

SC-Database

Software version = 5.81 Data version = 4.62
 Experiment list contains 3143 experiments for
 (no ligands specified)
 2 metals : Ag+, Ag++
 (no references specified)
 (no experimental details specified)

e- HL Electron (442)
 Electron;

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

Ag+ EMF non-aq 25°C 100% C 1995LSb (45) 1
 $K(\text{AgC} + \text{e} = \text{Ag}(\text{s}) + \text{C}) = -2.99 (-177\text{mV})$
 Medium: acetonitrile, 0.05 M Et4NClO4. Value is relative to the SCE(aq).
 C is cryptand 2,2,2. Data for many non-aqueous solvents.

 Ag+ EMF oth/un -5°C 6.50M C 1981BMa (46) 2
 $K(\text{e} + \text{Ag}^{++} = \text{Ag}^+) = 37.17$
 E=1.978 V

Medium: 6.5 M HClO4

 Ag+ EMF none 25°C 0.0 C T 1980JPa (47) 3
 $K = 1.2094 (71.5 \text{ mV})$
 K: $\text{AgBr}(\text{s}) + \text{e} = \text{Ag}(\text{s}) + \text{Br}^-$. Data for 15-55 C.

 Ag+ sol none 25°C 0.0 C T 1976DMb (48) 4
 Data for 15-35 C. $K(\text{AgSCN} + \text{e} = \text{Ag} + \text{SCN}^-) = 1.487 (88.0 \text{ mV})$.
 At 20 C, E=92.8 mV; at 15 C, E=102.1 mV. K derived from $K_{\text{so}}(\text{AgSCN})$.

 Ag+ sol none 25°C 0.0 C 1976DRa (49) 5
 $K(\text{AgBz} + \text{e} = \text{Ag} + \text{Bz}^-) = 9.391 (556.5\text{mV})$
 Bz is benzoate ion.

 Ag+ sol none 25°C 0.0 C T 1975DMa (50) 6
 Data for 15-35 C. $K(\text{AgMnO}_4 + \text{e} = \text{Ag} + \text{MnO}_4^-) = 3.632 (214.9 \text{ mV})$.
 At 20 C, E=224.9 mV; at 15 C, E=235.6 mV. K derived from $K_{\text{so}}(\text{AgMnO}_4)$.

 Ag+ EMF alc/w 25°C 10% U I 1974CKa (51) 7
 $K = 3.641 (215.4\text{mV})$
 Medium: 10% w/w MeOH/H2O, 1 M KCl; K: $\text{AgCl}(\text{s}) + \text{e} = \text{Ag}(\text{s}) + \text{Cl}^-$.
 $K = 3.426 (202.7\text{mV}, w=30), 3.332 (197.1\text{mV}, w=40), 3.279 (194.0\text{mV}, w=45)$

 Ag+ EMF none 35°C 0.00 U T 1974DSb (52) 8
 $K = -0.487 (-29.75\text{mV})$
 K: $\text{AgSeCN}(\text{s}) + \text{e} = \text{Ag}(\text{s}) + \text{SeCN}^-$. $K = -0.486 (-30.22\text{mV}, 40 \text{ C}), -0.492 (-31.05\text{mV}, 45 \text{ C}),$
 $-0.491 (-31.51\text{mV}, 50 \text{ C})$

Ag+ EMF non-aq 25°C 100% U I 1974KJb (53) 9
 $K = -0.07 (-4.4\text{mV})$
 In 10% w/w propylene glycol-MeOH. K: $\text{AgCl(s)} + \text{e} = \text{Ag(s)} + \text{Cl}^-$. $K = -0.17 (-10.3\text{mV}, w=0)$, $-0.08 (-4.8\text{mV}, w=20)$, $-0.17 (-10.0\text{mV}, w=50)$

Ag+ EMF non-aq 25°C 100% U I 1974KJb (54) 10
 $K = -0.27 (-16.0\text{mV})$
 In 70% w/w propylene glycol-MeOH; K: $\text{AgCl(s)} + \text{e} = \text{Ag(s)} + \text{Cl}^-$. $K = -0.44 (-26.0\text{mV}, w=90)$, $-0.55 (-32.3\text{mV}, w=100)$

Ag+ EMF mixed 5°C 20% U I 1974KRc (55) 11
 $K = 3.92 (216.6\text{mV})$
 Medium: 20% w/w diethylene glycol/H₂O. K: $\text{AgCl(s)} + \text{e} = \text{Ag(s)} + \text{Cl}^-$.
 $K = 3.76 (207.3\text{mV}, w=40)$, $3.45 (190.3\text{mV}, w=60)$, $2.85 (157.2\text{mV}, w=80)$

Ag+ EMF mixed 45°C 20% U I 1974KRc (56) 12
 $K = 3.00 (189.4\text{mV})$
 In 20% w/w diethylene glycol/H₂O. K: $\text{AgCl(s)} + \text{e} = \text{Ag(s)} + \text{Cl}^-$. $K = 2.82 (177.8\text{mV}, w=40)$, $2.35 (148.4\text{mV}, w=60)$, $1.67 (105.4\text{mV}, w=80)$ (also 15, 25 & 35 C)

Ag+ EMF none 25°C 0.00 U T 1974LLc (57) 13
 $K = 1.017 (60.14\text{mV})$
 In D₂O; K: $\text{AgBr(s)} + \text{e} = \text{Ag(s)} + \text{Br}^-$. $K = 1.086 (63.14\text{mV}, 20\text{ C})$, $0.949 (57.06\text{mV}, 30\text{ C})$, $0.882 (53.9\text{mV}, 35\text{ C})$, $0.815 (50.67\text{mV}, 40\text{ C})$

Ag+ EMF none 45°C 0.00 U T 1974LLc (58) 14
 $K = 0.750 (47.35\text{mV})$
 In D₂O; K: $\text{AgBr(s)} + \text{e} = \text{Ag(s)} + \text{Br}^-$. $K = 0.685 (43.95\text{mV}, 50\text{ C})$, $0.622 (40.48\text{mV}, 55\text{ C})$, $0.559 (36.93\text{mV}, 60\text{ C})$, $0.497 (33.33\text{mV}, 65\text{ C})$

Ag+ EMF none 70°C 0.00 U T 1974LLc (59) 15
 $K = 0.435 (29.59\text{mV})$
 Medium: D₂O; K: $\text{AgBr(s)} + \text{e} = \text{Ag(s)} + \text{Br}^-$. $K = 0.373 (25.79\text{mV}, 75\text{ C})$

Ag+ EMF non-aq 25°C 100% U T 1974NWa (60) 16
 $K = \text{ca.}10.5 (\text{ca.}622\text{mV})$
 Medium: NH₃(liquid); K: $\text{AgCl(s)} + \text{e} = \text{Ag(s)} + \text{Cl}^-$. $K = 14.72 (681\text{mV}, -40\text{ C})$

Ag+ EMF non-aq 25°C 100% U I 1973BSb (61) 17
 $K = -0.194 (-11.48\text{mV})$
 In 5 % w/w acetonitrile/MeOH; K: $\text{AgCl(s)} + \text{e} = \text{Ag(s)} + \text{Cl}^-$. $K = -0.205 (-12.12\text{mV}, w=0)$, $-0.227 (-13.41\text{mV}, w=10)$, $-0.325 (-19.22\text{mV}, w=20)$

Ag+ EMF non-aq 25°C 100% U 1973BSb (62) 18
 $K = -0.764 (-45.17\text{mV})$
 In 40% w/w acetonitrile/MeOH; K: $\text{AgCl(s)} + \text{e} = \text{Ag(s)} + \text{Cl}^-$

Ag+ EMF non-aq 25°C 100% U I 1973KDa (63) 19
 $K = -0.53 (-31.2\text{mV})$
 In 50% w/w ethylene glycol/MeCN; K: $\text{AgCl(s)} + \text{e} = \text{Ag(s)} + \text{Cl}^-$. Data also for 50%

w/w ethylene glycol-Me2NCHO: K=-1.59(-94.2mV)

Ag+ EMF mixed 25°C 11% U I 1973KMb (64) 20
K=4.39(259.9mV)

In 11.5% w/w CO(NH2)2/H2O; K: AgCl(s) + e=Ag(s)+Cl-. K=4.68(276.8mV,w=20.3),
4.93(291.6mV,w=29.6)

Ag+ EMF mixed 25°C 37% U 1973KMb (65) 21
K=5.07(299.7mV)

In 36.8% w/w CO(NH2)2/H2O; K: AgCl(s) + e=Ag(s)+Cl-. Also 10, 15, 20, 30, 35
and 40 C

Ag+ ISE non-aq 25°C 100% U 1973NDb (66) 22
K=4.331(256.2mV)

Medium: formamide; K: AgIO3(s)+e=Ag(s)+IO3-

Ag+ EMF alc/w 25°C 50% U T 1973RRa (67) 23
K=0.901(53.33mV)

Medium: 50% w/w MeOH/H2O; K: AgBr(s)+e=Ag(s)+Br-. K=1.180(65.15mV,5 C),
1.112(62.47mV,10 C), 1.043(59.61mV,15 C)

Ag+ EMF alc/w 20°C 50% U T 1973RRa (68) 24
K=0.973(56.60mV)

Medium: 50% w/w MeOH/H2O; K: AgBr(s)+e=Ag(s)+Br-. K=0.830(49.92mV,30 C),
0.757(46.28mV,35 C), 0.684(42.52mV,40 C)

Ag+ EMF alc/w 45°C 50% U T 1973RRa (69) 25
K=0.610(38.51mV)

Medium: 50% w/w MeOH/H2O; K: AgBr(s)+e=Ag(s)+Br-. K=0.535(34.30mV,50 C),
0.458(29.85mV,55 C), 0.383(25.35mV,60 C)

Ag+ EMF alc/w 25°C 30% U I 1972BLb (70) 26
K=1.02(60.4mV)

Medium: 30% w/w EtOH/H2O; K: AgBr(s)+e=Ag(s)+Br-. K=0.85(50.0mV,w=50),
0.49(29.0mV,w=72), -3.36(-198.5mV,w=100)

Ag+ EMF mixed 25°C 20% U I 1972BLb (71) 27
K=1.15(68.3mV)

Medium: 20% w/w acetone/H2O; K: AgBr(s)+e=Ag(s)+Br-. K=0.96(56.5mV,w=40),
0.46(27.1mV,w=60), -0.76(-44.8mV,w=80), -6.51(-385mV,w=100)

Ag+ EMF diox/w 25°C 70% U I 1972BLb (72) 28
K=0.92(54.4mV)

Medium: 70% w/w dioxan/H2O; K: AgBr(s)+e=Ag(s)+Br-

Ag+ EMF alc/w 25°C 30% U I 1972BLb (73) 29
K=-2.54(-150.3mV)

Medium: 30% w/w EtOH/H2O; K: AgI(s)+e=Ag(s)+I-. K=-2.51(-148.6mV,w=50),
-2.80(-165.9mV,w=72), -6.47(-382.6mV,w=100)

Ag+ EMF mixed 25°C 20% U I 1972BLb (74) 30
 $K = -2.38 (-140.7\text{mV})$
 Medium: 20% w/w acetone/H₂O; $K = \text{AgI}(s) + e = \text{Ag}(s) + \text{I}^-$. $K = -2.27 (-134.0\text{mV}, w=40)$,
 $-2.43 (-143.9\text{mV}, w=60)$, $-3.15 (-186.2\text{mV}, w=80)$, $-6.51 (-385\text{mV}, w=100)$

Ag+ EMF diox/w 25°C 70% U 1972BLb (75) 31
 $K = -3.79 (-224.3\text{mV})$
 Medium: 70% w/w dioxan/H₂O; $K: \text{AgI}(s) + e = \text{Ag}(s) + \text{I}^-$

Ag+ oth oth/un 25°C 0.0 U I 1972COa (76) 32
 $K(\text{Ag} + e = \text{Ag}(s)) = 13.40 (739\text{mV})$
 Method: Estimated data. $K = 9.15 (541\text{mV}$ in MeOH, $8.42 (498\text{mV})$ in EtOH,
 $8.42 (498\text{mV})$ in BuOH, $8.77 (519\text{mV})$ in PentOH, $7.32 (433\text{mV})$ in acetone

Ag+ oth non-aq 25°C 100% U I 1972COa (77) 33
 $K(\text{Ag} + e = \text{Ag}(s)) = -0.02 (-1\text{mV})$
 Method: Estimated data. Medium: MeCN. In HCOOH, $K = -1.49 (-88\text{mV})$.
 Also in NH₃, N₂H₄

Ag+ EMF NaClO₄ 25°C 3.00M U TI 1972GIa (78) 34
 $K = 3.15 (186.3\text{mV})$
 Medium: HClO₄; $K: \text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = 2.40 (158.6\text{mV}, 60\text{ C})$. Data also in
 3 M HCl ($K = 3.41 (201.8\text{mV}, 25\text{ C})$, $2.74 (180.8\text{mV}, 60\text{ C})$)

Ag+ EMF NaClO₄ 25°C 3.00M U TI 1972GIa (79) 35
 $K = 3.47 (205.5\text{mV})$
 $K: \text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = 2.66 (175.9\text{mV}, 60\text{ C})$. Data also in 3 M NaCl: $K = 3.61$
 $(213.4\text{mV}, 25\text{ C})$, $2.88 (190.7\text{mV}, 60\text{ C})$

Ag+ EMF oth/un 25°C 3.00M U TI 1972GIa (80) 36
 $K = 0.48 (28.6\text{mV})$
 Medium: HClO₄; $K: \text{AgBr}(s) + e = \text{Ag}(s) + \text{Br}^-$. $K = 0.05 (3.5\text{mV}, 60\text{ C})$. Data also in 3 M
 HBr: $K = 0.62 (36.8\text{mV}, 25\text{ C})$, $0.26 (17.1\text{mV}, 60\text{ C})$

Ag+ EMF NaClO₄ 25°C 3.00M U TI 1972GIa (81) 37
 $K = 0.86 (50.8\text{mV})$
 $K: \text{AgBr}(s) + e = \text{Ag}(s) + \text{Br}^-$. $K = 0.37 (24.2\text{mV}, 60\text{ C})$. Data also in 3 M NaBr: $K = 0.86$
 $(51.1\text{mV}, 25\text{ C})$, $0.46 (30.2\text{mV}, 60\text{ C})$

Ag+ EMF alc/w 25°C 10% U T 1972GSb (82) 38
 $K = 3.626 (214.5\text{mV})$
 Medium: 10% w/w EtOH/H₂O; $K: \text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = 3.408 (208.40\text{mV}, 35\text{ C})$,
 $3.297 (204.84\text{mV}, 40\text{ C})$

Ag+ EMF alc/w 25°C 30% U T 1972GSb (83) 39
 $K = 3.394 (200.76\text{mV})$
 Medium: 30% w/w EtOH/H₂O; $K: \text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = 3.174 (194.07\text{mV}, 35\text{ C})$,
 $3.061 (190.17\text{mV}, 40\text{ C})$

Ag+ EMF alc/w 25°C 40% U T 1972GSb (84) 40

K=3.759(222.38mV)

K: AgCl(s) + e=Ag(s)+Cl-

Ag+ EMF non-aq 25°C 100% U T 1972RBc (95) 51

K=-1.160(-68.63mV)

In butanol; K:AgCl(s) + e=Ag(s)+Cl-. K=-0.529(-29.18mV,5 C), -0.717(-40.27mV, 10 C), -0.817(-46.72mV,15 C), -0.963(-56.02mV,20 C)

Ag+ EMF non-aq 30°C 100% U T 1972RBc (96) 52

K=-1.448(-87.09mV)

In butanol; K: AgCl(s) + e=Ag(s)+Cl-. K=-1.687(-103.12mV,35 C), -1.739 (-108.02mV,40 C), -2.005(-126.59mV,45 C)

Ag+ EMF mixed 25°C 5% U T 1972RVa (97) 53

K=3.430(202.9mV)

In 5% w/w butanol/H2O; K: AgCl(s) + e=Ag(s)+Cl-. K=3.928(216.8mV,5 C), 3.675 (210.1mV,15 C), 3.202(195.8mV,35 C), 2.983(188.3mV,45 C)

Ag+ EMF mixed 25°C 95% U T 1972RVb (98) 54

K=0.356(21.05mV)

Medium: 95% w/w propanol/H2O; K:AgCl(s) + e=Ag(s)+Cl-. K=0.823(45.42mV,5 C), 0.754(42.35mV,10 C), 0.588(33.63mV,15 C), 0.533(31.00mV,20 C)

Ag+ EMF mixed 45°C 95% U T 1972RVb (99) 55

K=-0.324(-20.47mV)

Medium: 95% w/w propanol/H2O; K:AgCl(s) + e=Ag(s)+Cl-. K=0.131(7.85mV,30 C), -0.052(-3.19mV,35 C), -0.323(-20.07mV,40 C)

Ag+ EMF mixed 5°C 2% U I 1972RVc (100) 56

K=4.153(229.2mV)

Medium: 2% w/w t-butanol/H2O. K:AgCl(s) + e=Ag(s)+Cl-. K=4.084(225.4mV,w=4), 4.071(224.7mV,w=8)

Ag+ EMF mixed 25°C 2% U I 1972RVc (101) 57

K=3.641(215.4mV)

Medium: 2% w/w t-butanol/H2O. K:AgCl(s) + e=Ag(s)+Cl-. K=3.597(212.8mV,w=4), 3.555(210.3mV,w=8)

Ag+ EMF mixed 45°C 2% U I 1972RVc (102) 58

K=3.154(199.1mV)

Medium: 2% w/w t-butanol/H2O. K:AgCl(s) + e=Ag(s)+Cl-. K=3.086(194.8mV,w=4), 3.080(194.4mV,w=8) also 10, 15, 20, 30 and 40 C

Ag+ EMF non-aq 25°C 100% U T 1972RVd (103) 59

K=-2.262(-133.8mV)

Medium: i-propanol; K: AgCl(s) + e=Ag(s)+Cl-. K=-2.033(-112.2mV,5 C), -2.138(-120.1mV,10 C), -2.185(-124.9mV,15 C), -2.199(-127.9mV,20 C)

Ag+ EMF non-aq 30°C 100% U T 1972RVd (104) 60

K=-2.303(-138.6mV)

Medium: i-propanol; K: $\text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = -2.367(-144.7\text{mV}, 35\text{ C}), -2.446(-152.0\text{mV}, 40\text{ C}), -2.544(-160.6\text{mV}, 45\text{ C})$

Ag+ EMF non-aq 25°C 100% U T 1972Rve (105) 61
 $K = 0.35(20.77\text{mV})$

Medium: glycerol; K: $\text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = 0.74(40.65\text{mV}, 5\text{ C}), 0.56(31.74\text{mV}, 10\text{ C}), 0.46(26.05\text{mV}, 15\text{ C}), 0.43(25.11\text{mV}, 20\text{ C})$

Ag+ EMF non-aq 30°C 100% U T 1972Rve (106) 62
 $K = 0.23(14.07\text{mV})$

In glycerol; K: $\text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = 0.16(9.56\text{mV}, 35\text{ C}), -0.06(-3.53\text{mV}, 40\text{ C}), -0.12(-7.76\text{mV}, 45\text{ C})$

Ag+ EMF mixed 25°C 5% U T 1972RVf (107) 63
 $K = 3.440(203.50\text{mV})$

Medium: 5% w/w 2-methyl-1-propanol/H₂O K: $\text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = 3.810(210.28\text{mV}, 5\text{ C}), 3.649(208.64\text{mV}, 15\text{ C}), 3.187(194.88\text{mV}, 35\text{ C}), 2.895(45\text{ C})$

Ag+ EMF mixed 25°C 5% U T 1972RVg (108) 64
 $K = 3.68(217.9\text{mV})$

Medium: 5% w/w DMSO/H₂O; K: $\text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = 4.19(231.4\text{mV}, 5\text{ C}), 3.94(225.5\text{mV}, 15\text{ C}), 3.44(210.2\text{mV}, 35\text{ C}), 3.23(203.6\text{mV}, 45\text{ C})$

Ag+ EMF mixed 25°C 10% U T 1972RVg (109) 65
 $K = 3.63(214.8\text{mV})$

Medium: 10% w/w DMSO/H₂O; K: $\text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = 4.19(231.2\text{mV}, 5\text{ C}), 3.87(221.0\text{mV}, 15\text{ C}), 3.42(209.3\text{mV}, 35\text{ C}), 3.21(202.9\text{mV}, 45\text{ C})$

Ag+ EMF mixed 25°C 20% U T 1972RVg (110) 66
 $K = 3.58(211.7\text{mV})$

Medium: 20% w/w DMSO/H₂O; K: $\text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = 4.11(227.1\text{mV}, 5\text{ C}), 3.82(218.6\text{mV}, 15\text{ C}), 3.40(207.6\text{mV}, 35\text{ C}), 3.15(199.0\text{mV}, 45\text{ C})$

Ag+ EMF mixed 25°C 0.02M U I 1972SHa (111) 67
 $K = 3.75(222.0\text{mV})$

In C M C₆H₅OH in H₂O at C=0.025; K: $\text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$. $K = 3.76(222.2\text{mV}, C=0), 3.75(221.7\text{mV}, C=0.05), 3.74(221.4\text{mV}, C=0.075)$

Ag+ EMF mixed 25°C 0.15M U 1972SHa (112) 68
 $K = 3.77(223.1\text{mV})$

In C M C₆H₅OH in H₂O, at C=0.15; K: $\text{AgCl}(s) + e = \text{Ag}(s) + \text{Cl}^-$; also 30, 35, 40, 35 C

Ag+ oth non-aq 300°C 100% U T 1971BJc (113) 69
 $K(\text{Ag} + e = \text{Ag}(s)) = 5.94(675\text{mV})$

Method: Estimated data. Temp. Range (300-400). 309 C: 5.72(661mV), 350 C: 5.27(651mV), 400 C: 4.69(627mV). Medium: fused (Na, K)NO₃

Ag+ oth non-aq 309°C 100% U T 1971BJc (114) 70
 $K(\text{Ag} + e = \text{Ag}(s)) = 5.95(687\text{mV})$

Method: Estimated data. Medium fused NaX: 5.95(687mV) X=NO₃⁻, 3.96(456mV)

X=NO2-

Ag+ oth non-aq 400°C 100% U T 1971BJc (115) 71
K(Ag+e=Ag(s))=-0.28(-37mV)

Method:Estimated data. At 450 C: -0.47(-68mV), 550 C: -0.80(131mV).
Medium: fused (Li,K)Cl

Ag+ oth non-aq 550°C 100% U 1971BJc (116) 72
K(Ag+e=Ag(s))=3.59(586mV)

Method:Estimated data.Medium: fused (Li,Na,K)SO4. In fused (Li,Na)CO3,
550 C, K=2.04(334mV)

Ag+ EMF non-aq 25°C 100% U I 1971BSc (117) 73
K=-0.75(-44.56mV)

Medium: 40% w/w acetonitrile/MeOH; K: AgCl(s)+e=Ag(s)+Cl-

Ag+ vlt none 25°C 0.00 U 1971JPa (118) 74
K(Ag + e=Ag(s))=13.61(805mV)

Ag+ EMF mixed 25°C 10% U I 1971KHa (119) 75
K=3.736(221.02mV)

In 10% w/w DMSO/H2O; K: AgCl(s) + e=Ag(s)+Cl-. K=3.718(219.92mV,w=20),3.680
(217.68mV,w=40), 3.578(211.66mV,w=60), 2.994(177.1mV,w=80)

Ag+ EMF mixed 25°C 10% U I 1971KHa (120) 76
K=1.24(73.6mV)

Medium: 10% w/w DMSO/H2O; K: AgBr(s)+e=Ag(s)+Br-. K=1.29(76.5mV,w=20),
1.51(89.6mV,w=40), 1.76(104.0mV,w=60), 1.71(101.4mV,w=70), 1.61(95.0mV,w=80)

Ag+ EMF mixed 25°C 10% U I 1971KHa (121) 77
k=-2.43(-143.6mV)

Medium: 10% w/w DMSO/H2O; K: AgI(s)+e=Ag(s)+I-. K=-2.27(-134.3mV,w=20),
-1.79(-105.9 mV,w=40), -1.10(-65.3mV,w=60)

Ag+ EMF none 25°C 0.00 U 1971KKg (122) 78
K=3.758(222.33mV)

K: AgCl(s) + e=Ag(s)+Cl-

Ag+ EMF diox/w 20°C 5% U I 1971MMF (123) 79
K=1.209(70.32mV)

Medium: 5 % w/w dioxan/H2O; K: AgBr(s)+e=Ag(s)+Br-. K=1.170(68.03mV,w=10),
1.128(65.63mV,w=15), 1.093(63.59mV,w=20)

Ag+ EMF diox/w 20°C 45% U I 1971MMF (124) 80
K=0.680(39.55mV)

Medium: 45% w/w dioxan/H2O; K: AgBr(s)+e=Ag(s)+Br-. K=-0.875(-50.88mV,w=70),
-2.859(-166.3mV,w=82)

Ag+ EMF diox/w 25°C 5% U I 1971MMF (125) 81
K=1.147(67.85mV)

Medium: 5 % w/w dioxan/H₂O; K: AgBr(s)+e=Ag(s)+Br⁻. K=1.106(65.42mV,w=10),
1.060(62.71mV,w=15), 1.017(60.15mV,w=20)

Ag+ EMF diox/w 25°C 45% U I 1971MMF (126) 82
K=0.583(34.47mV)

Medium: 45% w/w dioxan/H₂O; K: AgBr(s)+e=Ag(s)+Br⁻. K=-0.997(-58.98mV,w=70),
-3.017(-178.5mV,w=82)

Ag+ EMF diox/w 30°C 5% U I 1971MMF (127) 83
K=1.080(64.97mV)

Medium: 5 % w/w dioxan/H₂O; K: AgBr(s)+e=Ag(s)+Br⁻. K=1.041(62.64mV,w=10),
0.993(59.70mV,w=15), 0.947(56.98mV,w=20)

Ag+ EMF diox/w 30°C 45% U I 1971MMF (128) 84
K=0.484(29.14mV)

Medium: 45% w/w dioxan/H₂O; K: AgBr(s)+e=Ag(s)+Br⁻. K=-1.138(-68.47mV,w=70),
-3.157(-189.9mV,w=82)

Ag+ EMF diox/w 35°C 5% U I 1971MMF (129) 85
K=1.015(62.05mV)

Medium: 5 % w/w dioxan/H₂O; K: AgBr(s)+e=Ag(s)+Br⁻. K=0.976(59.65mV,w=10),
0.922(56.40mV,w=15), 0.873(53.35mV,w=20)

Ag+ EMF diox/w 35°C 45% U I 1971MMF (130) 86
K=0.387(23.64mV)

Medium: 45% w/w dioxan/H₂O; K: AgBr(s)+e=Ag(s)+Br⁻. K=-1.260(-77.05mV,w=70),
-3.314(-202.6mV,w=82)

Ag+ EMF mixed 25°C 8% U I 1971RBb (131) 87
K=3.469(205.22mV)

Medium: 8.0% w/w i-propanol/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻.
K=3.758(222.34mV,w=0), 3.299(195.17mV,w=20.8), 3.014(178.31mV,w=44.0)

Ag+ EMF mixed 25°C 70% U I 1971RBb (132) 88
K=2.195(129.87mV)

Medium: 70.3% w/w i-propanol/H₂O; K:AgCl(s) + e=Ag(s)+Cl⁻.
K=1.226(72.53mV,w=87.7%) also data at 0, 15 and 35 C

Ag+ EMF mixed 25°C 8% U I 1971RBb (133) 89
K=3.64(215.5mV)

In 8.7% w/w monoglyme/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=3.53(209.0mV,w=17.8),
2.13(126.2mV,w=57) also 15 and 35 C

Ag+ EMF mixed 25°C 18% U I 1971RBb (134) 90
K=3.45(203.8mV)

In 18.2% w/w tetrahydrofuran/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=1.57(93.1mV,
w=73), -0.44(-25.8mV,w=89) also 15 and 35 C

Ag+ EMF mixed 25°C 10% U T 1971RVa (135) 91
K=3.484(206.1mV)

Medium:10% w/w t-butanol/H₂O. K:AgCl(s) + e=Ag(s)+Cl⁻. K=3.912(215.9mV,5 C), 3.040(191.9mV,45 C)

Ag+ EMF mixed 25°C 20% U T 1971RVa (136) 92
K=3.308(195.7mV)

Medium:20% w/w t-butanol/H₂O. K:AgCl(s) + e=Ag(s)+Cl⁻. K=3.774(208.3mV,5 C), 2.950(186.2mV,45 C)

Ag+ EMF mixed 25°C 40% U T 1971RVa (137) 93
K=3.119(184.5mV)

Medium:40% w/w t-butanol/H₂O. K:AgCl(s) + e=Ag(s)+Cl⁻. K=3.557(196.3mV,5 C), 2.638(166.5mV,45 C)

Ag+ EMF mixed 25°C 70% U T 1971RVa (138) 94
K=2.115(125.1mV)

Medium:70% w/w t-butanol/H₂O. K:AgCl(s) + e=Ag(s)+Cl⁻. K=2.616(144.4mV,5 C), 1.624(102.5mV,45 C), also intermediate temperatures

Ag+ EMF mixed 25°C 5% U T 1971RVb (139) 95
K=3.73(220.9mV)

In 5 % w/w propene carbonate/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=4.18(230.8mV, 5 C), 3.30(208.2mV,45 C)

Ag+ EMF mixed 25°C 10% U T 1971RVb (140) 96
K=3.70(218.8mV)

In 10% w/w propene carbonate/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=4.15(228.9mV, 5 C), 3.25(204.9mV,45 C)

Ag+ EMF mixed 25°C 20% U T 1971RVb (141) 97
K=3.60(213.2mV)

In 20% w/w propene carbonate/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=4.11(226.6mV, 5 C), 3.15(199.0mV,45 C) also intermediate temperatures

Ag+ EMF mixed 25°C 5% U T 1971RVc (142) 98
K=3.742(221.39mV)

Medium: 5% w/w N,N-dimethylformamide/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=4.182(230.81mV,5 C), 3.977(227.35mV,15 C), 3.518(215.07mV,35 C)

Ag+ EMF mixed 45°C 5% U 1971RVc (143) 99
K=3.244(204.76mV)

Medium: 5% w/w N,N-dimethylformamide/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻

Ag+ EMF mixed 25°C 10% U T 1971RVc (144) 100
K=3.632(214.87mV)

Medium: 10% w/w N,N-dimethylformamide/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=4.103(226.43mV,5 C), 3.902(223.07mV,15 C), 3.446(210.63mV,35 C)

Ag+ EMF mixed 45°C 10% U 1971RVc (145) 101
K=3.174(200.38mV)

Medium: 10% w/w N,N-dimethylformamide/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻

Ag+	EMF mixed	25°C	5%	U	I	1971STb	(156)	112
								K=3.71(219.4mV)
	In 5% w/w methylcellosolve/H ₂ O; K: AgCl(s) + e=Ag(s)+Cl ⁻ . K=3.76(222.6mV,w=0) 3.65(215.7mV,w=10), 3.52(208.3mV,w=20)							
Ag+	EMF mixed	25°C	30%	U	I	1971STb	(157)	113
								K=3.39(200.7mV)
	In 30% w/w methylcellosolve/H ₂ O; K: AgCl(s) + e=Ag(s)+Cl ⁻ . K=3.25(192.1mV, w=40), 3.05(180.6mV,w=50)							
Ag+	EMF mixed	25°C	60%	U	I	1971STb	(158)	114
								K=2.78(164.4mV)
	in 60% w/w methylcellosolve/H ₂ O; K: AgCl(s) + e=Ag(s)+Cl ⁻ . K=1.52(90.0mV, w=80). Also 30, 35, 40 and 45 C							
Ag+	EMF non-aq	25°C	100%	U	I	1970ABb	(159)	115
								K=-1.83(-108.5mV)
	In 25% v/v benzene-EtOH; K: AgCl(s)+e=Ag(s)+Cl ⁻ . K=-3.74(-221.0mV,v=50), -5.66(-333.0mV,v=75) also mixtures containing 0.05-1 M H ₂ O							
Ag+	EMF non-aq	25°C	100%	U		1970BPc	(160)	116
								K=3.52(0.208V)
	Medium: acetamide; K: AgCl(s) + e=Ag(s)+Cl ⁻							
Ag+	EMF alc/w	25°C	10%	U	I	1970FKc	(161)	117
								K=-2.61(-154.2mV)
	Medium: 10% w/w MeOH/H ₂ O; K: AgI(s)+e=Ag(s)+I ⁻ . K=-2.61(-154.2mV,w=20.2), -2.53(-149.9mV,w=33.4), -2.52(-149.0mV,w=43.1), -2.52(-149.3mV,w=50)							
Ag+	EMF none	25°C	0.00	U	I	1970FLa	(162)	118
								K(Ag+e=Ag(s))=13.508(799.1mV)
	Data also in dioxan: K=13.655(807.8mV)							
Ag+	EMF alc/w	25°C	10%	U	I	1970FLa	(163)	119
								K(Ag+e=Ag(s))=13.633(806.5mV)
	Medium: 10% w/w MeOH/H ₂ O. K=13.765(814.3mV,w=20.2%), 13.964(826.1mV,33.4%), 14.140(836.5mV,43.1%)							
Ag+	EMF non-aq	25°C	100%	U	T	1970KCb	(164)	120
								K=-0.55(-32.3mV)
	Medium: propylene glycol. K: AgCl(s) + e=Ag(s)+Cl ⁻ . K=-0.03(-1.5mV,5 C), -0.16(-8.9mV,10 C), -0.29(-16.6mV,15 C), -0.42(-24.4mV,20 C)							
Ag+	EMF non-aq	30°C	100%	U	T	1970KCb	(165)	121
								K=-0.67(-40.2mV)
	Medium: propylene glycol. K: AgCl(s) + e=Ag(s)+Cl ⁻ . K=-0.79(-48.3mV,35 C), -0.90(-56.1mV,40 C), -1.01(-63.8mV,45 C)							
Ag+	EMF non-aq	25°C	100%	U	T	1970KCb	(166)	122

K=-1.70(-100.7mV)

Medium: ethylene glycol; K: AgBr(s)+e=Ag(s)+Br-. K=-1.41(-78.0mV,5 C),
-1.50(-84.0mV,10 C), -1.57(-89.5mV,15 C), -1.64(-95.2mV,20 C)

Ag+ EMF non-aq 30°C 100% U T 1970KCb (167) 123
K=-1.78(-106.8mV)

Medium: ethylene glycol; K: AgBr(s)+e=Ag(s)+Br-. K=-1.85(-113.0mV,35 C),
-1.91(-118.7mV,40 C), -1.97(-124.5mV,45 C)

Ag+ EMF non-aq 25°C 100% U T 1970KJa (168) 124
K=-2.76(-163.3mV)

Medium: propylene glycol; K: AgBr(s)+e=Ag(s)+Br-. K=-2.43(-134.2mV,5 C),
-2.51(-141.1mV,10 C), -2.60(-148.9mV,15 C), -2.68(-156.0mV,20 C)

Ag+ EMF non-aq 30°C 100% U T 1970KJa (169) 125
K=-2.84(-170.6mV)

Medium: propylene glycol; K: AgBr(s)+e=Ag(s)+Br-. K=-2.92(-178.4mV,35 C),
-2.99(-185.7mV,40 C), -3.07(-193.7mV,45 C)

Ag+ EMF non-aq 25°C 100% U T 1970KJa (170) 126
K=-4.95(-292.8mV)

Medium: ethylene glycol; K: AgI(s)+e=Ag(s)+I-. K=-4.94(-272.8mV,5 C),
-4.94(-277.4mV,10 C), -5.12(-292.8mV,15 C), -4.95(-287.8mV,20 C)

Ag+ EMF non-aq 30°C 100% U T 1970KJa (171) 127
K=-4.95(-297.9mV)

Medium: ethylene glycol; K: AgI(s)+e=Ag(s)+I-. K=-4.96(-303.2mV,35 C),
-4.96(-307.9mV,40 C), -4.98(-314.6mV,45 C)

Ag+ EMF non-aq 25°C 100% U T 1970KJa (172) 128
K=-5.86(-346.8mV)

Medium: propylene glycol; K: AgI(s)+e=Ag(s)+I-. K=-5.79(-319.7mV,5 C),
-5.80(-325.8mV,10 C), -5.83(-333.2mV,15 C), -5.84(-339.9mV,20 C)

Ag+ EMF non-aq 30°C 100% U T 1970KJa (173) 129
K=-5.88(-353.5mV)

Medium: propylene glycol; K: AgI(s)+e=Ag(s)+I-. K=-5.90(-360.9mV,35 C),
-5.92(-367.6 mV,40 C), -5.94(-374.9mV,45 C)

Ag+ EMF alc/w 25°C 50% U T 1970LEb (174) 130
K=3.143(185.96mV)

Medium: 50% w/w EtOH/H2O; K: AgCl(s) + e=Ag(s)+Cl-. K=3.398(194.25mV,15 C),
3.271(190.24mV,20 C), 3.021(181.70mV,30 C)

Ag+ EMF alc/w 35°C 50% U 1970LEb (175) 131
K=2.894(176.92mV)

Medium: 50% w/w EtOH/H2O; K: AgCl(s) + e=Ag(s)+Cl-

Ag+ EMF mixed 25°C 10% U I 1970MMe (176) 132
K=0.19(11.5mV)

Medium: 10% w/w i-propanol/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. 0%: K=0.27(15.9mV). 20%: 0.14(8.0mV). 30%: 0.09(5.5mV). 50%: -0.11(-6.5mV). 60%: -0.30(-18.0mV)

Ag+ EMF mixed 25°C 10% U I 1970MMe (177) 133
K=0.19(11.0mV)

Medium: 10% w/w t-butanol/H₂O. K: AgCl(s) + e=Ag(s)+Cl⁻. K=0.14(8.0mV, w=20), 0.07(4.0mV, w=30), -0.03(-1.5mV, w=40), -0.20(-12.0mV, w=50), -0.46(w=60)

Ag+ EMF alc/w 25°C 10% U I 1970SPa (178) 134
K=3.623(214.3mV)

Medium: 10% w/w EtOH/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=3.494(206.7mV, w=20), 3.399(201.1mV, w=30), 3.283(194.2mV, w=40)

Ag+ EMF alc/w 25°C 52% U I 1970SPa (179) 135
K=3.087(182.6mV)

Medium: 52% w/w EtOH/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=2.923(172.9mV, w=60), 2.644(156.4mV, w=70), 2.241(132.6mV, w=80)

Ag+ EMF none 25°C 0.00 U T 1970SPe (180) 136
K=1.21(71.4mV)

K: AgBr(s)+e=Ag(s)+Br⁻. K=1.44(79.5mV, 5 C), 1.32(75.6mV, 15 C), 1.08(66.1mV, 35 C)

Ag+ EMF non-aq 98°C 100% U 1969GUa (181) 137
K(Ag + e=Ag(s))=10.25(0.755V)

Medium: N-methylformamide containing 1 M NaNO₃

Ag+ EMF non-aq 25°C 100% U 1969MKe (182) 138
K(Ag + e=Ag(s))=9.31(551mV)

Medium: pyridine

Ag+ EMF alc/w 25°C 92% U T 1969PBb (183) 139
K=1.215(71.85mV)

Medium: 92.4% w/w EtOH/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=1.922(106.07mV, 5 C), 1.742(97.88mV, 10 C), 1.566(89.51mV, 15 C)

Ag+ EMF alc/w 20°C 92% U T 1969PBb (184) 140
K=1.387(80.68mV)

Medium: 92.4% w/w EtOH/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=1.038(62.45mV, 30 C), 0.866(52.93mV, 35 C), 0.696(43.27mV, 40 C)

Ag+ EMF alc/w 45°C 92% U T 1969PBb (185) 141
K=0.524(33.09mV)

Medium: 92.4% w/w EtOH/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=0.354(22.69mV, 50 C)

Ag+ EMF mixed 20°C 20% U I 1969TBa (186) 142
K=3.70(215.1mV)

In 20.1% w/w sulfolane/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. K=3.40(197.8mV, w=40), 2.92(169.8mV, w=60), 1.81(105.2mV, w=80), -0.94(-54.5mV, w=94.3)

Ag+ EMF mixed 25°C 20% U I 1969TBa (187) 143
 $K=3.57(211.4\text{mV})$
 In 20.1% w/w sulfolane/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. $K=3.27(193.7\text{mV},w=40)$,
 $2.78(164.3\text{mV},w=60)$, $1.64(97.3\text{mV},w=80)$, $-1.10(-64.8\text{mV},w=94.3)$

