL+H)=5.0		
							K(HgH3L+H)=2.3		

K(HgL+Hg)=20.6; K(Hg2L+H)=4.1; K(Hg2HL+H)=2.0

****
C22H48N4O4 L (7292)
N,N',N",N"'-Tetrakis(3-hydroxypropyl)-1,4,8,11-tetraazacyclotetradecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.10M	C		K1=17.3	1996DTa (102469)	1445

Medium: Et4ClO4

****
C22H48N6O2 L CAS 39678-22-3 (1542)
4,7,13,16-Tetramethyl-1,4,7,10,13,16-hexaaza-21,24-dioxabicyclohexacosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	R4N.X	25°C	0.10M	U		K1=26.1	1978LMa (102486)	1446

K(Hg+HL)=20.6
K1 is corrected for HgClx complexes
****
C23H25NO5S L CAS 464185-98-6 (9292)
4'-[(2-Benzothiazole)ethenyl]-2:3-benzo-15-crown-5;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp non-aq 20°C 100% C K1=5.6 2003FFa (102691)1447
B(Hg2L)=9.4
Medium: CH3CN.
****
C24H32O8 L DiBz-24-Crown-8 CAS 14174-09-5 (580)
2,3:14,15-Dibenzo-1,4,7,10,13,16,19,22-octaoxacyclotetracosa-2,14-diene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ nmr non-aq 27°C 100% C I M 2003JLa (103129)1448
K(Hg(CN)2+L=HgL(CN)2)=-0.4
Medium: DMSO. Method:199Hg nmr. In DMF, K=0.6.
****
C24H42N6O12 H6L (6546)
1,4,7,10,13,16-Hexaazacyclooctadecane-N,N',N",N"',N"",N""'-hexaethanoic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ vlt KNO3 25°C 0.20M C H K1=25.2 1994KOb (103376)1449
DH(K1)=-121 kJ mol-1, DS=77 J K-1 mol-1

Hg++ gl NaNO3 25°C 0.20M C K1=25.27 1991KKa (103377)1450
K(Hg+H2L)=21.26
****
C25H19N5O10 L CAS 611183-31-4 (9129)
8,9,18,19-Tetrahydro-3,23-dinitro-15,11-nitrilodibenzo[1,15,4,12]dioxadiazacyclohen
eicosinetetron

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ nmr non-aq 25°C 100% C M 2003CAa (103599)1451
K(Hg(CN)2+L=HgL(CN)2)=1.6
Medium: acetonitrile. Method: 1H nmr.
****
C25H22As2 L CAS 21892-63-7 (2299)
Methylenebis(diphenylarsine); (C6H5)2As.CH2.As(C6H5)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ cal non-aq 30°C 100% U H 1976GGb (103613)1452
K(HgCl2+L)=3.50
K(HgBr2+L)=2.99

K(HgI2+L)=2.03
In benzene. DH(HgCl2L)=-50.0 kJ mol-1; DS=-98. DH(HgBr2L)=-53.0; DS=-128.
DH(HgI2L)=-52.0; DS=-133.
****
C25H22As2S2 L CAS 69289-43-6 (2305)
Methylenebis(diphenylarsine sulfide); (C6H5)2AsS.CH2.As(:S)(C6H5)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ cal non-aq 30°C 100% U H 1976GGb (103614)1453
K(HgCl2+L)=3.60
K(HgBr2+L)=3.07
In benzene. DH(HgCl2L)=-44.9 kJ mol-1; DS=-79. DH(HgBr2L)=-52.5; DS=-114.
****
C25H22O2P2 L CAS 207-21-8 (2099)
Methylenebis(diphenylphosphine oxide); Ph2P(O)CH2P(O)Ph2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ ISE mixed 25°C 82% U K1=18.89 B2=21.82 1979MTd (103628)1454
B3=24.53
Medium: 82% DMF/H2O
****
C25H22P2 L CAS 2071-20-7 (2294)
Methylenebis(diphenylphosphine); (C6H5)2P.CH2.P(C6H5)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ cal non-aq 30°C 100% U H 1976GGa (103646)1455
In benzene. DH(HgCl2+L)=-113 kJ mol-1; DH(2HgCl2+L)=-80 kJ mol-1.

Hg++ cal non-aq 30°C 100% U H 1976GGa (103647)1456
In benzene. DH(HgBr2+L)=-113 kJ mol-1; DH(2HgBr2+L)=-69 kJ mol-1.
****
C25H22P2S2 L CAS 14633-92-2 (2304)
Methylenebis(diphenylphosphine sulfide); (C6H5)2PS.CH2.P(:S)(C6H5)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ cal non-aq 30°C 100% U H 1976GGb (103648)1457
K(HgCl2+L)=3.50
K(HgBr2+L)=3.50
K(HgI2+L)=3.28
In benzene. DH(HgCl2L)=-39.7 kJ mol-1; DS=-64. DH(HgBr2L)=-39.0; DS=-62.
DH(HgI2L)=-20.5; DS=-2.
****
C26H24As2 L (2300)
Ethane-1,2-diylbis(diphenylarsine); (C6H5)2As.CH2.CH2.As(C6H5)2

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

---

Hg++ cal non-aq 30°C 100% U H 1976GGb (103892)1458
K(HgCl2+L)=2.82
K(HgBr2+L)=3.26
K(HgI2+L)=2.54
In benzene. DH(HgCl2L)=-73.0 kJ mol-1; DS=-188. DH(HgBr2L)=-72.6; DS=-177.
DH(HgI2L)=-57.0; DS=-140.

****

C26H24P2 L CAS 28240-60-0 (2280)
Ethylenebis(diphenylphosphine); (C6H5)2P.CH2.CH2.P(C6H5)2

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

---

Hg++ cal non-aq 30°C 100% U H 1974FGa (103930)1459
K(HgCl2+L) > 7
K(HgBr2+L)=7
K(HgI2+L)=6.30
In benzene. For HgCl2, DH=-130 kJ mol-1.
For HgBr2, DH=-130.1; DS=-295. For HgI2, DH=-118.8; DS=-270.

****

C26H25NO9S H4L Semi-Xylenol O (426)
3-(N,N-Di(carboxymethyl)aminomethyl)-2-cresolsulfonephthalein;

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

---

Hg++ gl KNO3 25°C 0.10M U 1981MUa (103945)1460
K(Hg+HL)=6.8

****

C26H28N6 L CAS 16858-02-9 (933)
N,N,N',N'-Tetrakis-(2-pyridylmethyl)-diaminoethane;

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

---

Hg++ ISE NaNO3 25°C 0.10M C K1=25.00 1995CCb (104004)1461
Method: mercury pool electrode

Hg++ gl KNO3 20°C 0.10M C H K1=25.05 1977AHc (104005)1462
Calorimetry: DH1=-124.5 kJ mol-1, DS1=55.6

****

C26H38N2O4 L CAS 80757-23-9 (2450)
N,N'-Bis(benzyl)-1,10-diaza-4,7,13,16-tetraoxacyclooctadecane;

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

---

Hg++ ix none 25°C 0.0 U K1=17.85 1988IBa (104185)1463
Ligand covalently attached to silica gel

****

C27H26P2 L CAS 6372-42-4 (2295)
Propane-1,3-diylbis(diphenylphosphine); (C6H5)2P.CH2.CH2.CH2.P(C6H5)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	cal	non-aq	30°C	100%	U	H		1976GGa	(104412)1464

In benzene. DH(2HgX2+L) = -93 (X=Cl); -78 (X=Br) kJ mol-1.

****

C27H41N3O4 L CAS 262610-61-7 (7222)

3,4:5,6-Dibenzo-14-methyl-4',4"-bis(dimethylamino)1,8,11,17-tetraoxa-14-azacyclononadecan3,5diene

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	mixed	25°C	70%	C		B(HgHL)=12.90 B(HgH-1L)=5.55 B(HgH-2L)=-3.50	2000CMa	(104592)1465

Medium: 70% v/v dioxane/H2O, 0.10 M KNO3.

****

C28H35N3O6 L CAS 114880-42-1 (7377)

3-(p-13-Aza-1,4,7,10-tetroxacyclopentadecan-13ylstyryl)-7-dimethylamino-1,4-benzoxazin-2-one;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	non-aq	RT	100%	C		K1=6.15	1998ABc	(104762)1466

Medium: acetonitrile. Method: fluorescence spectroscopy.

****

C28H36Fe2N4 L CAS 174322-18-0 (7771)

1,1":1',1"'-Bis[1,2-ethanediylbis(iminomethylene)]bis[ferrocene];

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	mixed	25°C	70%	C		K1=6.47 B(HgHL)=13.31 B(HgH2L)=19.50 K(HgL+H)=6.84 K(HgHL+H)=6.19	1998LBa	(104772)1467

Medium: 70% (v/v) THF/H2O, 0.1 M KCl. K(Pb+L+OH)=13.38, B(HgH-1L)=-1.60.

****

C29H45N3O5 L CAS 262610-63-9 (7249)

3,4:5,6-Dibenzo-14-methyl-4',4"-bis(dimethylamino)-1,8,11,17,20-pentaoxa14azacyclodocosan3,5diene

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	mixed	25°C	70%	C		K1=8.15 B(HgH-1L)=4.17 B(HgH-2L)=-4.59	2000CMa	(105154)1468

Medium: 70% v/v dioxane/H2O, 0.10 M KNO3.

****

C32H44N10O4 L CAS 702699-42-1 (9126)
2,9-Di[4-(1,4,7,10-tetraazacyclotridecane-11,13,-dione)methyl]-1,10-phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	25°C	0.10M	U		2004GLa	(105773)	1469
							B(HgH3L)=28.38		
							B(Hg2L)=16.20		
							B(Hg3H-2L)=12.30		
							B(Hg3H-3L)=1.18		

B(Hg3H-4L)=-10.08.

****

C34H54O8 H2L Lasalocid CAS 25999-20-6 (2335)
Lasalocid acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	alc/w	25°C	100%	M		K1=8.5 B2=15.7	1994MPc	(106136) 1470

Medium: MeOH

****

C35H36N6 L CAS 750635-82-6 (9186)
2,9-[2,5,8-Triaza-5-(N-anthracene-9-methylamino)ethyl]-[9]-1,10-phenantrolinophane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	mixed	25°C	50%	C		K1=14.4	2004BBd	(106187) 1471
							K(HgL+H)=4.2		

Medium: 50% v/v CH3CN/H2O, 0.1 M Me4NCl.

****

C36H38N4O8 H6L CAS 531-14-6 (7709)
3,8,13,18-Tetramethylporphine-2,7,12,17-tetrapropanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	oth/un	20°C	0.5M	U		K1=3.42	1998GBb	(106288) 1472

Medium not specified.

****

C36H60N8O8 L CAS 121925-84-6 (7152)
Cyclo(Gly-eLL-Gly)2 (eLL=N,N'-ethylene-bridged (S)-leucyl-(S)-leucine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	non-aq	25°C	100%	U		K1=3.71	1994MKa	(106455) 1473

Medium: MeCN

****

C36H62O11 HL Monensin CAS 17090-79-8 (737)
Monensin, 1,6-dioxaspiro[4,5]decane derivative;

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

Hg++ gl alc/w 25°C 100% M K1=9.9 B2=18.9 1994MPc (106500)1474
Medium: MeOH
****
C37H44N2O13S H6L MeThymol Blue (428)
3,3'-Bis(N,N-di(carboxymethyl)aminomethyl)thymolsulfonephthalein;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp oth/un 25°C 0.10M C M 1983ZJa (106602)1475
K(HgL+SCN)=5.76
K(HgL+Br)=5.46
K(HgL+I)=8.32
Medium: 0.46M NaH2PO4,0.26M NaOH, PH=7.0

Hg++ vlt KNO3 25°C 0.10M C 1977RSb (106603)1476
K1eff=10.3
Method: a.c. polarography. Medium, pH 3.97.
Measured in competition with edta.