Ag+ EMF mixed 30°C 20% U I 1969TBa (188) 144
 $K=3.45(207.5\text{mV})$
 In 20.1% w/w sulfolane/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. $K=3.14(189.1\text{mV},w=40)$,
 $2.64(158.5\text{mV},w=60)$, $1.48(88.9\text{mV},w=80)$, $-1.27(-76.2\text{mV},w=94.3)$

Ag+ EMF mixed 40°C 20% U I 1969TBa (189) 145
 $K=3.21(199.5\text{mV})$
 In 20.1% w/w sulfolane/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻. $K=2.89(179.4\text{mV},w=40)$,
 $2.36(146.5\text{mV},w=60)$

Ag+ EMF non-aq 15°C 100% U T 1968BDF (190) 146
 $K(\text{Ag}+e=\text{Ag}(s))=12.272$, 701.6 mV
 Medium: NH₂CHO. At 25 C: $K=11.668$, 690.2 mV

Ag+ EMF non-aq 5°C 100% U T 1968BDF (191) 147
 $K(\text{AgCl}(s)+e=\text{Ag}(s)+\text{Cl}^-)=4.012$
 Medium: NH₂CHO. $K=3.384$ at 25 C

Ag+ EMF non-aq 25°C 100% U I 1968ISb (192) 148
 $K(\text{AgCl}(s)+e=\text{Ag}(s)+\text{Cl}^-)=-3.11$
 Medium: Et₂O. $K=-3.45$ (Pr₂O), -3.67 (Bu₂O), -3.89 ((C₅H₁₁)₂O)

Ag+ EMF mixed 0°C 46% U I 1968JSa (193) 149
 $K=3.79(205.3\text{mV})$
 Medium: 46.5% w/w 1,2-dimethoxyethane/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻.
 $K=3.11(168.8\text{mV},w=67.0)$

Ag+ EMF mixed 35°C 8% U I 1968JSa (194) 150
 $K=3.42(208.9\text{mV})$
 Medium: 8.7 % w/w 1,2-dimethoxyethane/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻.
 $K=3.29(200.9\text{mV},w=17.8)$, $2.75(168.0\text{mV},w=46.5)$

Ag+ EMF mixed 35°C 67% U 1968JSa (195) 151
 $K=1.80(109.9\text{mV})$
 Medium: 67.0% w/w 1,2-dimethoxyethane/H₂O; K: AgCl(s) + e=Ag(s)+Cl⁻.
 Also 15 and 25 C

Ag+ EMF alc/w 25°C 30% U I 1968MAa (196) 152
 $K=0.98(58.2\text{mV})$
 Medium: 30% w/w MeOH/H₂O; K: AgBr(s)+e=Ag(s)+Br⁻. $K=0.74(43.6\text{mV},w=60)$,
 $-0.38(-22.6\text{mV},w=90)$, $-1.77(-104.6\text{mV},w=99)$, $-2.28(-134.9\text{mV},w=100)$

Ag+ EMF alc/w 45°C 30% U TI 1968MAa (197) 153
 $K=0.65(41.1\text{mV})$
 Medium: 30% w/w MeOH/H₂O; K: AgBr(s)+e=Ag(s)+Br⁻. $K=0.30(19.1\text{mV},w=60)$,

-0.92(-58.2mV,w=90), -2.32(-146.3mV,w=99), -2.79(-176mV,100%). Also at 35 C

Ag+ EMF none 25°C 0.0 U TI 1968MAc (198) 154
K(AgI(s)+e=Ag(s)+I)=-2.574

K=-2.549(35 C). DH=1.0 kJ mol⁻¹. DS= -60 J K⁻¹ mol⁻¹. In 100% MeOH: K=-5.373 (25 C), -5.533(45 C). DH=-14.4, DS=-150. Data also for MeOH/H₂O mixtures

Ag+ EMF non-aq 25°C 100% U 1968MMe (199) 155
K(AgBr(s)+e=Ag(s)+Br)=1.635

Medium: H₂NCHO

Ag+ EMF none 10°C 0.0 U T 1968Mnc (200) 156
K=17.04, 478.7 mV

K: Ag₂C₂O₄(s) + 2e = 2Ag(s) + C₂O₄²⁻. At 25 C: K=15.71, 464.7 mV; 50 C: K=13.76, 441.2 mV

Ag+ EMF none 25°C 0.00 U T 1968NMa (201) 157
K=17.25(340.2mV)

K: Ag₃P₄O₄(s)+3e=3Ag(s)+P₄O₄³⁻. K=19.65(367.9mV,10 C), 18.77(357.7mV,15 C), 18.04(349.7mV,20 C), 16.39(328.7mV,30 C), 15.61(35 C), 14.78(306.1mV,40 C)

Ag+ EMF mixed 25°C 9% U 1968RSb (202) 158
E₀=a+bT+cT² (constants a,b and c given for w=9.0,18.2,47.2,73.0 and 89.0 in system w/w % tetrahydrofuran/H₂O at 0-35 C)

Ag+ EMF oth/un 25°C 100% U 1968SPe (203) 159
K(AgCl(s)+e=Ag(s)+Cl)=2.536

Medium: Me₂NCOMe

Ag+ EMF alc/w 25°C 100% U 1968SSb (204) 160
K=-2.31(-136.8mV)

Medium: MeOH; K: AgBr(s)+e=Ag(s)+Br-

Ag+ EMF non-aq 25°C 100% U 1968SSb (205) 161
K=-5.06(-299.3mV)

Medium: MeOH; K: AgI(s)+e=Ag(s)+I-

Ag+ EMF alc/w 25°C 100% U I 1967ALa (206) 162
K(AgBr(s)+e=Ag(s)+Br)=-2.345

Medium MeOH. K=-0.130, -7.7 mV(87.7% MeOH)

Ag+ EMF alc/w 25°C 100% U I 1967ALa (207) 163
K(AgI(s)+e=Ag(s)+I)=-5.369

Medium: MeOH. K=-3.187, -188.5 mV (87.7% MeOH)

Ag+ EMF non-aq 25°C 100% U T H 1967ANc (208) 164
K(AgCl(s)+e=Ag(s)+Cl)=3.357

Medium: H₂NCHO. K=2.982(40 C;185.3 mV), K=2.853(45 C;180.1 mV), K=2.634(55 C;171.5 mV). DH=-192.7 kJ mol⁻¹(25 C), DS=-378.3 J K⁻¹ mol⁻¹

Ag+ kin NaClO4 25°C 4.0M U M 1967HSc (209) 165
K=1.64
Medium: HClO4. K: Co(II) + Ag(II) = Co(III) + Ag(I)

Ag+ EMF NaClO4 25°C 3.0M U I 1967KRb (210) 166
K(Ag+e=Ag(s))=13.106, 775.3 mV
At I=2.0: K=13.253, 784.0 mV; I=1.0: K=13.395, 792.4 mV

Ag+ EMF NaClO4 25°C 3.0M U I 1967KRb (211) 167
K(AgCl(s)+e=Ag(s)+Cl)=3.442
I=2.0: K=3.728, 220.5 mV; I=1.0: K=3.929, 232.4 mV

Ag+ EMF non-aq 5°C 100% U TI 1967SKc (212) 168
K(AgCl(s)+e=Ag(s)+Cl)=0.834
Medium: glycol. K=0.193(35 C;11.8 mV), K=-0.006(45 C;-0.4 mV)
Also values for water glycol mixtures

Ag+ EMF non-aq 25°C 100% U 1966ANc (213) 169
K(AgCl(s)+e=Ag(s)+Cl)=3.357
Medium: H2NCHO

Ag+ gl mixed 25°C 10% U I 1966BFa (214) 170
K(AgBr(s)+e=Ag(s)+Br)=1.025
Medium : 10% MeCO2H. K=0.652, -38.55 mV(60%)

Ag+ EMF mixed 25°C 10% U I 1966BFa (215) 171
K(AgI(s)+e=Ag(s)+I)=-2.721
Medium: 10% MeCO2H. K=-4.166, -246.45 mV(60%). Also data for 20% and 40%

Ag+ EMF non-aq 40°C 100% U I 1966DKb (216) 172
K(AgCl(s)+e=Ag(s)+Cl)=2.699
Medium 30% dioxan/MeCONHMe. K=2.260(43%), 0.439(74%)

Ag+ EMF non-aq 35°C 100% U T 1965DZa (217) 173
K(AgCl(s)+e=Ag(s)+Cl-)=3.465
Medium: MeCONHMe. K=3.055(50 C;194.56mV) K=2.914(55 C;189.72mV) K=2.777(60 C
183.57mV) K=2.525(70 C,171.94mV)

Ag+ EMF diox/w 25°C 20% U I 1965FTa (218) 174
K(AgBr(s)+e=Ag(s)+Br)=1.013
Medium: 20% dioxan. K=0.538, 31.83 mV (45%)

Ag+ EMF diox/w 25°C 20% U I 1965FTa (219) 175
K(AgI(s)+e=Ag(s)+I)=-2.559
Medium: 20% dioxan. K=-2.709, -160.25 mV (45%)

Ag+ EMF none 20°C 0.0 U T 1965KHa (220) 176
K(AgI(s)+e=Ag(s)+I)=2.587
K=-2.548(75 C;-176.0 mV), K=-2.61(100 C;-192.6 mV), K=-2.690((125 C;-212.5C)
K=-2.829(150 C;-237.5mV), K=-3.307(175 C;-270.0mV), K=-3.296(200C;-3.09.4mV)

Ag+ EMF non-aq 263°C 100% U T 1965KUb (221) 177
K=12.02, 639 mV

Medium: molten Na0.50.5NO3. K: 2Ag+ + O-- = Ag(s) + 0.5O2(g). K=9.67,612.8mV
at 366 C

Ag+ EMF alc/w 25°C 10% U I 1965PBb (222) 178
K(AgCl(s)+e=Ag(s)+Cl)=3.643

Medium; 10% MeOH/H2O. K=3.433(30%;203.1 mV), K=3.327(40%;196.8 mV),
K=3.073(60%;181.8 mV), K=2.845(70%;168.3 mV), K=2.522(80%;149.2 mV)

Ag+ oth none 0°C 0.0 M T 1964ACb (223) 179
K(AgCl(s)+e=Ag(s)+Cl)=4.367

K=3.759, 222.38 mV(25 C), 2.551, 178.74 mV(80 C), 2.143, 158.63(100 C)
Many other values for intermediate temperatures.

Ag+ EMF oth/un 5°C ? U T 1964GBa (224) 180
K(AgCl(s)+e=Ag(s)+Cl)=4.082

Medium: D2O. K=3.836, 219.31mV(15 C); K=3.595, 212.66 mV(25 C);
K=3.358, 205.32 mV(35 C); K=3.126, 197.33mV(45 C); K=3.012, 193.10mV(50 C)

Ag+ EMF none 0°C 0.0 U T 1964HRb (225) 181
K(AgI(s)+e=Ag(s)+I)=-2.701

K=-2.614(15 C;149.42 mV), K=-2.593(20 C;-150.8 mV), K=-2.577(25 C;-152.4 mV)
-2.561(30 C;-154.05 mV), K=-2.541(40 C;-157.9 mV), K=-2.530(50 C;-162.2 mV)

Ag+ EMF none 25°C 0.0 U T 1964LSb (226) 182
K(AgCl(s)+e=Ag(s)+Cl)=3.753

K=2.985, 197.3 mV(60 C); 0.731, 65.0 mV(175 C); -0.133, -13.1 mV(225 C)

Ag+ EMF oth/un 25°C 0.0 U T 1964LSb (227) 183
K(AgCl(s)+e=Ag(s)+Cl)=3.540

Medium: D2O. K=1.406, 111.1 mV(125 C); K=0.912, 76.6mV(150 C);
K=-0.029, -2.7 mV(200 C); K=-0.477, -47.1mV(225 C)

Ag+ EMF none 25°C 0.0 M 1964RPa (228) 184
K=9.99, 147.8 mV

K: Ag4Fe((CN)6(s) + 4e = 4Ag(s) + Fe(CN)6----

Ag+ EMF non-aq 25°C 100% U I 1964SSg (229) 185
K(AgCl(s)+e=Ag(s)+Cl)=-1.22

Medium: 70% dioxan/MeOH. K=-1.89(54%;-112mV), K=-2.50(50%;-148mV),
K=-2.74(45%;-1.62mV), K=-3.35(40%;-198mV)

Ag+ EMF none 25°C 0.0 M I 1963CLa (230) 186
K=-9.20, -272 mV

K: Ag2S(s) + H + 2e = 2Ag(s) + SH-. In 10% ethanoic acid: K(AgCl(s)+e=Ag(s)+
Cl)=3.558, 210.5 mV; in 60%: K=1.885, 111.5 mV

Ag+ EMF alc/w 25°C 10% U I 1963FWa (231) 187

Arsenate;

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

Ag+ sol oth/un 20°C dil U 1956CHd (1118) 209
Kso(Ag3L)=-19.95

Ag+ sol oth/un 23°C var U 1942TLa (1119) 210
Kso(Ag3L)=-21.97

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

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

Ag+ gl NaClO4 25°C 3.00M C K1=0.45 1970HSa (1286) 211
K(AgHB2(s)+H=Ag+2HB)=4.5
K'=-1.07

AgHB2=0.5Ag2B4O7(H2O)x. K': 0.5AgHB2(s)+0.5H2O=0.5Ag2O(s)+HB

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

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

Ag+ sol none 25°C 0.0 C IH B2=10.6 2003WAa (1472) 212
Kso(AgBr)=-12.28

Method: analysis of literature data. DH(Kso)=85.4 kJ mol⁻¹. Also Kso=
-15.10 (methanol), -13.7 (acetonitrile), -10.8 (DMSO). B2=12.2 (DMSO).

Ag+ con non-aq 25°C 100% C K1=>21 1990SAb (1473) 213
Medium: propylene carbonate.

Ag+ ISE non-aq 25°C 100% U IH K1=7.62 B2=10.96 1987JPa (1474) 214
Medium: tetrahydrothiophene, 0.1M Bu4NBF4

Ag+ ISE non-aq 25°C 100% C H K1=5.03 B2=8.44 1986AIb (1475) 215
K3=2.16
Medium: Pyridine, 0.1 M Et4NClO4; DH(K1)=-3.3, DH(K2)=6.7, DH(K3)=-1.2 kJ m⁻¹

Ag+ ISE non-aq 25°C 100% C H K1=5.03 B2=8.44 1986AIb (1476) 216
B3=10.59
B(2Ag+Br)=6.68
Medium: DMSO, 0.1 M NH4ClO4. DH(K1)=-3.3; DH(B2)=3.3 kJ mol⁻¹; DH(B3)=2.1;
DH(Ag2Br)=-1.6

Ag+ ISE KNO3 0°C 1.00M U M K1=5.94 B2=8.56 1985MMc (1477) 217
mixed complexes with thiacetamide B(AgLA)= 9.82; with thiourea B(AgLA)=8.76;
B(AgLA2)=13.69 with thiourea and thioacetamide B(AgLAB)=13.47

Ag+ ISE KNO3 25°C 1.00M U T HM B2=11.6 1985MMd (1478) 218
DH(B2)=-37.1 kJ mol⁻¹; DS(B2)=11.6 J K⁻¹ mol⁻¹.
Ternary complexes with: thiourea, thiosulphate, iodide, chloride

Ag+ ISE non-aq 25°C 100% U I B2eff=25.5 1981CLa (1479) 219
Kso=-23.5
Medium: methylisobutylketone. Data available for water equilibrated MIBK

Ag+ ISE non-aq 87°C 100% U K1=6.55 B2=7.83 1981GBb (1480) 220
B3=8.32
Medium: fused acetamide

Ag+ EMF KNO3 25°C 0.0 C T H Kso(AgBr)=-12.305 1980JPa (1481) 221
Method: Ag/AgBr,Br⁻ electrode. Data for 15-55 C. Molal scale: Kso=-12.303
DH(Kso)=84.15 kJ mol⁻¹, DS(Kso)=45.1 J K⁻¹ mol⁻¹.

Ag+ EMF KNO3 45°C 0.0 C I Kso(AgBr)=-11.39 1978JPa (1482) 222
Method: AgBr/Br⁻ electrode. Data extrapolated to I=0 from 0.005-0.10 M
KNO3/NaNO3.

Ag+ cal NaClO4 25°C 5.0M C H 1977ATb (1483) 223
Medium: 0.1 M HClO4/4.9 M NaClO4. DH(B3)=-54.6 kJ mol⁻¹, DS(B3)=
-9 J K⁻¹ mol⁻¹; DH(B4)=-79.6, DS(B4)=-91; DH(Kso(AgBr))=80.0, DS=26.

Ag+ ISE none 25°C 0.0 U K1=5.80 B2=7.38 1975CAa (1484) 224
B3=8.23

Ag+ EMF NaNO3 25°C 4.6M C T H B2=7.47 1975PPc (1485) 225
B3=7.88
B4=8.52
Method: Ag/Ag⁺ electrode. Data for 25-70 C. Medium: 4.6 m KBr/NaNO3.
DH(B2)=-43.9 kJ mol⁻¹, DH(B3)=-54, DH(B4)=-67.

Ag+ ISE non-aq 25°C 100% U B2=13.22 1975SAb (1486) 226
B3=15.29
Kso=-12.50
Medium: propylene carbonate/0.56 M tetrahydrothiophene

Ag+ ISE non-aq 25°C 100% U I B2=11.06 1975SAb (1487) 227
B3=11.97
Kso=-10.02
Medium: propylene carbonate/0.56 M tetrahydrothiophene
In propionitrile/0.10 M THT, B2=13.0, B3=15.0, Kso=-10.8

Ag+ ISE non-aq 25°C 100% U I B2=16.4 1975SAc (1488) 228
Kso=-15.6
B2=13.6 in TMSO

Medium: PC/TMSO, 1.23 M. In dimethylsulfoxide: $K_{so}=-18.3$, $B_2=17.1$.
In ethylene sulfite: $B_2=20.1$, $K_{so}=-20.0$. TMSO=Tetramethylene sulfoxide

Ag+ EMF oth/un 50°C 10% U IH 1974DGB (1489) 229

$K_{so}=-13.55$

Medium: 10% NaNO₃-Ca(NO₃)₂(H₂O)₄. DH(K_{so})=77.5 kJ mol⁻¹. 0%: $K_{so}=-13.47$,
DH(K_{so})=76.4; 20%: $K_{so}=-13.52$, DH(K_{so})=81.30

Ag+ EMF non-aq 25°C 100% U 1974FCa (1490) 230

$L(\text{AgL}(s)+\text{LiL}=\text{LiAgL}_2)=1.0$

Medium: THF. Method: current-voltage studied

Ag+ sol none 25°C 0.0 U T 1974GHb (1491) 231

$K_{so}=-12.31$

$K_{so}=-11.85(35\text{ C}), -11.42(45\text{ C})$

Ag+ EMF non-aq 30°C 100% U $K_1=3.95$ $B_2=5.45$ 1974JAc (1492) 232

Medium: pyridine, 0.2 M LiClO₄ m units

Ag+ dis R₄N.X 70°C ? U $K_1=3.70$ $B_2=6.70$ 1974NGc (1493) 233

$K_3=1.04$

$K_4=0$

Medium: NH₄NO₃(H₂O)₂; K values: in m units

Ag+ ISE non-aq 25°C 100% U I $B_2=17.65$ 1974SAb (1494) 234

$B_3=18.89$

$K_{so}=-16.32$

Medium: 3-Me-2-oxazolidone, 0.1 M Pr₄NClO₄

Ag+ ISE mixed 25°C 80% U I $B_2=12.98$ 1974SAc (1495) 235

$B_3=14.86$

$K_{so}=-14.79$

Medium: 80% acetone/H₂O. In 91.2% acetone, $B_2=16.20$, $B_3=15.44$, $K_{so}=-16.38$

In 98.5% acetone, $K_{so}=-18.67$, $B_2=19.92$, $B_3=21.34$

Ag+ sol alc/w 25°C 9.5% U I $K_2=1.11$ 1973ABc (1496) 236

$K_3=0.60$

$K_{so}=-12.69$

In w/w MeOH/H₂O. $K_2=0.45$, $K_3=2.10$, $K_{so}=-12.46(0\%)$; $K_2=1.88$, $K_3=0.95$, $K_{so}=-12.84$

(19.8%); $K_2=1.76$, $K_3=1.00$, $K_{so}=-12.99(34.5\%)$; $K_2=2.12$, $K_3=0.84$, $K_{so}=-13.5(54.2\%)$

Ag+ sol alc/w 25°C 9.7% U I $K_2=1.74$ 1973ABc (1497) 237

$K_3=0.70$

$K_{so}=-12.52$

In w/w EtOH/H₂O; $K_2=1.87$, $K_3=0.69$, $K_{so}=-12.80(19.9\%)$; $K_2=2.43$, $K_3=-0.14$, $K_{so}=-13.00(34.5\%)$ etc. Data also in acetone/H₂O, dioxan/H₂O

Ag+ sol mixed 25°C 9.6% U I $K_2=1.79$ 1973ABc (1498) 238

$K_3=0.64$

$K_{so}=-12.52$

In w/w acetone/H₂O. K₂=2.03, K₃=0.75, K_{so}=-12.99(19.8%); K₂=2.73, K₃=0.40, K_{so}=-13.23(34.4%); K₂=3.12, K₃=0.06, K_{so}=-13.47(42.1%); K₂=3.72, K₃=-0.52(54.2%)

Ag+ EMF oth/un 87°C 100% U 1973BMc (1499) 239
K_{so}=-7.92

Medium: CH₃COONa. K_{so}:in m units

Ag+ ISE none 25°C 0.0 U 1973BRa (1500) 240
K_{so}=-12.2

Ag+ ISE non-aq 25°C 100% U 1973CCa (1501) 241
B₂=14.1
K_{so}=-13.3

Medium: MeCN, 0 corr, m units

Ag+ ISE non-aq 25°C 100% U 1973CKa (1502) 242
B₂=13.8
K_{so}=-13.7

Medium: MeCN, 0 corr

Ag+ ISE non-aq 350°C 100% U T 1973GBb (1503) 243
K₁=3.27
Medium: (Na,Ba)NO₃. K₁=3.11 to 3.17(375 C), 2.91 to 2.96(400 C) unit:mol/mol solvent

Ag+ sol non-aq 163°C 100% U T 1973GDa (1504) 244
K₁=4.26 B₂=7.95
K_{so}=-11.01

Medium: (K,Ca)NO₃. K₁=4.05, K₂=3.61, K_{so}=-10.64(183 C); K₁=3.95, K₂=3.27, K_{so}=-10.10(198 C) x units

Ag+ ISE alc/w 25°C 10% U I 1973KPa (1505) 245
K_{so}=-12.5

In 10% v/v MeOH/H₂O. K_{so}=-12.32(0%), -13.0(40%), -13.4(60%), -14.5(90%);
Also in EtOH, PrOH, i-PrOH, acetone, DMF

Ag+ ISE mixed 25°C 10% U I 1973KPa (1506) 246
K_{so}=-12.2

In v/v DMF/H₂O. K_{so}=-12.5(v=40), -12.7(v=60). In Acetone/H₂O: K_{so}=-12.4(10%)
-12.3(20%), -11.9(30%), -12.3(40%)

Ag+ ISE diox/w 20°C 50% U I 1973NEa (1507) 247
K_{so}=-13.77

Medium: 50% v/v dioxan/H₂O, 0.001 M KBr. K_{so}=-15.02(70%), -15.89(80%),
-16.92(90%)

Ag+ ISE non-aq 25°C 100% U 1973SSg (1508) 248
B₂=16.24
B₃=17.63
K_{so}=-14.95

Medium: EtCN, 0.1 M Pr₄NC₁₀4. With 0.95 M SO₂: B₂=9.93, K_{so}=-11.40;
with 3.3 M SO₂: B₂=7.87, K_{so}=-10.25

Ag+ ISE non-aq 270°C 100% U T 1973TTa (1509) 249
K_{so}=-7.58

Medium: LiNO₃. K_{so}=-7.13(300 C), -6.58(320 C), -6.30(340 C) m units
In KNO₃: K_{so}=-5.20(350 C), -4.99(370 C), -4.69(395 C). Other melts also

Ag+ ISE oth/un 50°C ? U T 1972BNa (1510) 250
K_{so}=-13.57

Medium: Ca(NO₃)₂(H₂O)₄. K_{so}=-13.21(60 C), -12.97(65 C), -12.76(70 C),
-12.44(80 C)

Ag+ sol non-aq 25°C 100% U B₂=11.14 1972GSd (1511) 251
B₃=12.0
B(Ag₂L₃)=20.2
B(Ag₃L₄)=30.4
B(Ag₂L)=8.14

Medium: DMSO, 0.5 M KNO₃

Ag+ ISE mixed ? 2.7% U I 1972KPa (1512) 252
K_{so}=-12.4

In acetone/H₂O. K_{so}=-12.6(5.83%), -12.6(9.83%), -12.1(14.2%). In DMF/H₂O:
K_{so}=-12.36(0%), -12.22(2.52%), -12.50(13.3%), -12.70(25.9%)

Ag+ EMF non-aq 30°C 100% U B₂=12.1 1971BPb (1513) 253
K_{so}=-11.0

Medium: N-methyl-2-pyrrolidone, 0.1 M Et₄NClO₄. Method: current-voltage

Ag+ EMF non-aq 375°C 100% U T K₁=3.17 B₂=5.85 1971GBb (1514) 254
Medium: (Na,Ba)NO₃ eutectic. K₁=3.28(350 C), 2.96(400 C); K₂=2.53(400 C)
units mol/mol solvent

Ag+ EMF non-aq 350°C 100% U T 1971GJa (1515) 255
K_{so}=-5.67

Medium: (Na,Ba)NO₃. m units; log K_{so}=3.535-5739/T at 350-425 C

Ag+ EMF oth/un 130°C 100% U T K₁=1.17 1971KIa (1516) 256
Medium: EtNH₃Cl. K₁=1.10(150 C), 1.02(180 C), 0.93(200 C) unit:mol/mol solv.

Ag+ sol alc/w 20°C 50% U I 1971NEa (1517) 257
K_{so}=-13.00

In 50% w/w MeOH/H₂O. K_{so}=-13.48(70%), -13.90(80%), -14.34(90%), -15.06(100%)

In PrOH/H₂O: K_{so}=-12.96(50%), -13.60(70%), -14.20(80%), -14.96(90%), -16.24(100%)

Ag+ EMF non-aq 20°C 100% U B₂=12.0 1970DMa (1518) 258
B₁₂=10.9
K_{so}=-10.9

Medium: DMSO, 0.1 M Et₄NClO₄

Ag+ sol R₄N.X 55°C ? U T K₁=3.70 1969BBe (1519) 259
K_{so}=-10.30

Medium: NH₄NO₃(H₂O)₂. K₁=3.58, K_{so}=-10.00(70 C); K₁=3.52, K_{so}=-9.60(85 C);
K₁ and K_{so}:in m units

Ag+ ISE non-aq 30°C 100% U I B2=20.2 1969BBg (1520) 260
Kso=-18.9
Medium: sulfolane, 0 corr. B2=19.7, Kso=-18.4(I=0.1)

Ag+ ISE non-aq 22°C 100% U B2=21.2 1969CLa (1521) 261
Kso=-20.5
Medium: propene carbonate, 0.1 M Et4NC104

Ag+ ISE NaNO3 70°C 1.0M U T B3=6.84 1969GUa (1522) 262
Kso=-9.81
B3=6.53(80 C),6.46(90 C);Kso=-10.65(50 C),-10.21(60 C),-9.47(80 C),-9.22
(90 C). Method: Ag electrode

Ag+ ISE non-aq 98°C 100% U B2=7.5 1969GUa (1523) 263
B3=8.97
Kso=-9.39
In N-methylformamide, 1 M NaNO3

Ag+ ISE non-aq 25°C 100% U K(AgL+HL)=3.9 1969MLa (1524) 264
Medium: pyridine. Other constants also reported

Ag+ EMF non-aq 148°C 100% U T Kso=-9.77 1969SMh (1525) 265
Medium: (Li,K)NO3. Kso=-9.73(150 C), -9.14(172 C), -8.58(194.5 C),
-8.19(211.5 C) m units

Ag+ ISE non-aq 25°C 100% U B2=17.53 1969VKa (1526) 266
Kso=-14.49
Medium: N-methyl-2-pyrrolidone

Ag+ ISE non-aq 20°C 100% U B2=19.7 1968BBb (1527) 267
Kso=-19.7
Medium: CH3NO2

Ag+ ISE non-aq 30°C 100% U B2=19.32 1968DLa (1528) 268
Kso=-18.18
Medium:sulpholan, 0.1 M Et4NC104

Ag+ sol oth/un 56°C 100% U T K1=3.74 B2=6.58 1968GAa (1529) 269
K3=1.32
Kso=-10.31
Medium:NH4NO3(H2O)2. At 70C: Kso=-10.11,K1=3.72,K2=2.88,K3=1.18
87 C: Kso=-9.67,K1=3.65,K2=2.71,K3=0.87

Ag+ ISE non-aq 350°C 100% U H Kso=-5.40 1968GSf (1530) 270
Medium:(K/Ba)NO3 eutectic. DHso=100.5 kJ mol⁻¹, m units

Ag+ sol non-aq 24°C 100% U 1968LAc (1531) 271
 B(Ag2L)=8.23
 Medium: DMSO, 0.5 M Et4NClO4

Ag+ sol non-aq 190°C 100% U T H K1=3.06 B2=5.72 1968MGb (1532) 272
 Kso=-8.36
 Medium: molten (Li/K)NO3. Kso=-9.28(150 C), -8.83(169 C); K1=3.31(150 C),
 3.20(169 C); K2=2.91(150 C), 2.82(169 C). DH(K1)=DH(K2)=-5.2 kJ mol⁻¹

Ag+ ISE non-aq 25°C 100% U I B2=11.4 1967AKa (1533) 273
 Kso=-10.6
 Medium: DMSO. Kso=-15.2 in MeOH; Kso=-12.9, B2=13.7 in MeCN; Kso=-11.4 in HCONH2
 Kso=-15.0, B2=16.6 in Me2NCOME; Kso=-12.3, B2=16.5 in (Me2N)3PO

Ag+ ISE oth/un 25°C 1.0M U 1967BPF (1534) 274
 B4=8.33

Ag+ ISE non-aq 257°C 100% U T H 1967FBb (1535) 275
 Kso=-8.46
 Medium: molten (Li/Na)ClO4. Kso=-9.43(217 C); -8.65(250 C). DHso=110 kJ mol⁻¹

Ag+ ISE non-aq 546°C 100% U K1=2.20 B2=4.10 1967GUb (1536) 276
 K(Ag2L)=1.9
 Medium: (Li/K)SO4 eutectic, 412-680 C. x units

Ag+ ISE non-aq 85°C 100% U T B2=10.15 1967RPc (1537) 277
 Kso=-9.21
 Medium: DMSO, 0.1 M NH4NO3. Kso=-10.04(25 C), -9.74(45 C), -9.35(65 C);
 B2=10.59(25 C), 10.43(45 C), 10.18(65 C)

Ag+ sol non-aq 275°C 100% U T B2=4.39 1967SPc (1538) 278
 B3=4.89
 B(Ag2L)=3.93
 B(Ag3L)=4.46
 Kso=-6.57
 Medium: (Na/K)NO3. At 300 C: B2=4.24, B3=4.50, B12=3.75, B13=4.16, Kso=-6.19
 Ks1=-4.3, m units

Ag+ ISE non-aq 23°C 100% U I B2=12.0 1966LIb (1539) 279
 Kso=-10.6
 Medium: DMSO, I=0.1 M Et4NClO4. In MeCN: Kso=-13, 2, B2=13.4 to 14.1
 In MeOH: Kso=-15.2, B2=11.5; in Me2CO: Kso=-18.7, B2=20.0; in EtNO2: Kso=-21.8

Ag+ dis oth/un 0.0 U 1966LKa (1540) 280
 Kd(H+Ag+2L+3TBP(C6H6))=9.79

Ag+ ISE non-aq 150°C 100% U 1965BFc (1541) 281
 Kso=-9.72
 Medium: (Li/K)NO3 eutectic. m units

Ag+ ISE non-aq 25°C 100% U 1965MBd (1542) 282
 Kso=-4.26
 Medium: diaminoethane

Ag+ sol NaClO4 20°C 7.0M U 1964AJa (1543) 283
 Ks2=-4.90
 Ks3=-3.67
 Ks4=-3.65
 Medium: 4 M NaClO4, 3 M HClO4

Ag+ ISE non-aq 250°C 100% U H 1964BLa (1544) 284
 Kso=-9.07
 Medium: molten (Na/K)NO3. DHso=93.6 kJ mol⁻¹

Ag+ ISE non-aq 280°C 100% U K1=2.43 B2=4.38 1964CMA (1545) 285
 B3=4.77
 B(Ag2L6)=10.08 ?
 Kso=-6.52
 Medium: molten (Na/K)NO3. By solubility: K1=2.43, B2=4.36, B3=4.83, B(2,6)=10.34, Kso=-6.57?

Ag+ sol oth/un 300°C var U 1964GGa (1546) 286
 Ks2=-0.95
 Medium: NaBr var

Ag+ sol oth/un 20°C 0.0 U K1=4.68 1964LIa (1547) 287
 K(AgL+Ag)=2.38
 K(AgL+2Ag)=3.45
 ynd Ref:64La. Medium: 0 corr

Ag+ sol oth/un 18°C var U K1=4.69 B2=7.65 1963MIc (1548) 288
 B3=8.70
 B4=8.78
 B5=8.0
 Kso(AgBr)=-12.68
 Medium: NaBr.

Ag+ ISE non-aq 148°C 100% U T 1963THa (1549) 289
 Kso(AgBr)=-11.4
 Medium: Ag electrode. Method: liquid (Li/K)NO3. Kso=-10.9(172 C), -10.3(194.5 C), -10.2(211.5 C). x units.

Ag+ ISE non-aq 403°C 100% U T K1=2.97 B2=5.54 1962ABb (1550) 290
 K(AgBr+Ag=Ag2Br)=2.47
 Method: Ag electrode. Medium: liquid KNO3, x units. At 452 C: K1=2.86, K2=2.44
 K(AgL+Ag)=2.32. At 500 C: K1=2.73, K2=2.29, K(AgL+Ag)=2.16

Ag+ ISE non-aq ? 100% U 1962BSa (1551) 291
 Kso(AgBr)=-19
 Method: Ag electrode. Medium: THF, 0.3 M LiClO4

Ag+ sol NaClO4 25°C 5.0M U I 1954KTa (1564) 304

B3=9.18

K4=0.30

In 0.1 M NaClO4 K1=4.30, K2=2.34, K3=1.44. In KBr var: K1=5.08, K2=2.62, K3=1.06, K4=0.14, K5=-0.39 or B(Ag2L6)=20.51. AgNO3 var: B(Ag3L)=8.00, B(Ag4L)=8.38

Ag+ sol oth/un 20°C var. U I B2=7.93 1954KTa (1565) 305

K3=0.97

K4=-0.06

K(AgBr(s)+Br=AgBr2)=-4.60

K(AgBr(s)+2Br=AgBr3)=-3.64

Medium: AgNO3. K(AgBr(s)+3Br=AgBr4)=-3.70. Also data for MeOH/H2O, Me2CO/H2O and EtOH/H2O mixtures

Ag+ sol none 25°C 0.0 U T B3=8.53 1954LPb (1566) 306

B3=8.66(35 C), 8.70(45 C)

Ag+ ISE oth/un 20°C var U T H B3=9.03 1954PVa (1567) 307

B5=9.37

Kso(AgBr)=-12.57

Method: Ag electrode. B3=8.71(30 C), 8.12(50 C), 7.68(70 C). DH(B3)=-52.7 kJ mol-1. B5=8.87(30 C), 7.98(50 C), 7.19(70 C). DH(B5)=-85.4. Kso=-10.80(60 C)

Ag+ ISE NaClO4 25°C 5.0M U I B3=8.88 1953BLa (1568) 308

K4=0.27

B(Ag2Br6)=ca.20

Kso(AgBr)=-12.62

Method: Ag electrode. In 0.1 M Kso=-12.11. By solubility, 5 M: B2=7.23, K3=1.85, K4=0.12, K(AgL(s)+L=AgL2)=-5.40, K(AgL(s)+2L)=-3.52, K(AgL(s)+3L)=-3.41

Ag+ sol NaClO4 25°C 0.10M U I K1=4.15 B2=7.11 1953BLa (1569) 309

K3=0.84

K4=0.94

Kso(AgBr)=-12.10

K(AgBr(s)=AgBr)=-7.96

K(AgL(s)+L=AgL2)=-5.00, K(AgL(s)+2L)=-4.15, K(AgL(s)+3L)=-3.22. At I=0 corr. K1=4.38, K2=2.96, K3=0.66, K4=0.73, Kso=-12.37, K(AgL(s)+L)=-7.96 etc.

Ag+ con none 25°C 0.0 U Kso(AgBr)=-12.2 1953GMb (1570) 310

Ag+ ISE none 25°C 0.0 U B3=8.72 1952CPa (1571) 311

B5=9.30

Ag+ sol oth/un 25°C var U 1949RWa (1572) 312

Kso(AgBr)=-12.4

Ag+ sol oth/un 25°C var U H 1941ERa (1573) 313
B(Ag2Br6)=20.2
K(2AgBr(s)+4Br=Ag2Br6)=-4.2
B4=8.51

Medium: HBr. DH(Ag2Br6)=-160 kJ mol⁻¹

Ag+ ISE none 25°C 0.0 U T H 19380Ba (1574) 314
Kso(AgBr)=-12.30

Method: Ag electrode. I=0 corr. DH(so)=84.3 kJ mol⁻¹, DS=47.3 J K⁻¹ mol⁻¹.
Kso=-13.386(5 C), -12.820(15 C), -11.828(35 C), -11.392(45 C)

Ag+ ISE none 25°C 0.0 U 1933HJa (1575) 315
Kso(AgBr)=-12.20

Ag+ ISE oth/un 18°C 0.10M U 1930MAa (1576) 316
Kso(AgBr)=-12.31

Method: Ag electrode. Medium: KBr

Ag+ ISE alc/w 25°C 100% U 1929BHa (1577) 317
Kso(AgBr)=-15.24

Method: Ag electrode. Medium: MeOH

Ag+ ISE none 16°C 0.0 U 1927CAa (1578) 318
Kso(AgBr)=-12.50

Ag+ ISE oth/un rt var. U 1927Hsa (1579) 319
Kso(AgBr)=-11.62

Ag+ ISE oth/un 18°C var. U 1921K0a (1580) 320
Kso(AgBr)=-12.39

Ag+ con oth/un 21°C dil U 1908K0a (1581) 321
Kso(AgBr)=-12.47

Ag+ con oth/un 100°C dil U 1906B0a (1582) 322
Kso(AgBr)=-9.4

Ag+ sol oth/un 25°C var. U 1904BEa (1583) 323
B4=8.94

Medium: KBr.

Ag+ con none 20°C 0.0 U 1903B0b (1584) 324
Kso(AgBr)=-12.69

Ag+ sol none 25°C 0.0 U 1902BFa (1585) 325
Kso(AgBr)=-12.237

I=0 corr. Kso(AgBr/Kso(AgCl))=-2.485.

Ag+ sol oth/un 25°C var. U 1900HEb (1586) 326
B(Ag2Br)=9.70

Medium: AgNO3.

Ag+ ISE oth/un 25°C var. U 1900THa (1587) 327
Kso(AgBr)=-12.18

Ag+ ISE oth/un 25°C var. U 1894GOa (1588) 328
Kso(AgBr)=-12.36

Ag+ con oth/un 20°C dil U T 1893HOa (1589) 329
Kso(AgBr)=-11.13

Kso=-10.32(38.4 C)

Ag+ con oth/un 18°C dil U 1893KRa (1590) 330
Kso(AgBr)=-11.4

BrO3- HL Bromate (6017)
Bromate;

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

Ag+ con none 30°C 0.0 C I K1=1.033 1990GKd (2395) 331
Also data for 20-100% w/w DMSO/H2O.

Ag+ con none 30°C 0.0 C I K1=1.03 1986SKF (2396) 332
Data for 0.001-0.008 M AgBrO3 in 0-100% AN/H2O or MeOH/AN mixtures.
In 100% acetonitrile, K1=2.49

Ag+ ISE non-aq 20°C 100% U 1968BBb (2397) 333
Kso=-11.1

Medium: nitromethane

Ag+ cal oth/un 25°C dil U H 1967SVa (2398) 334
DHso(AgL(s)=Ag+L)=80.7 kJ mol-1

Ag+ sol none 25°C 0.0 U TIH 1963RDa (2399) 335
Kso(AgL)=-4.27
I=0 corr.Kso=-4.58(14.7 C), -3.99(35 C). DH(so)=49.0 kJ mol-1, DS=82 (25 C)
In D2O: Kso=-4.75(14.7 C), -4.41(35 C), -4.13(35 C). DH(so)=52.3, DS=91

Ag+ sol none 25°C 0.0 U K1=0.30 1951MOa (2400) 336
Kso(AgL)=-4.28

Ag+ sol none 25°C 0.0 U Kso(AgL)=-4.26 1949TLa (2401) 337

Ag+ sol none 25°C 0.0 U Kso(AgL)=-4.24 1923BOa (2402) 338

Ag+ con none 20°C 0.0 U 1903B0b (2403) 339
Kso(AgL)=-4.40

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

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

Ag+ cal NaCl04 25°C 1.0M C H 1996SMc (2530) 340
DH(B4)=-144.2 kJ mol⁻¹, DS(B4)=-98.3 J mol⁻¹ K⁻¹.

Ag+ ISE non-aq 185°C 100% M K1=2.10 B2=4.24 1988JHb (2531) 341
B3=4.40

Medium: molten KSCN. K1=mol⁻¹ kg

Ag+ ISE oth/un 25°C 0.04M C TIH R K1=13.23 B2=20.9 1987BEa (2532) 342
B3=21.8

IUPAC evaluation

Ag+ ISE KNO3 25°C 0.10M C B2=20.61 1985YWa (2533) 343

Ag+ ISE non-aq ? 100% C 1978GRa (2534) 344
K(Ag+2HCN=Ag(HCN)₂)=5.64

Medium: liquid anhydrous HF

Ag+ ISE oth/un 20°C 0.10M U K1=15.45 B2=20.45 1976CCa (2535) 345
Medium: pH 11.0

Ag+ ISE KNO3 25°C 0.10M U B2=18.75 1974MKd (2536) 346

Ag+ EMF NaCl04 25°C 1.00M U M 1972FAa (2537) 347
K(Ag+Cr(III)(CN))=5.7
K(Cr(CN)+Cr(CN)Ag)=5.0

Ag+ ix NaCl04 25°C 1.0M U M 1972FAa (2538) 348
K(Ag+Cr(III)(CN))=5.7
K(Cr(III)CN+Cr(III)(CN)Ag)=5.0

Ag+ sol NaCl04 25°C 1.0M U B2=20.14 1972GCa (2539) 349
B(Ag(OH)(CN))=12.80
Kso=-15.54

Ag+ EMF oth/un 25°C 0.03M U B2=20.9 1972HFa (2540) 350
B3=21.8

Medium: 0.025 M KCN

Ag+ con non-aq 20°C 100% U B2=23.4 1970DMa (2541) 351
B(Ag₂CN)=15.0
Kso=-14.9

Medium: DMSO, 0.1 M Et₄NC104

Ag+ con non-aq 25°C 100% U K1=5.88 B2=10.18 1969MKe (2542) 352
K3=4.3

Medium: pyridine

Ag+ ISE non-aq 20°C 100% U B2=34 1968BBb (2543) 353
Kso <-24

Medium: MeNO2

Ag+ ISE oth/un 30°C var U B2=21.1 1968KAa (2544) 354
Medium: KCN

Ag+ ISE non-aq 370°C 100% U K1=1.16 B2=1.79 1968WIb (2545) 355
Medium: molten (Li/K)Cl. Alternatively: K1=1.11, B2=1.85

Ag+ ISE KNO3 30°C 1.0M U B3=20.30 1967ADb (2546) 356
B4=20.79

Ag+ ISE oth/un 25°C 1.0M U B4=20.37 1967BPF (2547) 357

Ag+ nmr non-aq 25°C 100% U K(2AgHL=Ag+Ag(HL)2)=0.66 1967DHa (2548) 358

Medium: liquid HF

Ag+ vlt non-aq 195°C 100% U B2=3.20 1967ETa (2549) 359
Medium: liquid KSCN

Ag+ ISE NaClO4 21°C 4.25M U B2=20.23 1967ZFc (2550) 360
B(AgL(OH))=13.23

Ag+ ISE non-aq 190°C 100% U K1=3.2 1966BJa (2551) 361
Medium: liquid KSCN, 178-204 C

Ag+ ISE non-aq 20°C 100% U K1=6.45 B2=11.90 1966THb (2552) 362
Medium: liquid NH3/NH4NO3

Ag+ ISE non-aq 150°C 100% U B2=13.50 1965BFc (2553) 363
Kso=-10.45

Medium: molten (Li/K)NO3 eutectic, m units

Ag+ ISE non-aq 248°C 100% U K1=4.04 B2=8.04 1965TIb (2554) 364
Medium: molten (Na/K)NO3

Ag+ ISE oth/un 20°C 0.0 U B2=20.85 1965ZPa (2555) 365
K3=0.95
KsoKs2=-11.35

Ag+ ISE oth/un 25°C var U B2=20.44 1963ASb (2556) 366

B3=21.98
Kso(AgCN(s)=Ag+CN)=-15.84
K=-11.23

K: Kso.K(2AgCN(s)=Ag+Ag(CN)2)

Ag+ sol oth/un 20°C 0.10M U M 1963CBa (2557) 367
K(Ag+Pt(NH3)2L4)=1.37

Ag+ oth KNO3 ? sat U 1962FRc (2558) 368
K3=1.1

Medium: saturated. Method: freezing point

Ag+ ISE non-aq 246°C 100% U T K1=5.36 B2=10.26 1962MBb (2559) 369
Ks(AgCN(s)+Ag=Ag2CN)=4.90

Medium: 1:1 (x/x) KNO3/NaNO3(liquid); K1=5.34, K2=5.02, K(s)=4.78(286 C)
K1=5.28, K2=4.7, K(s)=4.6(326 C)

Ag+ ISE non-aq 25°C 100% U K1=7.7 B2=13.3 1961SBb (2560) 370
Medium: diaminoethane

Ag+ ISE non-aq 250°C 100% U H B2=10.87 1956FRb (2561) 371
Kso(AgCN(s)=Ag+CN)=-8.20

Medium: 1:1 (m/m) NaNO3/KNO3(liquid); DH(B2)=-149.5 kJ mol⁻¹

Ag+ oth none 25°C 0.0 U 1956KSb (2562) 372
K=6.53

B(Ag(CN)OH)=13.22
Kso(AgCN(s)=Ag+CN)=-15.64

K: K(Ag+2OH+Ag(CN)2=2(Ag(CN)OH); Method: amperometry

Ag+ oth none 21°C 0.0 U I 1954JPa (2563) 373
K3=0.70

K4=-1.13

Method: ir. K3=0.97, K4=-0.55 at 0.05 to 1.5 M CN

Ag+ ISE oth/un 18°C var U B2=20.7 1949GAb (2564) 374
K=-11.3

K: Kso.K(AgCN(s)+CN=Ag(CN)2)

Ag+ sol none 25°C 0.0 U B2=19.85 1947RIa (2565) 375
Ks(AgCN(s)=Ag+CN)=-14.89?

Ag+ ISE oth/un ? var U B2=21.2 1941BJa (2566) 376
K3=0.89
B4=ca.22

Ag+ ISE oth/un 15°C var U B2=21.4 1932BDa (2567) 377
K=-11.29

K: Kso.K(AgCN(s)+CN=Ag(CN)2)

Ag+ ISE oth/un 18°C 0.01M U 1930MAa (2568) 378
 $K(\text{AgCN}(s)=\text{Ag}+\text{CN})=-13.34$

Medium: KCN

 Ag+ sol none 25°C 0.0 U B2=18.42 1930RHa (2569) 379
 $K(\text{AgCN}(s)=\text{Ag}+\text{CN})=-14.15$

 Ag+ ISE oth/un ? var U B2=21.06 1904BEa (2570) 380
 $K3=0.89$

 Ag+ sol oth/un 25°C var U 1904LUa (2571) 381
 $K=-11.3$

K: $K_{\text{so}}.K(\text{AgCN}(s)+\text{CN}=\text{Ag}(\text{CN})_2)$

 Ag+ con oth/un 20°C dil U 1903BOb (2572) 382
 $K=-11.65$

K: $K_{\text{so}}.K(\text{AgCN}(s)+\text{CN}=\text{Ag}(\text{CN})_2)$

 Ag+ ISE oth/un ? var U 1903EUa (2573) 383
 $B2 \text{ ca. } 20.8$

 Ag+ ISE oth/un 18°C var U 1895MOa (2574) 384
 $K(\text{AgCN}(s)=\text{Ag}+\text{CN})=-13.0$

C03-- H2L Carbonate CAS 465-79-6 (268)
 Carbonate;

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

 Ag+ sol oth/un 25°C 0 U T H K1=2.50 1986NPb (3002) 385
 Extrapolation of constants measured at different I to zero ionic strength. D
 Also for 90 C K1=2.64; DH=+29.4; for 60 C K1=2.42; DH=+7.5

 Ag+ gl NaCl04 25°C 1.0M C K1=<1.5 1983MAe (3003) 386
 Additional method: Ag ion selective electrode.

 Ag+ sol none 25°C 0.0 U 1935KAa (3004) 387
 $K_{\text{so}}(\text{Ag}_2\text{CO}_3(s))=-11.09$

 Ag+ ISE oth/un 18°C 0.10M U 1930MAa (3005) 388
 $K_{\text{so}}(\text{Ag}_2\text{CO}_3(s))=-11.3(?)$

Method: Ag electrode. Medium: Na2CO3.

 Ag+ ISE oth/un 25°C var U 1909SPa (3006) 389
 $K_{\text{so}}(\text{Ag}_2\text{CO}_3(s))=-11.19$

 Ag+ ISE none 25°C 0.0 U 1903ACa (3007) 390
 $K_{\text{so}}(\text{Ag}_2\text{CO}_3(s))=-11.40$

C2N3- HL Dicyanamide CAS 504-66-5 (2917)

Dicyanamide; (NC.N.CN)-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	var	U				1954SSb (3468)	391
								$K(\text{Ag}2\text{L}(\text{s})=2\text{Ag}+\text{L})=-10.14$		

Ligand: cyanamid, CN2--

Ag+	ISE	none	18°C	0.0	U				1930BHa (3469)	392
								$K(\text{AgL}(\text{s})=\text{Ag}+\text{L})=-8.85$		

C4N3- HL CAS 454-50-2 (2918)

Tricyanomethanide; (C(CN)3)-

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	none	18°C	0.0	U				1930BHa (3477)	393
								$K(\text{AgL}(\text{s})=\text{Ag}+\text{L})=-10.14$		

C6N6Co--- H3L Cyanocobaltate (5470)

Hexacyanocobaltate; [Co(CN)6]---

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.0	U				1965R0a (3482)	394
								$K_{\text{so}}(\text{Ag}3\text{L})=-25.41$		

Ag+	ISE	none	25°C	0.0	U				1959DTa (3483)	395
								$K_{\text{so}}(\text{Ag}3\text{L})=-20.07$		
								$K_{\text{s}}(\text{Ag}2\text{T}1\text{L})=-15.48$		
								$K_{\text{s}}(\text{AgT}12\text{L})=-10.12$		

C6N6Fe---- H4L (2191)

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sol	KNO3	25°C	2.00M	U				1971HFa (3531)	396
								$K_{\text{so}}=-36.84$		
								$K_{\text{s}}(\text{KAg}3\text{L}=\text{K}+3\text{Ag}+\text{L})=-28.97$		

Ag+	con	oth/un	?		U				1970BEa (3532)	397
								$K_{\text{so}}=-19.21$		
								$K_{\text{s}}(\text{KAg}3\text{L}=\text{K}+3\text{Ag}+\text{L})=-19.33$		

Ag+	ISE	oth/un	25°C	0.0	U				1964RPa (3533)	398
								$K_{\text{so}}(\text{Ag}4\text{L})=-44.07$		

Ag+	ISE	none	18°C	0.0	U	M			1958DTb (3534)	399
								$K_{\text{so}}=-27.15$		

Ks(Ag3T1L)=-23.55
Ks(Ag2T12L)=-17.95

Ag+ ISE none 25°C 0.0 U 1938POa (3535) 400
Kso=-40.81

C6N6Fe--- H3L Ferricyanide (2491)
Hexacyanoferrate (III); Fe(III)(CN)6---

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

Ag+ con oth/un 20°C U T H 1973BCb (3615) 401
Kso=-18.3

Kso=-17.9(30 C-40 C)

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

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

Ag+ sol none 25°C 0.0 C IH B2=7.9 2003WAa (4029) 402
Kso(AgCl)=-9.77

Method: analysis of literature data. DH(Kso)=66.3 kJ mol⁻¹. Also Kso=
-12.82 (methanol), -12.8 (acetonitrile), -10.39 (DMSO). B2=11.9 (DMSO).

Ag+ ISE non-aq 87°C 100% U M K1=3.65 B2=5.77 1987BP a (4030) 403
B3=6.49
B(Ag(SCN)L)=6.55
B(Ag(SCN)2L)=7.34
B(Ag(SCN)L2)=7.13

Medium: fused acetamide. K(AgSCN+L)=2.97, K(Ag(SCN)2+L)=1.15

Ag+ ISE non-aq 25°C 100% U IH K1=6.85 B2=10.16 1987JP a (4031) 404
Medium: tetrahydrothiophene, 0.1M Bu4NBF4

Ag+ ISE non-aq 25°C 100% C H K1=4.95 B2=8.56 1986AI b (4032) 405
K3=0.99

Medium: Pyridine, 0.1 M Et4NClO4; DH(K1)=1.0, DH(K2)=7.6, DH(K3)=-2.6 kJ m⁻¹

Ag+ ISE non-aq 25°C 100% C H K1=4.95 B2=8.56 1986AI b (4033) 406
B3=9.54

B(2Ag+Cl)=6.92
Medium: DMSO, 0.1 M NH4ClO4. DH(K1)=1.0; DH(B2)=8.6 kJ mol⁻¹; DH(B3)=6.0;
DH(Ag2Cl)=3.0

Ag+ ISE NaCl 25°C 0.00 U TIH K1=3.23 B2=5.15 1985FR a (4034) 407
B3=5.04
B4=3.64

DH(K1)=-27.6 kJ mol⁻¹; DH(B2)=-21.3; DH(B3)=-41.8; DH(B4)=-69.9. Also data
15, 35, 60, 100, 150 and 160 C. Kso=-7.44 at 100 C; -6.37 at 150 C.

Ag+ ISE KNO3 0°C 1.00M U M K1=4.97 B2=5.95 1985MMc (4035) 408
mixed complexes with thiourea B(AgLA)= 8.45; with thioacetamide:B(AgLA)=9.08)
B(AgL2A)=9.78; with thiourea and thioacetamide B(AgLAB)=12.71

Ag+ ISE KNO3 25°C 1.00M U T HM K1=4.05 B2=4.88 1985MMd (4036) 409
DH(K1)=-44.4 kJ mol⁻¹; DH(B2)=-40.1; DS(K1)=-71.2 J K⁻¹ mol⁻¹; DS(B2)=-41.3
Ternary complexes with: thiourea,thiosulphate,iodide

Ag+ ISE oth/un 25°C var U 1984G0a (4037) 410
Kso(AgCl)=-9.81

Ag+ ISE non-aq 25°C 100% U I 1981CLa (4038) 411
B2eff=25.5
Kso=-23.2

Medium: methylisobutylketone. Data available for water equilibrated MIBK

Ag+ ISE non-aq 87°C 100% U K1=4.48 B2=6.95 1981GBb (4039) 412
Medium: fused acetamide

Ag+ cal NaClO4 25°C 5.0M C H 1977ATb (4040) 413
Medium: 0.1 M HClO4/4.9 M NaClO4. DH(B3)=-39.2 kJ mol⁻¹, DS(B3)=
-14 J K⁻¹ mol⁻¹; DH(B4)=-62.0, DS(B4)=-105; DH(Kso(AgCl))=62.7, DS=20.

Ag+ sol alc/w 25°C 10% U I K1=3.16 B2= 5.53 1977KDb (4041) 414
B3=3.81
Ks=-10.00

Medium: EtOH/H2O. 0% EtOH: K1=3.22,B2=5.07,B3=5.60, Ks=-9.77. 50% EtOH:
K1=3.96,B2=7.10,B3=6.68, Ks=-10.97. 100% EtOH: K1=5.87,B2=10.72,B3=11.37

Ag+ sol none 100°C 0.0 U T H K1=2.88 B2=4.49 1976SEb (4042) 415
B3=3.85
B4=1.94
Kso=-7.65

Further data also available for T=197, 277 and 353.

Ag+ ISE non-aq 25°C 100% U B2=13.083 1975SAb (4043) 416
B3=15.01
Kso=-12.07

Medium: propylene carbonate/0.56 M tetrahydrothiophene

Ag+ ISE non-aq 25°C 100% U I B2=10.538 1975SAb (4044) 417
B3=12.13
Kso=-9.40

Medium: propylene carbonate/0.56 M tetrahydrothiophene. In PC/1.56 M THT,
B2=9.30, B3=10.74, Kso=-8.30

Ag+ ISE non-aq 25°C 100% U I B2=16.6 1975SAc (4045) 418
Kso=-15.3
B2=13.9 in TMSO

Medium: PC/TMSO, 1.23 M. In dimethylsulfoxide: $K_{so}=-16.8$, $B_2=14.3$.
In ethylene sulfite: $B_2=18.4$, $K_{so}=-18.6$. TMSO=Tetramethylene sulfoxide

Ag+ EMF NaCl 50°C 0.0 U IH 1974DGb (4046) 419

$K_{so}=-10.86$

Medium: NaCl,CaCl₂(H₂O)₄,x% NaCl;x=0. $K_{so}=-10.96(x=10)$, $-11.03(x=20)$;
DH(K_{so})=65.48 kJ mol⁻¹(x=0), 66.53(x=10), 68.37(x=20)(x units)

Ag+ sol alc/w 25°C 25% U I B₂=6.1 1974DZb (4047) 420

B₃=6.5

B₄=6.7

B₅=5.3

Medium: 25% w/w MeOH/H₂O, CsCl. 0% MeOH: $B_2=5.3$, $B_3=5.8$, $B_4=4.9$, $B_5=5.5$

Ag+ EMF non-aq 30°C 100% U K₁=2.1 1974JAc (4048) 421

Medium: pyridine, 0.2 M LiClO₄; m units

Ag+ dis R4N.X 70°C ? U K₁=2.30 B₂=4.30 1974NGc (4049) 422

K₃=0.30

K₄=-0.5

Medium: NH₄NO₃(H₂O)₂; m units

Ag+ ISE non-aq 25°C 100% U I B₂=17.8 1974SAb (4050) 423

B₃=19.6

$K_{so}=-16.2$

Medium: 3-Me-2-oxazolidone. I=0 corr. With 0.1 M Pr₄NClO₄: $B_2=17.55$,
 $B_3=19.28$, $K_{so}=-15.93$

Ag+ ISE mixed 25°C 80% U I B₂=11.60 1974SAc (4051) 424

B₃=11.60

$K_{so}=-13.17$

Medium: 80% acetone/H₂O. In 91% acetone, $B_2=14.32$, $B_3=14.40$, $K_{so}=-14.96$.
In 98.5% acetone, $K_{so}=-17.95$, $B_2=19.10$, $B_3=20.37$

Ag+ EMF non-aq 87°C 100% U 1973BMc (4052) 425

$K_{so}=-5.55$ (m units)

Medium: CH₃COOH

Ag+ ISE none 25°C 0.0 U 1973BRa (4053) 426

$K_{so}=-9.7$

Ag+ ISE non-aq 25°C 100% U I B₂=16.7 1973CKa (4054) 427

$K_{so}=-14.8$

Medium: DMF. In MeCN: $B_2=13.7$, $K_{so}=-13.1$, $K(\text{Ag}+\text{NO}_3)=1.84$, $K(\text{Et}_4\text{N}+\text{NO}_3)=0.7$

Ag+ ISE non-aq 25°C 100% U B₂=12.1 1973CKa (4055) 428

$K_{so}=-10.5$

Medium: DMSO. $B_2=12.1$ to 12.5 , $K_{so}=-10.4$ to -10.9

Ag+ ISE non-aq 350°C 100% U T K₁=2.47 1973GBb (4056) 429

Medium:(Na,Ba)NO₃ eutectic. K₁=2.39(375 C); 2.31(400 C)

Ag+ sol KNO₃ 163°C 100% U T K₁=3.17 B₂=6.12 1973GDa (4057) 430
K_{so}=-9.07

Medium: (K,Ca)NO₃. At 178 C: K₁=3.09, K₂=2.80, K_{so}=-8.75(x units)
At 198 C: K₁=3.05, K₂=2.58, K_{so}=-8.38. DH(K₁)=-18.8 kJ mol⁻¹, DH(K_{so})=8.8

Ag+ ISE mixed 25°C 10% U I 1973KKh (4058) 431
K_{so}=-9.90

Medium: 10% w/w PrOH/H₂O. K_{so}=-10.34(50%), -12.30(90%), -14.70(100%). In
acetone/H₂O: K_{so}=-10.46(50%), -16.36(100%). DMF/H₂O: -10.30(50%), -12.76(100%)

Ag+ ISE oth/un 25°C dil U 1973KPa (4059) 432
K_{so}=-9.90

Ag+ ISE alc/w 25°C 10% U I 1973KPa (4060) 433
K_{so}=-10.06

Medium: 10% v/v MeOH/H₂O. K_{so}=-10.35(40%), -10.93(60%), -11.57(90%). Also in
EtOH, PrOH, i-PrOH. In acetone: K_{so}=-9.88(40%). In DMF: K_{so}=-10.0(10%), -10.6(60%)

Ag+ EMF oth/un 320°C 100% U T K₁=2.47 1973LVa (4061) 434
Medium: molten (Li,Na)NO₃. K₁=2.42(340 C), 2.36(360 C), 2.30(380 C),
2.25(400 C), 2.22(410 C)

Ag+ ISE diox/w 20°C 50% U I 1973NEa (4062) 435
K_{so}=-11.48

Medium: v/v dioxan/H₂O, 0.001 M KCl. K_{so}=-12.92(70%), -13.94(80%),
-14.98(90%)

Ag+ EMF KNO₃ 25°C 3.0M U 1973PGa (4063) 436
B(AgCl(OH))=4.7

Ag+ ISE non-aq 25°C 100% U TI B₂=8.67 1973SSg (4064) 437
K_{so}=-10.25

Medium: EtCN, 0.1 M (C₃H₇)₄NC₁₀ and 0.95 M SO₂. With 0 SO₂: B₂=15.94,
B₃=16.71, K_{so}=-14.29. With 3.3 M SO₂: B₂=6.58, K_{so}=-9.08

Ag+ ISE non-aq ? 100% U 1972BGa (4065) 438
K_{so}=-11.75

Medium: ethylene glycol

Ag+ ISE oth/un 50°C ? U T H 1972BNa (4066) 439
K_{so}=-10.66

Medium: Ca(NO₃)₂(H₂O)₄. DH(K_{so})=75.3 kJ mol⁻¹. K_{so}=-10.52(55 C), -10.24(60 C)
-9.94(70 C), -9.67(80 C)

Ag+ ISE non-aq 350°C 100% U T K₁=2.40 1972GBa (4067) 440
Medium:(Na,Ba)NO₃ eutectic. K₁=2.30 to 2.33(375 C); 2.2(400 C)

Ag+ ISE oth/un 350°C 100% U T K₁=2.5 B₂=4.30 1972GBb (4068) 441

Medium:(Na,Ba)NO₃ eutectic. K₁=2.4,K₂=1.7(375 C); K₁=2.3,K₂=1.5(400 C)

Ag+ ISE mixed ? 2.7% U I 1972KPa (4069) 442
K_{so}=-9.8

Medium: 2.69% acetone/H₂O. K_{so}=-10.0(5.83%), -10.2(9.83%), -10.5(14.2%);
In DMF/H₂O: K_{so}=-10.04(2.52%), -10.32(13.3%), -10.66(25.9%)

Ag+ EMF non-aq 20°C 100% U I 1972NEa (4070) 443
K_{so}=-15.10

Medium:CH₃COOH. In (CH₃CO)₂O: K_{so}=-16.34

Ag+ dis NaNO₃ 150°C 100% U K₁=2.5 B₂=4.60 1972TIa (4071) 444
Medium: (Li,K)NO₃; K₁, K₂ in m units

Ag+ sol alc/w 25°C 9.5% U I K₁=3.59 B₂=5.44 1971ABa (4072) 445
K_{so}=-10.03

Medium: 9.47% w/w MeOH/H₂O. 0%: K₁=3.31,K₂=1.95,K_{so}=-9.75; 20%: K₁=3.83, K₂=
=1.99,K_{so}=-10.27; 34.5%:K₁=4.03,K₂=2.20,K_{so}=-10.47; 54%:4.94,2.45,K_{so}=-11.38

Ag+ sol mixed 25°C 9.6% U I K₁=3.36 B₂=5.38 1971ABa (4073) 446
K_{so}=-10.10

Medium; 9.64% w/w acetone/H₂O. K₁=3.85,K₂=2.27,K_{so}=-10.29(19.8%); K₁=4.48,
K₂=2.56,K_{so}=-10.92(34.4%); 4.55,2.99,-10.99(42.08%); 5.69,3.44,-12.13(54.2%)

Ag+ sol diox/w 25°C 8.2% U I K₁=3.67 B₂=5.69 1971ABa (4074) 447
K_{so}=-10.11

K₁=3.80,K₂=2.25,K_{so}=-10.30(20.5% dioxan); K₁=4.17,K₂=2.54,K_{so}=-10.61(28.5%);
K₁=4.58,K₂=2.94,K_{so}=-11.02(40.8%); K₁=5.92,K₂=3.63,K_{so}=-12.36(60.7%)

Ag+ ISE KNO₃ 25°C 0.01M U I 1971BBg (4075) 448
K_{so}=-9.76

K_{so}=-9.76(I=0), -9.77(I=0.001), -9.77(I=0.005)

Ag+ EMF non-aq 30°C 100% U B₂=10.6 1971BPb (4076) 449
K_{so}=-10.4

Medium: 2-pyrrolidinone, 0.1 M Et₄NClO₄; K₁(H+Cl)=0.8

Ag+ EMF non-aq 350°C 100% U T 1971GJa (4077) 450
K_{so}=-4.02

Medium: (Na,Ba)NO₃ eutectic. logK_{so}=2.376-3980/T

Ag+ sol alc/w 20°C 50% U I 1971NEa (4078) 451
K_{so}=-10.48

Medium:50% w/w MeOH/H₂O. K_{so}=-11.14(70%), -11.68(80%), -12.10(90%), -13.0(100%)
In propanol/H₂O: K_{so}=-10.52(50%), -11.34(70%), -12.82(90%), -14.36(100%)

Ag+ ISE oth/un 110°C 0.40M U I K₁=3.41 1971PEe (4079) 452
Medium:H₂O/NH₄NO₃; (0.4 mol H₂O/mol NH₄NO₃). K₁=3.38(0.5 mol), 3.36(0.6mol),
3.32(0.8 mol), 3.29(1.0 mol), 3.26(1.2 mol), 3.25(1.4 mol), 3.22(2 mol)

Ag+ ISE NaNO3 150°C 100% U T K1=3.33 1971PEF (4080) 453
K(Ag+AgL)=2.9
At 160 C: K1=3.38(m units)

Ag+ con non-aq 20°C 100% U B2=11.7 1970DMa (4081) 454
B(Ag2Cl)=10.3
Kso=-10.4
Medium: DMSO, 0.1 M Et4NC104

Ag+ ISE none 25°C 0.0 U Kso=-9.747 1970FLa (4082) 455

Ag+ ISE alc/w 25°C 10% U I Kso=-9.992 1970FLa (4083) 456
Medium: 10 % w/w MeOH/H2O. Kso=-10.233(20.2%), -10.566(33.4%), -10.83(43%)

Ag+ ISE diox/w 25°C 100% U Kso=-10.223 1970FLa (4084) 457

Ag+ sol R4N.X 55°C ? U T K1=2.41 1969BBE (4085) 458
Kso=-7.95
Medium: NH4NO3(H2O)2. K1=2.38, Kso=-7.60(70 C); K1=2.34, Kso=-7.30(85 C)

Ag+ ISE non-aq 30°C 100% U I B2=20.3 1969BBg (4086) 459
Kso=-18.5
Medium: sulfolane. B2=19.8, Kso=-18.1 in sulfolane, I=0.1

Ag+ ISE non-aq 22°C 100% U B2=20.9 1969CLa (4087) 460
Kso=-20.0
Medium: propene carbonate

Ag+ ISE NaNO3 80°C 1.0M U T B2=4.47 1969GUa (4088) 461
B2=4.34(90 C). Kso=-8.42(50 C), -8.26(60 C), -7.81(70 C), -7.37(90 C)

Ag+ ISE non-aq 98°C 100% U B2=6.30 1969GUa (4089) 462
B3=6.98
Kso=-7.71
Medium: acetamide, 1 M NaNO3

Ag+ oth none 50°C 0.0 U T K1=3.17 B2=5.02 1969HEa (4090) 463
B3=5.08
B4=5.38
Evaluated from literature data. At 100 C: values: 2.99, 4.71, 4.88, 5.26;
150 C: 2.92, 4.57, 4.85, 5.31

Ag+ con non-aq 25°C 100% U K1=7.08 B2=11.28 1969MKe (4091) 464
K(Ag2L+L=Ag2L2)=5.81
Medium: pyridine

Ag+ ISE non-aq 25°C 100% U TI K1=6.8 B2=11.73 1969SBd (4092) 465

B3=13.1
Kso=-10.279

Medium: DMSO, 0.1 M LiClO₄ or Et₄NClO₄. I=0 corr: K1=7.3, B2=12.23, B3=13.1, Kso=-11.78. In DMSO, 0.1 M NH₄NO₃: K1=6.0, B2=10.6, B3=12.40, Kso=-9.6

Ag+ EMF non-aq 148°C 100% U T H 1969SMh (4093) 466
Kso=-7.30

Medium: molten (Li,K)NO₃(43% Li). Kso=-7.27(150 C), -6.80(172 C), -6.37(195 C), -6.06(211.5 C). Also DH,DS,DCp,m units

Ag+ ISE non-aq 25°C 100% U B2=17.73 1969VKa (4094) 467
Kso=-14.45

Medium: N-methyl-2-pyrrolidone

Ag+ ISE non-aq 20°C 100% U B2=19.5 1968BBb (4095) 468
Kso=-19.2

Medium: CH₃NO₂

Ag+ ISE non-aq 25°C 100% U 1968BCc (4096) 469

Medium: Propene carbonate. Formulae for K1, B2, B3, Kso as a function of H₂O

Ag+ sol non-aq 45°C 100% U T H K1=2.5 1968BDd (4097) 470
Kso=-9.17

Medium:D₂O. Kso=-9.88(25 C), K1=3(25 C). DH(Kso)=64.8 kJ mol⁻¹

Ag+ sol non-aq 25°C 100% U T H K1=3.81 1968BDF (4098) 471
Kso=-8.28

Medium:H₂NCHO. K1=3.79(15 C), Kso=-8.60(15 C), DH(Kso)=52.3 kJ mol⁻¹
By calorimetry: DH(Kso)=46.4(15,25C)

Ag+ ISE non-aq 25°C 100% U K1=12.11 B2=16.295 1968BUd (4099) 472
B3 < 17.7
Kso=-14.49

Medium: DMF, 0.1 M Et₄NClO₄

Ag+ sol oth/un 55°C 100% U T K1=2.40 B2=4.55 1968GAa (4100) 473
K3=0.69
Kso=-8.00

Medium:NH₄NO₃(H₂O)₂. At 70.1 C:Kso=-7.61,K1=2.33,K2=2.03,K3=0.58, m units
At 85 C:Kso=-7.31,K1=2.31,K2=1.95,K3=0.47

Ag+ dis non-aq 150°C 100% U K1=2.49 B2=4.59 1968GMb (4101) 474

Medium: (Li/K)NO₃. m units

Ag+ ISE non-aq 350°C 100% U H 1968GSf (4102) 475
Kso=-4.10

Medium: (K/Ba)NO₃ eutectic. DH=80.1 kJ mol⁻¹

Ag+ ISE non-aq 350°C 100% U T K1=2.60 B2=4.76 1968GSh (4103) 476
K(Ag+AgL)=2.1

Medium: (K/Ba)NO₃. At 370 C: K₁=2.54, K₂=2.10, K(AgL+Ag)=2.0
At 390 C:K₁=2.46, K₂=2.0, K(AgL+Ag)=2.0

Ag+ sol non-aq 480°C 100% U 1968KUb (4104) 477
Kso=-2.85

Medium: molten KNO₃

Ag+ sol non-aq 24°C 100% U 1968LAc (4105) 478
B(Ag2L)==7.73
B(Ag3L)=7.32

Medium: DMSO, 0.5 M Et₄NClO₄

Ag+ sol non-aq 200°C 100% U T H K₁=2.06 1968MGb (4106) 479
Kso=-6.17

Medium: (Li/K)NO₃ eutectic. Kso=-7.36(150C), -6.99(161C), -6.64(176C), -6.33(190C), DH=92.8 kJ mol⁻¹. K₁=2.48(150C), 2.38(161C), 2.25(176C), 2.13(190C)

Ag+ ISE mixed 25°C 20% U I 1968MOa (4107) 480
Kso=-10.26

Medium:20% Me₂CO/H₂O. Kso=-10.94(40%), -11.90(60%), -13.61(80%). In DMSO/H₂O: Kso=-9.81(20%), -9.86(40%), -9.82(60%,80%)

Ag+ sol alc/w 25°C 50% U I K₁=4.64 B₂=7.36 1967ABd (4108) 481
Kso=-11.11

Medium:50% EtOH. K₁=3.32(0%), 3.66(10%), 3.79(20%), 4.27(40%); B₂=5.26(0%), 5.58(10%), 5.82(20%), 6.82(40%); Kso=-9.76(0), -10.04(10), -10.22(20), -10.77(40)

Ag+ ISE non-aq 25°C 100% U B₂=16.3 1967AKa (4109) 482
Kso=-14.5

Medium: DMF. In MeCN:Kso=-12.9, B₂=13.4; in Me₂NCOMe: Kso=-11.9, B₂=16.1 etc

Ag+ ISE non-aq 438°C 100% U K₁=4.72 1967BLb (4110) 483
Medium: molten NaNO₃. x units

Ag+ ISE oth/un 25°C 1.0M U 1967BPF (4111) 484
B₄=5.16

Ag+ ISE non-aq 25°C 100% U K₁=15.15 B₂=20.87 1967BUa (4112) 485
B₃=23.39
Kso=-19.87

Medium: propene carbonate, 0.1 M Et₄NClO₄. Neglecting ion pair formation: K₁=15.15, B₂=21.18, B₃=23.4, Kso=-20.18

Ag+ ISE non-aq 264°C 100% U T H 1967FBb (4113) 486
Kso=-5.70

Medium:(Li/Na)ClO₄. Kso=-6.42(220 C), 5.94(250 C)
DH(Kso)=80.7 kJ mol⁻¹

Ag+ ISE diox/w 25°C 20% U 1967FLa (4114) 487
Kso=-10.216

Ag+ ISE alc/w 25°C 10% U I 1967FLb (4115) 488
 Kso=-9.963
 Medium: 10% MeOH. Kso=-10.780 in 43.12% MeOH, m units

Ag+ ISE non-aq 75°C 100% U T B2=9.42 1967RPC (4116) 489
 Kso=-8.49
 Medium: DMSO. Kso=-9.66(25 C), -9.25(45 C), 8.92(55 C); B2=10.59(25 C),
 10.23(45 C), 9.92(55 C)

Ag+ sol non-aq 275°C 100% U T B2=3.21 1967SPc (4117) 490
 B3=2.65
 B(Ag2L)=2.79
 B(Ag3L)=2.54
 Medium: (Na/K)NO3. At 300 C: B2=3.04, B3=2.38, B(Ag2L)=2.71, B(Ag3L)=2.08

Ag+ ISE non-aq 350°C 100% U TI K1=2.62 1966BBg (4118) 491
 Medium: (K/Ca)NO3, K1=2.71(320 C). K1=2.53(350 C) in (K/Sr)NO3

Ag+ oth non-aq 210°C 100% U B(Ag2Cl)=1.08 1966JRa (4119) 492
 Method: freezing point. Medium: molten AgNO3. x units

Ag+ ISE non-aq 23°C 100% U B2=12.0 1966LIb (4120) 493
 Kso=-10.4
 Medium: DMSO, 0.1 M Et4NClO4. In MeCN: Kso=-12.4, B2=13.0. In MeOH: Kso=-13.0
 B2=7.9, In acetone: Kso=-16.4, B2=16.7. In EtNO2: Kso=-21.1, B2=22.3

Ag+ dis oth/un 0.0 U Kd(Ag+2Cl+H+3TBP(C6H6))=5.39 1966LKa (4121) 494

Ag+ ISE non-aq 350°C 100% U T K1=2.60 1966SEa (4122) 495
 Medium: (K/Ba)NO3 eutectic. K1=2.51(370 C), 2.46(390 C)

Ag+ ISE non-aq 350°C 100% U Kso=-3.8 1965ASa (4123) 496
 Medium: (Na/K)NO3 eutectic, m units

Ag+ ISE non-aq 150°C 100% U Kso=-7.4 1965BFc (4124) 497
 Medium: (Li/K)NO3 eutectic, m units

Ag+ dis oth/un 0.0 U Kd(H+Ag+2Cl+3TBP(C6H6))=5.37 1965KLb (4125) 498

Ag+ ISE non-aq 25°C 100% U Kso=-4.04 1965MBd (4126) 499
 Medium: diaminoethane

Ag+ sol NaClO4 20°C 4.0M U K1=3.45 B2=5.67 1964AJa (4127) 500

B3=6.00
B4=6.04
Kso=-10.40

Ag+ ISE non-aq 240°C 100% U K1=2.93 1964BBc (4128) 501
Medium: molten MnO3. x units

Ag+ cal non-aq 320°C 100% U H 1964HKb (4129) 502
Medium: molten (Na/K)NO3 eutectic. DHso=79.0 kJ mol⁻¹

Ag+ sol non-aq 18°C 100% U B2=8.92 1964PKc (4130) 503
Kso=-10.39
Medium: MeNHCHO. In medium NH2CHO: Kso=-8.28

Ag+ sol non-aq 600°C 100% U 1964SFb (4131) 504
Kso=-6.34
K(AgCl(s)=AgCl)=-3.89
K(AgCl(s)+Cl=AgCl2)=-1.80
Ks(AgCl(s)+Ag)=-1.96

Medium: molten NaNO3. x units

Ag+ ISE non-aq 713°C 100% U T K1=2.70 1964TBa (4132) 505
Medium: molten CsNO3. Data also in different nitrate melts

Ag+ ISE non-aq 225°C 100% U K1=1.98 B2=1.2 1964THc (4133) 506
Medium: (Li/K)NO3, m units

Ag+ sol NaClO4 25°C 0.50M U I 1964WGa (4134) 507
Kso=-9.62
Medium: HClO4. Kso=-10.05(I=3 M)

Ag+ ISE non-aq 350°C 100% U T H 1963BBd (4135) 508
Kso(AgCl(s))=-6.06
Medium: liquid KNO3, I=0 corr. Kso=-5.86(370 C), -5.72(385 C), -5.55(402 C),
-5.26(436 C); DH(Kso)=80.3 kJ mol⁻¹. x units ?