Hg++ sp oth/un ? ? U 1971ANb (106604)1477
K(Hg+H3L)(?)=6.05
****
C40H44N4O2S4 CAS 244271-42-9 (8951)
4,7,13,16-Tetrakis(phenylmethyl)-1,10-dioxa-4,7,13,16-tetraazacyclooctadecLne-3,8,12,17-tetrathi
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp non-aq 25°C 100% C K1=7.3 B2=12.50 1999RPa (106759)1478
B(Hg2L)=14.0
Medium: acetonitrile.
****
C40H46N4O2S4 L CAS 244271-41-8 (8950)
Dimethyl-N,N',6,9-tetrakis(phenylmethyl)-5,10-dithione-3,12-dioxa-6,9-diazatetradecanedithioamide
---
Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp non-aq 25°C 100% C K1=9.4 B2=15.10 1999RPa (106769)1479
B(Hg2L)=16.7
Medium: acetonitrile.
****
C43H58N4O12 H3L Rifampicin CAS 13292-46-1 (8977)
3-[[(4-Methyl-1-piperazinyl)imino]methyl]rifamycin;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ gl alc/w 30°C 50% C T H 2001SKd (107019)1480
K(Hg+H2L)=6.42
K(HgH2L+H2L)=4.73

Medium: 50% v/v MeOH/H2O, 0.05 M KCl. DH(Hg+H2L)=-46.39 kJ mol-1, DS=-30.0
J K-1 mol-1; DH(HgH2L+H2L)=-36.50, DS=-26.7. Also data for 35 and 40 C.
****
C44H22N4O12Br8S4 H6L CAS 176173-80-1 (6959)
2,3,7,8,12,13,17,18-Octabromo-5,10,15,20-tetrakis(4-sulfonatophenyl)porphyrin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	NaNO3	25°C	0.1M	C			1996TNa (107037)	1481
							K(Hg+H2L=HgL+2H)=0.12		

****
C44H30N4 H2L Tetraphenylpor. CAS 917-23-7 (1781)
5,10,15,20-Tetraphenyl-21H,23H-porphine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	non-aq	25°C	100%	U	M		1970KHa (107071)	1482
							K(HgL+A)=2.92		
							K(HgL+B)=1.62		
							K(HgL+C)=1.41		
							K(HgL+py)=1.21		

Medium: benzene. K(HgL+D)=0.22, A=4-aminopyridine, B=4-methylpyridine,
C=3-methylpyridine, D=4-cyanopyridine
****
C44H38N8 H2L CAS 48242-70-2 (6629)
5,10,15,20-Tetrakis(1-methylpyridinium-4-yl)porphine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	sp	oth/un	25°C	1.90M	U	I M		1992RHa (107105)	1483
							K(2Hg+H2L=Hg2L+2H)=4.58		
							K(2Hg+H3L=Hg2L+3H)=1.58		
							K(2Hg+H4L=Hg2L+4H)=0.62		
							Keff(HgA2+H2L=HgA2L+2H)=-5.64		

Medium: LiNO3. A=OH. Keff in 0.1 M LiNO3/2x10-3 M 4-(2-hydroxyethyl)-1-piper
-azineethanesulfonic acid, pH 7.5. Data also for 2-pyridyl- and 4-quinolyl-
****
C47H57N9S3 L CAS 529487-44-3 (8769)
Ethane-1,1,1-tris(2-thia-5-aza-hexane-6-(3-(3'-methyl)dipyridine));

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg++	gl	KNO3	25°C	0.10M	C	M		2002KGa (107324)	1484
							K(FeL+Hg)=4.60		
							K(FeL+Hg+H)=9.30		
							K(FeL+Hg+OH)=8.84		

****
C48H58N2O4S2 L CAS 403518-26-3 (8260)
11,23-Diprop-2-enyl-25,27-bis(dimethylaminothiocarbonylmethoxy)-26,28-dipropoxycali
x[4]arene;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp non-aq 25°C 100% C K1=7.8 2001ACa (107394)1485
Medium: acetonitrile.
****
C69H102N4O9 L CAS 116352-85-3 (9286)
para-t-Butyldihomooxacalix[4]arene tetra(diethyl)amide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ sp alc/w 25°C 100% C K1=3.4 2004MFa (107833)1486
Medium: MeOH, 0.01 M Et4NCl.
****
Polymer CPA CAS 11075-17-5 (1758)
Carboxypeptidase A

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ oth NaCl 4°C 1.0M U 1961VWa (108113)1487
K(Hg+HxL=HgHyL+(x-y)H)=21.0
Medium: 0.05 M tris buffer pH 8
****
Polymer (4203)
Procarboxypeptidase;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg++ oth NaCl 4°C 1.0M U K1=18.3 1967PVa (108397)1488
Method: dialysis
****
e- HL Electron (442)
Electron;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg2++ EMF non-aq 25°C 100% C I 1980APa (534)1489
E0(Hg(l)/Hg2++)=-342 mV
Medium: DMSO, 1 M NH4ClO4. E0 referred to E0(aq)=0 for the Ag(s)/Ag+ elect.

Hg2++ EMF non-aq 25°C 100% U 1972FDa (535)1490
K=23.12(684mV)
Medium: DMSO, 0.1 M LiClO4; K: Hg2++ + 2e=2Hg(l)

Hg2++ EMF none 25°C 0.00 U T 1971DFa (536)1491
K=9.062(268.05mV) or 9.056
K: Hg2Cl2(s)+2e=2Hg(l)+2Cl-. 70 C: K=7.330(249.55mV) or 7.304. 100 C: K=
6.293 or 6.260. 200 C: K=3.075 or 3.042 depending on choice for Eo(AgCl,Ag)

Hg2++ EMF non-aq 25°C 100% U 1971NSc (537)1492

K=8.29(245.3mV)
Medium: formamide; K: Hg2Cl2(s)+2e=2Hg(l)+2Cl-

Hg2++ EMF none 25°C 0.00 U T 1971PCc (538)1493
K=26.67(788.9mV)
K: Hg2++ + 2e=2Hg(l). K=27.12(788.7mV,20 C), 26.20(788.0mV,30 C), 25.75(787.2mV,35 C)

Hg2++ sp oth/un 125°C 100% U T H 1971TFa (539)1494
K=0.85
Medium: (Na,Al)Cl(n(Na):n(Al)=35:65); DH=-11.7 kJ mol-1;
K(Hg2++ + Hg(l)=Hg3++)=0.70(175 C), 0.48(250 C). Raman also used
---
Hg2++ EMF none 25°C 0.00 U T 1970IPa (540)1495
K=9.067(268.18mV)
K: Hg2Cl2(s)+2e=2Hg(l)+2Cl-. K=9.890(272.90mV,5 C), 9.680(271.92mV,10 C), 9.475 (270.86mV,15 C), 9.268(269.55mV,20 C)

Hg2++ EMF none 30°C 0.00 U T 1970IPa (541)1496
K=8.864(266.59mV)
K: Hg2Cl2(s)+2e=2Hg(l)+2Cl-. K=8.663(264.85mV,35 C), 8.466(263.02mV,40 C), 8.269(261.01mV,45 C)

Hg2++ EMF none 25°C 0.00 U 1970LSb (542)1497
K=4.706(139.21mV)
K: Hg2Br2(s)+2e=2Hg(l)+2Br-

Hg2++ EMF none 25°C 0.00 U T 1970SMc (543)1498
K=4.713(139.41mV)
K: Hg2Br2(s)+2e=2Hg(l)+2Br-. K=4.925(140.78mV,15 C), 4.502(137.62mV,35 C)

Hg2++ EMF mixed 25°C 20% U T 1970SMc (544)1499
K=4.436(131.20mV)
Medium: 20% w/w i-propanol/H2O; K: Hg2Br2+2e=2Hg(l)+2Br-.
K=4.639(132.62mV,15 C), 4.229(129.30mV,35 C)

Hg2++ EMF mixed 25°C 40% U T 1970SMc (545)1500
K=4.113(121.65mV)
Medium: 40% w/w i-propanol/H2O; K: Hg2Br2+2e=2Hg(l)+2Br-.
K=4.382(125.28mV,15 C), 3.839(117.36mV,35 C)

Hg2++ EMF mixed 25°C 65% U T 1970SMc (546)1501
K=3.061(90.55mV)
Medium: 65% w/w i-propanol/H2O; K: Hg2Br2+2e=2Hg(l)+2Br-.
K=3.448(98.56mV,15 C), 2.671(81.66mV,35 C)

Hg2++ EMF mixed 25°C 90% U T 1970SMc (547)1502
K=0.222(6.57mV)
Medium: 90% w/w i-propanol/H2O; K: Hg2Br2+2e=2Hg(l)+2Br-.
K=0.746(21.32mV,15 C), -0.308(-9.42mV,35 C)

Hg2++ EMF mixed 25°C 99% U T 1970SMc (548)1503
=-3.058(-90.45mV)
Medium: 99% w/w i-propanol/H2O; K: Hg2Br2+2e=2Hg(l)+2Br-.
K=-2.610(-74.60mV,15 C), -3.569(-109.10mV,35 C)

Hg2++ EMF none 25°C 0.00 U T 1970SPc (549)1504
K=20.74(613.5mV)
K: Hg2SO4(s)+2e=2Hg(l)+SO4--. K=22.81(629.4mV,5 C), 21.74(621.4mV,15 C),
19.78(604.6mV,35 C)

Hg2++ EMF mixed 25°C 20% U I 1969SMb (550)1505
K=8.547(252.80mV)
Medium: 20% w/w propanol/H2O; K: Hg2Cl2(s)+2e=2Hg(l)+2Cl-. K=9.082(268.65mV,
w=0), 7.929(234.54mV,w=40), 6.942(205.34mV,w=60), 2.543(75.22mV,w=95)

Hg2++ sol none 25°C 0.0 U IH 1968SVa (551)1506
K(Hg(l) = Hg(aq))=-6.55
DH=64.5 kJ mol-1. Also K values in 16 solvents

Hg2++ EMF none 25°C 0.0 U 1967CDa (552)1507
K=9.059 to 9.062
K: Hg2Cl2(s)+2e=2Hg(l)+2Cl

Hg2++ EMF non-aq 25°C 100% U 1967RPe (553)1508
K=8.287, 245.1 mV
Medium: H2NCHO. K: Hg2Cl2(s) + 2e = 2Hg(l) + 2Cl-

Hg2++ EMF none 15°C 0.0 U TI 1966SFa (554)1509
K=4.921, 140.67 mV
K: Hg2Br2(s) + 2e = 2Hg(l) + 2Br-. K=4.713(25 C), 4.501(35 C). In MeOH:
K=-0.375(15 C), -0.701(25 C), -1.024(35 C). Also MeOH/H2O mixtures

---

Hg2++ EMF none 25°C 0.0 U 1965CDc (555)1510
K=20.71; 6123mV.
K: Hg2SO4(s) + 2e = 2Hg(l) + SO4--

Hg2++ EMF none 25°C 0.0 U I 1965SFb (556)1511
K=20.81, 615.5 mV
Medium: M2SO4, corr 0. K: Hg2SO4 + 2e = 2Hg(l) + SO4--

Hg2++ EMF none 15°C 0.0 U T 1965SFb (557)1512
K=9.476, 270.88 mV
K: Hg2Cl2(s) + 2e = 2Hg(l) + 2Cl-. K=9.068(25 C), 8.663(35 C)

Hg2++ EMF mixed 25°C 95% U 1965SWa (558)1513
K=-0.42, -12.5 mV
Medium: 95% Me2CO. K: Hg2Cl2(s) + 2e = 2Hg((l) + 2Cl-. Also Me2CO/H20 mix.

Hg2++ oth none 0°C 0.0 M T 1964ACb (559)1514

K=10.092, 273.5 mV
K=9.066(25 C;268.16 mV),K=6.951(80 C;243.52 mV), K=6.211(100 C;229.92 mV)
K: Hg2Cl2(s)+2e=2Hg(l)+2Cl

Hg2++ EMF none 25°C 0.0 U I 1964SUa (560)1515
K=4.713; 139.40mV.
K: Hg2Br2(s) + 2e = 2Hg(l) + 2Br-. In 95% EtOH: K=0.784. Also EtOH/H2O mix.