Ag+ ISE non-aq 250°C 100% U T 1963RSc (4136) 509
Kso=-5.27
Medium: liquid (Na/K)NO3. Kso=-4.36(320 C). Kso=2.47-4050/T
Ks(AgCl(s)=AgCl)=-8.47+3000/T, K1=7000/T-10.85

Ag+ ISE non-aq 148°C 100% U T 1963THa (4137) 510
Kso=-9.31
Medium: liquid (Li,K)NO3. Kso=-8.84(172 C), -8.34(194.5 C), -8.03(211.5 C)

Ag+ ISE non-aq 385°C 100% U K1=2.66 B2=4.89 1962BLb (4138) 511
K(AgL+Ag)=1.3
Medium: liquid KNO3, x units

Ag+ ISE non-aq ? 100% U 1962BSa (4139) 512

$K_{so}(\text{AgCl}(s)) = -16.5$

Medium: THF, 0.3 M LiClO₄

Ag+ ISE non-aq 350°C 100% U T K1=2.74 B2=5.07 1962MBd (4140) 513
Medium: liquid KNO₃. K1=2.50, K2=2.07(436 C), x units

Ag+ sol NaCl 18°C var U K1=3.44 B2=5.30 1962MIb (4141) 514
B3=5.48
B4=5.40
 $K_{so}(\text{AgCl}(s)) = -10.06$
 $K_s(\text{AgCl}(s) = \text{AgCl}) = -6.63$

$K_s(\text{AgCl}(s) + \text{Cl} = \text{AgCl}_2) = -4.76$, $K_s(\text{AgCl}(s) + 2\text{Cl} = \text{AgCl}_3) = -4.58$,
 $K_s(\text{AgCl}(s) + 3\text{Cl} = \text{AgCl}_4) = -4.67$

Ag+ ISE non-aq 350°C 100% U I 1961ASa (4142) 515
 $K_{so} = -3.75$

Medium: NaNO₃(liquid). $K_{so} = -3.79$ in KNO₃, $K_{so} = 3.82$ in (Na,K)NO₃(liquid)

Ag+ sp non-aq 25°C 100% U K1=4.08 1961B0a (4143) 516
Medium: pyridine

Ag+ ISE non-aq 370°C 100% U T H K1=1.70 B2=2.93 1961DGc (4144) 517
Medium: KNO₃(liquid). K1=1.45, K2=1.08 (436 C). DH(K1) = -33.3 kJ mol⁻¹,
DH(K2) = -20.6

Ag+ ISE non-aq 333°C 100% U T H K1=1.55 B2=2.68 1961DGc (4145) 518
Medium: (Na,K)NO₃(liquid). K1=1.45, K2=0.95(374 C). DH(K1) = -18.4 kJ mol⁻¹,
DH(K2) = -32.3

Ag+ ISE non-aq 374°C 100% U I K1=1.25 B2=2.08 1961GDa (4146) 519
Medium: liquid NaNO₃. In liquid KNO₃ K1=1.65, K2=1.26. Data also in mixtures

Ag+ ISE non-aq 233°C 100% U T K1=3.02 1961HBb (4147) 520
Medium: (NaK)NO₃(liquid). K1=2.81(278 C), 2.48(385 C), 2.26(479 C),
2.12(528 C), x units

Ag+ sol NaClO₄ 25°C 0.10M U K1=3.08 B2=5.08 1961K0c (4148) 521

Ag+ ISE R4N.X 25°C 1.0M U 1961LPa (4149) 522
 $K_{so}(\text{AgCl}(s)) = -9.31$

Ag+ sol non-aq 280°C 100% U K1=1.94 B2=2.80 19610Ka (4150) 523
Medium: (NaK)NO₃(liquid), m units

Ag+ ISE non-aq 25°C 100% U K1=3.54 1961SBb (4151) 524
Medium: diaminoethane

Ag+ sol NaCl 300°C var U B2=4.3 1960GAb (4152) 525
 $K_{so}(\text{AgCl}(s)) = -5.32$
 $K_s(\text{AgCl}(s) + \text{Cl} = \text{AgCl}_2) = -1$

Ag+ ISE non-aq 331°C 100% U T K1=2.44 1960HBa (4153) 526
Medium: KNO3(liquid). K1=2.35(364 C), 2.31(385 C), 2.25(402 C), 2.20(423 C),
2.16(438 C), 2.04(500 C). x units

Ag+ cal non-aq 158°C 100% U H 1960JMa (4154) 527
Kso(AgCl(s))=-7.56
Medium: (Li,K)NO3(liquid). DH(Kso)=79.1 kJ mol⁻¹, DS=39 J K⁻¹ mol⁻¹

Ag+ sol none 20°C 0.0 U K1=3.30 1960LIa (4155) 528
B(Ag2Cl)=4.60
B(Ag3Cl)=4.96

Ag+ sol none 25°C 0.0 U B2=5.24 1957CHd (4156) 529
B4=6.14

Ag+ sol none 18°C 0.0 U K1=3.41 B2=5.29 1957LIa (4157) 530
K3=-0.05
Kso(AgCl(s))=-10.05

Ag+ ISE non-aq 250°C 100% U H 1956FRb (4158) 531
Kso(AgCl(s))=-5.28
Medium: (Na/K)NO3(liquid). DH(Kso)=76.6 kJ mol⁻¹, DS=42.2 J K⁻¹ mol⁻¹, m unit

Ag+ ISE oth/un 25°C var U 1956KLa (4159) 532
Kso(AgCl(s))=0.40-3000/T
15-80 C. DH(Kso)=57.3 kJ mol⁻¹ (misprint ?)

Ag+ con none 25°C 0.0 U 1955DJb (4160) 533
Kso(AgCl(s))=-9.75

Ag+ sol NaCl 25°C var U B2=5.34 1955KNa (4161) 534
K3=0.37
K4=-0.41

Ag+ sol oth/un 25°C var U I B2=5.34 1955KNa (4162) 535
K3=0.31
K4=-0.42
Medium: HCl. In NaCl B2=5.49

Ag+ ix none 30°C 0.0 U K2=2.48 1955MAa (4163) 536
K3=0.88
K4=-0.92

Ag+ con none 25°C 0.0 U T 1954GMa (4164) 537
Kso(AgCl(s))=-9.75
I=0 corr. Kso=-10.59(5C), -10.15(15C), -9.38(35 C), -9.03(45 C), -8.67(55 C)

Ag+ sol oth/un 25°C var U I K1=3.52 B2=5.40 1954KTa (4165) 538
K3=0.23

B4=5.90

Medium HCl. DH(B4)=-59 kJ mol⁻¹. Alternative value: B4=5.23

Ag+ ISE none 25°C 0.0 U T H 19380Ba (4176) 549

Kso(AgCl(s))=-9.749

I=0 corr. DH(Kso)=65.5 kJ mol⁻¹, DS=33.1 J K⁻¹ mol⁻¹. Kso=-10.595(5 C),
-10.152(15 C), -9.381(35 C), -9.043(45 C)

Ag+ oth none 25°C 0.0 U 1938PSa (4177) 550

Kso(AgCl(s))=-9.79

Method: tyndallometry,nephelometry, I=0 corr.

Ag+ sol none 25°C 0.0 U 1936PHa (4178) 551

Ks(AgCl(s)=AgCl)=-6.85

K(AgCl(s)+Cl=AgCl₂)=-4.56

Ag+ ISE none 25°C 0.0 U 1935BMa (4179) 552

Kso(AgCl)=-9.76

Ag+ con none 25°C 0.0 U 1933DKa (4180) 553

Kso(AgCl)=-9.72

Ag+ ISE none 25°C 0.0 U 1933HJa (4181) 554

Kso(AgCl)=-9.71

Ag+ oth none 25°C 0.0 U 1932NEa (4182) 555

Kso(AgCl)=-9.79

Method:y tyndallometry,nephelometry, I=0 corr.

Ag+ ISE oth/un 20°C var U 1930BRa (4183) 556

Kso(AgCl)=-9.79

Ag+ EMF oth/un 25°C dil U T 1930HKa (4184) 557

Kso(AgCl)=-9.74

Kso=-10.12(15 C), -9.21(40 C)

Ag+ ISE alc/w 25°C 100% U 1929BHa (4185) 558

Kso(AgCl)=-13.05

Medium: MeOH

Ag+ ISE none 16°C 0.0 U 1927CAa (4186) 559

Kso(AgCl)=-10.03

Ag+ sol oth/un 25°C var U B2=5.64 1921FCa (4187) 560

K(AgCl(s)=AgCl)=-6.21

K(AgCl(s)+Cl=AgCl₂)=-4.47

Ag+ con none 18°C 0.0 U T 1910MEa (4188) 561

Kso(AgCl)=-9.96

I=0 corr. Kso=-8.88(50 C), -7.67(100 C)

Ag+ con oth/un 100°C dil U 1906B0a (4189) 562
Kso(AgCl)=-7.63

Ag+ sol KCl 25°C 4.0M U 1904BEa (4190) 563
B4=5.70

Ag+ con oth/un 20°C dil U 1903B0b (4191) 564
Kso(AgCl)=-9.95

Ag+ ISE oth/un 25°C var U 1900THa (4192) 565
Kso(AgCl)=-9.70

Ag+ con oth/un 26°C dil U T 1893H0a (4193) 566
Kso(AgCl)=-9.48

Kso=-10.02(13.8 C)

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

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

Ag+ con none 25°C 0.0 U K1=0.22 1947J0a (6023) 567

ClO4- HL Perchlorate CAS 7001-90-3 (287)
Perchlorate;

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

Ag+ dis non-aq 25°C 100% C K1=5.05 2001DGa (6123) 568
Medium: dichloromethane

Ag+ con mixed 25°C 20% C K1=0.80 1994SSb (6124) 569
Medium:20% w/w propylene carbonate/ethylene carbonate.

Ag+ con none 30°C 0.0 C I K1=-0.10 1990GKd (6125) 570
Also data for 20-100% w/w DMSO/H2O.

Ag+ con none 30°C 0.0 C I K1=-0.08 1986SKf (6126) 571
Data for 0.001-0.008 M AgBrO3 in 0-100% AN/H2O or MeOH/AN mixtures.
In 100% acetonitrile, K1=1.30

Ag+ ISE mixed 25°C 95% U I K1=3.25 1983MSa (6127) 572
Medium: THF/H2O mixtures. Proportion of THF varied from 95% to 77% (w/w)

Ag+ EMF mixed 25°C 0.10M U I K1=3.8 1970DCa (6128) 573
Medium: dimethoxy-1,2-ethane, 0.1 M H2O. K1=4.0(H2O concentration:0.01)

Ag+ dis NaClO4 25°C 3.0M U 1960ADa (6129) 574
Kd(Ag+2A(benzene)+L=AgLA2(benzene)). A=quinoline

 Ag+ con non-aq 25°C 100% U I K1=3.06 1958GLb (6130) 575
 Medium: cyclohexanone. In i-BuOH K1=2.83. Data also in mixtures
 In Me2CO: K1=3.27

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

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

Ag+ oth none 35°C 0.00 U T H 1971JLa (6454) 576

Kso=-11.24

5 C: Kso=-12.34; 25 C: Kso=-11.56; 45 C: Kso=-10.95; 60 C: Kso=-10.57;
 80 C: Kso=-10.14. DH(Kso)=93.59-3.93x10⁻⁵T**2, DS=209.79-0.79T (in kilocal)

 Ag+ ISE non-aq 357°C 100% U T K1=1.69 1963AHa (6455) 577
 Medium: KNO3(liquid);K1=1.62(377 C),1.58(410 C),1.54(450 C),1.51(490 C);
 in x units

 Ag+ ISE oth/un 357°C 100% U T K1=1.69 1963AHa (6456) 578
 Medium: KNO3(liquid); K1=1.62(377 C),1.58(410 C),1.54(450 C),1.51(490 C)

 Ag+ cal oth/un 158°C 100% U H 1960JMa (6457) 579

Kso=-7.96

Medium: (Li,K)NO3(liquid,eutectic) DH(Kso)=70 kJ mol⁻¹, DS=8 J K⁻¹ mol⁻¹

 Ag+ con none 25°C 0.0 U 1957HNa (6458) 580

Kso=-11.61

 Ag+ ISE oth/un 250°C 100% U 1956FRb (6459) 581

Kso=-6

Medium: (NaK)NO3(liquid);in m units

 Ag+ ISE none 25°C 0.0 U T H 1954PAa (6460) 582

Kso=-11.89

DH(Kso)=60.7 kJ mol⁻¹(25 C); Kso=-12.10(20 C),-11.72(30 C),-11.39(40 C)

 Ag+ ISE none 20°C 0.0 U 1941MUa (6461) 583

Kso=-12.15

 Ag+ ISE none 25°C 0.0 U 1935Cma (6462) 584

Kso=-11.89

 Ag+ ISE none 25°C 0.0 U 1935Cma (6463) 585

Kso=-11.81

 Ag+ ISE none 25°C 0.0 U 1935Cma (6464) 586

Kso=-11.95

 Ag+ ISE none 25°C 0.0 U 1932HJa (6465) 587

Kso=-11.39

Ag+ con none 18°C 0.0 U T 1923B0a (6466) 588

Kso=-11.80

Kso=-12.52(0.26 C), -11.92(14.8 C), -11.32(30.8 C), -11.07(37.3 C), -10.55(75 C)

Ag+ sol oth/un 25°C dil U 1907SHa (6467) 589

Kso=-11.05

Ag+ sol oth/un 25°C dil U 1905SAb (6468) 590

Kso=-11.58

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

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

Ag+ ISE NaClO4 25°C 1.00M C I K1=-0.52 1984HCa (6627) 591
Also in 1.0 M NaNO3 (K1=-1.0) and 1.0 M KNO3 (K1=-0.39).

Ag+ ISE NaNO3 16°C 0.50M U K1=-0.4 1970B0a (6628) 592

Ag+ EMF non-aq 0°C 100% U K1=1.06 1966CPb (6629) 593
Medium:HF

Ag+ ISE NaClO4 25°C 0.50M U T H 1961CPc (6630) 594
K(Ag+HF=AgF+H)=-0.17

*K1=-0.11(15C), *K1=-0.25(35C). At I=0 corr: K1=0.38
DH(K1)=-12 kJ mol⁻¹, DS=-42J K⁻¹ mol⁻¹

Ag+ ISE NaClO4 25°C 0.50M U TIH K1=-0.19 1955PAa (6631) 595
K1=-0.12(15 C), K1=-0.26(35 C). DH(K1)=-10.0 kJ mol⁻¹, DS=-38 J K⁻¹ mol⁻¹
At I=0 corr: K1=0.36, DS(K1)=-29

Ag+ ISE NaClO4 25°C 1.00M U K1=-0.32 1952LMa (6632) 596

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

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

Ag+ ISE non-aq 20°C 100% U B2=19.5 1968BBb (7380) 597
Kso(AgCl)=-19.2

Medium:MeNO2, 0.1 M Et4NClO4. Kso=-19.7(Br), -20.5(I), -16.9(SCN), <-24(CN);
B2=19.7(Br), 22.0(I), 16.4(SCN), >34(CN)

Ag+ ISE non-aq 438°C 100% U 1967BLb (7381) 598
K(AgCl2+AgBr2=2AgClBr)=0.71

Medium: molten NaNO3

Ag+ sol NaClO4 25°C 7.0M U M 1962FSb (7382) 599

B(AgCl2I)=7.57
B(AgBr2I)=12.31
B(AgBrI2)=13.47
B(AgBr(I3))=13.83

Ag+ ISE none 25°C 0.0 U M 1957CHc (7383) 600

B(AgClBr3)=9.48
B(AgCl3Br)=7.91

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

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

Ag+ oth non-aq 25°C 100% U K1=0.70 B2=0.85 1974BLa (7567) 601
Method:partial pressure. Medium:propene carbonate. By N.M.R., K1=0.68

Ag+ ISE alc/w 25°C 100% U K1=0.0 1924LAa (7568) 602
Medium: EtOH

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

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

Ag+ sol none 25°C 0.0 C IH B2=14.8 2003WAa (7691) 603
Kso(AgCl)=-15.96
Method: analysis of literature data. DH(Kso)=112.5 kJ mol⁻¹. Also Kso=-17.7 (methanol), -14.5 (acetonitrile), -12.0 (DMSO). B2=13.0 (DMSO).

Ag+ ISE non-aq 25°C 100% U I K1=10.60 B2=15.75 1994GSa (7692) 604
K3=0.85
B3=16.60
B(Ag2L4)=32.41
B(Ag5L7)=77.70
Medium: DMF. B(Ag6L8)=91.39

Ag+ ISE non-aq 25°C 100% U I K1=7.97 B2=12.72 1994GSa (7693) 605
B(Ag2L4)=27.26
B(Ag4L6)=51.63
B(Ag5L7)=64.63
B(Ag6L8)=76.31
Medium: DMSO

Ag+ ISE non-aq 25°C 100% C K1=21.44 1988CCd (7694) 606
Medium: propylene carbonate

Ag+ ISE non-aq 185°C 100% M K1=0.42 B2=0.80 1988JHb (7695) 607
Medium: molten KSCN. K1=mol⁻¹ kg

Ag+ EMF non-aq 25°C 100% U B2=21.59 1987CCb (7696) 608
B3=23.85
*B(3,4)=64.62
*B(3,6)=70.75
*B(8,1,2)=183.24

Medium: propylene carbonate

Ag+ ISE non-aq 25°C 100% U IH K1=7.86 B2=11.27 1987JPa (7697) 609
Medium: tetrahydrothiophene, 0.1M Bu4NBF4

Ag+ ISE non-aq 25°C 100% C H K1=6.87 B2=10.07 1986AIb (7698) 610
Medium: Pyridine, 0.1 M Et4NC104; DH(K1)=-12.3, DH(K2)=3.8 kJ mol⁻¹

Ag+ ISE non-aq 25°C 100% C H K1=6.87 B2=10.08 1986AIb (7699) 611
B(Ag2+I)=9.12
Medium: DMSO, 0.1 M NH4C104. DH(K1)=-12.3; DH(B2)=-8.5 kJ mol⁻¹;
DH(Ag2I)=-13.0

Ag+ ISE non-aq 25°C 100% U K1=7.97 B2=12.72 1985GAc (7700) 612
B(Ag2L4)=27.26
B(Ag4L6)=51.83
B(Ag5L7)=64.63
B(Ag6L8)=76.31

Medium: DMSO, 0.5 M KNO3.

Ag+ ISE KNO3 0°C 1.00M U K1=9.47 1985MMc (7701) 613

Ag+ ISE KNO3 25°C 1.00M U T HM 1985MMd (7702) 614
DH(K1)=-35.8 kJ mol⁻¹; DH(B2)=-60.6; DS(K1)=-69.8 J K⁻¹ mol⁻¹; DS(B2)=-28.2
Ternary complexes with: thiourea, thiosulphate, chloride

Ag+ EMF KNO3 20°C 1.0M C M K1=10.19 B2=12.46 1984DBb (7703) 615
B(Ag(tu)I)=12.12
B(Ag(tu)I2)=14.12
B(Ag(ts)I)=12.67

tu is thiourea. ts is thiosulfate. Method: Ag/Ag+ electrode.

Ag+ ISE non-aq 25°C 100% U I B2eff=26.1 1981CLa (7704) 616
Kso=-24.0

Medium: methylisobutylketone. Data available for water equilibrated MIBK

Ag+ ISE non-aq 25°C 100% U B2=14.49 1975SAb (7705) 617
Kso=-13.73

Medium: propylene carbonate/0.09 M tetrahydrothiophene

Ag+ ISE non-aq 25°C 100% U I B2=12.33 1975SAb (7706) 618
Kso=-10.93

Medium: propylene carbonate/0.56 M tetrahydrothiophene

In propionitrile/0.01 , B2=13.8, B3=15.8, Kso=-11.1

Ag+ ISE non-aq 25°C 100% U I B2=18.0 1975SAc (7707) 619
Kso=-16.7

Medium: PC/TMSO, 1.23 M. In dimethylsulfite: Kso=-20.5, B2=19.0.
In ethylene sulfite: B2=21.2, Kso=-21.1. TMSO=Tetramethylene sulfoxide

Ag+ ISE mixed 25°C 9% U I K2=1.87 1974ABa (7708) 620
K3=2.46
B(Ag2I)=13.16
Kso=-16.19

Medium: 9% w/w acetone/H2O. In 19.8% acetone/H2O, K2=3.07, K3=1.45, B(Ag2I)=
13.04. Solubility data for differing media strengths also given

Ag+ ISE alc/w 25°C 9.6% U I K2=2.69 1974ABa (7709) 621
K3=1.52
B(Ag2I)=13.87
Kso=-16.50

Medium: 9.6% w/w EtOH/H2O. In 19.8% EtOH, K2=2.20, K3=2.10, B(Ag2I)=14.17
Solubility constants and data for differing media strengths also available

Ag+ ISE alc/w 25°C 9.5% U I K2=1.92 1974ABa (7710) 622
K3=2.24
B(Ag2I)=13.87
Kso=-16.74

Medium: 9.5% MeOH/H2O. In 19.9% MeOH. K2=2.33, K3=2.94, B(Ag2I)=14.34.
Solubility constants and data for differing media strengths also available

Ag+ ISE diox/w 25°C 8.2% U IH K2=1.66 1974ABa (7711) 623
K3=2.63
B(Ag2I)=12.80
Kso=-15.84

Medium: 8.2% dioxan/H2O. In 20.5%, K2=2.75, K3=1.75, B(Ag2I)=13.04.
Solubility constants and data at differing media compositions also available

Ag+ EMF KNO3 50°C ? U IH 1974DGB (7712) 624
Kso=-17.52

Medium: 10% NaNO3-Ca(NO3)2(H2O)4. DH(Kso)=102.1 kJ mol⁻¹(0%), 102.6(10%),
98,5(20%); Kso=-17.45(0%), -17.58(20%) x units

Ag+ EMF non-aq ? 100% U 1974FCa (7713) 625
K(AgI(s)+LiI=LiAgI2)=2.8

Medium: THF

Ag+ EMF non-aq 30°C 100% U K1=6.55 B2=9.40 1974JAc (7714) 626
Medium: pyridine, 0.2 M LiClO4; m units

Ag+ ISE non-aq 25°C 100% U I B2=18.58 1974SAb (7715) 627
Kso=-16.79

Medium: 3-Me-2-Oxazolidone, 0.1 M Pr4NC1O4

Ag+ ISE mixed 25°C 80% U I B2=17.09 1974SAc (7716) 628
Kso=-17.64

Medium: 80% acetone/H2O. In 98.5% acetone, Kso=-20.21, B2=21.34, B3=22.79
In 91.2% acetone, Kso=-18.70, B2=18.96; 100%: Kso=-23.0, B2=24.4

Ag+ EMF non-aq 87°C 100% U Kso=-10.92 1973BMc (7717) 629

Medium: CH3COONa(liquid); m units

Ag+ ISE none 25°C 0.0 U Kso=-16.0 1973BRa (7718) 630

Ag+ EMF non-aq 25°C 100% U B2=15.6 1973CCa (7719) 631
B(Ag2I3)=30.3
Kso=-15.0

Medium: MeCN, m units

Ag+ sol non-aq 280°C 100% U B3=7.38 1973HOa (7720) 632
B4=7.56
B(Ag2L6)=16.2

Medium:(Na,K)NO3; m units

Ag+ ISE non-aq 280°C 100% U B2=6.5 1973HOb (7721) 633
B3=7.36
B4=6.5
B(Ag2I6)=16.3

Medium:(Na,K)NO3; m units

Ag+ ISE alc/w 25°C 10% U I Kso=-16.2 1973KPa (7722) 634

In 10% v/v MeOH/H2O; Kso=-15.96(=0%), -16.5(40%), -16.8(60%), -17.4(90%);
Also in EtOH, PrOH, i=PrOH, acetone, DMF. In PrOH: Kso=-16.1(10%), -16.3(40%)

Ag+ ISE mixed 25°C 10% U I Kso=-16.1 1973KPa (7723) 635

In 10% v/v acetone/H2O; Kso=-16.1(20%), -16.1(30%), -16.1(40%)
In DMF: Kso=-16.0(10%), -15.8(40%), -15.4(60%)

Ag+ ISE diox/w 20°C 50% U I Kso=-16.83 1973NEa (7724) 636

Medium: 50% v/v dioxan-H2O, 0.001 M KI; Kso=-17.80(70%), -18.59(80%),
-19.32(90%)

Ag+ ISE non-aq 25°C 100% U I B2=12.58 1973SSg (7725) 637
Kso=-13.41

in (propionitrile + y M SO2), 0.1 M Pr4NClO4 at y=0.95.
B2=17.25, Kso=-16.08(y=0); B2=10.07, Kso=-12.39(y=3.3)

Ag+ EMF non-aq 25°C 100% U I 1972BGa (7726) 638
Kso=-16.7
Medium: ethylene glycol.In diMeacetamide: B2=17.8, B(Ag3L4)=48.9, Kso=-15.30

Ag+ ISE oth/un 50°C ? U T H 1972BNa (7727) 639
Kso=-17.39
Medium: Ca(NO3)2(H2O)4. DH(Kso)=113 kJ mol⁻¹; Kso=-16.56(65 C), -16.21(70 C),
-16.12(75 C), -15.83(80 C) x units

Ag+ ISE non-aq 25°C 100% U B2=12.59 1972GSd (7728) 640
B3=13.45
B(Ag6I8)=75.33
Medium: DMSO, 0.5 M KNO3

Ag+ ISE mixed ? 2.7% U 1972KPa (7729) 641
Kso=-16.2
In 2.7 to 14.7% acetone/H2O. In DMF/H2O: Kso=-15.96(0-2.6%), -15.76(13.3%),
-15.34(25.9%)

Ag+ EMF non-aq 142°C 100% U Kso=-8.62 1971BMb (7730) 642
Medium: NH4SO3NH2; m units

Ag+ EMF non-aq 30°C 100% U B2=14.8 1971BPb (7731) 643
B(Ag3I4)=41.7
Kso=-14.4
Medium: 2-pyrrolidinone, 0.1 M Et4NClO4

Ag+ EMF mixed 25°C 60% U I B2=12.5 1971Cma (7732) 644
B(Ag2L3)=25.2
B(Ag3L4)=36.7
Kso=-12.2
Medium: 60% DMSO/H2O, 0.1 M Et4NClO4. B2=12.6(70%), 12.7(80-90%), 12.9(95%)
B(Ag2L3)=24.3(80%), B(Ag3L4)=36.9(95%). Kso=-15.6(5%), -14.5(20%), -11.9(95%)

Ag+ EMF non-aq 350°C 100% U T Kso=-8.32 1971GJa (7733) 645
Medium: (Na,Ba)NO3 eutectic. Kso=4.387-7895/T m units. 350-425 C

Ag+ ISE non-aq 150°C 100% U T K1=2.14 1971KIa (7734) 646
Medium: C2H5NH3Cl; K1=2.11(170 C), 2.06(190 C), 1.95(210 C) unit:mol/mol sol

Ag+ sol alc/w 20°C 50% U I Kso=-16.40 1971NEa (7735) 647
50% w/w MeOH/H2O; Kso=-16.96(70%), -17.24(80%), -17.64(90%), -18.00(100%)
In PrOH/H2O: Kso=-16.42(50%), -16.96(70%), -18.08(90%). -19.38(100%)

Ag+ ISE non-aq 30°C 100% U I Kso=-16.7 1971QDa (7736) 648
Medium: 13% N-methylacetamide/MeOH at I=0.1. Kso=-17.5(0%), -16.1(27%),

-15.4(40%), -14.9(63%), -14.6(84%), -14.3(100%). In MeOH, I=0.01: Kso=-18.0

Ag+ con non-aq 20°C 100% U B2=13.0 1970DMa (7737) 649
B(Ag2I)=12.1
B(Ag3I4)=37.2
Kso=-12.1

Medium: DMSO, 0.1 M Et4NClO4

Ag+ ISE non-aq 22°C 100% U B2=22.8 1969CLa (7738) 650
B(Ag3I4)=66.9
Kso=-21.8

Medium: propene carbonate, 0.1 M Et4NClO4

Ag+ sol non-aq 280°C 100% U K1=3.62 B2=6.56 1969ELa (7739) 651
B3=7.46
Kso=-9.21

Medium: (Na,K)NO3; m units. Using Ag ISE: B2=6.65, B3=7.54, Kso=-9.24

Ag+ ISE NaNO3 50°C 1.0M U T Kso=-13.85 1969GUa (7740) 652
Kso=-13.36(60 C), -12.87(70 C), -12.39(80 C), -12.10(90 C)

Ag+ ISE non-aq 98°C 100% U B2=10.6 1969GUa (7741) 653
B3=12.16
Kso=-11.95

Medium: N-methylformamide, 1 M NaNO3

Ag+ EMF non-aq 148°C 100% U T H Kso=-13.09 1969SMh (7742) 654

Medium: (Li,K)NO3, 43% LiNO3; 148.5 C. Kso=-13.04(150 C), -12.31(172 C), -12.64(194.5 C) m units

Ag+ ISE non-aq 25°C 100% U B2=16.7 1969VKa (7743) 655
Kso=-14.4

Medium: N-methyl-2-pyrrolidone

Ag+ ISE non-aq 20°C 100% U B2=22.0 1968BBb (7744) 656
Kso=-20.5

Medium: CH3NO2

Ag+ ISE non-aq 30°C 100% U Kso=-18.48 1968DLa (7745) 657
B(Ag3I4)=56.52

Medium: sulpholan, 0.1 M Et4NClO4

Ag+ ISE non-aq 350°C 100% U H Kso=-7.71 1968GSf (7746) 658

Medium: (K/Ba)NO3 eutectic. DHso=137.2 kJ mol⁻¹

Ag+ sp non-aq 24°C 100% U I 1968LAc (7747) 659

B(Ag2L)=10.04

B(Ag3L)=10.61

Also solubility. Medium: DMSO, 0.5 M Et4NClO4. In MeCN: B(Ag2L)=9.11,
B(Ag3L)=10.00; in acetone: B(Ag3L)=18.96

Ag+ oth alc/w 25°C 100% U 1968PAa (7748) 660

Kso=-18.3

Medium: MeOH

Ag+ ISE non-aq 428°C 100% U T K1=0.73 B2=1.55 1968WIb (7749) 661

Medium: molten (Li/K)Cl. At 450C: K1=0.63, B2=0; 476 C: K1=0.58, B2=0.8

Ag+ ISE alc/w 25°C 100% U I 1967AKa (7750) 662

Kso=-18.3

Medium:MeOH. In DMSO: Kso=-11.4,B2=12.5. In HCONH2:Kso=-14.5. In DMF:
Kso=-15.8,B2=17.8. In Me2NCOMe: Kso=-14.7,B2=12.5

Ag+ con non-aq 140°C 100% U K1=3.49 1967BNb (7751) 663

Medium:liquid I2

Ag+ ISE oth/un 25°C 1.0M U 1967BPF (7752) 664

B4=13.37

Ag+ ISE non-aq 239°C 100% U T H 1967FBb (7753) 665

Kso=-12.62

Medium: molten (Li/Na)ClO4. Kso=-13.21(222 C?), -12.3(250 C).
DH(Kso)=167.2 J K-1 mol-1

Ag+ ISE non-aq 641°C 100% U K1=3.23 B2=6.16 1967GUb (7754) 666

Medium: (Li/K)SO4 eutectic. 564-718 C, x units

Ag+ ISE non-aq 25°C 100% U T 1967RPa (7755) 667

Kso=-11.47

B(Ag2I3)=23.95

Medium: DMSO, 0.1 M NH4NO3. B=23.04(45 C),21.83(65 C),20.83(85 C)

Ag+ ISE non-aq 23°C 100% U I B2=13.15 1966LIb (7756) 668

Kso=-12.0

Medium: DMSO, 0.1 M Et4NClO4. In MeOH: B2=14.8, Kso=-18.2. In acetone:
B2=22.25, Kso=-20.9. In MeCN: B2=14.6 to 15.7, Kso=-14.2. In EtNO2:B2=23.5

Ag+ ISE non-aq 20°C 100% U 1966THb (7757) 669

Kso=-5.6

Medium liquid NH3, NH4NO3(NH3)1.3

Ag+ ISE non-aq 150°C 100% U 1965BFc (7758) 670

Kso=-13.0

Medium: (Na/K)NO3 eutectic. m units

Ag+ ISE non-aq 25°C 100% U K1=5.03 1965MBd (7759) 671

Medium: diaminoethane

Ag+ ISE non-aq 349°C 100% U TIH 1964BLa (7760) 672
Kso=-10.36

Medium: molten NaNO₃. DH(Kso)=123.3 kJ mol⁻¹. In KNO₃: Kso=-9.92(359 C), -9.24(361 C). In (Na/K)NO₃: Kso=-11.85(250 C), DH=116.6

Ag+ con non-aq 25°C 100% U K1=4.95 1964FMb (7761) 673
Medium: diaminoethane

Ag+ sol oth/un 300°C var U 1964GGa (7762) 674
Ks2=-0.70

Medium: NaI

Ag+ sol oth/un 20°C 0.0 U K1=6.58 1964LIa (7763) 675
K(AgL+Ag)=4.42
K(AgL+2Ag)=7.04

Ag+ ISE non-aq 350°C 100% U TI K1=4.08 1963BHa (7764) 676
Medium: molten KNO₃. In (Na/K)NO₃: K1=4.20(350 C), 4.11(375 C). In NaNO₃:
K1=4.69(350 C) x units(mol/mol NO₃)

Ag+ ISE non-aq 25°C 100% U B2=18.12 1963CMA (7765) 677
Kso=-16.44
B(Ag3L4)=51.55

Medium: Me₂NCHO

Ag+ sol oth/un 18°C var U K1=6.59 B2=11.74 1963MIc (7766) 678
B3=13.75
B4=14.36
Kso(AgL)=-16.50

Ag+ ISE non-aq 148°C 100% U T 1963THa (7767) 679
Kso(AgL)=-13.8
Medium: liquid (Li,K)NO₃. Method: Ag electrode. Kso=-13.1(172 C),
-12.4(194.5 C), x units

Ag+ ISE non-aq 402°C 100% U K1=3.73 B2=7.16 1962ABb (7768) 680
K(AgL+Ag)=3.55
Medium: liquid KNO₃, m units. Method: Ag electrode

Ag+ sol NaClO₄ 25°C 7.0M U 1962FSb (7769) 681
B3=14.09
B4=14.39
Kso(AgL)=-15.82

Ag+ ISE non-aq 25°C 100% U K1=4.79 1961SBb (7770) 682
Medium: C₂H₄(NH₂)₂. Method: Ag electrode

Ag+ cal non-aq 158°C 100% U H 1960JMa (7771) 683

Medium: liquid (Li,K)NO₃. DH(so)=134 kJ mol⁻¹, DS=76.6 J K⁻¹ mol⁻¹

Ag+ sol none 20°C 0.0 U 1960LIa (7772) 684

B(Ag₂L)=11.0
B(Ag₃L)=13.62

Ag+ sol none 18°C 0.0 U K1=6.58 B2=11.74 1957LIa (7773) 685

K3=1.94
K4=-0.58
Kso(AgL)=-16.50

Ag+ ISE non-aq 250°C 100% U H 1956FRb (7774) 686

Kso(AgL)=-9.73

Method: Ag electrode. Medium: liquid (Na0.5K0.5)NO₃, m units

DH(so)=122.8 kJ mol⁻¹, DS=58.6 J K⁻¹ mol⁻¹

Ag+ ISE oth/un 25°C var U T H 1956KLa (7775) 687

Kso(AgL)=1.52-5090/T

Method: Ag electrode. DH(so)=97.5 kJ mol⁻¹

Ag+ sol NaClO₄ 25°C 2.0M U 1956LPa (7776) 688

K(AgL(s)+2L=AgL₃)=-2.40
K(AgL(s)+3L=AgL₄)=-2.30
K(2AgL(s)+4L=Ag₂L₆)=-3.30
K(3AgL(s)+5L=Ag₃L₈)=-2.77

Ag+ sol NaClO₄ 25°C 4.0M U K1=8.13 1956LPa (7777) 689

K(AgL(s)=AgL)=-8.22
K(AgL(s)+Ag=Ag₂L)=-6.0
K(AgL(s)+2Ag=Ag₃L)=-3.15
K(AgL(s)+3Ag=Ag₄L)=-2.43

Ag+ ISE NaClO₄ 25°C 4.0M U 1956LPa (7778) 690

B(Ag₂L₆)=29.7
B(Ag₃L₈)=46.4
Kso(AgL)=-16.35
K(AgL(s)+2L=AgL₃)=-2.52

Method: Ag electrode. B₃=13.85; K₄=0.43; K(AgL(s)+3L=AgL₄)=-2.05;
K(2AgL(s)+4L=Ag₂L₆)=-3.0; K(3AgL(s)+5L=Ag₃L₈)=-2.64. Data also by solubility

Ag+ sol oth/un 25°C var U 1954KTa (7779) 691

B₄=14.00
K₅=0.18 or B(Ag₂L₆)=29.85
B(Ag₃L)=14.00

Ag+ sol non-aq 25°C 100% U I B₂=23.60 1954KTa (7780) 692

B(Ag₃L₄)=65.4

Medium: Me₂CO. Also data for Me₂CO/H₂O mixtures. In aqueous soln, I=var,
B₃=14.00, K₄=0.49, K(AgL(s)+2L=AgL₃)=-2.42, K(AgL(s)+3L=AgL₄)=-1.92

Ag+	sol oth/un	20°C	var	U		1954KTa	(7781)	693
						B3=13.60		
						K4=0.44		
						K5=0.11 or B(Ag2L6)=29.85		

Ag+	ISE KNO3	20°C	1.60M	U		1953G0a	(7782)	694
						B3=13.85		
						K4=-0.11		

Ag+	ISE non-aq	18°C	100%	U	B2=21.83	1952AEa	(7783)	695
Medium: Et2O, I 1 M LiClO4. Method: Ag electrode								

Ag+	sol oth/un	25°C	var	U H	B2=15.74	1941ERa	(7784)	696
						B(Ag2L6)=30.0		
						K3=-0.84		
						B5=13.95 or B(Ag2L6)=32.65		
Medium: HI. DH(Ag2L6)=-221.8 kJ mol-1								

Ag+	ISE none	25°C	0.0	U T H		19380Ba	(7785)	697
						Kso(AgL)=-16.081		
Method: Ag electrode, I=0 corr. DH(so)=110.8 kJ mol-1, DS=63.7 J K-1 mol-1.								
At 5 C: Kso=-17.498; 15 C: -16.081; 35 C: -15.456; 45 C: -14.879								

Ag+	ISE none	25°C	0.0	U		1933HJa	(7786)	698
						Kso(AgL)=-16.01		

Ag+	ISE alc/w	25°C	100%	U		1929BHa	(7787)	699
						Kso(AgL)=-18.22		
Medium: MeOH. Method: Ag electrode								

Ag+	ISE none	16°C	0.0	U		1927CAa	(7788)	700
						Kso(AgL)=-16.37		

Ag+	sol none	25°C	0.0	U		1908K0a	(7789)	701
						Kso(AgL)/Kso(AgBr)=-3.70		
						Kso(AgL)=-16.00		

Ag+	ISE oth/un	60°C	dil	U		1905SAd	(7790)	702
						Kso(AgL)=-13.93		

Ag+	sol oth/un	25°C	var	U		1904BEa	(7791)	703
						B4=15.74		
By Ag electrode B(Ag2L7)=29.50								

Ag+	ISE oth/un	13°C	var	U		1900DAa	(7792)	704
						Kso(AgL)=-16.49		

Ag+	sol oth/un	25°C	var	U		1900HEb	(7793)	705
						B4=14.41		
						B(Ag3L)=14.10		

$$K(\text{AgL}(s)+2\text{Ag}=\text{Ag}_3\text{L})=-2.6$$

 Ag+ ISE oth/un 25°C var U 1900THa (7794) 706
 Kso(AgL)=-15.96

Ag+ ISE oth/un 25°C var U 1894G0a (7795) 707
 Kso(AgL)=-16.03

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

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

Ag+ EMF none 25°C 0.0 U 1973KCb (8455) 708
 Kso(AgL(s))=-7.5

Ag+ EMF non-aq 25°C 100% U I 1973KCb (8456) 709
 Kso(AgL(s))=-12.7
 Medium: MeOH. Kso=-10.6 (in MeCN); -9.8 (in DMSO)

Ag+ sol non-aq 25°C 100% U T H 1973NDb (8457) 710
 Kso(AgL(s))=-7.34
 Medium: formamide. DH(Kso)=46.7 kJ mol⁻¹; Kso=-7.22(30 C), -7.07(35 C)

Ag+ sol none 25°C 0.0 U T 1972RAa (8458) 711
 Kso(AgL(s))=-7.510
 Kso=-8.364(2 C), -8.010(11 C), -7.689(20 C), -7.354(30 C), -7.041(40.2 C),
 -6.749(49.1 C)

Ag+ sol none 25°C 0.0 U T 1972RAa (8459) 712
 Kso(AgL(s))=-7.72
 Medium: D2O. Kso=-8.45(5 C), -8.05(15 C), -7.39(35 C), -6.95(50.3 C)

Ag+ sol NaClO4 25°C 1.0M U T H 1956RMa (8460) 713
 Kso(AgL)=-7.08
 K(AgL(s)=AgL)=-6.89
 K(AgL(s)+L=AgL2)=-5.62
 Medium: LiClO4. 35 C:K1=0.80,K2=1.02,Kso=-6.76,K(AgL(s))=-6.39,K(AgL(s)+L)=
 -5.37; 50 C:K1=0.96,K2=0.65,-6.37,-5.80,-5.15. DH(K1)=22 kJ m⁻¹,DH(B2)=-22

Ag+ ISE oth/un 22°C var U M B2=5.65 1952SHa (8461) 714
 B(Ag(NH3)2L2)=4.6

Ag+ sol none 25°C 0.0 U 1951M0a (8462) 715
 Kso(AgL)=-7.51

Ag+ sol oth/un 25°C dil U T 1951RAa (8463) 716
 Kso(AgL)=-7.49
 Kso=-6.91(45 C)

Ag+ sol none 25°C 0.0 U Kso(AgL)=-7.51 1941DSa (8464) 717

Ag+ sol none 25°C 0.0 U T H Kso(AgL)=-7.51 1941LLa (8465) 718
I=0 corr. DH(so)=-49 kJ mol⁻¹, DS=-49 J K⁻¹ mol⁻¹. Kso=-8.03(10 C), -7.68
(20 C), -7.35(30 C), -7.19(35 C)

Ag+ sol none 25°C 0.0 U Kso(AgL)=-7.52 1939KLa (8466) 719

Ag+ con none 18°C 0.0 U T Kso(AgL)=-7.74 1923B0a (8467) 720
I=0 corr. Kso=-8.04(9.4 C), -7.45(26.6 C)

Ag+ sol oth/un 20°C dil U Kso(AgL)=-7.73 1923B0a (8468) 721

Ag+ sol oth/un 25°C dil U Kso(AgL)=-7.50 1909HSa (8469) 722

Ag+ ISE oth/un 25°C dil U T H Kso(AgL)=-7.33 1905SAd (8470) 723
Method: Ag electrode. Kso=-6.37(60 C), DH=0.5 kJ mol⁻¹

Ag+ con oth/un 20°C dil U Kso(AgL)=-7.64 1903B0b (8471) 724

Ag+ sol oth/un 25°C dil U Kso(AgL)=-7.45 1902NKa (8472) 725

MnO4- HL Permanganate CAS 13456-41-3 (5678)
Manganate(VII), Permanganate;

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

Ag+ sol none 25°C 0.0 C TIH Kso(AgMnO4)=-9.88 1975DMa (8630) 726

Data for 15-35 C. Data for 0.0025-0.025 M NaClO4, corrected to I=0.0 M.
DH(Kso)=28.69 kJ mol⁻¹, DS(Kso)=-93.03 J K⁻¹ mol⁻¹.