Hg2++ EMF none 5°C 0.0 U T H 1963GHb (561)1516
K=9.890, 272.9 mV
K=9.270(20 C;269.57 mV), K=8.865(30 C;266.60 mV), K=8.467(40 C;263.0 mV),
K=8.271(45 C;261.04 mV). K:Hg2Cl2(s)+2e=2Hg(l)+2Cl. DH=-34.4 kJ mol-1,DS=-29

Hg2++ EMF none 5°C 0.0 U T H 1963GHb (562)1517
K=5.110, 141.0 mV
K=4.812(20 C;139.93 mV), K=4.707(25 C;139.23 mV), K=4.602(30 C;138.39 mV),
K=4.285(45 C;135.24 mV). DH=-17.8 kJ mol-1,DS=-15. K:Hg2Br2(s)+2e=2Hg(l)+2Br
---
Hg2++ sol oth/un 25°C dil U T 1962CTc (563)1518
K(Hg(l)=Hg(aq))=-6.50
Metal: Hg(0) K=-6.26(35 C),-6.05(50 C),-5.97(65 C),-5.89(80 C),-5.78(90 C)

Hg2++ EMF NaClO4 25°C 2.0M U I 1962ZSa (564)1519
K=26.07(770.94 mV)
K: Hg2+2e=2Hg(liq)). In 2 M HClO4 K=26.04(770.32 mV)

Hg2++ EMF none 35°C 0.0 U 1961SJa (565)1520
K=19.71(602.5 mV)
K: Hg2SO4(s)+2e=2Hg(liq)+SO4

Hg2++ EMF none 25°C 0.0 U H 1960BDb (566)1521
K=20.82(615.81 mV)
K: Hg2SO4(s)+2e=2Hg(liq)+SO4. DH(K)=-168.4 kJ mol-1

Hg2++ EMF none 25°C 0.00 U 1959BLa (567)1522
K=20.69(611.9mV)
K: Hg2SO4(s)+2e=2Hg(l)+SO4--

Hg2++ dis none 25°C 0.0 U 1957MVa (568)1523
K(Hg2=Hg(II)+Hg(aq))=-8.26
By solubility K(Hg(liq)=Hg(aq))=-6.52

Hg2++ EMF none 25°C 0.0 U 1956HSa (569)1524
K=26.79(792.5 mV)
K:Hg2+2e=2Hg(liq)

Hg2++ EMF none 25°C 0.0 U 1937BVa (570)1525
K=-1.37(-40.5 mV)
K: Hg2I2(s)+2e=2Hg(liq)+2I

```
Hg2++      EMF none   25°C  0.0  U T                    1935HHa   (571)1526
                                        K=20.81(615.15 mV)
K: Hg2SO4(s)+2e=2Hg(liq)+SO4. K=23.44(0 C;634.95 mV),21.80(15 C;623.07 mV),
18.56(50 C;594.87 mV),17.75(60 C;586.59 mV)
********************************************************************************
Br-                    HL    Bromide          CAS 10035-10-6  (19)
Bromide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      ISE non-aq 25°C 100%  U                    1973CCa  (2008)1527
                                        Kso(Hg2L2(s)=Hg2+2L)=-37.4
Medium: MeCN. Method: Ag electrode
--------------------------------------------------------------------------------
Hg2++      EMF KNO3   177°C 100%  U T                1969BMf  (2009)1528
                                        Kso(Hg2L2(s)=Hg2+2L)=-16.69
Medium: (Li,K)NO3. log Kso=3.666-9158.7/T m units at 137-207 C
--------------------------------------------------------------------------------
Hg2++      ISE non-aq 180°C 100%  U T                 1966FBa  (2010)1529
                                        Kso=5.28-9785/T(T K)
Medium: (Li/K)NO3 eutectic. Kso=-16.46(450 K) m units
--------------------------------------------------------------------------------
Hg2++      ISE NaClO4 40°C 0.60M U T                  1963HIa  (2011)1530
                                        Kso=-20.17
Medium:0.5 M NaClO4,0.1 HClO4. Kso=-22.85(7 C)
--------------------------------------------------------------------------------
Hg2++      ISE NaClO4 25°C 0.50M U  I                 1948BJb  (2012)1531
                                        Kso(Hg2L2)=-21.285
At I=0 corr. Kso=-22.24
--------------------------------------------------------------------------------
Hg2++      ISE none   27°C  0.0  U TIH                1929BRa  (2013)1532
                                        Kso(Hg2L2)=-22.16
Method: Hg electrode. Kso=-23.26(10.8 C), -23.00(14.9 C), -22.41(19.2 C)
At I=0 corr. Kso=-22.26; DH(so)=39.0 kJ mol-1
--------------------------------------------------------------------------------
Hg2++      ISE none   25°C  0.0  U                    1903SHa  (2014)1533
                                        Kso(Hg2L2)=-20.90
********************************************************************************
CN-                    HL    Cyanide          CAS 74-90-8  (230)
Cyanide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      ISE none   25°C  0.0  U                    1929BRa  (2731)1534
                                        Kso(Hg2L2(s)=Hg2+2L)=-39.3
********************************************************************************
CO3--                  H2L    Carbonate        CAS 465-79-6  (268)
Carbonate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
```

```
--------------------------------------------------------------------------------
Hg2++      ISE NaClO4 25°C 3.00M C                        1976HHa  (3241)1535
                                        *Ks=4.19
*Ks: Hg2L(s)+2H=Hg2+H2O+CO2(g)
--------------------------------------------------------------------------------
Hg2++      EMF none   25°C  0.0  U                       1929BRa  (3242)1536
                                        Kso(Hg2CO3(s)=Hg2+CO3)=-16.05
********************************************************************************
C6N6Co---             H3L    Cyanocobaltate     (5470)
Hexacyanocobaltate; [Co(CN)6]---
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      ISE oth/un 25°C  0.0  U                       1965ROa  (3492)1537
                                        Kso((Hg2)3L2)=-36.72
********************************************************************************
C6N6Fe----            H4L                         (2191)
Hexacyanoferrate (II); Fe(II)(CN)6----
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      sol oth/un 25°C  dil  U                       1962BBb  (3569)1538
                                        Kso((Hg2)2L)=-11.95
********************************************************************************
C6N6Fe---             H3L    Ferricyanide       (2491)
Hexacyanoferrate (III); Fe(III)(CN)6---
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      sol oth/un 25°C  dil  U                       1962BBb  (3652)1539
                                        Kso((Hg2)3L2)=-20.07
********************************************************************************
Cl-                    HL    Chloride         CAS 7647-01-0  (50)
Chloride;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      EMF non-aq 25°C 100%  U                       1973CCa  (5018)1540
                                        Kso(Hg2Cl2)=-37.3
Medium: MeCN
--------------------------------------------------------------------------------
Hg2++      EMF non-aq 177°C 100%  U T H                  1969BMf  (5019)1541
                                        Kso(Hg2Cl2)=-12.48
Medium: (Li,K)NO3; DH(Kso)=138 kJ mol-1(m units); Kso=3.608-7239.6/T
137-207 C
--------------------------------------------------------------------------------
Hg2++      ISE non-aq 450°C 100%  U T                    1966FBa  (5020)1542
                                        Kso=4.22-7495/T
                                        Kso=-12.45
Medium: (Li/K)NO3 eutectic. m units
```

```
--------------------------------------------------------------------------------
Hg2++      ISE NaClO4 40°C 0.50M U T                    1963HIa  (5021)1543
                                        Kso=-16.16
Kso=-18.19(7 C)
--------------------------------------------------------------------------------
Hg2++      ISE NaClO4 25°C 0.50M U       K1=<1.3        1947JQa  (5022)1544
                                        Kso(Hg2L2(s))=-16.88
--------------------------------------------------------------------------------
Hg2++      ISE NaClO4 25°C 0.50M U                      1947LJa  (5023)1545
                                        K(Hg2L2(s)=Hg(l)+HgL2)=-5.77
                                        K(Hg2L2(s)+L=Hg(l)+HgL3)=-4.92
--------------------------------------------------------------------------------
Hg2++      ISE none   25°C  0.0  U T                    1946LAa  (5024)1546
                                        Kso(Hg2L2(s))=-17.273
I=0 corr. Kso=-17.775(15 C), -16.791(35 C), -16.323(45 C)
--------------------------------------------------------------------------------
Hg2++      sol none   25°C  0.0  U                      1942GNa  (5025)1547
                                        Ks(Hg2L2(s)=Hg2L2)=-5.23 ?
                                        Ks(Hg2L2(s)+L=Hg2L3)=-4.06 ?
--------------------------------------------------------------------------------
Hg2++      ISE none   26°C  0.0  U T H                  1929BRa  (5026)1548
                                        Kso(Hg2L2(s))=-17.82
I=0 corr. Kso=-18.65(10.8 C), -18.48(14.9 C), -18.27(19.2 C)
DH(Kso)=30.6 kJ mol-1
--------------------------------------------------------------------------------
Hg2++      ISE oth/un 25°C  var  U                      1904LHa  (5027)1549
                                        Kso(Hg2L2(s))=-17.7
--------------------------------------------------------------------------------
Hg2++      sol none   25°C  0.0  U                      1903SHa  (5028)1550
                                        Kso(Hg2L2(s))=-17.46
********************************************************************************
ClO4-                   HL    Perchlorate      CAS 7001-90-3  (287)
Perchlorate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      kin oth/un 25°C  var  U        K1=0           1957AHa  (6249)1551
Medium: 3 M H+,Na+
--------------------------------------------------------------------------------
Hg2++      ISE NaClO4 25°C  var  U        K1=-0.05       1956HSd  (6250)1552
********************************************************************************
CrO4--                 H2L    Chromate         CAS 7738-94-5  (2382)
Chromate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      ISE none   25°C  0.0  U                      1929BRa  (6493)1553
                                        Kso=-8.70
********************************************************************************
F-                      HL    Fluoride         CAS 7644-39-3  (201)
```

Fluoride;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	ISE	NaClO4	25°C	0.50M	U		K1=<0	1955PAa	(6951)1554

Method: Hg electrode. At I=0 corr K1 < 0.5

****

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

Iodide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	ISE	none	25°C	0.0	U			1973CCa	(8098)1555
							Kso(Hg2I2(s)=Hg2+2I)=-39.3		
Hg2++	sol	non-aq	142°C	100%	U			1969MBd	(8099)1556
							Kso=0.13-9986/T		

Medium: (Li,K)NO3; Kso=K(Hg2I2(s)=Hg2+2I); 142-192 C

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	sol	none	25°C	0.0	U			1967KWb	(8100)1557
							K(Hg2I2(s)=Hg(l)+HgI2(s))=-1.8		
Hg2++	ISE	non-aq	177°C	100%	U			1966FBa	(8101)1558
							Kso=-22?		

Medium: (Li/K)NO3 eutectic, m units

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	ISE	NaClO4	40°C	0.60M	U	T		1963HIa	(8102)1559
							Kso=-26.46		

Medium:0.5 M NaClO4,0.1 HClO4. Kso=-29.34(7 C)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	ISE	NaClO4	25°C	0.50M	U			1949QSa	(8103)1560
							Kso(Hg2L2)=-27.465		
Hg2++	ISE	none	25°C	0.0	U			1938LAa	(8104)1561
							Kso(Hg2L2)=-28.35		
Hg2++	ISE	none	25°C	0.0	U	T		1929BRa	(8105)1562
							Kso(Hg2L2)=-28.31		

Method: Hg electrode, I=0 corr. Kso=-29.70(10.8 C), -29.29(14.9 C), -28.98(19.2 C), -28.13(26.5 C). DH(so)=52.7 kJ mol-1(25 C)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	ISE	oth/un	25°C	0.04M	U			1903SHa	(8106)1563
							Kso(Hg2L2)=-27.92		

****

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

Iodate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	ISE	none	25°C	0.0	U			1943TAa	(8518)1564

```
                                        Kso(Hg2L2)=-13.71
--------------------------------------------------------------------------------
Hg2++      ISE none   25°C  0.0  U                        1929BRa  (8519)1565
                                        Kso(Hg2L2)=-17.89
********************************************************************************
NO2-                   HL    Nitrite          CAS 7782-77-6  (635)
Nitrite;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      sp  oth/un 25°C  var  U        B2=6.1         1973TUa  (9380)1566
********************************************************************************
NO3-                   HL    Nitrate          CAS 7697-37-2  (288)
Nitrate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      ISE NaClO4 25°C 3.00M U        K1=-0.08  B2=-1.14  1983BMb  (9706)1567
--------------------------------------------------------------------------------
Hg2++      ISE NaNO3  25°C  var  U        K1=0.40        1956HSd  (9707)1568
--------------------------------------------------------------------------------
Hg2++      ISE NaClO4 25°C  3.0M U  I     K1=0.02   B2=-0.30  1946ISa  (9708)1569
K1=0.08(I=0.5 M)
********************************************************************************
OH-                    HL    Hydroxide          (57)
Hydroxide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      kin NaClO4 25°C 0.10M U        K2=1.20        1977SAa (11594)1570
--------------------------------------------------------------------------------
Hg2++      gl  NaClO4 25°C 3.00M C                       1976HHc (11595)1571
                                        *K1=-4.88
                                        *B(2,1)=-2.68
                                        *B(5,4)=-8.48(?)
                                        *Kso=2.35
*Kso:Hg2(OH)1.3(ClO4)0.7(s)+1.3H=Hg2++ + 0.7ClO4 +1.3H20
--------------------------------------------------------------------------------
Hg2++      kin oth/un 25°C 0.05M U                       1952FHa (11596)1572
                                        *K1=-3.6
--------------------------------------------------------------------------------
Hg2++      gl  oth/un   ?   var  U                       1936NEa (11597)1573
                                        *K1=ca.-4.3
--------------------------------------------------------------------------------
Hg2++      gl  oth/un 18°C  var  U                       1934BEa (11598)1574
                                        Kso=-23.11(?)
--------------------------------------------------------------------------------
Hg2++      ISE none   25°C  0.0  U                       1929BRa (11599)1575
                                        Kso=-23.74(?)
********************************************************************************
```

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg2++ ISE NaClO4 25°C 3.00M C 1975QDa (13214)1576
Kso=-10.70
*Ks=-21.40
Kso:Hg2HPO4(s)=(Hg2) + HPO4; *Ks=(Hg2)3(PO4)2(s) + 2H = 3(Hg2) + 2HPO4
****
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
---
Hg2++ ISE oth/un 25°C 1.00M U I K1=8.83 B2=11.71 1962SIb (13596)1577
B(Hg2(OH)L)=15.08
B(Hg2(OH)2L)=20.42
Medium: Na+, with Hg electrode. In K+: K1=9.25, B2=12.27, B(Hg2(OH)L)=15.85,
B(Hg2(OH)2L)=20.05, K(Hg2+HL)=5.93

Hg2++ sp NaNO3 28°C 0.75M U 1960YDa (13597)1578
B(Hg2(OH)L)=15.64
Also Hg electrode

Hg2++ EMF NaNO3 28°C 0.75M U B2=12.38 1959YDa (13598)1579
B(Hg2(OH)L)=16.11
****
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
---
Hg2++ ISE NaNO3 27°C 0.75M U B2=11.23 1960YDa (13865)1580
B(Hg2L(OH))=15.0
****
S-- H2L Sulfide CAS 7783-06-4 (705)
Sulfide;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg2++ ISE oth/un 18°C var U 1931KOa (14400)1581
Kso(Hg2L)=-47.0
****
SCN- HL Thiocyanate CAS 463-56-9 (106)
Thiocyanate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
Hg2++ ISE none 25°C 0.0 U 1929BRa (15071)1582

```
                                        K(Hg2L2(s)=Hg2+2L)=-19.52
------------------------------------------------------------------------------
Hg2++      sol oth/un 25°C  var  U                        1905GRa (15072)1583
                                        K(Hg2L2(s)=Hg2+2L)=-19.84
Also Hg electrode
------------------------------------------------------------------------------
Hg2++      sol oth/un 25°C  var  U                        1905SSa (15073)1584
                                        K(Hg2L2(s)=Hg2+2L)=-19.74
Also Hg electrode
******************************************************************************
SO4--                  H2L    Sulfate          CAS 7664-93-9  (15)
Sulfate;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Hg2++      EMF none   25°C  0.0  U T H                    1970SPb (16240)1585
                                        Kso=-6.09
Kso=-6.13(15 C); -6.09(25 C); -6.06(35 C); DHso=5.4 kJ mol-1
------------------------------------------------------------------------------
Hg2++      ISE oth/un 25°C  0.0  U                        1964PCa (16241)1586
                                        Kso(Hg2L)=-6.13
------------------------------------------------------------------------------
Hg2++      sol oth/un 25°C  0.0  U                        1957BLa (16242)1587
                                        Kso(Hg2L)=-6.17
------------------------------------------------------------------------------
Hg2++      ISE NaClO4 25°C 0.50M U  I     K1=1.30   B2=2.40   1946ISa (16243)1588
In 3 M NaClO4 Kso=-4.46
------------------------------------------------------------------------------
Hg2++      ISE oth/un 25°C  0.0  U                        1932HJa (16244)1589
                                        Kso(Hg2L)=-6.32
------------------------------------------------------------------------------
Hg2++      ISE oth/un 25°C  0.0  U                        1929BRa (16245)1590
                                        Kso(Hg2L)=-6.33
******************************************************************************
WO4--                  H2L    Tungstate        CAS 13783-36-3  (445)
Tungstate;
------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
------------------------------------------------------------------------------
Hg2++      ISE NaNO3  18°C 0.10M U                        1933BHa (17440)1591
                                        Kso(Hg2L)=-16.96
******************************************************************************
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
------------------------------------------------------------------------------
Hg2++      gl  NaClO4 25°C  3.0M C        K1=2.94   B2=5.45   1977RWb (17614)1592
******************************************************************************
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
Hg2++	ISE	NaClO4	25°C	1.0M	C			2000VCa (18922)	1593
							Kso=-11.19		
Method: Hg,Hg2 oxalate electrode									
Hg2++	ISE	oth/un	27°C	2.50M	U		B2=6.98	1960YDa (18923)	1594
							B(Hg2(OH)L)=13.04		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	gl	NaClO4	25°C	3.0M	C		K1=2.40 B2=4.4	1977RWb (19367)	1595

****

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
Hg2++	gl	alc/w	25°C	100%	M		K1=7.1 B2=12.8	1994MPc (19995)	1596
Medium: MeOH									
Hg2++	gl	NaClO4	25°C	3.0M	C		K1=3.57 B2=6.63	1977RWb (19996)	1597
Hg2++	vlt	non-aq	?	100%	U	M		1963DTa (19997)	1598
							K(Hg2A2+2HL=Hg2L2+2HA)=7.03		
Medium: ethanoic acid. HA=HClO4									

****

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
Hg2++	gl	NaClO4	25°C	3.0M	C	T	K1=3.01 B2=5.71	1977RWb (20556)	1599

****

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
Hg2++	gl	NaClO4	25°C	3.0M	C		K1=3.72 B2=6.99	1977RWb (25009)	1600

****

C3H6O3 HL Methoxyacetic CAS 625-45-6 (29)
Methoxyethanoic acid; CH3.O.CH2.COOH

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

```
--------------------------------------------------------------------------------
Hg2++      gl  NaClO4 25°C 3.00M C        K1=2.98   B2=8.39   1977RWb (25600)1601
********************************************************************************
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
--------------------------------------------------------------------------------
Hg2++      sol NaClO4 25°C 0.10M U        K1=10.81       1967SKg (32274)1602
********************************************************************************
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
--------------------------------------------------------------------------------
Hg2++      gl  NaClO4 25°C 3.00M C        K1=3.3         1977RWb (33623)1603
********************************************************************************
C4H8O3                 HL                    CAS 2544-06-1  (28)
3-Methoxypropanoic acid; CH3.O.CH2.CH2.COOH
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      gl  NaClO4 25°C 3.00M C        K1=3.50   B2=6.63   1977RWb (33635)1604
********************************************************************************
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
--------------------------------------------------------------------------------
Hg2++      ISE NaNO3  27°C 0.75M U        B2=7.52        1960YDa (38212)1605
                                        B(Hg(OH)L)=13.58
********************************************************************************
C6H4Cl2                 L                    CAS 106-46-7  (2405)
1,4-Dichlorobenzene; Cl.C6H4.Cl
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      nmr non-aq 32°C 100%  U        K1=-0.7        1976DIa (42169)1606
Medium: liquid SO2
********************************************************************************
C6H7N                   L    Aniline         CAS 62-53-3  (583)
Aminobenzene, aniline; C6H5.NH2
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
Hg2++      gl  NaClO4 27°C  1.0M U        K1=3.71        1964WDa (44873)1607
********************************************************************************
C7H6NO3Cl             H2L                     (205)
3-Chlorosalicylhydroxamic acid; Cl.C6H3(OH).CO.NH.OH
--------------------------------------------------------------------------------
```

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg2++      gl  diox/w 30°C  50%  U        K1=11.38  B2=19.16  1977DJb (53416)1608
*************************************************************************
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
-------------------------------------------------------------------------
Hg2++      gl  alc/w  25°C 100%  M        K1=6.1    B2=11.2   1994MPc (54234)1609
*************************************************************************
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
-------------------------------------------------------------------------
Hg2++      sp  oth/un 18°C 0.10M U        K1=4.90        1966GCb (58974)1610
*************************************************************************
C8H10                   L    p-Xylene         CAS 106-42-3  (2145)
1,4-Dimethylbenzene, 4-Xylene; CH3.C6H4.CH3
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg2++      nmr non-aq 32°C 100%  U        K1=3.5    B2=5.70   1976DIa (60681)1611
Medium: liquid SO2
*************************************************************************
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
-------------------------------------------------------------------------
Hg2++      gl  KNO3   20°C 0.10M U        K1=7.8    B2=14.30  1970BAa (77659)1612
*************************************************************************
C12H8N2                 L    Phenanthroline   CAS 66-71-7  (144)
1,10-Phenanthroline;
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg2++      ISE NaNO3  25°C 0.50M U                        1967SPa (80465)1613
                                        Ks(Hg2L2(NO3)2)=-23.20
*************************************************************************
C12H18                  L                     CAS 87-85-4  (2406)
Hexamethylbenzene; C6(CH3)6
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
Hg2++      nmr non-aq 32°C 100%  U        K1=5.0    B2=8.50   1976DIa (81791)1614
Medium: liquid SO2
*************************************************************************
C15H33N5S2              L                     CAS 143634-65-5  (7925)
```

1-Methyl-8-amino-3,13-dithia-6,10,16,19-tetraazabicyclo[6.6.6]icosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	gl	KNO3	25°C	0.10M	C		K1=19.5 K(HgL+H)=5.9	2001SGa (92584)	1615

****

C20H36O6 L DiCy-18-crown-6 CAS 16069-36-6 (1653)
2,3:11,12-Dicyclohexyl-1,4,7,10,13,16-hexaoxacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	cal	oth/un	25°C	0.10M	U	H	K1=1.93 (syn isomer) K1=1.57 (anti isomer) K2=0.60 (syn isomer) K2=1.1 (anti isomer)	1976ITb (100650)	1616

DH(K1,syn)=-9.04 and DH(K1,anti)=-18.2 kJ mol-1. DH(K2,cis-syn-cis)=26.0, DH(K2,cis-anti-cis)=-24.0

****

C34H54O8 H2L Lasalocid CAS 25999-20-6 (2335)
Lasalocid acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	gl	alc/w	25°C	100%	M		K1=6.8 B2=12.6	1994MPc (106137)	1617

Medium: MeOH

****

C44H22N4O12Br8S4 H6L CAS 176173-80-1 (6959)
2,3,7,8,12,13,17,18-Octabromo-5,10,15,20-tetrakis(4-sulfonatophenyl)porphyrin;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Hg2++	gl	NaNO3	25°C	0.1M	C		K(Hg2+H2L=Hg2L+2H)=3.57	1996TNa (107038)	1618

****

Br- HL Bromide CAS 10035-10-6 (19)
Bromide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	vlt	NaNO3	20°C	0.10M	C		K(CH3Hg+Br)=6.61	1986GLa (2015)	1619

Methods: normal and DP polarography.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	alc/w	25°C	100%	U	M	K(MeHg+Br)=0.021	1981BRa (2016)	1620

Medium: EtOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	dis	non-aq	25°C	100%	U	I		1978JIb (2017)	1621

K(MeHg+Br=MeHgBr(aq))=6.60
K(MeHg+Br=MeHgBr(org))=8.30
K(CH3Hg+2Br=CH3HgBr2(aq))=5.98
In o-xylene using the two-phase system: o-xylene/H2O, 2.5 M NaNO3.
Data also for o-xylene, 1.0 M (Na,H)(Br,Cl,NO3)-medium

HgR+ nmr non-aq 25°C 100% U 1975BWc (2018)1622
K(MeHg+L)=6.62
Medium: DMF

HgR+ kin oth/un 20°C 0.10M U 1973GEb (2019)1623
K(MeHg+L)=6.62

HgR+ oth oth/un 25°C 0.0 U 1968SRf (2020)1624
K(EtHgL+L)=0.3
K(EtHgL2+L)=1.1

HgR+ vlt mixed 25°C 60% U M 1967BBb (2021)1625
K(HgC6H5+L)=5.28
K(HgC6H5L+L)=0.74
K(HgCH2C6H5+L)=5.42
K(HgCH2C6H5L+L)=1.10
Medium: 60% DMF, 0.1 Na,LiClO4. Data also with HgCH2CH2C6H5(7.95,1.23),
HgCH2COCMe3(5.18,2.75) and HgC6H5CHCOOEt(4.43,2.95)

HgR+ sol NaClO4 25°C 1.0M U 1965BBa (2022)1626
Ks(EtHgL)=-3.1

HgR+ gl KNO3 20°C 0.10M U H 1965SSd (2023)1627
K(MeHg+L)=6.62
By calorimetry: DH=-41.4 kJ mol-1, DS=-15.1 J K-1 mol-1