MoO4-- H2L Molybdate (443)
Molybdate;

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

Ag+ EMF oth/un 251°C ? U T H K1=0.75 B2=1.26 1981HTa (8697) 727
Electrolyte: molten 1:1 (K,Na)NO3; DH1=-7.5 kJ mol⁻¹; DS1=20 J mol⁻¹ K-1

Ag+ sol oth/un 25°C dil U 1980GSb (8698) 728

Ks(Ag2MoO4)=-11.66

ISE also used

Ag+ sol none 25°C 0.0 U H 1956MHa (8699) 729
Kso(Ag2L)=-11.51
DH(Kso)=52.7 kJ mol⁻¹, DS=-40 J K⁻¹ mol⁻¹

Ag+ ISE none 25°C 0.0 U T H 1954PAa (8700) 730
Kso(Ag2L)=-11.55
DH(Kso)=54.0 kJ mol⁻¹(25 C). Kso=-11.72(20 C), -11.40(30 C), -11.09(40 C)

Ag+ ISE oth/un 18°C var U 1934BGa (8701) 731
Kso(Ag2L)=-10.51

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

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

Ag+ gl KNO3 25°C 1.00M U K1=3.367 B2=7.251 1993GYa (9004) 732
B(AgH-1L2)=-4.08

Ag+ cal R4N.X 25°C 1.0M C H 1992LHa (9005) 733
Medium: 1.0 M NH4NO3. DH(K1)=-21.40 kJ mol⁻¹, DS(K1)=8.66 J K⁻¹ mol⁻¹;
DH(B2)=-56.6, DS(B2)=-52.6.

Ag+ sp R4N.X 25°C 0.10M U 1986BJb (9006) 734
K3=-1.60

Ag+ ISE oth/un 25°C 1.00M U T HM K1=4.33 B2=6.9 1986MLa (9007) 735
DH(K1)=-79.4 kJ mol⁻¹; DH((B2)=-56.9; DS(K1)=180.0 J K⁻¹ mol⁻¹;
DS(B2)=-58.6. Ternary complexes with S2O3 and SCN ligands

Ag+ ISE KNO3 25°C 0.10M C K1=3.41 B2=7.26 1985YWa (9008) 736

Ag+ EMF R4N.X 25°C 1.0M C M K1=5.94 B2= 9.19 1984DBc (9009) 737
B(Ag(S2O3)L)=9.33
B(Ag(S2O3)2L)=14.08
B(Ag(S2O3)L2)=12.32

Method: Ag/Ag(I) electrode. Medium: 1.0 M NH4NO3.

Ag+ oth R4N.X 25°C 0.10M U T K1=3.44 B2=6.92 1983KOb (9010) 738
Medium:NH4NO3. At 30 C K1=3.38,B2=6.80; 40 C K1=3.26,B2=6.56; 50 C K1=3.15,
B2=6.32; 60 C, K1=3.08, B2=6.10; 80 C, K1=2.71, B2=5.58; 100C,K1=2.52,B2=5.1

Ag+ gl oth/un 25°C 0.50M U I K1=3.22 B2=7.21 1983MNa (9011) 739
Medium: LiNO3. I=1.0: K1=3.23, B2=7.17; I=2.0: 3.20, 7.20; I=3.0:3.18, 7.18;
I=4.0: 3.13, 7.14; I=5.0: 3.10, 7.09

Ag+ gl NaNO3 25°C 0.50M U I K1=3.28 B2=7.25 1983MNa (9012) 740

Medium: LiNO₃. I=1.0: K₁=3.27, B₂=7.24; I=2.0: 3.27, 7.28; I=3.0: 3.25, 7.30;
I=4.0: 3.27, 7.34; I=5.0: 3.28, 7.38

Ag+ gl KNO₃ 25°C 0.50M U I K₁=3.27 B₂=7.24 1983MNa (9013) 741
I=1.0: K₁=3.19, B₂=7.17; I=2.0: 3.28, 7.30; I=3.0: 3.32, 7.35

Ag+ gl NaClO₄ 25°C 0.50M U I K₁=3.31 B₂=7.35 1983MNa (9014) 742
Medium: LiClO₄. I=1.0: K₁=3.43, B₂=7.53; I=2.0: 3.52, 7.72; I=3.0: 3.60,
7.84

Ag+ gl NaClO₄ 25°C 0.50M U I K₁=3.36 B₂=7.38 1983MNa (9015) 743
I=1.0: K₁=2.29, B₂=7.54; I=2.0: 3.53, 7.78; I=3.0: 3.63, 7.92;
I=4.0: 3.80, 8.18

Ag+ gl oth/un 25°C 3.00M C K₁=3.204 B₂=7.17 1979HAb (9016) 744
K₃=-0.76

Ag+ cal NaClO₄ 25°C 3.00M C I K₁=3.62 B₂=7.93 1979MAb (9017) 745
Medium: NaClO₄. In 3.0 M LiClO₄: K₁=3.58, B₂=7.77; 3 M NaNO₃: 3.23, 7.14

Ag+ EMF KNO₃ 141°C ? U T K₁=3.178 B₂=6.66 1974MBc (9018) 746
Medium:(Li,K)NO₃, 160 C:K₁=3.088,K₂=3.208; 181 C:K₁=2.831, K₂=3.120;
199 C: K₁=2.993, K₂=2.742 (Unit mol/mol NO₃-)

Ag+ sol KNO₃ 70°C 1.0M U T 1973KBb (9019) 747
K_s(Ag₂O+4L+H₂O=2AgL₂+2OH)=1.36
K_s=1.56(80C), 1.79(90 C), 2.03(100 C), 2.33(110 C), 2.56(120 C), 2.82(130 C)

Ag+ gl R4N.X 25°C 2.0M U T K₁=3.35 B₂=7.23 1969KLe (9020) 748
Medium:NH₄NO₃. At 30 C:K₁=3.30, B₂=6.96. 40 C:3.1, 6.57. 50 C:2.9, 6.18
60 C:2.8, 5.85. 70 C:2.7, 5.54. 80 C:2.5, 5.22. 90 C:2.3, 4.95

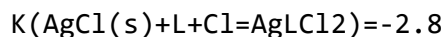
Ag+ ISE oth/un 50°C var U T H B₂=5.6 1966MAa (9021) 749
K_s(AgL₂Br(s)=AgL₂+Br)=-5.2
At 20 C: B₂=6.5, K_s=-6.4. DH(B₂)=-51.8 kJ mol⁻¹

Ag+ cal oth/un 25°C 0? U H 1966PVa (9022) 750
DH(K₁)=-20.5 kJ mol⁻¹, DS=-35.9 J K⁻¹ mol⁻¹

Ag+ ISE R4N.X 25°C 1.0M U M B₂=7.34 1961LPa (9023) 751
B(AgLCl)=6.3
B(AgL₂Cl)=7.08
B(AgL₂Br)=7.64
B(AgL₂Br₂)=7.76

Method: Ag electrode. Medium: NH₄(ClO₄,X) where X is Cl or Br.

Ag+ sol R4N.X 25°C 1.0M U M 1961LPb (9024) 752
K(AgCl(s)+2L=AgL₂+Cl)=-1.95
K(AgCl(s)+2L=AgL₂Cl)=-2.3
K(AgCl+L=AgLCl)=-3.4?



Medium: $\text{NH}_4(\text{ClO}_4, \text{Cl})$. $K(\text{AgBr}(s)+2L=\text{AgL}_2+\text{Br})=-4.58$; $K(\text{AgBr}(s)+2L=\text{AgL}_2\text{Br})=-4.37$; $K(\text{AgBr}(s)+L=\text{AgLBr})=-4.35$; $K(\text{AgBr}(s)+L+\text{Br}=\text{AgLBr}_2)=-4.1$ and others.

 Ag+ sol oth/un 15°C var U B2=7.0 1961SDa (9025) 753

Ag+ sol oth/un 25°C var U B2=7 1959DSb (9026) 754

Ag+ ISE none 25°C 0.0 U B2=7.22 1955FYb (9027) 755

Ag+ cal oth/un 25°C dil U H 1955FYb (9028) 756
 DH(B2)=-56.5 kJ mol⁻¹; DS(B2)=-51.9 to -51.0.

Ag+ sol oth/un 25°C var U B2=7.31 1954K0a (9029) 757

Ag+ gl R4N.X 25°C 1.0M U K1=3.37 B2=7.15 1954LLa (9030) 758
 Medium: NH_4NO_3 .

Ag+ sol none 25°C 0.0 U T B2=5.09 1954LPa (9031) 759
 I=0 corr. B2=5.00(35 C), 4.83(45 C)

Ag+ ISE oth/un 22°C var U M 1952SHa (9032) 760
 $B(\text{AgL}_2\text{X}_2)=\text{ca.}4.5$
 Method: Ag electrode. X:Cl, BrO₃ or IO₃.

Ag+ kin oth/un 25°C var U H 1949JAb (9033) 761
 0-45 C. DH(B2)=-54 kJ mol⁻¹.

Ag+ ISE KNO₃ 25°C 1.0M U I K1=3.3 B2=7.21 1947NAa (9034) 762
 I=0.0044 M K2=3.89, B2=7.20. I=0 corr.: B2=7.21

Ag+ gl none 25°C 0.0 U K1=3.26 1944KNa (9035) 763

Ag+ sol none 25°C 0.0 U K1=3.37 B2=7.21 1943VMa (9036) 764

Ag+ gl R4N.X 30°C 5.0M U TI K1=3.14 B2=6.96 1941BJa (9037) 765
 Medium: NH_4NO_3 . 2 M: K1=3.20, K2=3.83. 0.5 M: K1=3.24, K2=3.81. I=0 corr.,
 25 C: K1=3.315, K2=3.915. 22 C, 0.5 M: K1=3.39, K2=3.92

Ag+ sol none 25°C 0.0 U B2=7.22 1941DSa (9038) 766

Ag+ cal none 25°C 0.0 U H 1937SBa (9039) 767
 I=0 corr. DH(B2)=-56.1 kJ mol⁻¹; DS(B2)=-49.8.

Ag+ sol oth/un 15°C var U B2=7.48 1935BWa (9040) 768

Ag+ ISE alc/w 25°C 50% U B2=7.73 1934LAb (9041) 769
 Method: Ag electrode. Medium: 50 mol% EtOH/H₂O.

Ag+ ISE oth/un 15°C var U B2=7.13 1933BWa (9042) 770

Ag+ ISE oth/un 25°C dil U T H B2=7.03 1930K0a (9043) 771
Method: Ag electrode. B2=7.77(0 C), 7.24(18.5 C), 6.86(30 C), 6.49(40 C),
6.16(52 C). DH(B2)=-51.5 kJ mol⁻¹.

Ag+ sol none 25°C 0.0 U B2=7.10 1930RHa (9044) 772

Ag+ ISE oth/un 15°C var U B2=7.60 1928J0a (9045) 773

Ag+ ISE oth/un 18°C var U B2=7.66 1925BRa (9046) 774

Ag+ ISE oth/un 16°C dil U B2=7.31 1903EUa (9047) 775

Ag+ sol oth/un 25°C var U T B2=7.17 1902BFa (9048) 776
At 18 C, by EMF, B2=7.10

Ag+ cal oth/un 15°C ? U H 1899BDa (9049) 777
DH(B2)=-55.44 kJ mol⁻¹

NH3O L Hydroxylamine; CAS 5470-11-1 (1808)
Hydroxylamine; NH2.OH

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

Ag+ gl NaNO3 20°C 0.50M U K1=1.9 B2=1.90 1963SZa (9256) 778

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

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

Ag+ EMF NaNO3 25°C 0.50M U IH K1=1.695 B2=2.073 1972TLa (9341) 779
Kso=-3.569. At I=0.8: K1=1.562, B2=2.051, Kso=-3.456. At 0 corr, 15 C: K1=
2.426, B2=2.811, Kso=-4.50; 25 C:2.32,2.527,-4.15. 35 C:2.07,2.26,Kso=-3.78

Ag+ sol NaClO4 20°C 1.20M U K1=1.61 B2=2.18 1970KCC (9342) 780
By spectrophotometry: K1=1.64

Ag+ sol oth/un 25°C 0.0 U B2=2.30 1957HAa (9343) 781
Kso(AgL(s))=-3.22

Ag+ sol oth/un 25°C var U B2=2.83 1906PAa (9344) 782
Kso(AgL(s))=-3.80
Ks(AgL(s)=AgL)=-1.92
Ks(AgL(s)+L=AgL2)=-1.28

B2 by Ag electrode. By conductivity Kso=-4.22

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	con	none	25°C	0.0	C	I		K1=0.0	1986SDa (9495)	783
Value derived from data for 0.001-0.05 self medium.										
Ag+	ISE	mixed	25°C	95%	U	I		K1=3.02	1983MSa (9496)	784
Medium: THF/H2O mixtures. Proportion of THF varied from 95% to 77% (w/w)										
Ag+	con	non-aq	25°C	100%	U	I		K1=2.40	1982GCa (9497)	785
Medium: DMF. Further data for a wide variety of media										
Ag+	con	non-aq	25°C	100%	U	I		K1=2.3	1982Gcb (9498)	786
Medium: DMF and 1,1,3,3-Tetramethylurea. Further data for other media available for a wide variety of mixed media										
Ag+	sp	oth/un	25°C	?	U			K1=-1.0	1974CIb (9499)	787
Method: Raman and IR spectroscopy										
Ag+	con	non-aq	25°C	100%	U			K1=2.21	1974HPb (9500)	788
Medium: Hexamethylphosphotriamide										
Ag+	con	oth/un	25°C	0.0	U			K1=-0.06	1971HPa (9501)	789
Ag+	con	oth/un	25°C	0.0	U			K1=-0.1	1971PJa (9502)	790
Ag+	con	oth/un	25°C	0.0	U			K1=-0.08	1969BJa (9503)	791
Ag+	con	oth/un	25°C	0.0	U			K1=-0.23	1969GUc (9504)	792
Ag+	ISE	non-aq	25°C	100%	U			K1=1.87	1969KLa (9505)	793
Medium: MeCN										
Ag+	con	oth/un	25°C	0.0	U	I		K1=0.26	1969MFb (9506)	794
Also in dioxan/H2O mixtures										
Ag+	con	non-aq	25°C	100%	U			K1=1.85	1969YKa (9507)	795
Medium: MeCN										
Ag+	oth	oth/un	25°C	0.0	U			K1=0.2	1966MBb (9508)	796
Ag+	ISE	mixed	22°C	80%	U	I		K1=1.06	1965MAd (9509)	797
Medium: 80% i-PrOH, 0.05 M HClO4. K1=0.39(I=0.80)										
Ag+	con	non-aq	25°C	100%	U	I		K1=3.34	1964FMb (9510)	798
Medium: diaminoethane. K1=4.09 in 1,3-diaminopropane										
Ag+	ISE	mixed	23°C	40%	U	I		K1=-0.28	1964FWa (9511)	799
Medium: 40% i-PrOH, 0.5 M HClO4. K1=-0.57(0%), 0.20(70%), 0.53(80%), 0.73(90%)										
Ag+	con	alc/w	25°C	100%	U			K1=1.85	1963BGc (9512)	800

Medium: MeOH

Ag+ con alc/w 25°C 100% U K1=2.32 1963PSa (9513) 801
Medium: EtOH, I=0 corr.

Ag+ sol NaClO4 25°C 0.20M U I K1=-0.2 1963RSe (9514) 802
Medium:Li(ClO4). K1=-0.1(I=0.02 to 0.1) in H2O and D2O

Ag+ con alc/w 25°C 100% U T K1=2.28 1962BKb (9515) 803
Medium: EtOH, I=0 corr. K1=2.11(-5 C), 2.02(5 C), 2.11(15 C), 2.42(35 C),
2.49(40 C)

Ag+ oth non-aq 11°C 100% U K1=3.42 1962PBb (9516) 804
Method: Freezing point. Medium: 1,2-diaminoethane

Ag+ con non-aq 25°C 100% U K1=2.40 1961CMA (9517) 805
Medium: HCONMe2

Ag+ con non-aq 25°C 100% U K1=3.60 1958GLb (9518) 806
Medium: C6H5CN

Ag+ con alc/w 25°C 100% U T K1=2.25 1958KIa (9519) 807
Medium: EtOH, I=0 corr. K1=2.17(15 C), 2.41(35C), 2.55(45 C)

Ag+ con non-aq 25°C 100% U K1=0.96 1956GLa (9520) 808
Medium: C2H4(OH)2, also K1 for C2H4(OH)2/H2O

Ag+ con oth/un 25°C 0.0 U K1=-0.29 1955RSa (9521) 809

Ag+ ISE NaClO4 25°C 2.0M U K1=-0.34 19460Aa (9522) 810

Ag+ con oth/un 25°C 0.0 U K1=-0.18 1937RDa (9523) 811

Ag+ con alc/w 25°C 100% U K1=2.36 1933DAa (9524) 812
Medium: EtOH

Ag+ con oth/un 18°C 0.0 U K1=-0.08 1927DAb (9525) 813

N2O2-- H2L (6885)
Hyponitrite;

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

Ag+ sol oth/un 25°C 0.0 U 1961PYa (10093) 814
B(AgL(NH3))=8.4
Kso(Ag2L)=-18.89

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	EMF	non-aq	30°C	100%	U			B2=7.6	1971BPb (10158)	815
Medium: 2-pyrrolidinone, 0.1 M Et4NClO4. Kso=-7.6										
Ag+	EMF	mixed	25°C	80%	U			B2=6.8	1971CMA (10159)	816
Medium: w% Me2SO, 0.1 M Et4NClO4. B2=7.0(w=90), 7.4(w=95), Kso=-8.3(w=0) -7.9(w=10), -7.6(w=20), -7.2(w=40), -6.9(w=60), -6.7(w=80), -7.1(w=95)										
Ag+	con	non-aq	20°C	100%	U			B2=8.0	1970DMA (10160)	817
Medium: DMSO, 0.1 M Et4NClO4. Kso=-7.5										
Ag+	ISE	non-aq	25°C	100%	U			B2=12.60	1969VKA (10161)	818
Medium: N-Methyl-2-pyrrolidone. Kso=-10.91										
Ag+	ISE	alc/w	25°C	100%	U	I			1967AKA (10162)	819
Kso=-11.2 Medium: MeOH. Kso=-7.7(HCONH2), -10.8(Me2NCOMe), -6.5(Me2SO), -11.0(Me2NCHO), -9.6(MeCN), -8.5((Me2N)3PO), B2=12.2(Me2NCOMe), 7.0(Me2SO), 11.4((Me2N)3PO).										
Ag+	cal	oth/un	25°C	0.0	U	H			1956GWC (10163)	820
DH(Kso(AgL(s)))=69.7 kJ mol-1										
Ag+	sol	NaClO4	25°C	4.0M	U			K1=2.49 K3=-0.02 K4=-0.48	1954LSa (10164)	821
Kso(AgL(s))=-8.80, Ks(AgL(s)=AgL)=-6.30, Ks(AgL(s)+L=AgL2)=-4.60 Ks(AgL(s)+ 2L=AgL3)=-4.52, Ks(AgL(s)+3L=AgL4)=-4.82. By Ag elec. B3=3.90, B4=3.67										
Ag+	ISE	oth/un	25°C	0.0	U				1952SUA (10165)	822
Kso(AgL(s))=-8.54										
Ag+	ISE	oth/un	25°C	0.0	U				1938TNa (10166)	823
Kso(AgL(s))=-8.58										

OCN-		HL		Cyanate				CAS 661-20-1	(6165)	
Cyanate, Fulminate;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sol	none	30°C	0.0	U			B2=5.00	1954COa (10290)	824
Ks(Ag2L2(s)=Ag+AgL2)=-7.64										
Conductivity also used										
Ag+	ISE	none	19°C	0.0	U				1930BHa (10291)	825
Kso(AgL(s)=Ag+L)=-6.64										

OH-		HL		Hydroxide				(57)		
Hydroxide;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	0.10M	C			*K1=-8.56	2002PLb (10723)	826
Ag+	gl	NaClO4	25°C	1.0M	C			Kso(AgOH)=-7.0	1983MAe (10724)	827
Additional method: Ag ion selective electrode.										
Ag+	ISE	NaClO4	25°C	3.00M	U			*Kso(AgOH(s)+H=Ag+H2O)=6.64	1970HSa (10725)	828
Ag+	ISE	KNO3	250°C	100%	U T H			Kso(AgO2)=-15.6	1968SGi (10726)	829
Medium: molten KNO3. Kso=-15.1(275 C), -14.8(400 C), -14.47(425 C). DH=119 kJ mol-1, DS=106 J K-1 mol-1. Data also in (NaK)NO3.										
Ag+	sol	NaClO4	25°C	1.00M	U			K1=3.02 B2=4.69 Kso=-8.17	1967GSd (10727)	830
Ag+	con	none	25°C	0.0	U			Kso=-7.71	1963FSa (10728)	831
Ag+	dis	NaClO4	25°C	3.0M	U			B2=3.50	1960ADa (10729)	832
By solubility B2=3.60										
Ag+	ISE	NaClO4	25°C	3.0M	U			Kso=-7.42	1960AHa (10730)	833
Ag+	gl	oth/un	25°C	1.0M	U			*K1 < -11.1 *B(2,1) < -11.1 *B(2,2) < -17.7	1960BHb (10731)	834
Ag+	gl	NaClO4	25°C	0.26M	U I			Kso=-7.37	1960NMb (10732)	835
Kso: K(0.5Ag2O(s)+0.5H2O=Ag+OH). At I=1 M NaClO4 Kso=-7.29, I=3 Kso=-7.45										
Ag+	gl	oth/un	12°C	?	U			Kso=-7.25	1958KGa (10733)	836
Kso: K(0.5Ag2O(s)+0.5H2O=Ag+OH). Polarography also used										
Ag+	ISE	none	25°C	0.0	U			Ks(3,4)=-4.3(?)	1957PKb (10734)	837
Ks(3,4): 1.5Ag2O(s)+1.5H2O+OH=Ag3(OH)4										
Ag+	gl	KNO3	18°C	0.20M	U			K1=4.22 *K1=-9.76	1954FAa (10735)	838
Ag+	ISE	none	25°C	0.0	U				1943NAa (10736)	839

O2-- H2L Peroxide CAS 7772-84-1 (2813)
Peroxide; -0.0-

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

Ag+ sol oth/un 25°C 20% U I 1959MSa (12647) 854

Kso(AgHL)=-6.6

Also by kinetics, conductivity. 20% H2O2. Kso=-4.8(70%). -10 to 25 C

PF3 L CAS 7783-55-3 (1861)

Phosphorus trifluoride;

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

Ag+ ISE non-aq ? 100% C K1=3.19 1978GRa (12764) 855

Medium: liquid anhydrous HF

PH3 L Phosphine CAS 7803-51-2 (1859)

Phosphine;

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

Ag+ ISE non-aq ? 100% C 1978GRa (12768) 856

K(Ag+Ag(PH3)2=2AgPH3)=0.81

K(Ag(PH3)2/AgPH3*PH4*F)=3.98

Medium: liquid anhydrous HF. K(AgPH3+PH4+L=Ag(PH3)2+HL)=3.98

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

Phosphate;

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

Ag+ gl NaClO4 25°C 3.0M M I 1996CIb (12987) 857

K(Ag+H2L)=-0.17

K(Ag+2H2L)=-0.13

K(Ag+H2L=AgHL+H)=-5.56

K(Ag+2H2L=AgH3L2+H)=-4.58

At I=0: K(Ag+H2L)=0.3

Ag+ gl NaClO4 25°C 3.00M U I 1973HSa (12988) 858

K(Ag+H2L=AgHL+H)=-4.80

K(Ag+H2L)=0.036

K(Ag3L(s)+H=3Ag+HL)=-6.56. Data also at other ligand concs.

Ag+ gl NaClO4 25°C 3.00M U 1969BSd (12989) 859

K(Ag+HL) < 3.2

K(Ag3L(s)+H=3Ag+HL)=-6.70

Ag+ sol none 25°C 0.0 U 1954T0a (12990) 860

Kso(Ag3L)=-15.84

Ag+ sol oth/un 19°C var U 1951ZHa (12991) 861
Kso(Ag3L)=-19.89

Ag+ sol oth/un 18°C 0.02M U 1942HAa (12992) 862
Kso(Ag3L)=-19

Ag+ sol oth/un 18°C var U 1942TLa (12993) 863
Kso(Ag3L)=-20.84

Ag+ con oth/un 20°C dil U 1903B0b (12994) 864
Kso(Ag3L)=-17.86

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

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

Ag+ vlt KNO3 ? 1.00M U M 19720Aa (13524) 865
K(Ag(NH3)2+L)=4.77

Ag+ ISE NaNO3 25°C 0.50M U I K1=2.55 1971TVa (13525) 866
Kso=-17.82. I=1: K1=2.30, Kso=-17.46

Ag+ ISE NaClO4 25°C 0.50M U K1=2.57 1971TVa (13526) 867
Kso=-17.55

Ag+ sol NaNO3 ? 0.15M U I K1=2.89 1971VMb (13527) 868
Kso=-18.60. Also K1=2.80, Kso=-18.41(I=0.25), K1=2.54, Kso=-17.68(I=0.75);
K1=3.74, Kso=-21.1(I=0)

P4013----- H6L Tetrphosphate (1102)
Tetrphosphate;

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

Ag+ sol oth/un 25°C var U T K1=7.56 1966BCc (14036) 869
Kso=-7.07

35 C: K1=7.34, Kso=-6.89. L=PO3- unit, n=60-150

ReO4- HL Perrhenate (2581)
Rhenate(VII), Perrhenate;

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

Ag+ sol none 25°C 0.0 C 1988HHb (14094) 870
Kso(AgReO4)=-3.17

Method: perrhenate ion selective electrode.

S-- H2L Sulfide CAS 7783-06-4 (705)

Sulfide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sol	oth/un	25°C	0.0	C	TIH			2003SSd (14235)	871
								K(Ag+HS)=15.89 K(Ag+2HS)=17.54 K(2Ag+3HS=Ag ₂ S(HS) ₂ +H)=31.24		
Calc. from solubility of Ag ₂ S (argentite) in H ₂ S/NaOH (0.007-0.176 m HS ⁻), pH 3.7-12.7. Data for 25-350 C. DH(AgHS)=-123.2 kJ mol ⁻¹ , DH(Ag(HS) ₂)=20.1										
Ag+	sol	oth/un	25°C	0.0	C	TI			2003SSd (14236)	872
								Ks(0.5Ag ₂ S+0.5H ₂ S=AgHS)=-5.62 Ks(Ag ₂ S+2HS=Ag ₂ S(HS) ₂)=-4.78 Ks(0.5Ag ₂ S+H=Ag+0.5H ₂ S)=-14.52		
Solubility of Ag ₂ S (argentite) in H ₂ S/NaOH (0.007-0.176 m HS ⁻), pH 3.7-12.7. Ks(0.5Ag ₂ S+0.5H ₂ S+HS=Ag(HS) ₂)=-3.97. Data for 25-350 C.										
Ag+	vlt	oth/un	25°C	0.72M	C	I			1999AVb (14237)	873
								K(Ag+HL)=11.6		
Method: determination of free S ⁻ by cathodic stripping voltammetry. Medium: seawater, pH 8.0, S=35. Also data for S=21 and 10.5.										
Ag+	vlt	NaCl	25°C	?	?	U			1994ZMa (14238)	874
								K _{1eff} >9.5 K _{2eff} >5.8		
Medium: sea water, pH=8. Method: cathodic stripping square wave voltammetry										
Ag+	oth	none	?	0	?	U			1990DKa (14239)	875
								*Ks(Ag ₂ S+H=2Ag+HS)=-35.94		
From recalculation of literature data.										
Ag+	sol	oth/un	25°C	var	?	U	T		1989GBa (14240)	876
								Ks(0.5Ag ₂ S+0.5H ₂ S+HS)=-3.82		
25-300 C. Constant valid at infinite dilution										
Ag+	gl	oth/un	25°C	0.10M	?	U	TI		1988DYa (14241)	877
								K(Ag+HS)=13.6 K(AgHS+HS)=4.1		
At 20 C, I=1 M: K(Ag+HS)=13.3, K(AgHS+HS)=3.9										
Ag+	oth	none	25°C	0	?	U			1988LIa (14242)	878
								Kso(Ag ₂ S, orthorhombic)=-53.6 *Kso(Ag ₂ S, orthorhombic)=-36.3 Kso(Ag ₂ S, beta)=-53.4 *Kso(Ag ₂ S, beta)=-36.1		
Derived from thermodynamic data and K(H+S=HS)=17.3.										
Ag+	oth	none	25°C	0	?	U			1988SBc (14243)	879
								Kso(Ag ₂ S, acanthite)=-54.71		

Method: recalculated from literature data using $K(\text{H+S=HS})=18.57$ and $K(\text{H+HS})=6.99$

Ag+ ISE NaCl 24°C 0.10M M 1987PFb (14244) 880
 $K_{\text{so}}(\text{Ag}_2\text{S})=-48.9$

Method: pH₂S measured with Ag₂S electrode. $K(\text{H+S=HS})=13.9$ and $K(\text{H+HS=H}_2\text{S})=6.92$ assumed

Ag+ EMF non-aq 155°C 100% U 1971PCa (14245) 881
 $K_3=25.43$
 $K_{\text{so}}=-17.26$
 $K(2\text{Ag}_2\text{S}(s)=\text{Ag}+\text{Ag}_3\text{S}_2)=-9.25$

Medium: fused (Na,K)SCN. In m units

Ag+ oth none 50°C 0.0 M T 1969HEa (14246) 882
Estimated from literature data. $K_{\text{so}}=-46.17(50\text{ C}); -40.08(100\text{ C});$
 $-35.45(150\text{ C}); -31.71(200\text{ C}); -28.74(250\text{ C}); -26.36(300\text{ C})$

Ag+ ISE NaNO₃ 25°C 0.10M U 1968HRa (14247) 883
 $K_{\text{so}}=-50.83$

Ag+ sol NaClO₄ 20°C 1.0M U 1966SWb (14248) 884
 $K_{\text{s}}(1/2\text{Ag}_2\text{S}+1/2\text{H}_2\text{S})=-7.89$
 $K_{\text{s}}(1/2\text{Ag}_2\text{S}+1/2\text{H}_2\text{S}+\text{HS})=-4.02$
 $K_{\text{s}}(\text{Ag}_2\text{S}+2\text{HS})=-4.82$
 $K_{\text{so}}(\text{Ag}_2\text{S})=-49.7$

Ag+ ISE non-aq 20°C 100% U 1966THb (14249) 885
 $*K(\text{Ag}_2\text{S}(s)+\text{H}=2\text{Ag}+\text{HS})=-24.4$

Medium: liquid NH₄NO₃(NH₃)1.3

Ag+ oth none 25°C 0.0 U I 1964PCa (14250) 886
From thermodynamic data. $K(0.5\text{Ag}_2\text{L}(s)+\text{H}=\text{Ag}+0.5\text{H}_2\text{S})=-13.80$. Alternative value
 $K=-14.09$. 0.1 ClO₄, by Ag electrode, $K=-14.20$

Ag+ sol oth/un 25°C 0.0 U 1963CLa (14251) 887
 $K(\text{Ag}+\text{H}_2\text{S}=\text{AgSH}+\text{H})=9.23$
 $K(\text{Ag}+2\text{H}_2\text{S}=\text{Ag}(\text{SH})_2+2\text{H})=4.0$

Ag+ sol oth/un 30°C 0.0 U 1963CLa (14252) 888
 $K(\text{Ag}_2\text{S}(s)+4\text{S}_4=2\text{Ag}(\text{S}_4)_2+\text{S})=-7.6$
Ag₂S=acanthite(s). Also other solubilities

Ag+ ISE none 25°C 0.0 U 1960MTc (14253) 889
 $K(\text{AgHL}(s)=\text{Ag}+\text{HL})=-26.05$

Ag+ oth none 25°C 0.0 U T 1959CZa (14254) 890
 $K_{\text{so}}(\text{Ag}_2\text{L})=-49.20$
From thermodynamic data. $K_{\text{so}}=-39.42(100\text{ C}), -35.30(200\text{ C}), -22.20(400\text{ C}),$
 $-17.27(600\text{ C})$

Ag+ sol NaClO4 25°C 0.10M U K1=20.3 1958SGa (14255) 891
 Kso(Ag2L)=-50
 K(Ag2L(s)+H=2Ag+HL)=-35.2
 K(Ag+HL)=13.6
 K(AgHL+HL)=4.1

Also by Ag electrode. K(AgHL2+H)=9.5

 Ag+ ISE none 25°C 0.0 U 1952GGc (14256) 892
 Kso(Ag2L)=-49.15

 Ag+ oth none 25°C 0.0 U 1952LAb (14257) 893
 Kso(Ag2L(alpha))=-50.26
 Kso(Ag2L(beta))=-50.07

From thermodynamic data. Ag2L(alpha) is orthorhombic

 Ag+ oth none 25°C 0.0 U I 1949THa (14258) 894
 Kso(Ag2L)=-48.07

From thermodynamic data. K(0.5Ag2L(s)+H=Ag+0.5H2S(g))=-13.82. In 0.1 M ClO4, by solubility, 20 C: K(0.5Ag2S(s)+0.5H2S(g)=AgHL)=-5.86, K(AgL+H)=5.28

 Ag+ ISE none 10°C 0.0 U 1936RAa (14259) 895
 Kso(Ag2L)=-53.98

 Ag+ sol none 25°C 0.0 U 1935KIa (14260) 896
 Kso(Ag2L)=-51.02

I=0 corr. By Ag electrode Kso=-51.22

 Ag+ ISE oth/un 25°C var U 1931K0a (14261) 897
 Method: Ag electrode. K(0.5Ag2L(s)+H=Ag+0.5H2S(g))=-13.2

 Ag+ ISE oth/un 10°C var U I 1922JCa (14262) 898
 Kso(Ag2L)=-49.5

By Ag electrode. Medium:NaHS. In Na2S Kso=-50.25

 Ag+ ISE oth/un 25°C var U 1908KNa (14263) 899
 Kso(Ag2L)=-49.41

 Ag+ sol oth/un 25°C var U 1904LUa (14264) 900
 Kso(Ag2L)=-50.64

Medium: KCN. By Ag electrode, room temp, 0.1 NaSH: Kso=-47.75

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

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

 Ag+ sp non-aq 25°C 100% C K1=0.68 1998AEa (14625) 901
 Medium: N,N-Dimethylthioformamide. Methods: IR and FT Raman spectroscopy.
 Ligand is S-bonded (thiocyanate).

Ag+ dis NaNO3 25°C 1.0M C 19970Da (14626) 902
 K3=1.83
 K4=1.22
 Method: solvent extraction into CHCl3 or MIBK.

Ag+ ISE mixed 25°C C B2=8.0 1990TMa (14627) 903
 B3=9.0
 Medium 0.4 M LiNO3 in 25% mass DMSO/H2O
 Also for 100% H2O B2=7.9; B3=9.0; B4=9.7

Ag+ cal oth/un 25°C 0.10M C H 1989HKa (14628) 904
 Medium: 0.10 M KSCN. DH(K1)=-86.6 kJ mol⁻¹.

Ag+ ISE NaNO3 25°C 0.0 U I M 1988TEa (14629) 905
 B(AgLBr)=8.5
 B(AgLBr2)=9.2
 B(AgL2Br)=9.3
 B(AgLBr3)=8.2
 B(AgL2Br2)=8.8, B(AgL3Br)=9.5. Data extrapolated to 0 from 2.0,1.0,0.4 NaNO3

Ag+ ISE non-aq 87°C 100% U M K1=3.58 B2=6.19 1987BPa (14630) 906
 B3=7.48
 B(AgClL)=6.55
 B(AgClL2)=7.34
 B(AgCl2L)=7.13
 Medium: fused acetamide. K(AgCl+L)=2.89, K(AgCl2+L)=1.36

Ag+ ISE non-aq 25°C 100% U IH K1=5.51 B2=8.10 1987JPa (14631) 907
 Medium: tetrahydrothiophene, 0.1M Bu4NBF4

Ag+ ISE non-aq 25°C 100% C H T K1=3.64 B2=5.56 1986AIb (14632) 908
 B(2Ag+SCN)=5.26
 Medium: DMSO, 0.1 M NH4ClO4. DH(K1)=-1.5; DH(B2)=-1.4; DH(Ag2(SCN)2)=-1.1

Ag+ ISE oth/un 25°C 1.00M U T HM K1=6.7 B2=8.5 1986MLa (14633) 909
 B3=10.0
 DH(K1)=-24.3 kJ mol⁻¹; DH(B2)=-39.8; DS(K1)=46.1 J K⁻¹ mol⁻¹;
 DS(B2)= 28.5. Ternary complexes with S2O3⁻⁻ and NH3 ligands

Ag+ EMF KNO3 20°C 1.0M C M K1=7.43 1984DBb (14634) 910
 B(Ag(ta)SCN)=10.08
 B(Ag(ta)(tu)SCN)=12.55
 B(Ag(tu)SCN)=9.86
 B(Ag(tu)2SCN)=12.81
 ta is thioacetamide. tu is thiourea. Method: Ag/Ag+ electrode.

Ag+ EMF R4N.X 25°C 1.0M C M K1=6.22 1984DBc (14635) 911
 B(Ag(NH3)L)=9.29
 B(Ag(NH3)(S2O3)L)=14.11
 B(Ag(S2O3)L)=11.03

Method: Ag/Ag(I) electrode. Medium: 1.0 M NH₄NO₃.

Ag+ gl oth/un 25°C 0.30M U M B2=7.9 1982TMb (14636) 912
B3=9.0
B4=9.7

Medium: LiNO₃. In 60% w/w acetone/H₂O, B2=9.3, B3=10.7, B4=11.5

Ag+ EMF oth/un 25°C 0.40M U I K1=4.4 B2=7.9 1981TMc (14637) 913
B3=9.0
B4=9.7

In w/w 80% acetone/H₂O: B2=10.4; B3=11.0; B4=12.0

Ag+ sp non-aq 20°C 100% U T H 1978GGa (14638) 914
K(Ag(NH₃)₄+L=Ag(NH₃)₃L)=0.49

Medium: liquid NH₃. Also data at -40 C. DH=8.2 kJ mol⁻¹; DS=37 J K⁻¹ mol⁻¹

Ag+ sol none 25°C 0.0 C TIH 1976DMb (14639) 915
Kso(AgSCN)=-12.02

Data for 15-35 C. Data for 0.0025-0.025 M NaClO₄, corrected to I=0.0 M.
DH(Kso)=68.58 kJ mol⁻¹, DS(Kso)=-103.3 J K⁻¹ mol⁻¹.

Ag+ EMF oth/un 25°C 1.0M U T 1976PPE (14640) 916
B4=10.67
B(Ag₂(SCN)₆)=22.1
Kso(AgSCN)=-11.95 (I=0)

Method: Ag/Ag+ electrode. Medium: 0.01-3.5 m KSCN. Data for 50 and 70 C.
DH(Kso)=90 kJ mol⁻¹, DH(B4)=-100 kJ mol⁻¹, DH(Ag₂(SCN)₆)=-190 kJ mol⁻¹.

Ag+ EMF oth/un 25°C 0.10M U K1=5.19 1975LMA (14641) 917

Ag+ sol NaClO₄ 25°C 1.00M U M 1975MAB (14642) 918
B(Ag(S₂O₃)(SCN))=12.07

Ag+ EMF mixed 30°C 100% U I T B2=8.7 1971BPb (14643) 919
Kso=-8.6

Medium: 2-pyrrolidinone, 0.1 M Et₄NClO₄

Ag+ oth mixed 25°C 80% U I B2=8.0 1971CMA (14644) 920
Kso=-7.6

Medium: DMSO/H₂O, 0.1 M Et₄NClO₄. In 60-70% DMSO, B2=7.9. In 0%, Kso=-11.6.
40%, Kso=-9.05. 70%, Kso=-7.8

Ag+ con non-aq ? 100% U B2=8.4 1970DMA (14645) 921
B(Ag₂L)=7.6
B(Ag₂L₃)=15.9
B(Ag₃L₄)=23.5
Kso=-7.6

Medium: DMSO, 0.1 M Et₄NClO₄

Ag+ ISE non-aq 22°C 100% U T B2=16.0 1969CLA (14646) 922

B3=18.7
Kso=-16.4

Medium: propene carbonate

Ag+ ISE NaNO3 60°C 1.0M U T H 1969GUa (14647) 923

B4=8.47
Kso=-9.78

K(so)=-10.15(50 C), -9.34(70 C), -8.91(80 C), -8.60(90 C).
B3=7.45(80 C), 7.17(90 C); DH(Kso)=86.6 kJ mol⁻¹

Ag+ ISE non-aq 98°C 100% U B2=6.5 1969GUa (14648) 924

B3=7.79
Kso=-7.88

Medium: acetamide, 1 M NaNO3

Ag+ con non-aq 25°C 100% U K1=5.46 B2=7.46 1969MKe (14649) 925

Medium: pyridine

Ag+ vlt non-aq 40°C 100% U I 1969PVb (14650) 926

B3=10.7
Kso=-13.7

Medium: N-methylacetamide, 0.1 M Et4NClO4; Kso=-11.2 in H2O

Ag+ ISE non-aq 25°C 100% U B2=11.30 1969VKa (14651) 927

Kso=-10.26

Medium: N-methyl-2-pyrrolidone

Ag+ ISE non-aq 20°C 100% U B2=16.4 1968BBb (14652) 928

Kso=-16.9

Medium: Nitromethane

Ag+ ISE non-aq 30°C 100% U T B2=16.04 1968DLa (14653) 929

Kso=-16.27

Medium:sulpholan, 0.1 M Et4NClO4

Ag+ sol KNO3 20°C 2.0M U 1968GYa (14654) 930

Ks(3AgL(s)+3L=Ag3L6)=-1.35

Ag+ sol non-aq 24°C 100% U 1968LAc (14655) 931

B(Ag2L)=6.40

Medium: Me2SO, 0.5 M Et4NClO4

Ag+ oth non-aq ? 100% U K1=2.55 B2=4.44 1968LMa (14656) 932

B3=4.49
B(Ag2L)=0.15
B(Ag2L2)=0.42

Method: infrared spectra. Medium: pyridine

Ag+ ISE non-aq 25°C 100% U I T K1=2.24 B2=3.83 1968MLa (14657) 933

B3=3.69

Ag+ sol none 20°C 0.0 U B2=9.78 1954KTa (14667) 943
B4=11.15

By Ag electrode B4=11.18

Ag+ sol oth/un 25°C var U B4=10.70 1954KTa (14668) 944

Ag+ sol oth/un 25°C var U B4=10.70 1954KTa (14669) 945

Ag+ ISE oth/un rt var U B2=10.60 1954KTa (14670) 946
B3=10.78

Ag+ sol oth/un 20°C var U I 1954KTa (14671) 947
K(AgL(s)+2L=AgL3)=-1.70
K(AgL(s)+3L=AgL4)=-1.17
B3=10.30
B4=10.83

[K(AgL(s)=Ag+L)=-12.00 assumed]. Also data for B2 and B3 in H2O/MeOH, EtOH and Me2CO

Ag+ ISE NaCl04 25°C 4.0M U I 1954LNa (14672) 948
K(AgL(s)=Ag+L)=-12.11
Ks(NaAgL2(H2O)2(s))=-11.79

Ks: NaAgL2(H2O)2(s)=Na+Ag+2L; at I=0 corr. Ks=-11.07

Ag+ ISE none 25°C 0.0 U K(AgL(s)=Ag+L)=-11.95 1953CHa (14673) 949

Ag+ sol none 25°C 0.0 U I B2=8.39 1953CHa (14674) 950
K3=1.23
K4=0.28
B4=9.90

Kso=-11.9 by tyndallometry. In 2.2 M KNO3 B2=7.57, K3=1.15, K4=1.00, B4=10.08
K(AgL(s)+L)=-3.60, K(AgL(s)+2L)=-2.10, K(AgL(s)+3L)=-1.10

Ag+ ISE oth/un 20°C var U T H 1953JAb (14675) 951
Ks(AgL(s)=Ag+L)=-12.36
B4=11.19

DH(Ks)=93.3 kJ mol⁻¹; Ks=-11.48(35 C), -10.77(50 C), -10.06(66 C).

DH(B4)=-83.7. B4=10.54(35 C), 9.81(50 C), 9.18(66 C)

Ag+ ISE none 29°C 0.0 U K(AgL(s)=Ag+L)=-11.85 1952APa (14676) 952

Ag+ sol oth/un 25°C var U B4=11.0 1952YPa (14677) 953
B(AgLI)=12.15

K(AgL(s)=Ag+L)=-11.94; K(AgI(s)=Ag+I)=-16.07 assumed

Ag+ kin oth/un 0°C var U H 1949JAb (14678) 954
DH(B4)=-117 kJ mol⁻¹; temperature:0-45 C

Ag+ ISE oth/un 25°C var U 1933MAa (14679) 955
B4=10.89

Ag+ ISE oth/un 18°C 0.10M U 1930MAa (14680) 956
K(AgL(s)=Ag+L)=-12.0
Medium: KSCN

Ag+ EMF alc/w 25°C 100% U 1929BHa (14681) 957
K(AgL(s)=Ag+L)=-13.74
Medium: methanol; method: emf with Ag electrode

Ag+ EMF none 18°C 0.0 U T H 1912KIa (14682) 958
K(AgL(s)=Ag+L)=-12.31
DH=89.1 kJ mol⁻¹. K=-11.94(25 C). Method: emf with Ag electrode

Ag+ sol oth/un 25°C var U 1908HIa (14683) 959
Ks(AgL)/Ks(AgCl)=-2.25
Ks(AgL)/Ks(AgBr)=0.27
Ks: K(AgL(s)=Ag+L)

Ag+ con oth/un 100°C dil U 1906B0a (14684) 960
K(AgL(s)=Ag+L)=-8.82

Ag+ sol oth/un 25°C var U 1904BEa (14685) 961
B4=11.14
K(AgL(s)=Ag+L)=-11.93 assumed

Ag+ EMF none 20°C 0.0 U B2=9.78 1904BEa (14686) 962
B4=11.18
Method: Ag electrode

Ag+ sol oth/un 25°C var U 1903ACa (14687) 963
K(AgL(s)=Ag+L)=-11.81
B(Ag(NH3)2)=7.17 assumed

Ag+ con oth/un 20°C dil U 1903B0b (14688) 964
K(AgL(s)=Ag+L)=-12.16

Ag+ EMF oth/un 25°C var U 1902KTa (14689) 965
K(AgL(s)=Ag+L)=-11.93
Method: Ag electrode

Ag+ cal oth/un 13°C dil U H 1892J0a (14690) 966
DH(AgL(s)=Ag+L)=93.9 kJ mol⁻¹; 13.5 C

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

Sulfite;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	NaCl04	25°C	0.18M	U			B2=8.4 B(Ag(NH3)L)=8.54 B(Ag(NH3)2L)=9.24	1972JJa (15414)	967
Ag+	ISE	oth/un	25°C	var	U			B3=8.7	1963NAb (15415)	968
Ag+	ISE	oth/un	9°C	var	U T H			K1=6.3 K3=0.52 B2=9.08	1957BCa (15416)	969
Also by solubility. Medium: Na2L. At 25 C: B2=8.68, K3=0.24. 50 C: B2=8.12, K3=-0.21; 69 C: 7.72, -0.74. By calorimetry DH(B2)=-46.0 kJ mol ⁻¹ , DH(K3)=-21										
Ag+	sol	none	25°C	0.0	U			K1=5.60 B2=8.68 B3=9.00 Kso(Ag2L)=-13.86	1956CDc (15417)	970
I=0 corr. Also by Ag electrode										
Ag+	sol	oth/un	20°C	var	U T H			B2=8.33	1956KLa (15418)	971
B2=8.07(42 C), 7.85(60 C). DH(B2)=-22.6 kJ mol ⁻¹										
Ag+	ISE	NaNO3	25°C	2.0M	U			K1=5.4 B2=7.8	1955TSb (15419)	972
Ag+	sol	oth/un	29°C	var	U T H			B2=8.21	1951JSa (15420)	973
Also by Ag electrode. B2=4.634-1082/T=8.56(1.6 C), 8.45(10.2 C), 8.33(20.2 C) 8.08(39.9 C), 7.97(50.5 C). DH(B2)=-20.7 kJ mol ⁻¹ ; DS=88.7 J K ⁻¹ mol ⁻¹										
Ag+	sol	oth/un	25°C	var	U M			K(AgCl(s)+2L=AgL2+Cl)=-1.29	1941TGb (15421)	974
Ag+	sol	none	25°C	0.0	U M			B2=8.52 K(AgCl(s)+2L=AgL2+Cl)=-1.24	1930RHa (15422)	975
Ag+	sol	oth/un	25°C	var	U			B2=8.40	1912LLa (15423)	976

S04-- H2L Sulfate CAS 7664-93-9 (15)										
Sulfate;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sol	non-aq	30°C	100%	C I			Kso(Ag2S04)=-17.94	1986RKa (15783)	977
Medium: dioxane. Data for 0-1.0 mole fraction Me2S0 in dioxane.										
Ag+	sol	NaNO3	25°C	0	U T H				1976MSc (15784)	978
Ks=-4.85. Ks=11.464 - 3055/T - 0.2034T. DH=23.9 kJ mol ⁻¹										

Ag+ sol mixed 25°C 20% U I 1973ESa (15785) 979
Kso=-7.09
Medium: DMSO/H2O. 0% DMSO: Kso=-5.00; 10%:-6.13; 30%:-7.95; 50%:-9.39;
80%:-11.37; 100%:-12.68. m units

Ag+ EMF KNO3 390°C ? U T K1=1.12 1973VBb (15786) 980
K(Ag+AgL)=0.9
Medium: molten KNO3; unit: Temkin fraction. At 349 C: K1=1.12

Ag+ oth none 50°C 0.0 U T K1=1.4 1969HEa (15787) 981
Estimated from literature data. K1=1.4(60 C), 1.6(100 C), 1.9(150 C),
2.2(200 C)

Ag+ ISE NaClO4 25°C 3.0M U K1=0.24 B2=0.3 1969MMc (15788) 982

Ag+ oth none 25°C 0.0 U T 1968KRa (15789) 983
Kso=-4.84
Evaluated from literature data. Kso=-4.63(50 C), -4.52(100 C), -4.71(150 C),
-5.10(200 C)

Ag+ EMF NaClO4 25°C 2.0M U K1=0.31 B2=0.19 1967CCd (15790) 984
B3=0.40

Ag+ sol oth/un 25°C 0.0 U T 1967LHa (15791) 985
Kso=-4.81
Kso=-4.67(50 C), -4.58(75 C), -4.54(100 C)

Ag+ cal oth/un 25°C 0.0 U H 1965HWe (15792) 986
Medium:0 corr. DH(K1)=6.27 kJ mol⁻¹ DS=46 J K⁻¹ mol⁻¹; DHso=17.2, DS=-37
Method: from thermodynamic data

Ag+ ISE non-aq 650°C 100% U K1=1.5 1963WHa (15793) 987
Medium: (Li/K)SO4 eutectic. K1=1.4 to 1.5, x units

Ag+ sol non-aq 275°C 100% U T K1=0.3 1962SIc (15794) 988
Medium: (Na/K)NO3 eutectic. K1=0(300, 325 C), m units

Ag+ sol oth/un 25°C 0.0 U T H 1960SLa (15795) 989
Kso(Ag2L)=-4.835
Kso=-4.62(50 C), -4.54(75 C), -4.53(100 C), -4.59(125 C), -4.71(150 C),
-5.11(200 C). DH(so)=18.7 kJ mol⁻¹, DS=-29.8(25 C); DH=-40.3, DS=-183(200 C)

Ag+ ISE oth/un 25°C 0.0 U T 1959PLa (15796) 990
Kso(Ag2L)=-4.92
25 to 60 C. Kso=491.1/T=11.305+0.0159T (T in Kelvin)

Ag+ sol oth/un 25°C 0.0 U 1957KEc (15797) 991
Kso(Ag2L)=-4.77

Ag+ sol oth/un 25°C 0.0 U T 1954TOa (15798) 992

Kso(Ag2L)=-4.86

I=0 corr. Kso=-4.97(18 C), -4.82(31 C)

Ag+ ISE NaCl04 25°C 3.0M U K1=0.23 B2=0.28 1952LEb (15799) 993

Ag+ sol oth/un 25°C 0.0 U 1943VMa (15800) 994

Kso(Ag2L)=-4.80

Ag+ con oth/un 18°C 0.0 U K1=1.3 1930RDa (15801) 995

S2O3-- H2L Thiosulfate CAS 73686-28-7 (177)

Thiosulfate;

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

Ag+ ISE KNO3 23°C 0.10M U K1= 9.47 B2=13.15 1991TEa (16723) 996

B3=15.46

B(Ag2L3)=24.01

B(Ag3L4)=37.81

Ag+ ISE oth/un 25°C 1.00M U T HM K1=8.49 B2=12.2 1986MLa (16724) 997

DH(K1)=-45.2 kJ mol⁻¹; DH((B2))=-33.1; DS(K1)=25.1 J K⁻¹ mol⁻¹;

DS(B2)=121.4. Ternary complexes with SCN and NH3 ligands

Ag+ ISE KNO3 25°C 1.00M U T HM K1=9.10 B2=12.39 1985MMd (16725) 998

DH(K1)=-60.8 kJ mol⁻¹; DH(B2)=-73.0; DS(K1)=-29.7 J K⁻¹ mol⁻¹; DS(B2)=-8.0

Ternary complexes with: thiourea, chloride, iodide

Ag+ ISE KNO3 25°C 0.10M C K1=9.52 B2=13.08 1985YWa (16726) 999

Ag+ EMF KNO3 20°C 1.0M C M K1=9.66 B2=12.78 1984DBb (16727)1000

B(Ag(tu)L)=12.13

B(Ag(tu)2L)=13.80

B(Ag(I)L)=12.67

B(Ag(tu)(I)L)=14.36

tu is thiourea. B(Ag(tu)L2)=13.81. Method: Ag/Ag+ electrode.

Ag+ EMF R4N.X 25°C 1.0M C K1=8.38 B2=11.86 1984DBc (16728)1001

Method: Ag/Ag(I) electrode. Medium: 1.0 M NH4NO3.

Ag+ gl oth/un 25°C 0.30M U M K1=9.3 B2=12.4 1982TMb (16729)1002

B3=13.8

Medium: LiNO3. In 60% w/w acetone/H2O, K1=11.6, B2=14.6, B3=16.7

Ag+ EMF KNO3 25°C 1.00M C T M K1=9.81 B2=12.5 1980MBa (16730)1003

B(AgL(thiourea))=11.77

B(AgLNCS)=10.38

B(AgL2NCS)=13.94

B(AgL(NCS)2)=11.81

Data also at 5, 10, 20 and 30 C.

Method: Ag/Ag+ electrode

Ag+ EMF KNO3 25°C 1.00M C T M 1980MBa (16731)1004
B(AgL2(thiourea))=10.42
B(AgL(thiourea)NCS)=13.03
B(AgL(thiourea)(NCS)2)=13.69
B(AgL(thiourea)2)=13.85
B(AgL(thiourea)2NCS)=15.20. Data also at 5, 10, 20 and 30 C.

Ag+ sol NaClO4 25°C 1.00M U M 1975MAb (16732)1005
B(Ag(S2O3)(SCN))=12.07

Ag+ ISE KNO3 25°C 1.00M C T HM K1=9.23 B2=12.50 1974BMb (16733)1006
B(AgLA)=11.96
B(AgL2A)=14.16
B(AgLA2)=13.35
DH(K1)=-58.9 kJ mol⁻¹, DH(B2)=-80, DH(AgLA)=-79, DH(AgL2A)=-112, DH(AgLA2)=-90. A=thiourea. Data also at 10 C and 30 C

Ag+ sol oth/un 25°C 0.0 U T B2=13.83 1974GHb (16734)1007
B2=13.55(35 C); 14.18(45 C)

Ag+ ISE KNO3 25°C 0.10M U B2=13.2 1974MKd (16735)1008

Ag+ ISE NaNO3 25°C 1.0M U I B2=13.0 1972PRa (16736)1009
B(Ag2L3)=24.5
B(Ag3L4)=38.2
When I=2 M NaNO3: B2=12.83, B(Ag2L3)=23.9, B(Ag3L4)=ca.38; when I=0 (corr):
B2=13.64, B(Ag2L3)=25.9, B(Ag3L4)=40.0

Ag+ oth oth/un 25°C 0? U K1=8.9 B2=13.50 1969MAc (16737)1010
K3=0.8

Ag+ ISE oth/un 25°C 1.0M U M B2=12.63 1967BPF (16738)1011
B3=12.76
B(AgL2Cl)=10.84
B(AgL2Br)=12.02
B(AgL2I)=13.25
B(AgL2(CN))=15.68; B(AgLBr2)=11.30, B(AgLI2)=13.62; B(AgLBr3)=9.99,
B(AgLI3)=13.52, B(AgL(CN)2)=21.28; B(AgL2(CN)2)=18.15

Ag+ sol NaClO4 25°C 4.00M U M K2=5.36 1958NIa (16739)1012
K3=0.79
B(Ag2L4)=26.3
B(Ag3L5)=39.85
B(Ag6L8)=78.62
Ks(NaAgLH2O=(Na+H2O)+Ag+L)=-13.24, K(NaAgLH2O(s)=(Na+H2O)+AgL)=-5.89,
K(NaAgLH2O(s)+L=(Na+H2O)+AgL2)=-0.52, Kso(NaAgLH2O)=-12.64

Ag+ ISE none 25°C 0.0 U T H B2=13.46 1957CHE (16740)1013

B2=13.00(35 C), 12.43(50 C), 11.68(68 C) B2=4166*T-0.510
DH(B2)=-79.7 kJ mol⁻¹, DS=-9.6 J K⁻¹ mol⁻¹

Ag+ ix oth/un 25°C 1.0M U 1957MAb (16741)1014
K3=0.4

Ag+ ISE oth/un 70°C var U H K1=7.44 B2=11.60 1955CPa (16742)1015
DH(K1)=-54.8 kJ mol⁻¹, DH(K2)=-18.8

Ag+ sol oth/un 25°C dil U K1=8.87 1953CPa (16743)1016

Ag+ ISE none 20°C 0.0 U K1=8.82 B2=13.46 1953CPa (16744)1017
K3=0.69

Ag+ ISE NaNO3 20°C 0.20M U K1=10.00 B2=13.36 1953JAb (16745)1018

Ag+ sol oth/un ? var U M 1952YPa (16746)1019
B(AgClL)=10.15
B(AgBrL)=12.39
B(AgIL)=14.57

Ag+ sol none 25°C 0.0 U K1=2.40 1951DMb (16747)1020

Ag+ ISE oth/un 21°C 0.30M U T B2=13.17 1949BRa (16748)1021
Medium:0.3-0.4 Na2L. B2=13.19(17 C), 12.78(30 C)

Ag+ kin oth/un 25°C var U H 1949JAb (16749)1022
0-45 C. DH(B2)=-80 kJ mol⁻¹

Ag+ ISE NaClO4 25°C 2.00M U B2=12.78 19460Aa (16750)1023
K3=0.28
B(Ag2L2)=22.1?

Ag+ ISE oth/un rt? var U B2=13.3 1936FRa (16751)1024

Ag+ ISE oth/un 25°C var U B2=13.73 1933MAa (16752)1025

Ag+ sol oth/un 5°C dil U T H 1931CRa (16753)1026
K1.Kso(AgCl)=-1.36
K1.Kso=-0.60(45 C). DH(K1)=-32.2 kJ mol⁻¹

Ag+ ISE oth/un ? var U K1=13.38 1924PAa (16754)1027

Ag+ ISE oth/un ? var U B2=12.99 1903BOa (16755)1028
K3=0.55

Medium: Na2L

Se-- H2L Selenide (6335)
Selenide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sol	NaClO4	25°C	1.0M	U				1970MGa (16934)	1029

K(2Ag+HL+OH)=48.5

K(Ag+2L+OH)=24.1

Method: Ag2Se solubility using 110Ag tracer

Ag+	oth	none	25°C	0.0	U				1964BUe (16935)	1030
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Kso=-63.7

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ag+	EMF	none	25°C	0.0	U T H				1974DSb (16961)	1031
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Ks(AgL(s)=Ag+L)=-14.01

DH(Kso)=107.9 kJ mol⁻¹, DS=94.6 J K⁻¹ mol⁻¹. Kso=-13.41(35 C), -13.12(40 C), -12.83(45 C); -12.56(50 C)

Ag+	sol	KNO3	20°C	2.0M	U T				1965GSc (16962)	1032
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Ks(AgL(s)+2SCN)=-1.62

Ks(AgI(s)+2L)=-0.4

At 25 C, Ag electrode: B(AgL3I)=14.5, B(AgL3(SCN))=13.4, BAgLI3)=14.66

Ag+	sol	oth/un	20°C	var	U I				1961GSa (16963)	1033
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B(Ag2L)=11.7

B(Ag3L)=12.23

B(Ag4L)=12.32

Medium: AgClO4 at various concentrations. In AgNO3: B(Ag2L)=11.7, B(Ag3L)=12.25, B(Ag4L)=12.04

Ag+	ISE	alc/w	20°C	35%	U I		B2=13.86		1961GSd (16964)	1034
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Medium: 35% w/w MeOH/H2O with KL at various conc.; B2=13.78(0%), 14.25(56%) 14.60(74%); B4=15.13(74%), 15.61(83%), 16.45(92%), 16.96(100%); Ag electrode

Ag+	ISE	KNO3	20°C	?	U I				1959GPb (16965)	1035
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B3=13.79

In 7 M acetone/H2O: B3=14.58, B4=14.80

Ag+	ISE	NaNO3	25°C	0.30M	U		B2=10.7		1956TOa (16966)	1036
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B3=13.90

Ag+	ISE	none	18°C	0.0	U				1930BHa (16967)	1037
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K(AgL(s)=Ag+L)=-15.40

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ag+ sol oth/un 25°C dil C 1993SPb (17023)1038
Kso(Ag2SeO3)=-15.76

Method: [Ag] determined by ion selective electrode. Medium: dil HNO3.

Ag+ sol NaClO4 25°C 1.0M U K1=2.42 B2=3.76 1969MGe (17024)1039
Kso=-15.58

Ag+ sol none 25°C 0.0 U H 1962SLb (17025)1040
Kso(Ag2L)=-15.55

DH(so)=44.7 kJ mol⁻¹; DS=-147

Ag+ ISE none 25°C 0.0 U 1961LPc (17026)1041
Kso(Ag2L)=-14.74

Ag+ sol oth/un 20°C var U 1956CHE (17027)1042
Kso(Ag2L)=-15.01

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

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

Ag+ sol none 25°C 0.0 U H 1959SZb (17091)1043
Kso(Ag2L)=-8.91

I=0 corr. By calorimetry DH(so)-43.4 kJ mol⁻¹

Ag+ sol oth/un 25°C dil U 1942GKa (17092)1044
Kso(Ag2L)=-7.25

Te-- H2L Telluride (472)
Telluride;

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

Ag+ oth oth/un 25°C 0.0 U 1964BUE (17254)1045
Kso=-71.7

Estimated. Kso=-33.3(Zn⁺⁺), -41.5(Cd⁺⁺), -69.6(Hg⁺⁺), -39.2(Tl⁺),
-44.7(Sn⁺⁺), -46.3(Pb⁺⁺)

TeO3-- H2L Tellurite CAS 10049-23-7 (1165)
Tellurate(IV)

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

Ag+ sol oth/un 25°C 1.0M U B2=4.34 1972MKa (17271)1046
Kso=-17.85

Ag+ gl oth/un 25°C 0.0 U 1965GPa (17272)1047
Kso(Ag2L)=-2.43

Ks(Ag2H2L2)=-7.95
Ks(Ag7(OH)5L)=-5.6(?)

V04--- H3L CAS 15457-75-7 (1586)
Vanadate; V02(OH)3-- or polymers

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

Ag+ ISE oth/un 20°C var U 1930BRa (17371)1048
Ks(AgHL=H+HL)=-6.3
Ks(Ag2L)=-13.7
Ks(Ag3L2(OH))=-24

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

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

Ag+ sol NaNO3 25°C 0.50M U I 1982JBa (17422)1049
K(6Ag2L(s)+7H = 12Ag+HW6O21+3H2O) = -3.68

Ag+ sol oth/un 25°C dil U 1980GSb (17423)1050
Ks(Ag2W04)=-10.67
ISE also used

Ag+ sol NaNO3 25°C 1.00M C TIH 1980JBa (17424)1051
K(6Ag2W04(s)+7H+=12Ag+HW6O21+3H2O)=-2.1

Ag+ cal none 25°C 0.0 U H 1958GHa (17425)1052
DH(Kso(Ag2L))=61.5 kJ mol-1

Ag+ ISE none 25°C 0.0 U T H 1954PAa (17426)1053
Kso(Ag2L)=-11.26
DH(Kso)=50.7 kJ mol-1(25 C). Kso=-11.42(20 C), -11.11(30 C), -10.83(40 C)

Ag+ ISE oth/un 18°C var U 1934BGa (17427)1054
Kso(Ag2L)=-9.28

CH2I2 L Di-iodomethane CAS 75-11-6 (2962)
Methylene iodide; CH2I2

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

Ag+ sol oth/un 25°C ? U K1=1.31 1951AKb (17472)1055

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

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

Ag+ ISE NaClO4 25°C 0.10M U K1=6.2 B2=11.2 1996MTa (17741)1056
B3=13.4
B(Ag2L)=9.1
B(Ag2L2)=16.1
B(Ag2L3)=21.7

Medium: 0.1 M HClO4; Ag-electrode

Ag+ EMF alc/w 25°C 100% M T H K1=9.86 B2=13.88 1994MGa (17742)1057
B3=16.46

Medium: EtOH, 0-40 C. DH(K1)=-107 kJ mol⁻¹, DS=-171 J K⁻¹ mol⁻¹; DH(B2)=-46,
DS=+110; DH(B3)=-138, DS=-147. Method:Ag elect. Other alkyl-thioureas also

Ag+ EMF KNO3 25°C 1.0M U T HM K1=7.59 B2=10.35 1993MGa (17743)1058
B(AgLC1)=8.33
B(AgLC2)=8.57
B(AgLBr)=9.36
B(AgLBr2)=10.39

B(AgL2Br)=12.53, B(AgLI)=11.82. 0-35 C. DH(K1)=-65 kJ mol⁻¹, DS=-73 J K⁻¹ m-1
Data also for other mixed complexes

Ag+ EMF KNO3 25°C 1.0M U T HM K1=5.67 B2=7.44 1992MMc (17744)1059
B(AgLC1)=6.12
B(AgL2Cl)=8.90
B(AgLBr)=7.05
B(AgL2Br)=9.11

B(AgLI)=10.03 etc. 0-35 C. DH(K1)=-82 kJ mol⁻¹, DS=-167 J K⁻¹ mol⁻¹; DH(B2)=-
64, DS=-71. Data also for other mixed complexes

Ag+ EMF alc/w 25°C 100% M T H K1=8.63 B2=13.09 1990MMF (17745)1060
B3=15.94

Medium: MeOH, 0-40 C. DH(K1)=-127 kJ mol⁻¹, DS=-261 J K⁻¹ mol⁻¹; DH(B2)=-66,
DS=+24; DH(B3)=-118, DS=-92. Method:Ag electrode. Other alkyl-thioureas also

Ag+ ISE non-aq 25°C C B2=10.1 1990TMa (17746)1061
B3=11.7

Medium 0.4 M LiNO3 in 100% DMSO
Also for 100% H2O B2=10.7; B3=12.8; B4=13.5

Ag+ ISE oth/un 25°C 1.00M U B3=13 1986GKa (17747)1062

Ag+ ISE NaClO4 25°C 1.00M U K1=6.05 B2=10.71 1986KPa (17748)1063
B3=12.56
B4=13.95
B(Ag2L6)=31.09

Ag+ ISE KNO3 0°C 1.00M U M K1=7.87 B2=11.92 1985MMc (17749)1064
mixed complexes: with thioacetamide: B(AgLA)=11.92; with chloride: B=8.45;
B(AgLA2)=9.78; with bromide B=8.76; B(AgL2A)=13.69

Ag+ ISE KNO3 25°C 1.00M U T HM K1=8.09 B2=10.53 1985MMd (17750)1065
B3=12.87

DH(K1)=-66.2 kJ mol⁻¹; DH(B2)=-87.4; DH(B3)=-106.4,
DS(K1)=-67.4 J K⁻¹ mol⁻¹; DS(B2)=-91.7; DS(B3)=-110.8

Ag+ EMF KNO3 20°C 1.0M C T M K1=9.25 B2=10.21 1984DBb (17751)1066
B3=12.48
B(Ag(I)L)=12.12
B(Ag(I)2L)=14.12

Also ternary complexes with thiosulfate. At 5 C, K1=8.16, B2=10.60,
B3=13.25. Method: Ag/Ag+ electrode.

Ag+ ISE oth/un 25°C 0.10M U I K1=5.55 B2=10.54 1984PKa (17752)1067

Ag+ EMF oth/un 25°C 0.40M U I K1=7.1 B2=10.7 1981TMc (17753)1068
B3=12.8
B4=13.5

In w/w 80% acetone/H2O: K1=9.6; B2=12.4; B3=14.4; B4=15.5

Ag+ EMF KNO3 25°C 1.00M C T M K1=8.77 B2=11.29 1980MBa (17754)1069
B3=13.92
B(AgLNCS)=13.89
B(AgL(NCS)2)=11.24
B(AgL(NCS)3)=12.44

B(AgL2NCS)=12.40; B(AgL4(NCS)2)=13.20. Data also at 5, 10, 20 and 30 C
Method: Ag/Ag+ electrode

Ag+ ISE mixed 25°C 82% U K1=8.85 B2=11.35 1979TBa (17755)1070
B3=13.82

Medium: 82% formamide

Ag+ ISE mixed 25°C 0.20M U I K1=10.35 B2=11.90 1978BMb (17756)1071
B3=13.34

Medium: 40 mol/l H2O in H2O/Dimethylformamide mixed solvent

Ag+ EMF NaClO4 25°C 0.02M C H K1=6.46 B2=10.90 1976MHc (17757)1072
B3=12.88
B(Ag2L3)=20.73

Method: Ag electrode. By calorimetry: DH(K1)=-81 kJ mol⁻¹; DH(B2)=-113,
DS(B2)=-171 J K⁻¹ mol⁻¹; DH(B3)=-127, DS(B3)=-181, DH(Ag2L3)=-217.

Ag+ ISE KNO3 25°C 1.00M U T H K1=7.69 B2=10.47 1974BMb (17758)1073
B3=12.88

DH(K1)=-38.7 kJ mol⁻¹, DH(B2)=-28.8, DH(B3)=-26.1. Data also at 10 and 30 C

Ag+ EMF none 25°C 0.00 U TI K1=7.30 B2=10.60 1973BMf (17759)1074
B3=12.80
B4=13.72

35 C, K1=6.52, B2=9.92, B3=12.03, B4=12.97. 45 C, K1=5.60, B2=9.34,
B3=11.59, B4=12.15. Data also in 0.25 KNO3, 0.75 KNO3

Ag+ con oth/un 20°C 0.03M U 1924PAa (17771)1086
B3=13.9

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

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

Ag+ gl KNO3 25°C 1.00M U K1=3.106 B2=6.806 1993GYa (17997)1087
B(AgH-1L2)=-5.30

Ag+ gl KCl 25°C 0.10M U K1=3.06 B2=6.78 1980HAa (17998)1088

Ag+ gl none 25°C 0.00 U K1=3.18 B2=7.14 1971HTa (17999)1089

Ag+ sol oth/un 25°C ? U B2=8.86 1964SDB (18000)1090
Medium: Cl-. In Br-: B2=6.67

Ag+ ISE alc/w 25°C 90% U I B2=7.51 1963PLa (18001)1091
Medium: 90% MeOH. B2=6.72(0%), 7.10(30%), 7.13(50%), 7.15(60%), 7.43(80%)

Ag+ ISE oth/un 25°C 0.0 U B2=6.79 1955FYb (18002)1092

Ag+ gl oth/un 25°C 0.50M U K1=3.15 B2=6.68 1950BJa (18003)1093

Ag+ ISE oth/un 18°C 0.02M U B2=7.06 1935BWa (18004)1094
By solubility, B2=7.16

Ag+ sol oth/un 16°C 0.10M U B2=6.98 1933TAa (18005)1095

Ag+ sol oth/un 25°C <0.1 U B2=6.79 1903BEa (18006)1096

Ag+ ISE oth/un 25°C <0.2 U B2=6.81 1903EUa (18007)1097
At I=0.02 M, 18 C: B2=7.05

CH5N3S L CAS 79-19-6 (372)
Thiosemicarbazide; H2N.CS.NH.NH2

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

Ag+ EMF NaClO4 25°C 0.10M C H K1=7.50 B2=11.41 1976BBg (18064)1098
B3=13.28
B(Ag2L3)=21.58

Method:Ag electrode. Calorimetry: DH(K1)=-93.9 kJ mol⁻¹, DS(K1)=-172 J K⁻¹
mol⁻¹;DH(B2)=-109, DS=-148; DH(B3)=-122, DS=-153; DH(Ag2L3)=-199, DS=-253

Ag+ ISE NaClO4 25°C 0.1M C I K1=7.55 B2=10.67 1976BBh (18065)1099
B3=12.33
B4=13.61

In 50% EtOH w/w, 0.1 M NaClO4: K1=7.93, B2=11.05, B3=13.05, B4=14.97
 In 50% acetone: K1=8.62, B2=11.62, B3=13.19, B4=14.65. Also in 25% acetone

 Ag+ ISE alc/w 25°C 40% U 1961TKb (18066)1100
 B3=13.3

Medium: 40% EtOH, 0.05 NaC2H3O2

 Ag+ ISE NaNO3 20°C 0.80M U T 1960TKa (18067)1101
 B4=13.35

B4=13.10(25 C), 12.85(30 C), 12.42(40 C), 12.03(50 C)

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

Ethyne; HCCH

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

 Ag+ sol oth/un 25°C 0.0 U K1=1.63 1965TUa (18353)1102
 Kso(AgL(OH))=-19.29

C2H2Br2 L CAS 540-12-5 (4212)

cis-1,2-Dibromoethylene; Br.CH:CH.Br

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

 Ag+ sol KNO3 25°C 1.00M U K1=-0.17 19690Fa (18358)1103

C2H2Br2 L CAS 590-12-5 (4213)

trans-1,2-Dibromoethylene; Br.CH:CBr.H

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

 Ag+ sol KNO3 25°C 1.00M U K1=-0.25 19690Fa (18359)1104

C2H2Cl2 L CAS 156-59-2 (4210)

cis-1,2-Dichloroethylene; Cl.CH:CH.Cl

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

 Ag+ sol KNO3 25°C 1.00M U K1=-0.60 19690Fa (18360)1105

C2H2Cl2 L CAS 156-60-5 (4211)

trans-1,2-Dichloroethylene; Cl.CH:CCl.H

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

 Ag+ sol KNO3 25°C 1.00M U K1=-0.38 19690Fa (18361)1106

C2H2I2 L CAS 590-27-2 (2963)

cis-Di-iodoethene, cis-Di-iodoethylene; ICH:ICH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	sol	oth/un	25°C	?	U		K1=1.25 B2=1.28	1951AKb (18362)	1107

C2H2I2 L CAS 590-26-1 (2964)
trans-Di-iodoethene, trans-Di-iodoethylene; ICH:CHI

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	sol	oth/un	25°C	?	U		K1=0.74 B2=1.10	1951AKb (18363)	1108

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
Ag+	gl	NaClO4	25°C	1.0M	C		K1=<0.9	1983MAe (18658)	1109

Additional method: Ag ion selective electrode.

Ag+	sol	KN03	25°C	2.0M	U	M		1963FVa (18659)	1110
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B(Ag(en)L)=7.2

Ag+	dis	NaClO4	20°C	0.10M	U		K1= 2.0	1963STc (18660)	1111
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Ag+	EMF	oth/un	25°C	?	U		K1=2.41	1960CIa (18661)	1112
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C2H3N L Cyanomethane CAS 75-05-8 (1399)
Acetonitrile; CH3.CN

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	nmr	oth/un	23°C	0.10M	U		K1=0.16 B2=0.71	1982FTa (19173)	1113

Ag+	con	oth/un	25°C	?	U		K1=1.85	1975JMa (19174)	1114
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Using laser Raman: K1=1.92, B2=0.10

Ag+	ISE	NaClO4	25°C	0.10M	U		K1=2.6 B2=4.4	1974SMa (19175)	1115
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Ag+	ISE	NaClO4	25°C	0.01M	U	I	K1=0.7 B2=0.8	1967MId (19176)	1116
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Medium:0.01(?) LiClO4.In MeOH: K1=1.1,B2=1.2,B3=1.2; Butan-2-ol: K1=1.0, B2=1.4,B3=1.3; acetone: K1=1.0,B2=1.5,B3=1.6; nitroethane:K1=1.1,B2=2.8

Ag+	kin	oth/un	40°C	0.01M	U		K1=0.89	1964YKb (19177)	1117
-----	-----	--------	------	-------	---	--	---------	-----------------	------

Ag+	sol	oth/un	25°C	0.0	U		K1=0.75	1964YKb (19178)	1118
-----	-----	--------	------	-----	---	--	---------	-----------------	------

Ag+	ISE	oth/un	20°C	0.01M	U		B2=1.23	1924PAa (19179)	1119
-----	-----	--------	------	-------	---	--	---------	-----------------	------

C2H3N3 HL 1,2,4-Triazole CAS 288-88-0 (381)
1,2,4-Triazole; cyclo(-NH.N:CH.N:CH-) C2H3N3

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE KNO3   25°C 0.50M M                K(Ag+HL)=2.21
                                                K(AgHL+HL)=2.29
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-----
Ag+        gl  KNO3   25°C 0.50M U                K(Ag+HL)=2.60
                                                K(AgHL+HL)=1.78
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*****
C2H3O2Cl          HL  Chloroacetic      CAS 79-11-8 (34)
Chloroethanoic acid; ClCH2.COOH
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        sol oth/un 25°C ->0 U          K1=0.64  B2=0.53  1952MTa (19342)1122
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-----
Ag+        ISE oth/un 30°C ->0 U          K1=0.58  B2=0.91  1949PHa (19343)1123
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*****
C2H4          L  Ethylene          CAS 74-85-1 (478)
Ethene; H2C:CH2
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        dis none   40°C 0.0  U T H      K1=1.34                1984DWa (19421)1124
Method: Gas-Liquid Chromatography
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-----
Ag+        sol none   30°C 0.00 U          K1=1.88                1970CBa (19422)1125
0.945 atm. C2H4
-----

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-----
Ag+        kin oth/un 25°C 1.0M U      M      K1=1.97                1959BRa (19423)1126
                                                K(AgA+L)=1.76
                                                K(AgA2+L=AgAL+A)=0.42
                                                K(ALL(OH)+H)=8.7
-----

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Medium: CF3COONa. A=triethanolamine

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-----
Ag+        dis oth/un 25°C 1.0M U          K1=1.93                1952TLa (19424)1127
                                                K(AgL+Ag)=-0.82
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*****
C2H4N2          L          CAS 6011-14-9 (5501)
(Cyanomethyl)amine; CN.CH2.NH2
-----

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  oth/un 25°C 0.50M U          K1=1.90  B2=3.21  1983HNa (19440)1128
Medium: 0.5 M LHN03
-----

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*****
C2H4N2S2          L  Rubenic acid      CAS 79-40-3 (2782)
Dithiooxamide; H2N.CS.CS.NH2
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Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

Ag+ EMF none 25°C 0.0 C T H K1=23.3 2002DZa (19451)1129
Method: Ag electrode. Data for 5-45 C. DH(K1)=-45.8 kJ mol⁻¹, DS(K1)=44.3
J K⁻¹ mol⁻¹.