HgR+ gl oth/un 25°C dil U 1962POd (2024)1628
K(CF3Hg+L)=7.24
K(C2F5Hg+L)=7.16
K(C3F7Hg+L)=7.16

HgR+ dis oth/un 25°C 0.0 U 1961SIa (2025)1629
Kd(CH3HgL into C6H5CH3)=1.65

HgR+ gl oth/un 25°C dil U 1955WWa (2026)1630
K(CH3Hg+L)=6.70
K(CH3HgL(s)=CH3HgL)=-2.19
K(CH3HgL(s)=CH3Hg+L)=-8.90

HgR+ gl oth/un 25°C dil U 1955WWa (2027)1631
Kso(C6H5HgBr=C6H5Hg+Br)=-11.75
****
CN- HL Cyanide CAS 74-90-8 (230)
Cyanide;

```
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
HgR+       kin oth/un 20°C 0.10M U      T K1=14.1        1973GEb  (2732)1632
Metal ion: MeHg+
--------------------------------------------------------------------------------
HgR+       gl  KNO3   20°C 0.10M U   H  T                1963SCc  (2733)1633
                                         K(MeHg+L)=14.0
                                         K(MeHgL+L) < 0.5
By calorimetry: DH(MeHg+L)=-92.4 kJ mol-1, DS=-47.7 J K-1 mol-1
--------------------------------------------------------------------------------
HgR+       gl  oth/un 25°C 0.1?M U      T                1961SIa  (2734)1634
                                         K(MeHg+L)=14.2
********************************************************************************
CO3--                  H2L    Carbonate        CAS 465-79-6  (268)
Carbonate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
HgR+       nmr oth/un 25°C    ?  C    M   K1=6.10         1976RTa  (3243)1635
********************************************************************************
C6N6Co---              H3L    Cyanocobaltate     (5470)
Hexacyanocobaltate; [Co(CN)6]---
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
HgR+       gl  KNO3   20°C 0.10M U                       1963SCc  (3493)1636
                                         K(MeHg+L)=4.15
                                         K(MeHg+2L)=7.65
********************************************************************************
Cl-                     HL    Chloride         CAS 7647-01-0  (50)
Chloride;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
HgR+       gl  NaCl   25°C  0.0  C  I     K1=5.45         1998DFb  (5029)1637
Metal: (CH3)Hg+. Extrapolated from data for 0.1-3.0 M NaCl
Pitzer interaction parameters derived.
--------------------------------------------------------------------------------
HgR+       nmr KNO3   25°C 0.30M C                       1987RBa  (5030)1638
                                         K(HgR+Cl)=4.50
Method: 1H nmr. R is p-benzenesulfonate.
--------------------------------------------------------------------------------
HgR+       vlt NaNO3  20°C 0.10M C                       1986GLa  (5031)1639
                                         K(CH3Hg+Cl)=5.26
Methods: normal and DP polarography.
--------------------------------------------------------------------------------
HgR+       dis none   25°C  0.0  C                       1984SNa  (5032)1640
                                         K(EtHg+Cl)=5.43
Method: extraction of RHg+ from dilute acidified chloride solution into
```

benzene.

HgR+ nmr non-aq 25°C 100% U 1981BRa (5033)1641
K(MeHg+Cl)=0.06
Medium: CH2Cl2

HgR+ dis non-aq 25°C 100% U I 1978JIb (5034)1642
K(MeHg+Cl=MeHgCl(aq))=5.50
K(MeHg+Cl=MeHgCl(org))=6.59
In o-xylene using the two-phase system: o-xylene/H2O, 2.5 M NaNO3.
Data also for o-xylene, 1.0 M (Na,H)(Br,Cl,NO3)-medium

HgR+ dis NaClO4 25°C 1.0M C 1978SKi (5035)1643
K(CH3Hg+Cl)=5.51
K(C2H5Hg+Cl)=5.32
K(C6H5Hg+Cl)=5.77
Medium: 1.0 M HClO4. Method: extraction into dithizone/CCl4.

HgR+ nmr non-aq 25°C 100% U 1975BWc (5036)1644
K(MeHg+L)=5.25
Medium: DMF

HgR+ dis NaClO4 25°C 1.0M U 1973BIa (5037)1645
K(MeHg+L)=5.32

HgR+ kin oth/un 20°C 0.10M U 1973GEb (5038)1646
K(MeHg+L)=5.25

HgR+ sol NaClO4 25°C 1.0M U 1965BBa (5039)1647
Ks(EtHgL)=-2.4

HgR+ gl KNO3 20°C 0.10M U H 1965SSd (5040)1648
K(MeHg+L)=5.25
By calorimetry: DH=-25.1 kJ mol-1, DS=15.1 J K-1 mol-1

HgR+ oth KCl 0°C var U 1964DOa (5041)1649
K(Hg(CF3)2+L)=-0.5
Method:freezing point.

HgR+ gl none 25°C 0.0 U 1962POd (5042)1650
K(CF3Hg+L)=5.78
K(C2F5Hg+L)=5.64
K(C3F7Hg+L)=5.56

HgR+ dis none 25°C 0.0 U 1961SIa (5043)1651
Kd(MeHgL into toluene)=1.0

HgR+ gl none 25°C 0.0 U 1955WWa (5044)1652
Kso(MeHgL(s))=-7.16
Ks(MeHgL(s)+L)=-1.71

K(MeHg+L)=5.45
Kso(PhHgL(s))=-9.30
****
F- HL Fluoride CAS 7644-39-3 (201)
Fluoride;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	KNO3	20°C	0.10M	U		1965SSd	(6952)	1653
							K(MeHg+L)=1.50		

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	KNO3	25°C	0.10M	U	T M	1968ZPa	(7405)	1654
							K(MeHg+Cl)=4.90		
							K(MeHg+Br)=5.98		
							K(MeHg+I)=7.70		

K(Cl)=4.78(Et),4.65(Pr),4.55(Bu). K(Br)=5.90(Et),5.80(Pr),5.74(Bu).
K(I)=7.85(Et),8.20(Pr). At 20 C:K(MeHg+I)=8.70
****
HPO3-- H2L Phosphite CAS 13598-36-2 (6305)
Phosphite;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	KNO3	20°C	0.10M	U		1963SCc	(7511)	1655
							K(MeHg+L)=4.67		

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	kin	oth/un	20°C	0.10M	U		1973GEb	(8107)	1656
							K(MeHg+L)=8.60		
HgR+	sol	NaClO4	25°C	1.0M	U		1965BBa	(8108)	1657
							K(EtHgI+I)=-0.67		
							K(EtHgI2+I)=0.75		
							K(EtHgL(s)=EtHgL)=-4.11		
HgR+	gl	KNO3	20°C	0.10M	U		1965SSd	(8109)	1658
							Kso(MeHgI)=-11.46		
							K(MeHg+I)=8.60		
							K(MeHgI+I)=0.26 ?		
HgR+	oth	oth/un	0°C	var	U		1964DOa	(8110)	1659

```
                                        K(Hg(CF3)2+L)=0.98
Method:freezing point. Medium:KI var
--------------------------------------------------------------------------------
HgR+       gl  oth/un 25°C  dil  U                      1962POd  (8111)1660
                                        K(CF3Hg+L)=9.63
                                        K(C2F5Hg+L)=9.66
                                        K(C3F7Hg+L)=9.96
--------------------------------------------------------------------------------
HgR+       gl  oth/un 25°C 0.10M U                      1961SIa  (8112)1661
                                        Kd(MeHgL into C6H5CH3)=2.6
--------------------------------------------------------------------------------
HgR+       gl  oth/un 25°C  dil  U                      1955WWa  (8113)1662
                                        K(MeHgL(s)=MeHg+L)=-11.72
                                        K(MeHg+L)=8.7
                                        K(C6H5HgL(s)=C5H5Hg+L)=-15.01
********************************************************************************
NH3                     L    Ammonia          CAS 7664-41-7  (414)
Ammonia
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
HgR+       sp  oth/un 24°C  var  U                      1978SMa  (9166)1663
                                        K(MeHg(OH)+HL=MeHgL+H2O)=2.42
Medium: phosphate buffer, pH 6-8, ionic strength 0.4 to 0.6M.
--------------------------------------------------------------------------------
HgR+       nmr none   25°C  0.0  U                      1974ROa  (9167)1664
                                        K(MeHg+L)=7.25
--------------------------------------------------------------------------------
HgR+       gl  KNO3   20°C 0.10M U                      1965SSd  (9168)1665
                                        K(MeHg+L)=7.60
--------------------------------------------------------------------------------
HgR+       gl  oth/un 25°C 0.1?M U                      1961SIa  (9169)1666
                                        K(MeHg+L)=8.4
********************************************************************************
NO3-                    HL    Nitrate          CAS 7697-37-2  (288)
Nitrate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
HgR+       dis non-aq 25°C 100%  U  I                   1978JIb  (9709)1667
                                        K(MeHg+NO3=MeHgNO3(org))=-1.2
In o-xylene using the two-phase system: o-xylene/H2O, 2.5 M NaNO3.
Data also for o-xylene, 1.0 M (Na,H)(Br,Cl,NO3)-medium
********************************************************************************
OH-                     HL    Hydroxide          (57)
Hydroxide;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
HgR+       gl  NaNO3  25°C  0.0  C  I                   1998DFb (11600)1668
```

*K1=-4.528
*B(2,1)=-2.15
Metal: (CH3)Hg+. Extrapolated from data for 0.01-3.25 M NaNO3.
Pitzer interaction parameters derived.

HgR+ nmr KNO3 25°C 0.30M C 1987RBa (11601)1669
K(HgR+OH)=9.12
Method: 1H nmr. R is p-benzenesulfonate.

HgR+ vlt NaNO3 20°C 0.10M C 1986GLa (11602)1670
K(CH3Hg+OH)=9.36
Methods: normal and DP polarography.

HgR+ dis none 25°C 0.0 C 1984SNa (11603)1671
K(EtHg+OH)=9.23
K(n-PrHg+OH)=9.20
K(n-BuHg+OH)=9.04
K(PhHg+OH)=9.98
Method: extraction of RHg+ from dilute phosphate buffer into benzene/
8-hydroxyquinoline.

HgR+ nmr oth/un 25°C ? U 1982MCb (11604)1672
K(MeHg+L)=9.41

HgR+ gl NaNO3 25°C 1.00M C 1978JIc (11605)1673
*K1=-4.686
*B(2,1)=-1.725
Kso(MeHgOH)=-13.66

HgR+ gl KNO3 25°C 0.10M C I 1974ANa (11606)1674
K(MeHg+OH)=4.56
K(PhHg+OH)=4.03
In 75% dioxan, 0.1 M NaClO4: K(MeHg+OH)=5.2, K(PhHg+OH)=4.5, K(MeHg+MeHgOH=
(MeHg)2OH)=3.7, K(PhHg+PhHgOH=(PhHg)2OH)=3.85

HgR+ dis NaNO3 25°C 1.0M C 1974ILb (11607)1675
*K(CH3Hg)=-4.40

HgR+ kin oth/un 20°C 0.10M U 1973GEb (11608)1676
K(MeHg+OH)=9.37

HgR+ nmr oth/un 25°C U 1973LRa (11609)1677
K(MeHg+OH)=9.30
K(MeHgOH+MeHg)=2.37

HgR+ sp oth/un ? U 1971SBa (11610)1678
*K1(M+H2O=MOH+H)=-2.74
M=HgC(NO2)3+. Dissociation of cation neglected

HgR+ gl KNO3 25°C 0.10M U T 1968ZPa (11611)1679

```
                                        K(MeHg+L)=9.00
                                        K(EtHg+L)=8.80
                                        K(PrHg+L)=8.66
                                        K(BuHg+L)=8.61
K(MeHg+L)=9.32(20 C)
--------------------------------------------------------------------------------
HgR+       gl  KNO3   20°C 0.10M U   H                  1963SCc (11612)1680
                                        *K1(MeHg)=-4.59
                                        K(MeHgOH+MeHg)=2.37
DH(*K1)=-35.5 kJ mol-1, DS=-57.3 J K-1 mol-1
--------------------------------------------------------------------------------
HgR+       gl  oth/un 25°C  dil  U                    1962POd (11613)1681
                                        K(CF3Hg+L)=10.76
                                        K(C2F5Hg+L)=10.58
                                        K(C3F7Hg+L)=10.50
--------------------------------------------------------------------------------
HgR+       gl  oth/un 25°C  dil  U                    1961PSb (11614)1682
                                        K(MeHg+L)=9.89
--------------------------------------------------------------------------------
HgR+       gl  oth/un 24°C  dil  U                    1955WWa (11615)1683
                                        K(MeHg+L)=9.50
                                        K(EtHg+L)=9.1
                                        K(PhHg+L)=10.0
********************************************************************************
PO4---                 H3L    Phosphate        CAS 7664-38-2  (176)
Phosphate;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
HgR+       dis none   25°C  0.0  C                     1984SNa (13215)1684
                                        K(EtHg+PO4)=8.45
                                        K(EtHg+HPO4)=4.08
                                        K(n-PrHg+PO4)=8.04
                                        K(n-PrHg+HPO4)=4.15
Method: extraction of RHg+ from dilute phosphate buffer into benzene/
8-hydroxyquinoline.
--------------------------------------------------------------------------------
HgR+       dis none   25°C  0.0  C                     1984SNa (13216)1685
                                        K(PhHg+PO4)=9.49
                                        K(PhHg+HPO4)=5.26
                                        K(n-BuHg+PO4)=8.43
                                        K(n-BuHg+HPO4)=4.26
Method: extraction of RHg+ from dilute phosphate buffer into benzene/
8-hydroxyquinoline.
--------------------------------------------------------------------------------
HgR+       dis NaNO3  25°C  1.0M C                    1974ILb (13217)1686
                                        K(MeHg+H2PO4=MeHgHPO4+H)=-1.74
--------------------------------------------------------------------------------
HgR+       gl  KNO3   20°C 0.10M U                    1965SSd (13218)1687
                                        K(MeHg+HL)=5.03
```

```
**************************************************************************
S--                   H2L    Sulfide          CAS 7783-06-4  (705)
Sulfide;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
HgR+       gl  KNO3   20°C 0.10M U                      1965SSd (14401)1688
                                        K(MeHg+HS=MeHgS+H)=7.02
                                        K(MeHg+MeHgS)=16.34
                                        K(MeHg+(MeHg)2S)=7
**************************************************************************
SCN-                   HL    Thiocyanate      CAS 463-56-9  (106)
Thiocyanate;
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
HgR+       nmr oth/un 25°C    ?  C    M   K1=6.05        1976RTa (15074)1689
--------------------------------------------------------------------------
HgR+       nmr non-aq 25°C 100%  U                      1975BWc (15075)1690
                                        K(MeHg+L)=6.05
Medium: DMF
--------------------------------------------------------------------------
HgR+       kin oth/un 20°C 0.10M U                      1973GEb (15076)1691
                                        K(MeHg+L)=6.05
--------------------------------------------------------------------------
HgR+       sol NaClO4 25°C  1.0M U  I                   1965BBa (15077)1692
                                        K(EtHgL+L)=-0.10
                                        K(EtHgL2+L)=0.20
                                        Ks(EtHgL(s)=EtHgL)=-2.48
In 50% MeOH, 0.1 M NaClO4: Ks=-1.76, K(MeHgL+L)=0.24, K(MeHgL2+L)=-0.25
--------------------------------------------------------------------------
HgR+       sol alc/w  25°C  50%  U                      1965BBa (15078)1693
                                        K(BuHgL+L)=0.36
                                        K(BuHgL2+L)=-0.25
                                        K(BuHgL(s)=BuHgL)=-1.89
--------------------------------------------------------------------------
HgR+       gl  KNO3   20°C 0.10M U  IH    K1=6.05        1965SSd (15079)1694
                                        K(MeHgL+MeHg)=1.65
                                        K(Co(NH3)5NCS+MeHg)=3.20
By calorimetry: DH(MeHg+L)=-46.8 kJ mol-1, DS=-44.3 J K-1 mol-1
--------------------------------------------------------------------------
HgR+       sp  KNO3   25?°C  1.0M U                     1965TSd (15080)1695
                                        K(MeHg+L)=5.82
                                        K(EtHg+L)=5.85
                                        K(PrHg+L)=5.96
                                        K(BuHg+L)=6.0
By solubility: Ks(RHgL(s)=RHgL)=1.37(R=Me); 0.56(R=Et); 0.38(R=Pr),-0.54(Bu)
K2=0.02(Me), 0.15(Et), 0.19(Pr), 0.22(Bu) plus others
--------------------------------------------------------------------------
HgR+       gl  oth/un 25°C 0.1?M U                      1961SIa (15081)1696
```

K(MeHg+L)=6.1
K(CH3Hg+OH)=9.5 assumed
****
SO3-- H2L Sulfite CAS 7782-99-2 (801)
Sulfite;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ nmr oth/un 25°C ? C M K1=7.96 1976RTa (15462)1697

HgR+ gl KNO3 20°C 0.10M U 1965SSd (15463)1698
K(MeHg+L)=8.11
****
SO4-- H2L Sulfate CAS 7664-93-9 (15)
Sulfate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ gl oth/un 25°C 0.0 C I K1=2.64 1998DFb (16246)1699
Metal: (CH3)Hg+. Extrapolated from data for 0.1-1.0 M Na2SO4
Pitzer interaction parameters derived.

HgR+ gl oth/un 25°C ? U M K1=0.94 1976RTa (16247)1700
****
S2O3-- H2L Thiosulfate CAS 73686-28-7 (177)
Thiosulfate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ cal KNO3 20°C 0.10M U H 1963SCc (16860)1701
K(MeHg+L)=10.90
DH=-48.9 kJ mol-1, DS=41.4 J K-1 mol-1
****
SeCN- HL Selenocyanate CAS 73102-11-2 (440)
Selenocyanate;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ nmr oth/un 25°C ? C M K1=6.79 1976RTa (16989)1702
****
SeO3-- H2L Selenite CAS 7783-00-8 (2391)
Selenite;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ nmr oth/un 25°C ? C M K1=6.46 1976RTa (17063)1703
K(MeHg+HL)=2.70
****
SeO4-- H2L Selenate CAS 7783-08-6 (459)
Selenate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	oth/un	25°C	?	C	M		1976RTa	(17103)1704
							K(MeHg+L)=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
HgR+	gl	NaNO3	25°C	1.00M	C			1978JIc	(17615)1705
							K(MeHg+L)=2.681		
HgR+	nmr	oth/un	25°C	0.40M	U			1973LRa	(17616)1706
							K(MeHg+L)=2.67		

****

CH5N L Methylamine CAS 74-89-5 (155)

Methylamine; CH3.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	sp	oth/un	24°C	var	U			1978SMa	(18021)1707
							K(MeHg(OH)+HL=MeHgL+H2O)=1.23		

Medium: phosphate buffer, pH 6-8, ionic strength 0.4 to 0.6M.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	none	25°C	0.0	U			1974ROa	(18022)1708
							K(MeHg+L)=7.57		

****

C2H2O2Cl2 HL CAS 79-43-6 (1282)

Dichloroethanoic acid; Cl2CH.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	oth/un	25°C	0.40M	U			1973LRa	(18397)1709
							K(MeHg+L)=1.14		

****

C2H3O2Cl HL Chloroacetic CAS 79-11-8 (34)

Chloroethanoic acid; ClCH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	oth/un	25°C	0.40M	U			1973LRa	(19368)1710
							K(MeHg+L)=2.19		

****

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

---

HgR+ gl NaNO3 25°C 1.00M C 1978JIc (19998)1711
K(MeHg+L)=3.204
B(2MeHg+L)=5.279

HgR+ nmr non-aq 25°C 100% U 1975BWc (19999)1712
K(MeHg+L)=3.6
Medium: DMF

HgR+ nmr oth/un 25°C 0.40M U 1973LRa (20000)1713
K(MeHg+L)=3.18
****
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
---
HgR+ dis NaClO4 25°C 1.0M C K1=8.78 1988KSa (21580)1714
Metal is C6H5Hg+. Method: extraction of 203Hg(C6H5)Br into benzene from a ligand solution in 1.0 M NaClO4.

HgR+ gl NaNO3 25°C 1.00M C 1978JIc (21581)1715
K(MeHg+L)=7.518
K(MeHg+2L)=9.468

HgR+ sp oth/un 24°C var U 1978SMa (21582)1716
K(MeHg(OH)+HL=MeHgL+H2O)=2.67
Medium: phosphate buffer, pH 6-8, ionic strength 0.2 to 0.3M.

HgR+ gl oth/un 22°C ? U 1976HSa (21583)1717
K(C6H5Hg+L)=7.13

HgR+ gl oth/un 22°C ? U 1976HSa (21584)1718
K(MeHg+L)=6.07

HgR+ nmr none 25°C 0.0 U 1974ROa (21585)1719
K(MeHg+L)=7.88
****
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
---
HgR+ nmr KNO3 25°C 0.30M C 1987RBa (22067)1720
K(HgR+L)=16.35
Method: 1H nmr. R is p-benzenesulfonate.

HgR+ gl oth/un 22°C ? U 1976HSa (22068)1721
K(MeHg+L)=8.76
K(C6H5Hg+L)=6.67

```
HgR+       nmr non-aq 25°C 100%  U                        1975BWc (22069)1722
                                        K(MeHg+L)=16.1
Medium: DMF
**************************************************************************
C2H6S2                  L                      CAS 624-92-0  (152)
Dimethyl disulfide; CH3.S.S.CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
HgR+       nmr non-aq 25°C 100%  U  I M                    1981BRa (22202)1723
                                        K(MeHgA+L)=-1.30
Medium: CH2Cl2. HA=EtOH. In EtOH: K(MeHgA+L)=-0.16
**************************************************************************
C2H7N                   L    Dimethylamine    CAS 124-40-3  (802)
Dimethylamine; CH3.NH.CH3
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
HgR+       nmr none   25°C  0.0  U                        1974ROa (22226)1724
                                        K(MeHg+L)=6.76
**************************************************************************
C2H7N                   L    Ethylamine       CAS 75-04-7  (156)
Ethylamine;  CH3.CH2.NH2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
HgR+       sp  oth/un 24°C  var  U                        1978SMa (22275)1725
                                        K(MeHg(OH)+HL=MeHgL+H2O)=1.31
Medium: phosphate buffer, pH 6-8, ionic strength 0.4 to 0.6M
--------------------------------------------------------------------------
HgR+       nmr none   25°C  0.0  U                        1974ROa (22276)1726
                                        K(MeHg+L)=7.64
**************************************************************************
C2H8N2                  L    Ethylenediamine  CAS 107-15-7  (23)
1,2-Diaminoethane; H2N.CH2.CH2.NH2
--------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------
HgR+       gl  KNO3   22°C 0.10M U    M                   1977HSb (23181)1727
                                        K(MeHg+L)=5.52, B2=7.90
                                        K(EtHg+L)=5.52, B2=7.28
                                        K(PrHg+L)=5.56, B2=7.35
**************************************************************************
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
--------------------------------------------------------------------------
HgR+       nmr NaCl   25°C 0.50M U    M   K1=9.0           1981BEa (23903)1728
R=Hg(p-chlorobenzoate)
```

HgR+ nmr oth/un 25°C var U TI K1=11.76 1977ERb (23904)1729
K(MeHg+HL)=6.93
K(MeHg+MeHgL)=8.26
Also K(MeHg+L)=11.79 at 20 C, by pH-metric titn.