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

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

Ag+ ISE KNO3 25°C 0.50M M 1986BGa (19485)1130
K(Ag+HL)=2.30
K(AgHL+HL)=2.13

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

Ag+ sol non-aq 30°C 100% C I 1986Rkb (19780)1131
Kso(AgL)=-10.04
Medium: dioxane. Data for 0-1.0 mole fraction Me2SO in dioxane.

Ag+ con none 25°C 0.0 U I 1980ASa (19781)1132
Kout=1.23
Data also in 10, 20, 30, 40 and 50% w/w MeOH/H2O

Ag+ ISE mixed 25°C 80% U I B2=5.2 1971CMa (19782)1133
Medium: 80% DMSO, 0.1 M Et4NClO4. In 90% dioxan: B2=6.2, 95%, B2=6.8

Ag+ ISE non-aq 25°C 100% U B2=8.4 1970DMa (19783)1134
Medium: DMSO, 0.1 M

Ag+ ISE non-aq 25°C 100% U I B2=10.9 1967AKa (19784)1135
Medium : DMF. In dimethylacetamide, B2=10.6, In dimethylsulfoxide, B2=5.8

Ag+ gl NaClO4 25°C 3.0M U K1=0.36 B2=0.11 1964PCa (19785)1136
B3=-0.14

Ag+ ISE alc/w 25°C 30% U I K1=1.31 B2=1.72 1952MTa (19786)1137
Medium: 30% EtOH. K1=0.73(0%),0.89(10%),1.10(20%); B2=0.64(0%),1.0(10%),1.25
(20%)

Ag+ ISE mixed 25°C 30% U I K1=1.26 B2=1.75 1952MTa (19787)1138
Medium: 30% acetone. K1=0.88(10%), 1.10(20%); B2=0.92(10%), 1.24(20%)

Ag+ ISE oth/un 25°C 0.0 U K1=0.73 B2=0.64 1952MTa (19788)1139

Ag+ ISE KNO3 30°C 0.10M U T K1=3.74 B2=6.57 1977PUa (21323)1152

Ag+ ISE KNO3 25°C 0.10M C T K1=3.01 B2=6.22 1975IPb (21324)1153
K(Ag+HL)=1.40

Glass electrode also used

Ag+ gl NaCl04 30°C 0.20M U T K1=3.54 B2=6.97 1975JBb (21325)1154

Ag+ gl KNO3 15°C 0.50M U T K1=3.24 B2=6.96 1970PTa (21326)1155
0 C: K1=3.44, K2=3.99; 40 C: K1=3.03, K2=3.15

Ag+ gl KNO3 20°C 0.50M U T K1=3.22 B2=6.75 1968ALc (21327)1156
Using: Ag-AgCl ISE electrode: B2=6.85

Ag+ gl KNO3 25°C 0.50M U T K1=5.15 B2=8.53 1968TPb (21328)1157

Ag+ ISE oth/un 25°C 0.60M U T K1=3.54 B2=6.82 1967AMb (21329)1158

Ag+ ISE oth/un 20°C 0.0 U T K1=4.00 B2=7.19 1962ALb (21330)1159
Medium: 0 corr. By solubility: B2=7.26

Ag+ gl oth/un 25°C 0.01M U T H K1=3.43 B2=6.86 1959DGa (21331)1160
K1=-7686.3/T+57.454-0.094725T
K2=1506.7/T-0.763-0.002879T

DH(K1)=29.3 kJ mol⁻¹(5 C), -14.2(15 C), -58.5(25 C), -104.5(35 C), -151.7(45 C),
-200.6(55 C); DH(B2)=-34(25 C). DS(K1)=230 J K⁻¹ mol⁻¹, DS(B2)=47

Ag+ gl oth/un 22°C 0.02M U K1=3.7 1952PEa (21332)1161
Medium: AgNO3.

Ag+ gl oth/un 25°C ->0 U K1=3.51 B2=6.89 1951ALa (21333)1162

Ag+ gl oth/un 25°C 0.0 U K1=3.51 B2=6.89 1951MOa (21334)1163

Ag+ ISE oth/un 19°C 0.10M U K1=0.59 B2=7.24 1947DUa (21335)1164

Ag+ gl KNO3 20°C 0.50M U K1=3.7 B2=7.0 1945FLa (21336)1165

Ag+ sol oth/un 25°C ->0 U K1=4.28 1941KRa (21337)1166

C2H5NS HL Thioacetamide CAS 62-55-5 (3542)
Thioacetic acid amide; CH3.CS.NH2

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

Ag+ EMF KNO3 25°C 1.0M U T HM K1=8.56 1993MGa (21832)1167
B(AgL(thiourea))=11.25
B(AgLI)=11.91
B(AgLI2)=16.28
B(AgLC1)=9.19

B(AgLBr)=9.93 etc. 0-35 C. DH(K1)=2 kJ mol⁻¹, DS=171 J K⁻¹ mol⁻¹
Data also for other mixed complexes

Ag+ ISE KNO3 0°C 1.00M U M K1=8.53 1985MMc (21833)1168
mixed complexes: with thiourea: B(AgLA)=11.92; with chloride: B=9.08;
with bromide B=9.82;

Ag+ EMF KNO3 5°C 1.0M C M K1=8.6 1984DBb (21834)1169
B(Ag(tu)L)=10.77
B(Ag(tu)2L)=13.16
tu is thiourea. Method: Ag/Ag+ electrode.

Ag+ EMF oth/un 25°C 0.60M U I K1=6.1 B2=13.7 1966PLa (21835)1170
B3=14.7
B4=13.4

Medium: 0.3-0.9 M HNO₃. In 0.2-0.4 M H₂SO₄: K1=4.7, B2=13.7

C2H5N3OS L CAS 23228-74-2 (8602)
Thioimidodicarbonic diamide;

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

Ag+ EMF none 25°C 0.0 C T H K1=13.3 2002DZa (21838)1171
Method: Ag electrode. Data for 5-45 C. DH(K1)=90 kJ mol⁻¹, DS(K1)=415
J K⁻¹ mol⁻¹.

C2H5N3S2 L CAS 541-53-7 (8603)
Dithiobiuret;

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

Ag+ EMF none 25°C 0.0 C T H K1=18.1 B2=29.80 2002DZa (21855)1172
B3=39.1

Method: Ag electrode. Data for 5-45 C. DH(K1)=32.6 kJ mol⁻¹, DS(K1)=238
J K⁻¹ mol⁻¹; DH(B2)=9.5, DS(B2)=187; DH(B3)=-46.9, DS(B3)=151.

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

Ag+ EMF alc/w 25°C 100% M T H K1=8.81 B2=13.38 1990MMF (21998)1173
B3=16.03

Medium: MeOH, 0-40 C. DH(K1)=-56 kJ mol⁻¹, DS=+19 J K⁻¹ mol⁻¹; DH(B2)=+86,
DS=+544; DH(B3)=-112, DS=-123. Method: Ag electrode

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

 Ag+ oth NaClO4 20°C 0.10M U K1=13.0 B2=17.90 1971TSa (22056)1174
 K(Ag+AgL)=6
 B(10Ag+9L)=176.4

Method: radiometry

C2H6OS L DMSO CAS 67-68-5 (329)
 Dimethylsulfoxide; (CH3)2.S0

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

Ag+ ISE mixed 25°C C K1=-0.7 1990TMa (22086)1175
 Medium 0.4 M LiNO3 in 25% mass DMSO/H2O

C2H6O2S2 CAS 51554-68-8 (2123)
 Ethylthiosulfonic acid; C2H5.S2O2H HL

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

Ag+ ISE KNO3 20°C 1.00M U B2=9.01 1974GSb (22162)1176
 B3=10.99

C2H6S L CAS 75-18-3 (151)
 Dimethyl sulfide; CH3.S.CH3

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

Ag+ nmr alc/w 34°C 50% C K1=3.7 1980SSa (22185)1177
 Also in D2O, K1=2.01

C2H7N L Dimethylamine CAS 124-40-3 (802)
 Dimethylamine; CH3.NH.CH3

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

Ag+ gl KNO3 25°C 1.00M U K1=2.484 B2=5.263 1993GYa (22218)1178

Ag+ ISE alc/w 25°C 90% U I B2=5.84 1963PLa (22219)1179
 Medium: 90% MeOH. B2=5.22(0%), 5.32(30%), 5.54(50%), 5.55(60%), 5.85(80%)

Ag+ ISE oth/un 25°C ->0 U B2=5.37 1955FYb (22220)1180

Ag+ sol oth/un 15°C 0.10M U B2=5.30 1935BWa (22221)1181
 At 17 C, by EMF, B2=5.45

Ag+ ISE oth/un 16°C 0.02M U B2=5.91 1928JOa (22222)1182

Ag+ ISE oth/un 20°C 0.01M U B2=5.60 1924PAa (22223)1183

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

Ethylamine; CH3.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	1.00M	U			K1=3.492 B2=7.493 B(AgH-1L2)=-3.60	1993GYa (22254)	1184
Ag+	gl	KCl	25°C	0.10M	U			K1=3.44 B2=7.34	1980HAa (22255)	1185
Ag+	gl	none	25°C	0.00	U			K1=3.58 B2=7.62	1971HTa (22256)	1186
Ag+	gl	KNO3	20°C	0.50M	U			K1=3.46 B2=7.57	1968ALc (22257)	1187
Using Ag-AgCl electrode: B2=7.51										
Ag+	sol	oth/un	25°C	?	U	I		B2=7.39	1964SDb (22258)	1188
Medium: Cl-. In Br-, B2=7.48										
Ag+	ISE	oth/un	25°C	->0	U			B2=7.32	1955FYb (22259)	1189
Ag+	gl	KNO3	25°C	0.50M	U	T		K1=3.37 B2=7.30	1948BVa (22260)	1190
K1=3.21(35 C), B2=3.77(35 C)										
Ag+	gl	KNO3	30°C	0.50M	U			K1=3.30 B2=7.14	1945CMa (22261)	1191
Ag+	sol	oth/un	15°C	<0.1	U			B2=7.72	1935BWa (22262)	1192
By EMF B2=7.67										
Ag+	ISE	oth/un	21°C	0.01M	U			B2=7.50	1928JOa (22263)	1193
Ag+	sol	oth/un	25°C	0.10M	U			B2=7.33	1903BEa (22264)	1194
Ag+	sol	oth/un	25°C	0.30M	U			B2=7.24	1903EUa (22265)	1195

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
Ag+	gl	non-aq	?	100%	U			K1=6.0 B2=8.2	1974UPb (22366)	1196
Medium: DMF, 0.2 M LiNO3. In DMSO: K1=4.7, B2=7.0										
Ag+	ISE	mixed	25°C	20%	U	I		K1=4.48 B2=6.53 B3=6.63	1973MPf (22367)	1197
Medium: 20% Acetone/H2O, 0.4 LiNO3. K1=5.04, B2=6.63, B3=7.20(40%), K1=5.13, B2=6.65, B3=7.29(60%), B2=6.85, B3=7.36(80%), B2=7.38, B3=7.58(90%) also X=95%										
Ag+	ISE	oth/un	25°C	0.20M	U	I		K1=4.30 B2=6.78	1973UPa (22368)	1198
Medium: LiNO3. In MeOH, K1=5.47, B2=7.62, B3=7.48. In EtOH, K1=5.47, B2=7.65, B3=7.56										

Ag+ ISE diox/w 25°C 20% U I K1=4.40 B2=6.65 1972MPc (22369)1199
B3=7.11

Medium:20% Dioxan, 0.4 LiNO3. Also K1=4.41, B2=6.93, B3=7.35(40%), B2=7.30,
B3=7.60(60%), B2=7.45, B3=7.72(70%)

Ag+ ISE KNO3 25°C 0.50M U K1=2.92 B2=6.72 1972PEa (22370)1200

Ag+ sol KNO3 25°C 2.0M U B2=6.48 1970UPa (22371)1201

Ag+ gl KNO3 20°C 0.50M U K1=3.22 B2=6.79 1968ALc (22372)1202
Using an Ag-AgC ISE: B2=6.83

Ag+ ISE alc/w 25°C 20% U I K1=4.60 B2=6.50 1965MPb (22373)1203
B3=6.84

Medium: 20% EtOH, 0.4 LiNO3. 0%:K1=4.18,B2=6.45,B3=6.30; 40%:5.15,6.85,7.11;
60%:5.5,7.0,7.5; 80%:5.8,7.23,7.8; 100%:6.0,7.48,8.36

Ag+ gl NaClO4 0°C 1.0M U T K1=3.38 B2=7.65 1964PCa (22374)1204
30 C: K1=3.07, K2=3.56; 50 C: K1=2.86, K2=3.29

Ag+ ix KNO3 25°C 0.10M U B2=6.56 1962Cwa (22375)1205

Ag+ ISE oth/un 25°C 0.01M U B2=6.78 1961ALb (22376)1206

Ag+ gl oth/un 25°C .015M U K1=3.29 B2=6.82 1959DGa (22377)1207

Ag+ gl oth/un 10°C ->0 U T H K1=3.36 B2=7.28 1959LBb (22378)1208
20 C: K1=3.29, K2=3.63; 30 C: K1=3.07, K2=3.57; 40 C: K1=2.98, K2=3.41.
DH(K1)=-23 kJ mol⁻¹, DS=-17 J K⁻¹ mol⁻¹; DH(K2)=-27, DS=-21

Ag+ EMF oth/un 20°C 0.01M U B2=6.91 1958ASb (22379)1209

Ag+ gl KNO3 25°C 0.50M U K1=3.11 B2=6.68 1956BJb (22380)1210

Ag+ gl alc/w 25°C 50% U K1=3.41 B2=7.40 1955ANc (22381)1211
Medium: 50 mol % EtOH

Ag+ gl KNO3 25°C 0.50M U K1=3.13 B2=6.68 1948BVa (22382)1212

Ag+ sol oth/un 16°C 0.20M U B2=7.09 1933TAa (22383)1213

C2H7NO3S HL Taurine CAS 107-35-7 (2214)
2-Aminoethane sulfonic acid; H2N.CH2.CH2.SO3H

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

Ag+ EMF NaClO4 25°C 1.0M C K1=3.53 B2= 6.48 1998BFb (22434)1214
Method: Ag and glass electrodes

Ag+ gl KNO3 25°C 0.50M U K1=2.97 B2=6.15 1972PTa (22435)1215

Ag+ gl oth/un 25°C .014M U K1=3.19 B2=6.38 1959DGa (22436)1216

C2H7N04S HL CAS 926-39-6 (2972)
2-Aminoethyl hydrogen sulfate; H2N.CH2.CH2.O.S03H

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

Ag+ gl oth/un 25°C .013M U K1=3.42 B2=6.90 1959DGa (22442)1217

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

Ag+ sp NaClO4 20°C 1.00M U M 1972GSg (22473)1218
K(Ag+NiL2)=6.70
K(Ag+Ni3L4=AgNi2L4+Ni)=7.48

C2H7OPS2 HL CAS 993-44-2 (4228)
Dimethyldithiophosphonic acid; (CH3S)2PO.H

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

Ag+ ISE alc/w 25°C 90% U B2=16.00 1971TCa (22526)1219
Medium: 90% EtOH, 0.3 M NaClO4

C2H8N04P H2L CAS 1071-23-4 (1864)
2-Aminoethyl-dihydrogenphosphoric acid; H2N.CH2.CH2.OP03H2

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

Ag+ gl oth/un 25°C .034M U I 1959DGa (22657)1220
K1=3.89(?)
K2=3.22(?)

At I=0.026 M K1(?)=3.87, K2(?)=3.25

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

Ag+ ISE mixed 25°C 0.10M C I K1=6.65 B2=10.28 2002PRa (23034)1221
Ag-electrode; Medium:0.1 M NaClO4 in 0.4 mol parts DMFA in H2O
for 0.1 M NaClO4 in 100% DMFA K1=7.86; K2=4.38

Ag+ gl KNO3 25°C 1.0M C B2=7.67 1994GYb (23035)1222
B(AgHL)=12.63
B(AgH2L2)=25.93
B(AgHL2)=16.59

B(Ag2L2)=13.41

B(Ag2HL2)=20.20

Ag+ cal non-aq 25°C 100% U H 1989CDa (23036)1223
Medium: DMSO. DH(K1)=-63 kJ mol⁻¹; DS=-109. DH(B2)=-85; DS=-103.

Ag+ cal oth/un 25°C dil C H K1=4.68 B2= 7.69 19890Fa (23037)1224
B(Ag2L2)=13.19
Medium: NH4Cl/NH3 buffer, pH 10. DH(B2)=-52.59 kJ mol⁻¹,
DH(B(Ag2L2))=-113.3.

Ag+ ISE non-aq 25°C 100% C K1=5.34 B2=9.50 1988CBa (23038)1225
Medium: DMSO, 1.0 M Et4N.ClO4.

Ag+ ISE mixed 25°C 90% U B2=8.36 1985BIa (23039)1226
Medium: 90% v/v DMSO in H2O

Ag+ gl NaNO3 25°C 2.00M U K1=5.05 B2=11.12 1982SPc (23040)1227
B(AgHL)=12.52
K(Ag+HL)=2.26
B(AgHL2)=18.69
K(Ag+HL+L)=8.44

Ag+ ISE KNO3 25°C 0.10M C H K1=5.32 B2=7.62 1981SCa (23041)1228
B3=14.52
By calorimetry: DH(K1)=-55.5 kJ mol⁻¹, DS=-40.1

Ag+ sol NaClO4 25°C 1.00M U T 1979BBb (23042)1229
K(2AgL=Ag2L2)=1.71
Also polymerized species (Ag)x(L)x with x greater than 2

Ag+ vlt non-aq 25°C 100% U K1=3.30 1979SZa (23043)1230
Medium: DMSO, 0.1 M NaClO4

Ag+ gl KNO3 25°C 1.00M C H K1=5.06 1978MSb (23044)1231
K(Ag+HL)=2.42
K(Ag+AgL)=1.20
B(2Ag+2L)=13.17
DH(K1)=-48.5; DH(K2)=-55.2; DH(2,2)=-107.8 kJ mol⁻¹

Ag+ gl KNO3 25°C 0.50M U H B2=7.64 1976VPb (23045)1232
B(AgHL)=2.34
B(AgH2L2)=4.90
B(AgHL2)=6.47
B(Ag2L2)=13.15
DH(AgHL)=-25.4 DS=-41, DH(Ag2H2L)=-5.08 DS=-77, DH(Ag2HL)=-56.9 DS=-66,
DH(Ag2L)=-52.5 DS=-30, DH(Ag2L2)=-97.1 DS=-74

Ag+ ISE oth/un 25°C 3.00M U M K1=6.13 19730Ia (23046)1233
K(2Ag+L=Ag2L)=7.67

K(2Ag+2L=Ag2L2)=14.53
 B(AgHL)=13.56
 B(Ag(HL)2)=27.37

Medium: LiClO4. K(AgL+H2O=Ag(OH)L+H)=-4.59

 Ag+ ISE non-aq 25°C 100% U K1=6.27 B2=9.54 1969PSd (23047)1234
 K(2Ag+L)=5.8

Medium: DMSO, 0.1 KClO4

 Ag+ ISE oth/un 25°C 0.01M U B2=7.73 1961ALb (23048)1235
 B3=9.75

 Ag+ gl NaNO3 20°C 0.10M U K1=4.70 B2=7.70 1952SMa (23049)1236
 K(Ag+HL)=2.35
 K(Ag+AgL)=1.76
 B(Ag2L2)=13.23

 Ag+ ISE KNO3 25°C 1.0M U K1=6 B2=7.4 1950BJa (23050)1237

 Ag+ ISE oth/un 18°C 0.02M U B2=7.70 1936BWa (23051)1238

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

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

 Ag+ gl KNO3 25°C 0.10M U K1=4.17 1980ZRc (23322)1239
 K(Ag+HL)=3.39
 K(Ag+H2L)=3.13

 C3H2NCl L CAS 920-37-6 (3548)
 2-Chloroacrylonitrile; H2C:C(Cl)CN (1-Cyano-2-chloropropene)

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

 Ag+ dis oth/un 61°C 4.0M U K1=-0.55 1968SCb (23480)1240
 Medium: LiNO3

 C3H3Cl L 3-Chloropropyne CAS 624-65-7 (4230)
 3-Chloropropyne, Propargyl chloride; HCC.CH2Cl

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

 Ag+ EMF NaNO3 25°C 1.00M U K1=0.10 1973STd (23491)1241

C3H3N L Acrylonitrile CAS 107-13-1 (3545)
 Cyanoethene; H2C:CH.CN

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

Ag+ dis oth/un 61°C 4.0M U K1=-0.15 1968SCb (23492)1242
Medium: LiNO3

C3H3NO L Isoxazole CAS 288-14-2 (384)

Isoxazole; cyclo(-O.N:CH.CH:CH-) C3H3NO

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

Ag+ gl KNO3 25°C 0.50M U K1=1.21 B2=2.59 1979BBa (23495)1243

Ag+ gl KNO3 25°C 0.50M U K1=0.80 B2=1.21 1978KLa (23496)1244

C3H3NOS2 HL Rhodanine CAS 141-84-4 (3557)

2-Thioxo-4-thiazolidinone;

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

Ag+ dis NaClO4 20°C 0.10M U K1=5.47 B2=9.68 1965NKb (23500)1245

C3H3NO2S HL CAS 2295-31-0 (388)

2,4-Thiazolidinedione;

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

Ag+ gl KNO3 25°C 0.50M U K1=3.5 B2=7.05 1979BBa (23513)1246

C3H3NS L Isothiazole CAS 288-16-4 (383)

Isothiazole; cyclo(-S.N:CH.CH:CH-) C3H3NS

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

Ag+ gl KNO3 25°C 0.50M U K1=1.44 B2=2.69 1979BBa (23517)1247

Ag+ gl KNO3 25°C 0.50M U K1=1.11 B2=2.71 1978KLa (23518)1248

C3H3NS L Thiazole CAS 288-47-1 (382)

Thiazole; cyclo(-S.CH:N.CH:CH-) C3H3NS

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

Ag+ ISE KNO3 25°C 0.50M M K1=1.56 B2=3.73 1986BGa (23525)1249

Ag+ gl KNO3 25°C 0.50M U K1=1.95 B2=3.92 1979BBa (23526)1250

C3H4N2 L Pyrazole CAS 288-13-1 (367)

1,2-Diazole, pyrazole; cyclo(-NH.N:CH.CH:CH-)

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

Ag+ ISE KNO3 25°C 0.50M M K1=1.88 B2=4.17 1986BGa (23558)1251


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Ag+      gl  KNO3   25°C 0.50M U      K1=2.110  B2=4.235  1979BBa (23559)1252
-----
Ag+      gl  KNO3   25°C 0.50M U      K1=2.11   B2=4.24   1977BBb (23560)1253
-----
Ag+      ISE alc/w 25°C 20% C T H    K1=2.05   B2=4.44   1977PGb (23561)1254
-----
Ag+      EMF NaCl04 25°C 0.10M C    K1=2.05   B2= 4.37  1977PMa (23562)1255
Method: Ag electrode.

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C3H4N2          L   Imidazole          CAS 288-32-4 (90)
1,3-Diazole, imidazole; C3H4N2

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values          Reference ExptNo
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Ag+      gl  KNO3   25°C 0.10M C      R K1=2.93  B2=6.74  1997SJa (23782)1256
IUPAC evaluation. I=0.5 M: DH(K1)=-30.5 kJ mol-1, DH(K2)=-32.1
I=0: K1=2.92, B2=6.71; I=2.0: K1=3.34, B2=7.55

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-----
Ag+      ISE KNO3   25°C 0.50M M      K1=3.31   B2=6.78  1986BGa (23783)1257
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Ag+      ISE KNO3   25°C 0.50M U      K1=3.31   B2=6.78  1985BGa (23784)1258
Simultaneous measurement of Ag+ in a concentration cell and of pH
With glass electrode alone, K1=3.33, B2=6.96

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Ag+      ISE alc/w 25°C 50% U      B2=7.22          1980BTb (23785)1259
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Ag+      gl  KNO3   25°C 0.50M U      K1=2.96   B2=6.95  1979BBa (23786)1260
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Ag+      ISE NaCl04 25°C 3.00M C    K1=3.336  B2=7.554  1979GSb (23787)1261
K(Ag+L=AgL(OH)+H)=-4.78

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-----
Ag+      ISE R4N.X 25°C 0.50M U      K1=4.0     B2=6.88  1971BLb (23788)1262
Medium: NH4NO3

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-----
Ag+      ISE KNO3   25°C 0.50M U      K1=2.70   B2=6.88  1970BLa (23789)1263
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Ag+      gl  KNO3   25°C 1.00M U      K1=3.08   B2=6.95  1969NNa (23790)1264
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Ag+      gl  KNO3   50°C 0.10M U T H    K1=2.81   B2=6.05  1966DGb (23791)1265
0 C:K1=3.52,K2=4.36; 10 C:3.38, 4.15; 20 C:3.24, 3.89; 30 C:3.10, 3.64;
50 C:2.81,3.24. At 20 C:DH(K1)=-23 kJ mol-1,DS=-17; DH(K2)=-43,DS=-73

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-----
Ag+      gl  KNO3   25°C 1.0M U      K1=3.05   B2=6.88  1964BWa (23792)1266
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Ag+      gl  KCl    25°C .058M U T      K1=3.78   B2=7.04  1961SMa (23793)1267
0 C: K1=4.26; 45 C: K1=3.46, B2=7.94

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Ag+      gl  KNO3   25°C 1.0M U      K1=3.11   B2=6.84  1960GGa (23794)1268

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C3H4N2OS L Thiohydantoin CAS 503-87-7 (387)
Imidazolidine-2-thioxo-4-one, 2-Thiohydantoin;

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

Ag+ gl KNO3 25°C 0.50M U K1=4.26 B2=6.87 1979BBa (23935)1269

C3H4N2O2 HL Hydantoin CAS 461-72-3 (389)
2,4-Imidazolidinedione;

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

Ag+ gl KNO3 25°C 0.50M U K1=4.42 B2=9.05 1979BBa (23943)1270

Ag+ gl KNO3 25°C 0.50M U IH K1=4.42 B2= 9.05 1979BEc (23944)1271

By calorimetry: DH(K1)=-24.4 kJ mol⁻¹, DS(K1)=2.7 J K⁻¹ mol⁻¹;
DH(B2)=-12.65, DS(B2)=-4.2. In 0.10 M KNO3, K1=4.29, B2=9.20

Ag+ ISE KNO3 25°C 0.10M U K1=4.29 B2=9.20 1965COB (23945)1272

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

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

Ag+ ISE KNO3 25°C 0.50M M K1=2.69 B2=5.35 1986BGa (23958)1273

C3H4O L 2-Propyn-1-ol CAS 107-19-7 (4231)
2-Propyn-1-ol, Propargyl alcohol; HCC.CH2.OH

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

Ag+ EMF NaNO3 25°C 1.00M U K1=0.64 1973STd (23976)1274

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

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

Ag+ EMF NaNO3 25°C 1.00M U K1=0.51 1973STd (24636)1275

C3H6 L Propylene CAS 115-07-1 (702)
Propene; CH3.CH:CH2

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

Ag+ dis none 40°C 0.0 U T H K1=0.95 1984DWa (24752)1276

Ag+ ISE none 25°C 0.00 U K1=1.77 1971PTb (24753)1277

Medium: 0.1 KNO3. 20 C: K1=1.00; 40 C: K1=0.53; 60 C: K1=0.26; 80 C: K1=-0.1

Ag+ dis oth/un 25°C 1.0M U K1=1.94 1952TLa (24754)1278
K(AgL+Ag)=-0.96

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

Ag+ EMF none 25°C 0.0 C T H K1=13.2 2002DZa (24763)1279
Method: Ag electrode. Data for 5-45 C. DH(K1)=127 kJ mol⁻¹, DS(K1)=540
J K⁻¹ mol⁻¹.

Ag+ ISE mixed 25°C 82% U K1=7.25 B2=9.60 1979TBa (24764)1280
Medium: 82% formamide

Ag+ ISE mixed 25°C 0.20M U I 1978BMb (24765)1281
B3=11.77

Medium: 40 mol/l H2O in H2O/Dimethylformamide mixed solvent

C3H6N2OS L (6138)
4,5-Dihydroxyimidazolidine-2-thione;

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

Ag+ ISE mixed 25°C 82% U K1=4.87 B2=8.45 1979TBd (24816)1282
B3=12.10

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

C3H6N2S L CAS 96-45-7 (386)
2-Imidazolidinethione; C3H6N2(:S)

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

Ag+ gl KNO3 25°C 0.50M U K1=5.97 B2=10.2 1979BBa (24831)1283
B3=12.3

Ag+ ISE diox/w 28°C 80% U 1964KKa (24832)1284
K(Ag+3HL)=11.5

Medium: 80% dioxan, 2 M NH4NO3

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

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

Ag+ ISE NaClO4 25°C 1.0M U TIH K1=1.253 B2=1.05 1977HSa (24840)1285
By temp coeff., DH1=-18.6 kJ mol⁻¹, DS1=-38 J K⁻¹ mol⁻¹, also in MeOH etc.

Ag+ EMF NaNO3 25°C 1.00M U K1=0.97 1973STd (24841)1286

Ag+ ISE NaClO4 25°C 2.0M U K1=1.360 B2=1.12 1967HV a (24842)1287

Ag+ sol KNO3 25°C 0.10M U K1=1.15 1949KAb (24843)1288

Ag+ dis KNO3 25°C 1.0M U K1=1.08 B2=1.56 1938WLa (24844)1289

C3H6O L Acetone CAS 67-64-1 (1912)
Propan-2-one, acetone; CH3.CO.CH3

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

Ag+ dis KNO3 25°C 1.0M U K1=-0.85 1938WLa (24854)1290

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

Ag+ ISE oth/un 25°C 0.10M U K1=3.90 B2=7.36 1968PSb (25089)1291
K(Ag+HL)=3.16

Acetate buffer. For K(Ag+HL) I=0.2 M

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

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

Ag+ ISE KNO3 20°C 0.10M C K1=12.0 B2=14.00 1999AKa (25198)1292
Method: Ag2S electrode. K(H+L)=10.5.

C3H7N L Allylamine CAS 107-11-9 (2973)
Allylamine; H2C:CH.CH2.NH2

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

Ag+ ISE NaClO4 25°C 2.0M U K1=0.114 1967HV a (25635)1293

Ag+ sol oth/un 16°C 0.01M U B2=7.17 1933TAa (25636)1294

C3H7N L (160)
Amino-cyclopropane; C3H5.NH2

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

Ag+ gl KCl 25°C 0.10M U K1=3.10 B2=6.43 1980HAa (25640)1295

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	EMF	non-aq	?	100%	U		K1=1.7 B2=2.7 B3=3.0 B4=2.42	1971Lub	(25650)1296

Medium: 0.1-1.0, HCON(CH₃)₂, in nitroethane. Data also in sulfolane, acetone, 2-butanol and methanol

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
Ag+	gl	oth/un	30°C	0.10M	U		K1=3.85 B2=6.60	1981PUa	(26053)1297
Ag+	EMF	KNO ₃	25°C	0.10M	C T H		K1=4.3 K(AgL+H)=8.1 K(AgHL+H)=2.5	1981SBe	(26054)1298

Method: Ag/Ag+ electrode. Data for 25-45C. DH(K1)=41.3 kJ mol⁻¹.

Ag+	gl	NaClO ₄	30°C	0.20M	U	T	K1=3.85 B2=7.51	1975JBb	(26055)1299
Ag+	ISE	oth/un	25°C	0.60M	U	T	K1=3.60 B2=7.06	1967AMb	(26056)1300
Ag+	gl	oth/un	25°C	->0	U		K1=3.64 B2=7.18	1951MOa	(26057)1301
Ag+	sol	oth/un	25°C	->0	U		K1=4.86	1941KRa	(26058)1302

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
Ag+	gl	NaClO ₄	25°C	3.00M	C	IH	K1=3.58 B2=7.46	1987IOc	(26419)1303
Ag+	gl	NaClO ₄	25°C	3.00M	U	T	K1=3.58 B2=7.46 B(AgHL)=10.88 K(Ag+L+H ₂ O=Ag(OH)L+H)=-6.12	19800Za	(26420)1304

Ag+	gl	NaClO ₄	30°C	0.20M	U		K1=4.17	1975JBb	(26421)1305
Ag+	gl	KNO ₃	15°C	0.50M	U T		K1=3.47 B2=7.41	1970PTa	(26422)1306

K1(0 C)=3.72, B2(0 C)=7.90; K1(40 C)=3.19, B2(40 C)=6.69

Ag+	gl	KNO ₃	20°C	0.50M	U	T	K1=3.44 B2=7.25	1968ALc	(26423)1307
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Using Ag/AgCl ISE: B2=7.32

Ag+	gl	KNO ₃	25°C	0.50M	U	T	K1=3.33 B2=7.12	1968TPa	(26424)1308
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Ag+ ISE oth/un 25°C 0.60M U T K1=3.76 B2=7.21 1967AMb (26425)1309

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

Ag+ gl oth/un 25°C .016M U K1=3.04 B2=5.88 1959DGa (26593)1310

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

Ag+ ISE KNO3 20°C 0.10M C K1=11.9 B2=15.20 1999AKa (26731)1311
Method: Ag2S electrode. K(H+L)=7.8.

Ag+ ISE NaClO4 25°C 0.50M U 1986KPa (26732)1312
Kso(AgL)=-8.40

Ag+ ISE NaNO3 25°C 1.0M U 1976ZNb (26733)1313
K(Ag+HL)=14.01

Ag-electrode

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

Ag+ EMF KNO3 25°C 0.10M C T H K1=4.1 1981SBe (27065)1314
K(AgL+H)=7.4
K(AgHL+H)=2.5

Method: Ag/Ag+ electrode. Data for 25-45C. DH(K1)=44.3 kJ mol⁻¹.

Ag+ ISE oth/un 25°C 0.60M U K1=3.40 B2=6.67 1967AMb (27066)1315

C3H7NS L CAS 758-16-7 (476)
N,N-Dimethylthioformamide; HCS.N(CH3)2

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

Ag+ ISE none 25°C 0.0 U K1=6.8 B2=10.2 1976CWc (27255)1316
B3=11.9
B4=13.0

Ag+ ISE non-aq 25°C 100% U K1=3.7 B2=6.7 1976CWc (27256)1317
B3=8.4
B4=9.2

Medium: MeCN

Ag+ ISE non-aq 25°C 100% U B2=13.9 1976CWc (27257)1318
B3=16.0
B4=16.9

Medium: propylene carbonate

C3H7NS L Thiazolidine CAS 504-78-9 (385)
Tetrahydrothiazole; cyclo(-S-CH2-NH-CH2-CH2-) C3H7NS

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

Ag+ gl KNO3 25°C 0.50M U K1=8.84 B2=12.08 1979BBa (27260)1319

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

Ag+ EMF alc/w 25°C 100% M T H K1=8.77 B2=12.52 1990MMf (27623)1320
B3=15.24

Medium: MeOH, 0-40 C. DH(K1)=-37 kJ mol⁻¹, DS=+44 J K⁻¹ mol⁻¹; DH(B2)=-60,
DS=+36; DH(B3)=-110, DS=-77. Method: Ag electrode

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

Ag+ sp oth/un ? ? U B(Ag2L)=35.8 1971EPd (27774)1321

Ag+ EMF KNO3 ? 1.00M U B(Ag2L2)=25.80 1969SOa (27775)1322

Medium:HNO3

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

Ag+ gl alc/w 20°C 25% U T H K1=7.05 1978SKf (27805)1323
DH=-39.54 kJ mol⁻¹. Data also available when T=10 and 30. Alternative
methods: Conductivity and amperometric techniques.

Ag+ con alc/w 20°C 25% C TIH Kso(AgL)=-7.05 1978SKj (27806)1324

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

C3H9N L 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

Ag+ gl KNO3 25°C 1.00M U K1=3.463 B2=7.435 1993GYa (27820)1325
B(AgH-1L2)=-4.30

Ag+ gl none 25°C 0.00 U K1=3.57 B2=7.70 1971HTa (27821)1326

Ag+ ISE R4N.X 25°C 2.00M U K1=3.40 B2=7.10 1969PMc (27822)1327
Medium: NH4NO3

Ag+ EMF KNO3 20°C 0.50M U K1=3.47 B2=7.54 1968ALc (27823)1328
Method: quinhydrone electrode. Using Ag/AgCl ISE: B2=7.48

Ag+ sol oth/un 16°C 0.01M U B2=7.68 1933TAa (27824)1329

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

Ag+ gl KCl 25°C 0.10M U K1=3.64 B2=7.77 1980HAa (27840)1330

Ag+ oth non-aq ? 100% U B2=10.5 1965MMA (27841)1331
Method: coulometric titration. Medium: acetone, 0.1 M NaCl04

C3H9N L (6677)
Methylethylamine; CH3.CH2.NH.CH3

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

Ag+ gl KNO3 25°C 1.00M U K1=2.789 B2=5.828 1993GYa (27849)1332

C3H9N L Trimethylamine CAS 75-50-3 (803)
Trimethylamine; (CH3)3.N

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

Ag+ gl KNO3 25°C 1.00M U K1=1.701 1993GYa (27857)1333

Ag+ sol oth/un 15°C 0.10M U B2=3.11 1935BWA (27858)1334

C3H9NO L CAS 2799-16-8 (905)
1-Aminopropan-2-ol; H2N.CH2.CH(OH).CH3

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

Ag+ ISE KNO3 25°C 0.50M U K1=3.03 B2=6.77 1972PEa (27873)1335

Ag+ gl oth/un 20°C 0.0 U K1=3.23 B2=6.78 1964AKb (27874)1336

Medium: 0 corr. By solubility: B2=6.78

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

Ag+ gl NaClO4 30°C 1.0M U TI K1=3.15 B2=6.81 1964PCa (27900)1337
50 C: K1=2.95, K2=8.27. At I=0, 30 C: B2=6.76

Ag+ gl none 10°C 0.0 U T H K1=3.44 B2=7.16 1959LBb (27901)1338
DH(K1)=-23 kJ mol⁻¹, DS=-8; DH(K2)=-22, DS=-4. 20 C: K1=3.16, K2=3.81;
30 C: K1=3.18, K2=3.37; 40 C: K1=2.99, K2=3.43

Ag+ gl KNO3 25°C 0.50M U K1=2.95 B2=6.34 1948BVa (27902)1339

C3H9NO L CAS 156-87-6 (906)
3-Aminopropan-1-ol; HO.CH2.CH2.CH2.NH2

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

Ag+ gl KNO3 20°C 0.50M U K1=3.25 B2=7.04 1968ALc (27915)1340
By Ag/AgCl ISE: B2=7.04

C3H9NO2 L CAS 616-30-8 (4237)
3-Aminopropan-1,2-diol; H2N.CH2.CH(OH).CH2(OH)

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

Ag+ ISE KNO3 25°C 0.50M U K1=3.00 B2=6.35 1972PEa (27922)1341

C3H9NO3S HL CAS 3687-18-1 (4242)
3-Aminopropanesulfonic acid; H2N.CH2.CH2.CH2.SO3H

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

Ag+ gl KNO3 25°C 0.50M U K1=3.17 B2=6.75 1972PTa (27924)1342

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

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

Ag+ gl KNO3 25°C 0.50M U K1=4.88 B2=9.29 1977TGa (27940)1343
B(2Ag+L)=6.86
B(2Ag+2L)=13.01
B(Ag+HL)=2.64
B(Ag+HL+L)=7.56

B(Ag+2HL)=4.06

Ag+ cal KNO3 25°C 0.50M C H 1977TGc (27941)1344
DH(Ag+HL)=-27.3 kJ mol⁻¹, DH(Ag+2HL)=-55.6, DH(Ag+HL+L)=-73.6,
DH(B2)=-82.0, DH(2Ag+2L)=-123, DH(2Ag+L)=-17.58.