****

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
HgR+	gl	NaNO3	25°C	1.00M	U		K(MeHg+L)=2.31	1981JIa (24055)1730	

****

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
HgR+	nmr	oth/un	25°C	0.40M	U		K(MeHg+L)=3.39	1973LRa (25010)1731	

****

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
HgR+	gl	oth/un	22°C	?	U		K(MeHg+L)=9.03	1976HSa (25148)1732	
							K(C6H5Hg+L)=7.37		

****

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
HgR+	gl	NaNO3	25°C	1.00M	C		K(MeHg+L)=7.516	1978JIc (26189)1733	
							K(MeHg+2L)=9.450		

****

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
HgR+	sp	oth/un	24°C	var	U		K(MeHg(OH)+HL=MeHgL+H2O)=1.80	1978SMa (26457)1734	

Medium: phosphate buffer, pH 6-8, ionic strength 0.2 to 0.3M.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	none	25°C	0.0	U			1974ROa (26458)1735	

K(MeHg+HL)=2.52 (O coord)
K(MeHg+L)=7.56 (N coord)

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	dis	NaClO4	25°C	1.0M	C		K1=16.5	1988KSa	(26793)1736

Metal is C6H5Hg+. Method: extraction of 203Hg(C6H5)Br into benzene from a ligand solution in 1.0 M NaClO4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	dis	NaClO4	25°C	1.0M	C		K1=16.58	1988SKf	(26794)1737
							K(CH3Hg+HL)=15.56		

Method: extraction of 203Hg-labelled complex into dithizone/CCl4 solution
Metal is CH3Hg+.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	dis	NaClO4	25°C	1.0M	C		K1=17.7	1988SKf	(26795)1738
							K(C6H5Hg+HL)=16.5		

Method: extraction of 203Hg-labelled complex into dithizone/CCl4 solution.
Metal is C6H5Hg+.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	KNO3	25°C	0.30M	C			1987RBa	(26796)1739
							K(HgR+L)=16.97		
							K(HgR+HL)=15.50		

Method: 1H nmr. R is p-benzenesulfonate.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	NaNO3	25°C	1.00M	U		K1=15.70	1981JIa	(26797)1740
							K(MeHg+H2L)=6.69		
							B((MeHg)HL)=24.96		
							K(MeHgL+H)=9.25		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	oth/un	25°C	0.30M	M		K1=16.67	1981RRd	(26798)1741
							K(MeHgL+H)=8.80		
							K(MeHg+HL)=15.38		
							K(MeHgHL+H)=2.44		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	oth/un	22°C	?	U			1976HSa	(26799)1742
							K(C6H5Hg+L)=4.77		
							K(C6H5HgL+H)=8.64		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	oth/un	22°C	?	U			1976HSa	(26800)1743
							K(MeHg+L)=7.19		
							K(MeHgL+L)=5.96		
							K(MeHgL+H)=8.92		

****

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

---
HgR+ gl NaNO3 25°C 1.00M U 1981JIa (27144)1744
K(MeHg+L)=6.93
****
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
---
HgR+ gl KNO3 25°C 0.10M U K1=19.56 1985ACa (27662)1745
K(CH3Hg+CH3HgL)=10.46
K(CH3Hg+HL)=16.54
Metal is CH3Hg+.

HgR+ gl oth/un 22°C ? U 1976HSa (27663)1746
K(MeHg+L)=7.92
K(MeHgL+L)=7.81
K(MeHgL+H)=7.79
K(C6H5Hg+L)=6.12
****
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
---
HgR+ gl KNO3 25°C 0.10M U K1=21.01 1985ACa (27791)1747
K(CH3Hg+CH3HgL)=10.26
K(CH3Hg+HL)=17.19
Metal is CH3Hg+.
****
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
---
HgR+ sp oth/un 24°C var U 1978SMa (27847)1748
K(MeHg(OH)+HL=MeHgL+H2O)=1.29
Medium: phosphate buffer, pH 6-8, ionic strength 0.4 to 0.6M.

HgR+ nmr none 25°C 0.0 U 1974ROa (27848)1749
K(MeHg+L)=7.56
****
C3H9N L Trimethylamine CAS 75-50-3 (803)
Trimethylamine; (CH3)3.N

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ nmr none 25°C 0.0 U 1974ROa (27859)1750
K(MeHg+L)=5.05
****

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
HgR+	gl	KNO3	22°C	0.10M	U	M		1977HSb (28309)	1751
							K(MeHg+L)=5.24, B2=9.01		
							K(EtHg+L)=5.08, B2=8.60		
							K(PrHg+L)=5.09, B2=8.39		

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
HgR+	nmr	oth/un	25°C	var	U			1977ERb (29600)	1752
							K(MeHg+HL)=6.96		

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
HgR+	nmr	KNO3	25°C	0.30M	C			1987RBa (30336)	1753
							K(HgR+L)=17.28		

Method: 1H nmr. R is p-benzenesulfonate.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	oth/un	25°C	0.30M	M		K1=17.31	1981RRd (30337)	1754
							K(MeHgL+H)=4.85		
							K(MeHgHL+H)=3.53		
HgR+	gl	oth/un	22°C		?	U		1976HSa (30338)	1755
							K(C6H5Hg+L)=7.78		
HgR+	gl	oth/un	22°C		?	U		1976HSa (30339)	1756
							K(MeHg+L)=8.16		

C4H6O4S2 H4L CAS 2418-14-6 (4264)
2,3-Dimercaptobutanedioic acid; HOOC.CH(SH).CH(SH).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	KNO3	25°C	0.30M	C		K1=18.4	1985ACa (30393)	1757
							K(CH3Hg+CH3HgL)=16.9		

Metal is CH3Hg+. Method: 1H nmr by competition with mercaptoethanoic acid.

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

---
HgR+ nmr oth/un 25°C 0.40M U 1973LRa (31502)1758
K(MeHg+L)=2.68
****
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
---
HgR+ dis NaClO4 25°C 1.0M C K1=8.71 1988KSa (31868)1759
Metal is C6H5Hg+. Method: extraction of 203Hg(C6H5)Br into benzene from a ligand solution in 1.0 M NaClO4.
****
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
---
HgR+ gl NaNO3 25°C 1.00M U 1981JIa (32703)1760
K(MeHg+L)=6.32
****
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
---
HgR+ nmr none 25°C 0.0 U 1974ROa (33983)1761
K(MeHg+HL)=2.74 O coord
K(MeHg+L)=7.54 N coord
****
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
---
HgR+ gl oth/un 22°C ? U 1976HSa (34098)1762
K(C6H5Hg+L)=5.84
K(MeHg+L)=5.15
****
C4H9NO2S HL CAS 29768-80-7 (2597)
2-Amino-4-mercaptobutanoic acid; HOOC.CH(NH2).CH2.CH2.SH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ nmr oth/un 25°C 0.30M M K1=16.45 1981RRd (34113)1763
K(MeHgL+H)=9.12
K(MeHgHL+H)=2.26
****
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
HgR+	nmr	KNO3	25°C	0.30M	C		K1=17.0	1985ACa	(34696)1764

Metal is CH3Hg+. Method: 1H nmr by competition with mercaptoethanoic acid.

****

C4H11N L t-Butylamine CAS 75-64-9 (158)
2-Amino-2-methylpropane; H2N.C(CH3)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	sp	oth/un	24°C	var	U			1978SMa	(34790)1765
							K(MeHg(OH)+HL=MeHgL+H2O)=1.20		

Medium; phosphate buffer, pH 6-8, ionic strength 0.3 to 0.4M.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	none	25°C	0.0	U			1974ROa	(34791)1766
							K(MeHg+L)=7.52		

****

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
HgR+	nmr	NaCl	25°C	0.50M	U	M	K1=10.0	1981BEa	(34819)1767

R=Hg(p-chlorobenzoate)

****

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
HgR+	nmr	NaCl	25°C	0.50M	U	M	K1=9.9	1981BEa	(35057)1768

R=Hg(p-chlorobenzoate)

****

C4H12N2 L Putrescine CAS 110-60-1 (360)
1,4-Diaminobutane; H2N.(CH2)4.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	KNO3	22°C	0.10M	U	M		1977HSb	(35366)1769
							K(MeHg+HL)=4.67, B2=10.23		
							K(EtHg+HL)=4.44, B2=9.95		
							K(PrHg+HL)=4.33, B2=9.91		

****

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	NaCl	25°C	0.50M	U	M	K1=8.3	1981BEa	(36645)1770

R=Hg(p-chlorobenzoate)

HgR+ kin oth/un 20°C 0.10M U 1973GEb (36646)1771
K(CH3Hg+L)=4.72
****
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
---
HgR+ gl NaNO3 25°C 1.00M U 1981JIa (38170)1772
K(MeHg+L)=2.51
****
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
---
HgR+ gl oth/un 22°C ? U 1976HSa (38817)1773
K(C6H5Hg+L)=7.29
K(MeHg+L)=8.87
****
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
---
HgR+ dis NaClO4 25°C 1.0M C K1=8.50 1988KSa (39090)1774
Metal is C6H5Hg+. Method: extraction of 203Hg(C6H5)Br into benzene from a ligand solution in 1.0 M NaClO4.
****
C5H10O2 HL Pivalic acid CAS 75-98-9 (3026)
Trimethylethanoic acid, 2,2-Dimethylpropanoic acid; (CH3)3C.COOH

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ nmr oth/un 25°C 0.40M U 1973LRa (40217)1775
K(MeHg+L)=3.40
****
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
---
HgR+ nmr NaCl 25°C 0.50M U M K1=10.2 1981BEa (40451)1776
R=Hg(p-chlorobenzoate)
****
C5H11NO2 L Betaine CAS 107-43-7 (4326)
(Carboxymethyl)trimethylammonium hydroxide inner salt; (CH3)3.N.CH2.CO2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	oth/un	25°C	0.40M	U			1973LRa	(40467)1777
							K(MeHg+L)=1.71		

****

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
HgR+	sp	oth/un	24°C	var	U			1978SMa	(40718)1778
							K(MeHg(OH)+HL=MeHgL+H2O)=2.09		

Medium; phosphate bufer, pH 6-8, ionic strength 0.2 to 0.3M.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	none	25°C	0.0	U			1974ROa	(40719)1779
							K(MeHg+HL)=2.7 O coord		
							K(MeHg+L)=7.41 N coord		

****

C5H11NO2 HL CAS 660-88-8 (1845)
5-Aminopentanoic acid; H2N.CH2.CH2.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	none	25°C	0.0	U			1974ROa	(40859)1780
							K(MeHg+HL)=2.98 O coord		
							K(MeHg+L)=7.75 N coord		

****

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
HgR+	gl	NaNO3	25°C	1.00M	C			1978JIc	(40894)1781
							K(MeHg+L)=7.268		
							K(MeHg+2L)=9.157		

****

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
HgR+	dis	NaClO4	25°C	1.0M	C		K1=8.42	1988KSa	(41101)1782

Metal is C6H5Hg+. Method: extraction of 203Hg(C6H5)Br into benzene from a ligand solution in 1.0 M NaClO4.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	NaNO3	25°C	1.00M	U			1981JIa	(41102)1783
							K(MeHg+L)=7.17		
HgR+	nmr	oth/un	25°C	0.20M	C		K1=7.40	1975FRb	(41103)1784

Method: 1H nmr. HgR is CH3Hg. Self-medium: 0.2 M CH3Hg, 0.03-0.29 M H2L.

K1 from chemical shift values of CH3Hg protons; from CH2 protons, K1=7.5.

****

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
HgR+	nmr	KNO3	25°C	0.30M	C		K(HgR+L)=17.26 K(HgR+HL)=15.07	1987RBa	(41267)1785
HgR+	nmr	oth/un	25°C	0.30M	M		K1=16.94 K(MeHgL+H)=8.14 K(MeHgHL+H)=2.33	1981RRd	(41268)1786
HgR+	gl	oth/un	22°C	?	U		K(C6H5Hg+L)=11.86	1976HSa	(41269)1787
HgR+	gl	oth/un	22°C	?	U		K(MeHg+L)=6.72 K(MeHgL+L)=5.73	1976HSa	(41270)1788
HgR+	nmr	oth/un	25°C	0.20M	C		K(CH3HgHL+H)=2.0 K(CH3HgL+H)=9.0	1975RFb	(41271)1789

Method: 1H nmr. R is p-benzenesulfonate.

Self medium, ca. 0.2 M CH3Hg+, 0.2 M H2L. Method: 13C nmr.

****

C5H11NO2Se HL CAS 1464-42-2 (1900)
2-Amino-4-(methylseleno)butanoic acid; CH3.Se.CH2.CH2.CH(NH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	KNO3	25°C	0.30M	U		K(MeHg+HL)=3.73 K(MeHg+L)=7.63	1985IAa	(41303)1790

****

C5H14N2 L CAS 462-94-2 (359)
1,5-Diaminopentane; H2N.(CH2)5.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	KNO3	22°C	0.10M	U	M	K(MeHg+HL)=5.17, B2=10.83 K(EtHg+HL)=4.93, B2=10.59 K(PrHg+HL)=5.02, B2=10.46	1977HSb	(41864)1791

****

C6H5NO2S HL CAS 1849-36-1 (4397)
4-Nitrothiophenol; NO2.C6H4.SH

```
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
HgR+       kin oth/un 20°C 0.10M U                         1973GEb (42710)1792
                                        K(CH3Hg+L)=12.3
*************************************************************************
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
-------------------------------------------------------------------------
HgR+       nmr non-aq 25°C 100%  U                         1975BWc (44547)1793
                                        K(MeHg+L)=14.1
Medium: DMF
*************************************************************************
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
-------------------------------------------------------------------------
HgR+       dis NaClO4 25°C  1.0M C        K1=8.77          1988KSa (49364)1794
Metal is C6H5Hg+. Method: extraction of 203Hg(C6H5)Br into benzene from a
ligand solution in 1.0 M NaClO4.
*************************************************************************
C6H13NO2               HL                      CAS 60-32-2  (1846)
6-Aminohexanoic acid; H2N.CH2.CH2.CH2.CH2.CH2.COOH
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
HgR+       nmr none   25°C  0.0  U                       1974ROa (50217)1795
                                        K(MeHg+HL)=3.10 O coord
                                        K(MeHg+L)=7.83   N coord
*************************************************************************
C6H15NO3                     Triethanolamine  CAS 102-71-6  (447)
Tris-(2-hydroxyethyl)amine;                                          L
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
HgR+       nmr NaCl   25°C 0.50M U    M   K1=6.9           1981BEa (51295)1796
R=Hg(p-chlorobenzoate)
*************************************************************************
C6H15O3P                L                       CAS 122-52-1  (1723)
Triethylphosphite; (C2H5O)3P
-------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
-------------------------------------------------------------------------
HgR+       nmr non-aq 25°C 100%  U    M                   1981BRa (51512)1797
                                        K(MeHgA)+L)=-0.26
Medium: CH2Cl2. HA=EtOH
*************************************************************************
C6H16N2                 L                       CAS 124-09-4  (358)
```

1,6-Diaminohexane; H2N.(CH2)6.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	KNO3	22°C	0.10M	U			1977HSb	(51586)1798
							B(MeHgL2)=10.95, K(M+HL)=5.34		
							B(EtHgL2)=11.03, K(M+HL)=5.40		
							B(PrHgL2)=10.80		
							K(PrHg+HL)=5.21		

****

C7H8S2 L CAS 14173-25-2 (2345)
Phenyl-methyl-disulfide; C6H5.S.S.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	non-aq	25°C	100%	U	M		1981BRa	(56179)1799
							K(MeHgA+L)=0.055		

Medium: CH2Cl2. HA=EtOH

****

C7H13NO3S H2L CAS 59-53-0 (1269)
N-Acetyl-penicillamine; CH3.CO.NH.CH(COOH)C(CH3)2SH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	oth/un	25°C	0.30M	M		K1=16.76	1981RRd	(57492)1800
							K(MeHgL+H)=3.10		

****

C8H17NO2 HL CAS 2187-07-7 (1847)
8-Aminooctanoic acid; H2N.CH2.CH2.CH2.CH2.CH2.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	none	25°C	0.0	U			1974ROa	(62748)1801
							K(MeHg+HL)=3.15 O coord		
							K(MeHg+L)=7.60 N coord		

****

C8H18S L CAS 544-40-1 (2346)
Bis(n-butyl)sulfide; C4H9.S.C4H9

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	non-aq	25°C	100%	U	M		1981BRa	(63007)1802
							K(MeHgA)+L)=-0.82		

Medium: CH2Cl2. HA=EtOH

****

C9H5NOClI HL CAS 130-26-7 (1541)
5-Chloro-7-iodo-8-hydroxyquinoline;

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

HgR+ gl diox/w 25°C 75% C 1974ANa (63528)1803
K(MeHg+L)=9.2
K(PhHg+L)=9.8
Medium: 75% 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
---
HgR+ gl KNO3 25°C 0.10M C 1974ANa (63806)1804
K(MeHg+L)=8.1
K(PhHg+L)=8.7

HgR+ sp oth/un 26°C 0.01M U K1=10.40 1973DNa (63807)1805
Metal: C6H5Hg+
****
C9H7N L CAS 91-22-5 (1538)
Quinoline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ gl KNO3 25°C 0.10M C 1974ANa (64062)1806
K(MeHg+L)=4.05
****
C9H7NO HL Oxine CAS 148-24-3 (504)
8-Hydroxyquinoline (8-quinolinol);

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ dis none 25°C 0.0 C 1984SNa (64280)1807
K(EtHg+L)=10.46
K(n-PrHg+L)=11.15
K(n-BuHg+L)=11.88
K(PhHg+L)=13.30
Method: extraction of RHg+ from dilute phosphate buffer into benzene/
8-hydroxyquinoline. Reaction: RHg+L=RHgL(org).

HgR+ gl KNO3 25°C 0.10M C I 1974ANa (64281)1808
K(MeHg+L)=8.8
K(MeHg+HL)<4
In 75% dioxan, 0.1 M NaClO4: K(MeHg+L)=11.5, K(MeHg+HL)=4.7

HgR+ sp oth/un 26°C 0.01M U K1=10.82 1973DNa (64282)1809
Metal : C6H5Hg, 25-27 C
****
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

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--------------------------------------------------------------------------------
HgR+       gl  KNO3   25°C 0.10M C                        1974ANa (64550)1810
                                        K(MeHg+L)=8.3
                                        K(PhHg+L)=8.9
********************************************************************************
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
--------------------------------------------------------------------------------
HgR+       nmr none   25°C  0.0  U                        1974ROa (65946)1811
                                        K(MeHg+L)=8.29  N coord
********************************************************************************
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
--------------------------------------------------------------------------------
HgR+       sp  oth/un 24°C  var  U                        1978SMa (66009)1812
                                        K(MeHg(OH)+HL=MeHgL+H2O)=3.64
Medium: phosphate buffer, pH 6-8, ionic strength 0.2 to 0.3M.
********************************************************************************
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
--------------------------------------------------------------------------------
HgR+       sp  oth/un 25°C 0.01M U                        1980HMb (66228)1813
                                        K(MeHgOH+H2L=MeHgHL+H2O)=3.61
********************************************************************************
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
--------------------------------------------------------------------------------
HgR+       nmr oth/un 25°C    ?  U                        1982MCb (67061)1814
                                        K(MeHg+L)=4.66
********************************************************************************
C9H15NO3S              H2L    Captopril        CAS 62571-86-2  (5773)
1-(2(S)-3-Mercapto-2-methyl-1-oxopropanyl)-L-proline;
--------------------------------------------------------------------------------
Metal      Mtd Medium Temp Conc Cal Flags Lg K values       Reference ExptNo
--------------------------------------------------------------------------------
HgR+       gl  oth/un 25°C  0.0  U                        1991ISa (67391)1815
                                        Keff(HgR+cis-L)=16.85
                                        Keff(HgR+trans-L)=16.57.
In D2O. R=CH3-.  Additional method: n.m.r.
********************************************************************************
C9H15N3O2S              L    Ergothioneine    CAS 105496-34-2  (1821)
2-Mercaptohistidine trimethyl ester betaine;
```

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ nmr oth/un 25°C ? U 1982RRb (67558)1816
K(MeHg+L)=13.7
Medium: D2O
****
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
---
HgR+ gl KNO3 25°C 0.10M U K1=5.75 1974ANa (68711)1817
Metal: MeHg+. For C6H5Hg+, K1=6.35
****
C10H7NO2 HL CAS 86-59-9 (873)
Quinoline-8-carboxylic acid;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ gl KNO3 25°C 0.10M C 1974ANa (68762)1818
K(MeHg+L)=5.75
K(PhHg+L)=6.35
****
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
---
HgR+ gl diox/w 25°C 75% C I 1974ANa (68787)1819
K(MeHg+L)=10.3
K(MeHg+HL)=4.6
In 0.1(KNO3): K(MeHg+L)=8.4
****
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
---
HgR+ gl diox/w 25°C 75% C 1974ANa (68794)1820
K(MeHg+HL)=6.6
K(MeHg+H2L)=4.1
****
C10H8N2 L 2,2'-Bipyridyl CAS 366-18-7 (25)
2,2'-Bipyridine; (C5H4N)2

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ gl KNO3 25°C 0.10M C 1974ANa (69587)1821
K(MeHg+L)=5.86

****
C10H10N2 L Benzylimidazole CAS 4238-71-5 (2189)
Benzylimidazole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ sp oth/un 24°C 0.02M U 1978SMa (70528)1822
K(MeHg(OH)+HL=MeHgL+H2O)=4.34
Medium: 0.02M Phosphate buffer.
****
C10H12N2 L Tryptamine CAS 61-54-1 (2190)
3-(2-Aminoethyl)indole;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
---
HgR+ sp oth/un 24°C 0.04M U 1978SMa (71156)1823
K(MeHg(OH)+HL=MeHgL+H2O)=2.36
Medium: 0.04 M Phosphate buffer, pH 8. At 0.02 M, K=2.69; 0.005 M, K=2.87
****
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
---
HgR+ gl NaNO3 25°C 1.00M U 1978JAa (73855)1824
K(MeHg+L)=9.26
B((MeHg)HL)=14.35
B((MeHg)H2L)=17.95

HgR+ gl KNO3 22°C 0.10M U 1977HSb (73856)1825
K(MeHg+L)=8.21
K(MeHgL+L)=3.35
*K((MeHg)2L)=-7.27

HgR+ gl KNO3 22°C 0.10M U 1977HSb (73857)1826
K(EtHg+L)=8.09
K(EtHgL+L)=3.41
*K((EtHg)2L)=-7.04

HgR+ gl KNO3 22°C 0.10M U 1977HSb (73858)1827
K(PrHg+L)=7.98
K(PrHgL+L)=3.43
*K((PrHg)2L)=-7.11

HgR+ gl KNO3 22°C 0.10M U 1977HSb (73859)1828
K(PhHg+L)=9.15
K(PhHgL+L)=3.66
*K((PhHg)2L)=-5.33
****
C10H17N3O6S H3L Glutathione CAS 70-18-8 (333)

Glutamyl-cysteinyl-glycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	KNO3	25°C	0.30M	C			1987RBa (75124)	1829
							K(HgR+L)=15.91		

Method: 1H nmr. R is p-benzenesulfonate.

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	nmr	oth/un	25°C	?	U		K1=16.00	1982RRb (75125)	1830
							K(MeHgL+H)=9.25		
							K(MeHgHL+H)=3.63		
							K(MeHg+HL)=15.85		

Medium: D2O

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	oth/un	22°C	?	U			1976HSa (75126)	1831
							K(C6H5Hg+L)=7.09		
							K(C6H5HgL+H)=9.37		

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	oth/un	22°C	?	U			1976HSa (75127)	1832
							K(MeHg+L)=8.11		
							K(MeHgL+H)=9.37		

****

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
HgR+	sp	oth/un	24°C	0.02M	U			1978SMa (78210)	1833
							K(MeHg(OH)+HL=MeHgL+H2O)=3.92		

Medium: 0.02 M Phosphate buffer, pH 8. At 0.005 M, K=4.18

****

C12H8N2 L Phenanthroline CAS 66-71-7 (144)
1,10-Phenanthroline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	KNO3	25°C	0.10M	U		K1=7.15	1974ANa (80466)	1834

Metal: CH3Hg+

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	sp	oth/un	26°C	0.01M	U			1973DNa (80467)	1835
							K(C6H5Hg(H2O)+L)=8.24		

Metal: C6H5Hg+

****

C12H28N2 L CAS 2783-17-7 (357)
1,12-Diaminododecane; H2N.(CH2)12.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	gl	KNO3	22°C	0.10M	U	M		1977HSb (84143)	1836
							K(MeHg+HL)=6.42		

K(EtHg+HL)=6.29
K(PrHg+HL)=6.28
K(PhHg+HL)=7.45

****

C13H12N4O L Diphenylcarbaz. CAS 538-62-5 (1195)
Diphenylcarbazone; C6H5.NH.NH.CO.N:N.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	sp	non-aq	?	100%	U		K1=6.5 B2=11.90	1971TBa (85412)	1837

Metal: Hg(4-dimethylaminophenyl)+
With Hg(4-diethylaminophenyl)+ : K1=6.2, K2=5.5

****

C13H14N4 L CAS 13103-75-8 (473)
4-(2-Pyridylazo)-N,N-dimethylaniline; C5H4N.N:N.C6H4.N(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	kin	oth/un	20°C	0.10M	U			1973GEb (85684)	1838
							K(CH3Hg+L)=5.75		

****

C13H16N2O2 H2L CAS 9479-05-2 (1104)
Tryptophan ethyl ester; C8H6N.CH2.CH(NH2).COOC2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	sp	oth/un	25°C	0.01M	U			1980HMb (85936)	1839
							K(MeHgOH+H2L=MeHgHL+H2O)=3.36		

Medium: 0.01 M phosphate, pH 8

****

C18H15O3PS HL CAS 16704-71-5 (3365)
3-Diphenylphosphino-benzene sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
HgR+	kin	oth/un	20°C	0.10M	U			1973GEb (97109)	1840
							K(CH3Hg+L)=9.15		

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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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