Ag+ gl KNO3 30°C 1.0M U K1=4.17 B2=6.88 1951G0a (27942)1345

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

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

Ag+ ISE alc/w 25°C 10% C 1990GVa (27950)1346
B(6,3)=61.60
B(6,4)=77.83
B(8,6)=114.58
B(7,6)=109.84

B(10,9)=163.76, B(12,12)=211.2, B(5,6)=96.58, B(5,7)=102.6, B(4,6)=83.59,
B(2,4)=44.84. In 10% methanol/H2O, 0.10 M NaNO3. B(p,q): pAg+qHL=(Ag)p(HL)q

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

Ag+ gl KNO3 25°C 1.0M C B2=7.92 1994GYb (28155)1347
B(AgHL)=12.55
B(AgH2L2)=25.10
B(AgHL2)=16.87
B(Ag2L2)=13.29

B(Ag2HL2)=20.07

Ag+ ISE NaClO4 25°C 3.00M U K1=5.52 19730Ia (28156)1348
B(Ag2L)=7.60
B(AgHL)=12.72
B(AgH2L2)=25.84
B(Ag2L2)=13.47

Medium: LiClO4. K(AgL+H2O=AgOHL+H)=-4.17

Ag+ ISE KNO3 25°C 1.00M U K1=6.20 B2=7.60 1968LAb (28157)1349
K(Ag+HL)=3.20
K(AgHL+HL)=2.76

C3H10N2 L Propanediamine CAS 109-76-2 (123)
1,3-Diaminopropane; H2N.CH2.CH2.CH2.NH2

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

Ag+ EMF non-aq 25°C 100% C H K1=5.9 2002CNa (28271)1350
B(Ag2L)=8.06
B(Ag2L2)=14.4

Method: Ag electrode. Medium: DMSO, 0.10 M Et4NClO4. DH(K1)=-80.8 kJ mol⁻¹, DS=-157 J K⁻¹ mol⁻¹; DH(Ag2L)=-71.6, DS=-86; DH(Ag2L2)=-146.8, DS=-217.

 Ag+ ISE KNO3 25°C 1.00M C B2=7.81 1994GYa (28272)1351
 B(AgHL)=13.75
 B(AgH2L2)=27.72
 B(Ag2L2)=14.86

Ag+ cal non-aq 25°C 100% U H 1989CDa (28273)1352
 Medium: DMSO. DH(K1)=-80.8 kJ mol⁻¹; DS=-157. DH(Ag2L)=-71.6; DS=-86.
 DH(Ag2L2)=-146.8; DS=-217

Ag+ ISE non-aq 25°C 100% C K1=5.9 1988CBa (28274)1353
 B(Ag2L)=8.06
 B(Ag2L2)=14.4

Medium: DMSO, 1.0 M Et4N.ClO4.

Ag+ vlt non-aq 25°C 100% U K1=2.00 1979SZA (28275)1354
 Medium: DMSO, 0.1 M NaClO4

Ag+ gl NaClO4 25°C 3.00M C K1=6.59 B2=9.8 19770Ca (28276)1355
 B(AgHL)=14.32
 B(AgH2L2)=28.90
 B(AgH-1L)=-3.6
 B(Ag2L2)=15.90

Medium: LiClO4

Ag+ gl oth/un 10°C ->0 U T H K1=6.35 1958BFa (28277)1356
 DH(K1)=-61.1 kJ mol⁻¹, DS=-96. K1=5.92(20 C), 5.56(30 C), 5.27(40 C)

Ag+ gl NaNO3 20°C 0.10M U K1=5.85 1952SMa (28278)1357
 K(Ag+HL)=2.55
 B(Ag2L)=0.6

 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
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Ag+	gl	KNO3	25°C	1.0M	C			B2=7.26 B(AgHL)=12.60 B(AgH2L2)=25.28 B(AgHL2)=16.74 B(Ag2L2)=11.99	1994GYb (28355)	1358
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B(Ag2HL2)=19.42

Ag+	gl	KNO3	25°C	0.10M	C			B2= 7.30 B(AgHL)=12.69 B(AgH2L2)=25.47 B(AgHL2)=16.83	1993GYb (28356)	1359
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B(Ag2L2)=12.05

C3H10N2O L CAS 616-29-5 (1910)
1,3-Diaminopropane-2-ol; H2N.CH2.CH(OH).CH2.NH2

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

Ag+ gl oth/un 10°C 0.0 U T H K1=5.96 1958BBc (28381)1360
DH(K1)=-55.2 kJ mol⁻¹, DS=-79. K1=5.64(20 C), 5.31(30 C), 4.97(40 C)

Ag+ gl KNO3 30°C 1.0M U K1=5.80 1955GFa (28382)1361

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

Ag+ gl NaNO3 20°C 0.10M U K1=5.65 1950PSa (28482)1362
K(Ag+HL)=3.4
K(Ag+AgL)=1.2

C4H3N2Cl L Chloropyrazine CAS 14508-49-7 (2530)
2-Chloro-pyrazine, 2-Chloro-1,4-diazine; C4H3N2.Cl

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

Ag+ gl KNO3 25°C 0.10M U H K1=0.96 B2=1.53 1974HEa (28676)1363
DH(K1)=-15.9 and DH(B2)=-32.13 kJ mol⁻¹.

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

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

Ag+ ISE KNO3 ? 0.10M U B2=8.18 1970GKd (28690)1364

C4H4N2 L Pyridazine CAS 289-80-5 (1484)
1,2-Diazine, Pyridazine; cyclo(-N:N.CH:CH.CH:CH-)

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

Ag+ ISE KNO3 25°C 0.50M U K1=1.48 B2=2.70 1986KLa (28768)1365

Ag+ ISE KNO3 25°C 0.10M U K1=1.48 B2=2.82 1973BEb (28769)1366

C4H4N2 L Pyrimidine CAS 289-95-2 (4247)
1,3-Diazine, pyrimidine;

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

Ag+ ISE KNO3 25°C 0.10M U K1=1.61 B2=2.98 1973BEb (28775)1367

C4H4N2 L Pyrazine CAS 290-37-9 (620)
1,4-Diazine, Pyrazine;

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

Ag+ ISE KNO3 25°C 0.50M U K1=1.39 B2=2.52 1986KLa (28786)1368

Ag+ ISE KNO3 25°C 0.10M U K1=1.38 B2=2.41 1973BEb (28787)1369

Ag+ sol mixed 30°C 1% U K1=1.50 B2=2.12 1962STa (28788)1370
Medium: 1% Pyrazine

C4H4N2 L Succinonitrile CAS 110-61-2 (2987)
Succinonitrile; NC.CH2.CH2.CN

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

Ag+ ISE oth/un 20°C ? U K1=1.0 1924PAa (28799)1371

C4H4N2OS HL 2-Thiouracil CAS 141-90-2 (4278)
4-Hydroxy-2-mercaptopyrimidine; HO.C4H2N2.SH

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

Ag+ EMF none 25°C 0.0 C T H K1=13.1 B2=22.30 2002DZa (28803)1372
B3=31.5

Method: Ag electrode. Data for 5-45 C. DH(K1)=-80.3 kJ mol⁻¹, DS(K1)=-189
J K⁻¹ mol⁻¹; DH(B2)=-93.5, DS(B2)=-145; DH(B3)=-38.2, DS(B3)=122.

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

Ag+ ISE KNO3 25°C 1.00M U K1=8.18 B2=11.67 1975DWa (28849)1373
B(Ag+HL)=6.00
B(Ag+2HL)=8.78

C4H4N2O2S H2L Thiobarbituric CAS 504-17-6 (4279)
4,6-Dihydroxy-2-mercaptopyrimidine, 2-thiobarbituric acid;

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

Ag+ ISE NaCl04 25°C 0.50M U 1986KPa (28882)1374
Kso(AgL)=-10.91
Kso(AgL2)=-22.82

C4H4N2S HL CAS 1450-85-7 (1521)

2-Mercapto-1,3-diazine, 2-Mercaptopyrimidine; C4H3N2.SH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KNO3   30°C 0.50M U          K1=5.63      1989WIa (28931)1375
*****
C4H5N          L      Crotononitrile  CAS 4786-20-3 (3561)
2-Butenenitrile; CH3.CH:CH.CN
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        dis oth/un 61°C 4.0M U          K1=-0.03     1968SCb (29284)1376
Medium: LiNO3. Method: gas chromatography
*****
C4H5N          L      2-Cyanopropene  CAS 126-98-7 (3560)
Methacrylonitrile; H2C:C(CH3)CN
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        dis oth/un 61°C 4.0M U          K1=-0.11     1968SCb (29285)1377
Medium: LiNO3. Method: gas chromatography
*****
C4H5NO         L      Methylisoxazole CAS 5765-44-6 (2045)
5-Methylisoxazole; C3H2NO.CH3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        EMF KNO3   25°C 0.50M U          K1=0.99      B2=1.76      1977LKa (29289)1378
Ag/Ag+ concentration cell
*****
C4H5NO2        HL     Succinimide      CAS 123-56-8 (390)
Succinic acid imide; (CH2.CO)2NH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KNO3   25°C 0.50M U          K1=4.36      B2=9.64      1979BBa (29306)1379
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Ag+        gl  KNO3   25°C 0.50M U  H      K1=4.36      B2= 9.64     1979BEc (29307)1380
By calorimetry: DH(K1)=-23.4 kJ mol-1, DS(K1)=5.0 J K-1 mol-1.
DH(B2)=-50.63, DS(B2)=14.7.
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Ag+        ISE KNO3   25°C 0.10M U          K1=4.45      B2=9.54      1965COa (29308)1381
*****
C4H5NS         L      4-Methiazole     CAS 693-95-5 (820)
4-Methylthiazole; C3H2NS.CH3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE KNO3   25°C 0.50M M          K1=1.00      B2=4.27      1986BGa (29324)1382
*****
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C4H5N3 L CAS 109-12-6 (1480)
2-Amino-1,3-diazine; C4H3N2.NH2

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

Ag+ ISE KNO3 25°C 0.50M U K1=2.27 B2=5.08 1986KLa (29342)1383

C4H5N3 L Aminopyrazine CAS 5049-61-6 (2529)
2-Amino-1,4-diazine; C4H3N2.NH2

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

Ag+ gl KNO3 25°C 0.10M U H K1=1.81 B2=3.50 1974HEa (29346)1384

C4H6 L 1,3-Butadiene CAS 106-99-0 (4245)
1,3-Butadiene; CH2:CH:CH:CH2

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

Ag+ ISE KNO3 20°C 0.10M U I K1=1.67 1971PTc (29439)1385
K1(I=0.5)=1.67, K1(1.0)=1.66, K1(I=2.5)=1.67
I=0.1 KClO4, K1=1.68; I=0.1 LiNO3, K1=1.67,; I=0.1 Zn(NO3)2, K1=1.67

C4H6N2 L 2-Me-Imidazole CAS 693-98-1 (122)
2-Methyl-1,3-diazole; C3H3N2.CH3

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

Ag+ ISE KNO3 25°C 0.50M M K1=3.54 B2=7.14 1986BGa (29469)1386

Ag+ EMF KNO3 25°C 0.50M U K1=3.54 B2=7.14 1985BGa (29470)1387
Simultaneous measurement of Ag+ in a concentration cell and of pH
Using glass electrode alone K1=3.50, B2=7.25

Ag+ gl KNO3 25°C 1.00M U K1=3.11 B2=6.98 1969NNa (29471)1388

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

Ag+ ISE KNO3 25°C 0.50M M K1=2.33 B2=4.94 1986BGa (29500)1389

Ag+ ISE alc/w 25°C 20% C T H K1=2.41 B2=4.80 1977PGb (29501)1390

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

Ag+ ISE KNO3 25°C 0.50M M K1=2.95 B2=6.33 1986BGa (29555)1391

Ag+ ISE KNO3 25°C 0.50M U K1=2.95 B2=6.33 1985BGa (29556)1392
Simultaneous measurement of Ag+ in a concentration cell and of pH
Using glass electrode alone, K1=2.91, B2=6.56

Ag+ gl KNO3 25°C 1.0M U T K1=3.00 B2=6.89 1964BWa (29557)1393
K1=2.98(25.6 C),2.94(27 C); K2=3.87(25.6 C),3.82(27 C)

C4H6N2O L CAS 13148-65-7 (2050)
2,5-Dimethyl-1,3,4-oxadiazole; C2N2O(CH3)2

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

Ag+ ISE KNO3 25°C 0.50M U K1=1.60 B2=2.84 1977LGa (29613)1394
Ag+/Ag concentration cell

C4H6N2O2 HL CAS 616-04-6 (3583)
1-Methylimidazolidine-2,4-dione (1-Methylhydantoin)

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

Ag+ ISE KNO3 25°C 0.10M U K1=4.37 B2=9.34 1965COa (29622)1395

C4H6N2O2 HL CAS 616-03-5 (3584)
5-Methylimidazolidine-2,4-dione (5-Methylhydantoin)

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

Ag+ ISE KNO3 25°C 0.10M U K1=4.34 B2=9.27 1965COb (29624)1396

C4H6N2S L CAS 27464-82-0 (1457)
2,5-Dimethyl-1,3,4-thiadiazole; C2N2S(CH3)2

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

Ag+ gl KNO3 25°C 0.50M U K1=1.79 B2=3.25 1985GLa (29641)1397

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

Ag+ EMF KNO3 25°C 0.50M C K1=7.70 B2= 9.40 1977LWa (29658)1398
B3=12.48

Method: Ag electrode.

C4H6N4 L CAS 627-40-7 (4252)
1,5-Trimethylenetetrazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.40M	U	I	B2=3.01	1969DPc (29667)	1399
B2(I=0.4)=2.98									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	EMF	NaNO3	25°C	1.00M	U		K1=0.39	1973STd (29691)	1400

C4H6O		L					Crotonaldehyde	CAS 4170-30-3	(2988)
Crotonaldehyde; CH3.CH:CH.CHO									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	KNO3	25°C	1.0M	U		K1=-0.72	1938WLa (29693)	1401

C4H6O		L					But-1-en-3-one	CAS 78-94-4	(3562)
Methyl vinyl ketone, but-1-en-3-one; H2C:CH.CO.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	KNO3	25°C	1.0M	U		K1=-0.4	1968FKa (29694)	1402

C4H6O2		L					Vinyl acetate	CAS 108-05-4	(3564)
Acetic acid vinyl ester; CH3.CO.OCH:CH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	KNO3	25°C	1.0M	U		K1=0.01 B2=-0.39	1968FKa (29707)	1403

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	KNO3	25°C	1.0M	U		K1=-1.04	1938WLa (29710)	1404

C4H6O2		L					Me methacrylate	CAS 96-33-3	(815)
Methyl propenoate; CH2:CH.CO2.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	KNO3	25°C	1.0M	U		K1=-0.4 B2=-1.00	1968FKa (29729)	1405

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
Ag+	ISE	NaNO3	20°C	1.0M	U			K1=2.7 B2=6.3	1944LAa	(30200)1406

 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
Ag+	gl	NaClO4	25°C	0.50M	U			K1=4.12 K(AgL+H)=3.15	1981NAa	(30304)1407

Ag+	gl	KNO3	35°C	0.10M	U T H			K1=7.17	1968SGj	(30305)1408
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K1=6.89(25 C), 6.95(30 C). At 30 C: DH(K1)=-31.4 kJ mol⁻¹(?), DS=29 J K⁻¹ m⁻¹

Ag+	gl	KNO3	25°C	0.10M	U			K1=7.85	1965LMa	(30306)1409
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 C4H6O4Se H2L CAS 6228-62-2 (984)
 Selenodiethanoic acid; HOOC.CH2.Se.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	0.10M	C			K1=4.46 B2=7.02 K(Ag+HL)=3.42 K(Ag+H2L)=3.02	1975LPa	(30445)1410

 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
Ag+	dis	NaClO4	20°C	0.10M	U			K1=<2.0	1963STc	(31146)1411

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	20°C	0.05M	U			B2=0.94	1924PAa	(31434)1412

 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
Ag+	gl	oth/un	30°C	0.10M	U			K1= 4.70 B2=11.67	1981PUa	(31748)1413

Ag+	ISE	KNO3	30°C	0.10M	U			K1=4.2 B2=6.97	1977PUa	(31749)1414
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 C4H7NO4 H2L IDA CAS 142-73-4 (118)

Iminodiethanoic acid; HN(CH2.COOH)2

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KNO3   25°C 1.00M C          K1=3.27  B2=5.90  1992ANa (32152)1415
                        B(AgHL)=11.40
-----
```

```
-----
Ag+        ISE NaClO4 25°C 1.00M U I      K1=3.30          1989MIa (32153)1416
-----
```

```
-----
Ag+        ISE KNO3   25°C 0.10M C H      K1=3.51  B2=5.79  1981SCa (32154)1417
By calorimetry: DH(K1)=-35.8 kJ mol-1, DS=-9.2
-----
```

```
*****
C4H7OCl          L          CAS 23679-22-3 (4310)
cis-2-Chlorovinyl ethyl ether; Cl.CH:CH.O.CH2.CH3
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        sol KNO3   25°C 1.00M U          K1=-0.45          19690Fa (32452)1418
Medium: 50% EtOH, 0.1 M NaClO4
-----
```

```
*****
C4H7OCl          L          CAS 23679-21-2 (4311)
trans-2-Chlorovinyl ethyl ether; Cl.CH:CH.O.CH2.CH3
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        sol KNO3   25°C 1.00M U          K1=-0.23          19690Fa (32453)1419
Medium: 50% EtOH, 0.1 M NaClO4
-----
```

```
*****
C4H8            L      But-1-ene          CAS 106-98-9 (2985)
But-1-ene; CH2:CH.CH2.CH3
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        dis oth/un 25°C ->0 U          K1=2.08          1952HTa (32457)1420
-----
```

```
*****
C4H8            L      Isobutene          CAS 107-01-7 (2986)
Isobutene; CH3.CH(:CH2)CH3
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        dis oth/un 25°C ->0 U          K1=1.85          1952HTa (32459)1421
-----
```

```
-----
Ag+        dis KNO3   25°C 1.0M U          K1=1.79          1938WLa (32460)1422
*****
C4H8            L          CAS 590-18-1 (804)
cis-But-2-ene; CH3.CH:CH.CH3
-----
```

```
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        dis oth/un 25°C ->0 U          K1=1.79          1952HTa (32461)1423
-----
```

 C4H8 L CAS 624-64-6 (805)
 trans-But-2-ene; CH3.CH:C(CH3)H

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

Ag+ dis oth/un 25°C ->0 U K1=1.39 1952HTa (32463)1424

C4H8Cl2S L (6425)
 Bis(2-Chloroethyl) sulfide;

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

Ag+ ISE alc/w 25°C 100% C I K1=2.45 B2=4.28 1990TIa (32465)1425
 B3=5.31

Medium: MeOH, 0.1 M Et4NClO4. Data also in acetone (K1=2.48, B2=4.18,
 B3=5.88) and DMSO (K1=0.92) and DMF (K1=1.84, B2=2.80)

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

Ag+ gl oth/un 30°C 0.10M U K1=3.64 B2=6.64 1981PUa (32653)1426

Ag+ ISE oth/un 25°C 0.60M U K1=3.30 B2=6.45 1967AMb (32654)1427

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

Ag+ gl NaClO4 30°C 0.10M U T K1=8.01 1980SBe (32970)1428
 At 40 C, K1=8.06

Ag+ gl oth/un 25°C 0.10M U T K1=2.90 B2=5.65 1971PEd (32971)1429
 Temperature range 10-40C
 K1(10 C)=3.20, K1(40 C)=2.71, B2(10 C)=6.18, B2(40 C)=5.21

Ag+ gl oth/un 21°C 0.02M U K1=3.1 1952PEa (32972)1430
 Medium: AgNO3

Ag+ gl oth/un 25°C ->0 U K1=2.72 B2=4.98 1951MOa (32973)1431

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

Ag+ EMF alc/w 25°C 100% M T H K1=9.64 B2=12.71 1994MGa (33150)1432

B3=15.19

Medium: EtOH, 0-40 C. DH(K1)=-109 kJ mol⁻¹, DS=-184 J K⁻¹ mol⁻¹; DH(B2)=-133 DS=-204; DH(B3)=-210, DS=414. Method: Ag elect. Other alkyl-thioureas also

Ag+ EMF alc/w 25°C 100% M T H K1=9.70 B2=13.89 1990MMF (33151)1433
B3=16.48

Medium: MeOH, 0-40 C. DH(K1)=-76 kJ mol⁻¹, DS=-71 J K⁻¹ mol⁻¹; DH(B2)=-82.3, DS=-10; DH(B3)=-105, DS=-37. Method: Ag electrode

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

Ag+ gl KNO3 30°C 0.50M U K1=3.8 B2=6.7 1989WIa (33160)1434

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

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

Ag+ ISE diox/w 28°C 80% U 1964KKa (33164)1435
K(Ag+3HL)=9.5

Medium: 80% dioxan, 2M NH4NO3

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

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

Ag+ sol KNO3 25°C 0.10M U K1=1.15 1949KAb (33172)1436

C4H8O L 2-Methoxypropen CAS 116-11-0 (3565)
2-Methoxypropene; CH3.C(OCH3):CH2

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

Ag+ dis non-aq 20°C 100% U T H K1=0.87 1968FKb (33174)1437
Medium: ethylene glycol. K1=0.98(10 C). DH(K1)=-19.6 kJ mol⁻¹, DS=-50

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

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

Ag+ sol oth/un 25°C 0.10M U K1=1.04 1949KAb (33175)1438

C4H8O L (4253)
3-Methoxyprop-1-ene; CH2:CH.CH2.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	EMF	NaNO3	25°C	1.00M	U		K1=0.71	1973STd (33177)	1439

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	NaClO4	25°C	1.0M	U	TIH	K1=0.81	1977HSa (33178)	1440
By temp coeff., DH1=-20.8 kJ mol-1, DS1=-54 J K-1 mol-1, also in MeOH etc.									
Ag+	ISE	NaClO4	25°C	2.0M	U		K1=0.896 B2=0.66	1967HVa (33179)	1441
Ag+	sol	KNO3	25°C	0.10M	U		K1=0.59	1949KAb (33180)	1442
Ag+	dis	KNO3	25°C	1.0M	U		K1=0.71	1938WLa (33181)	1443

C4H8O		HL				Crotyl alcohol	CAS 627-27-0	(61)	
But-3-en-1-ol; CH2:CH.CH2.CH2.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	NaClO4	25°C	1.0M	U	TIH	K1=1.801 B2=2.25	1977HSa (33185)	1444
By temp coeff., DH1=-23.8 kJ mol-1, DS1=-45 J K-1 mol-1, also in MeOH etc.									

C4H8O		L				Ethoxyethene;	CAS 109-92-2	(3566)	
Ethyl vinyl ether; C2H5.O.CH:CH2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	KNO3	25°C	1.0M	U		K1=1.11 B2=0.91	1968FKa (33186)	1445
Ag+	dis	non-aq	30°C	100%	U	T H	K1=0.74	1968FKb (33187)	1446
Medium: ethylene glycol. K1=0.96(10 C),0.83(20 C). DH(K1)=-18.4 kJ mol-1, DS=-46 J K-1 mol-1									

C4H8O2S		HL					CAS 627-04-3	(3007)	
S-Ethylthioethanoic acid; CH3.CH2.S.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.10M	U		K1=3.92 B2=6.95	1968PSb (33398)	1447
Acetate buffer. I=0.2 M, K(Ag+HL)=3.17									
Ag+	oth	NaNO3	20°C	1.0M	U		K1=4.1 B2=7.2	1944LAa (33399)	1448

C4H8O4S2		L					CAS 26413-18-3	(5949)	
1,3-Dithiane 1,1,3,3-tetraoxide;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	2.00M	U				1983DEa (33690)	1449
K(AgBr(s)+L+OH=AgLOH+Br)=-8.2 K(AgBr(s)+2L=AgL2+Br)=3.4 Ionic medium:2 M KOH. Data also for -CH3 and -C2H5 derivatives of L. *****										
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
Ag+	ISE	non-aq	25°C	100%	U	IH		K1=-0.05	1987ZPa (33727)	1450
In pyridine; 0.1M Et4NC104. In DMSO,0.1M NH4C104, K1=1.24										
Ag+	nmr	NaNO3	27°C	0.50M	U	TI		K1=4.70	1982SSb (33728)	1451
Medium: D2O. At 34 C in d6-DMSO, 0.01 M DNO3: K1=1.63										
Ag+	gl	alc/w	25°C	50%	C			K1=3.51	1979SRa (33729)	1452
Ag+	sp	alc/w	25°C	50%	C			K1=3.51	1975RSa (33730)	1453
Medium: 50% EtOH, 1.0 M NaClO4 *****										
C4H9ClS		L						(6424)		
2-Chloroethyl ethyl sulfide;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	alc/w	25°C	100%	C	I		K1=3.03 B2=4.96 B3=5.97	1990TIa (33745)	1454
Medium: MeOH, 0.1 M Et4NC104. Data also for acetone (K1=3.08, B2=5.43, B3=6.33) and DMSO (K1=1.31, B2=1.97) and DMF (K1=2.43, B2=3.22, B3=4.00) *****										
C4H9N		L						CAS 56930-04-2	(3570)	
trans-4-Aminobut-2-ene; CH3.CH:CH.CH2.NH2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	NaClO4	25°C	2.0M	U			K1=0.107	1967HVa (33756)	1455

C4H9NO		L						CAS 127-19-5	(477)	
N,N-Dimethylacetamide; CH3.CO.N(CH3)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	non-aq	25°C	100%	U			K1=1.7 B2=2.7 B3=3.2 B4=3.4	1976CWc (33759)	1456
Medium: propylene carbonate *****										

C4H9NO L Morpholine CAS 110-91-8 (318)
Perhydro-1,4-oxazine, Tetrahydro-1,4-oxazine; C4H8NO

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

Ag+ ISE non-aq 25°C 100% C H K1=2.58 B2=4.68 1987CBa (33785)1457
DH1= -24.85 kJ mol⁻¹, DH(K2) = -30.70, DS1= -33.9, DS(K2) = -62.8.
Ag/AgCl electrode in DMSO

Ag+ ISE R4N.X 25°C 2.00M U K1=4.18 B2=6.91 1969PDa (33786)1458
Medium: NH4NO3

Ag+ oth non-aq ? 100% U B2=9.17 1965MMa (33787)1459
Method: coulometric titration. Medium: acetone, 0.1 M NaClO4

Ag+ gl alc/w 25°C 50% U K1=2.69 B2=5.48 1955ANc (33788)1460
Medium: 50 mol % EtOH

Ag+ gl KNO3 25°C 0.50M U K1=2.25 B2=4.92 1948BVa (33789)1461

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

Ag+ gl KNO3 15°C 0.50M U T K1=3.54 B2=7.46 1970PTa (33979)1462
K1(0 C)=3.82, K1(40 C)=3.46, K2(0 C)=4.12, K2(40 C)=3.75

Ag+ gl KNO3 20°C 0.50M U K1=3.47 B2=7.24 1968ALc (33980)1463
By Ag/AgCl ISE: B2=7.32

Ag+ gl KNO3 25°C 0.50M U K1=3.46 B2=7.21 1968TPb (33981)1464

C4H9NO2 HL Dimethylglycine CAS 1118-68-9 (88)
N,N-Dimethyl-2-aminoethanoic acid; (CH3)2N.CH2.COOH

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

Ag+ gl oth/un 25°C .013M U K1=2.90 B2=5.71 1959DGa (34027)1465

C4H9NO2S HL CAS 3335-52-2 (8306)
2-(Aminoethyl)thioethanoic acid;

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

Ag+ EMF KNO3 25°C 0.50M C K1=5.15 B2= 9.21 1984TSb (34043)1466
K(Ag+H2L)=1.95
K(Ag+HL)=2.61
K(Ag+2H2L)=2.75
K(Ag+H2L+HL)=3.91

Method: Ag electrode. $K(\text{Ag}+2\text{HL})=4.44$, $K(\text{Ag}+\text{HL}+\text{L})=7.75$, $B(\text{Ag}2\text{L}2)=13.22$,
 $B(\text{Ag}2\text{L})=7.37$.

C4H9NO2S HL Methylcysteine CAS 1187-84-4 (84)
2-Amino-3-methylmercaptopropanoic acid; $\text{H}_2\text{N}.\text{CH}(\text{CH}_2.\text{S}.\text{CH}_3)\text{COOH}$

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	EMF	KNO3	25°C	0.50M	C			$K_1=5.06$ $B_2=9.46$ $K(\text{Ag}+\text{H}2\text{L})=2.16$ $K(\text{Ag}+\text{HL})=2.47$ $K(\text{Ag}+2\text{H}2\text{L})=3.16$ $K(\text{Ag}+\text{H}2\text{L}+\text{HL})=3.91$	1984TSb (34086)	1467

Method: Ag electrode. $K(\text{Ag}+2\text{HL})=4.00$, $K(\text{Ag}+\text{HL}+\text{L})=7.39$, $B(\text{Ag}2\text{L}2)=13.06$,
 $B(\text{Ag}2\text{L})=7.08$.

Ag+	ISE	KNO3	25°C	0.10M	C			$K_1=5.42$ $B_2=9.62$ $B(\text{AgHL})=11.54$ $B(\text{AgH}2\text{L}2)=23.10$	1981PSb (34087)	1468
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Ag+	gl	KNO3	25°C	0.10M	U			$K_1=5.25$	1964LMa (34088)	1469
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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
Ag+	ISE	alc/w	25°C	40%	U			$B_3=13.2$	1961TKb (34432)	1470

Medium: 40% EtOH, 0.052 M NaC2H3O2

C4H9O2PS2 HL CAS 89620-01-9 (4282)
Phosphorodithioic acid 0,0'-(1,2-dimethyl)ethylene ester,
Methylvinylphosphorodithioate;

Ag+	ISE	alc/w	25°C	90%	U			$B_2=14.61$	1971TCa (34438)	1471
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Medium: 90% EtOH, 0.3 M NaClO4

C4H10N2 L Piperazine CAS 110-85-0 (2826)
Piperazine; cyclo(-CH2.CH2.NH.CH2.CH2.NH-)

Ag+	ISE	KNO3	25°C	0.10M	U			$K_1=3.33$ $B_2=6.04$	1973HBa (34501)	1472
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Ag+	ISE	R4N.X	25°C	2.00M	U			$K_1=3.32$ $B_2=6.87$	1969PMb (34502)	1473
-----	-----	-------	------	-------	---	--	--	-----------------------	-----------------	------

Medium: NH4NO3

Ag+ gl NaNO3 20°C 0.10M U K1=3.4 1952SMa (34503)1474
K(Ag+HL)=1.75
K(Ag+AgL)=1.5

C4H10N2O HL CAS 27620-10-6 (4273)
alpha-Hydroxyisobutyramidine;

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

Ag+ gl KNO3 25°C 0.10M U 1970GSb (34515)1475
K(Ag+HL)=4.05
K(Ag+2HL)=8.61
K(Ag(HL)2+OH)=3.45

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

Ag+ gl NaNO3 25°C 1.0M C I K1=3.43 1979SRa (34676)1476
In 1.0 M NaClO4, K1=3.8

Ag+ EMF NaClO4 25°C 0.50M C H K1=3.53 B2= 5.81 1976MHc (34677)1477
B3=6.68

Method: Ag electrode. By calorimetry: DH(K1)=-31.6 kJ mol⁻¹; DH(B2)=-66.5,
DS(B2)=-111 J K⁻¹ mol⁻¹; DH(B3)=-75, DS(B3)=-124

Ag+ ISE KNO3 20°C 1.00M U H K1=3.7 B2=6.10 1970WSa (34678)1478
DH(K1)=-33.5 kJ mol⁻¹, DS(K1)=-42.3 J K⁻¹ mol⁻¹, DH(K2)=-28.5, DS(K2)=-52.7
at pH 3

C4H10S L CAS 352-93-2 (4259)
Diethyl sulfide; C2H5.S.C2H5

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

Ag+ ISE alc/w 25°C 100% C I K1=3.95 B2=6.60 1990TIa (34718)1479
B3=7.63

Medium: MeOH, 0.1 M Et4NClO4. Data also in acetone (K1=3.87, B2=6.91,
B3=8.05) and DMSO (K1=1.96, B2=2.84) and DMF (K1=3.02, B2=4.77, B3=5.12)

C4H11N L iso-Butylamine CAS 78-81-9 (2355)
1-Amino-2-methylpropane; H2N.CH2.CH(CH3).CH3

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

Ag+ oth mixed ? 0.10M U B2=9.68 1965MMa (34726)1480
Method: coulometric titration. Medium: acetone, 0.1 M NaClO4

Ag+ gl KNO3 25°C 0.50M U T K1=3.38 B2=7.24 1948BVa (34727)1481

dlogB2/dt=-0.032

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

Ag+ EMF non-aq 25°C 100% C I K1=3.60 B2= 6.95 1999THa (34748)1482
Medium: acetonitrile. Method: Ag/Ag+ electrode.
Also data for medium: DMSO

Ag+ gl KNO3 25°C 1.00M U K1=3.453 B2=7.571 1993GYa (34749)1483
B(AgH-1L2)=-3.66

Ag+ ISE non-aq 25°C 100% C H K1=3.58 B2=7.34 1987CBa (34750)1484
DH1= -31.40 kJ mol⁻¹, DH(K2)=-40.10, DS1= -37.2, DS(K2)= -62.4.
Ag/AgCl electrode in DMSO

Ag+ gl KCl 25°C 0.10M U K1=3.65 B2=7.77 1980HAa (34751)1485

Ag+ gl none 25°C 0.00 U K1=3.55 B2=7.77 1971HTa (34752)1486

Ag+ gl KNO3 20°C 0.50M U K1=3.50 B2=7.60 1968ALc (34753)1487
By Ag/AgCl ISE: B2=7.59

Ag+ oth non-aq ? 100% U B2=10.3 1965MMa (34754)1488
Method: coulometric titration. Medium: acetone, 0.1 M NaClO4

Ag+ gl oth/un 25°C 0.50M U K1=3.43 B2=7.48 1950BJa (34755)1489
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

Ag+ gl KCl 25°C 0.10M U K1=3.69 B2=7.87 1980HAa (34782)1490

Ag+ gl alc/w 25°C 50% U K1=4.01 B2=8.26 1955ANc (34783)1491
Medium: 50 mol % EtOH

C4H11N L sec-Butylamine CAS 33966-50-6 (3578)
2-Aminobutane; C2H5.CH(NH2).CH3

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

Ag+ oth mixed ? 0.10M U B2=10.76 1965MMa (34792)1492
Method: coulometric titration. Medium: acetone, 0.1 M NaClO4

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
Ag+	gl	KNO3	25°C	1.00M	U			K1=3.11 B2=6.43	1993GYa (34803)	1493
Ag+	ISE	R4N.X	25°C	2.00M	U			K1=3.00 B2=6.96	1968PMa (34804)	1494
Medium: NH4NO3										
Ag+	ISE	R4N.X	25°C	2.00M	U			K1=4.93 B2=7.08	1968PMc (34805)	1495
Medium: NH4NO3										
Ag+	ISE	alc/w	25°C	80%	U	I		B2=7.81	1963PLa (34806)	1496
Medium: 80% MeOH, 0.02. B2=6.27(0%), 6.38(20%), 6.51(30%), 6.59(40%), 6.63(50%), 6.64(60%), 6.72(70%)										
Ag+	gl	alc/w	25°C	50%	U			K1=3.26 B2=6.43	1955ANc (34807)	1497
Medium: 50 mol % EtOH										
Ag+	ISE	oth/un	25°C	->0	U			B2=6.38	1955FYb (34808)	1498
Ag+	gl	KNO3	30°C	0.50M	U			K1=2.98 B2=6.20	1945CMa (34809)	1499
Ag+	ISE	oth/un	15°C	0.10M	U			B2=6.40	1936BWa (34810)	1500
Ag+	ISE	alc/w	25°C	50%	U			B2=6.37	1934LAb (34811)	1501
Medium: 50 mol % EtOH										
Ag+	ISE	oth/un	15°C	0.01M	U			B2=6.98	1928JOa (34812)	1502
Ag+	ISE	oth/un	16°C	0.01M	U			B2=5.77	1924PAa (34813)	1503

C4H11N L (6678)										
Dimethylethylamine; (CH3)2NCH2CH3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	1.00M	U			K1=1.979 B2=3.49	1993GYa (34822)	1504

C4H11NO L CAS 110-73-6 (900)										
2-(Ethylamino)ethanol; CH3.CH2.NH.CH2.CH2.OH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	2.00M	U			B2=5.77	1970UPa (34835)	1505

C4H11NO L CAS 13054-87-0 (2665)										
2-Amino-1-butanol; CH3.CH2.CH(NH2).CH2.OH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	2.00M	U			B2=5.77	1970UPa (34835)	1505

 Ag+ ISE KNO3 25°C 0.50M U K1=3.35 B2=7.14 1972PEa (34840)1506

 C4H11NO L CAS 13325-10-5 (3589)
 4-Amino-1-butanol; H2N(CH2)4.OH

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

 Ag+ ISE KNO3 25°C 0.50M U K1=3.32 B2=7.20 1972PEa (34858)1507

Ag+ gl KNO3 20°C 0.50M U K1=3.39 B2=7.27 1968ALc (34859)1508
 By Ag/AgCl ISE: B2=7.32

 C4H11NO L CAS 108-01-0 (3590)
 N,N-Dimethyl-2-aminoethanol; HO.CH2.CH2.N(CH3)2

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

 Ag+ sol oth/un 20°C 0.0 U B2=3.83 1961ALa (34873)1509
 Medium: 0 corr. By glass electrode: B2=3.80

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

 Ag+ gl KNO3 25°C 0.50M U K1=4.81 B2=9.21 1977TGa (34885)1510
 B(2Ag+L)=7.05
 B(2Ag+2L)=12.82
 B(Ag+HL)=2.55
 B(Ag+HL+L)=7.54

B(Ag+2HL)=4.11

Ag+ cal KNO3 25°C 0.50M C H 1977TGc (34886)1511
 DH(Ag+HL)=-28.1 kJ mol⁻¹, DH(Ag+2HL)=-46.44, DH(Ag+HL+L)=-70.3,
 DH(B2)=-80.0, DH(2Ag+2L)=-118.0, DH(2Ag+L)=-66.9.

Ag+ gl oth/un 20°C 0.0 U T H K1=4.97 B2=9.08 1959LBb (34887)1512
 DH(K1)=-37 kJ mol⁻¹, DS=-29; DH(K2)=-25, DS=-4. 10 C: K1=5.18, K2=4.34;
 30 C: K1=4.78, K2=3.95; 40 C: K1=4.52, K2=3.80

Ag+ gl NaClO4 30°C 1.0M U T K1=4.53 B2=7.46 1953Mca (34888)1513
 50 C: K1=4.18, K2=2.65. At I=0 K1=4.69, K2=4.04

 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

 Ag+ gl NaClO4 25°C 0.50M U H K1=2.69 B2=5.48 1978MHa (34935)1514

By calorimetry, DH1=-21.5 kJ mol⁻¹, DS1=20.8 J K⁻¹ mol⁻¹, DH(B2)=-49,
 DS(B2)=60

 Ag+ gl NaNO3 25°C 0.20M U K1=3.3 B2=5.7 1974UPa (34936)1515
 Medium: LiNO3

Ag+ gl alc/w 25°C 100% U K1=5.0 B2=7.2 1974UPa (34937)1516
 B3 7.04
 Medium: MeOH, 0.2 M LiNO3

Ag+ gl alc/w 25°C 100% U K1=5.0 B2=7.4 1974UPa (34938)1517
 B3 7.3
 Medium: MeOH, 0.2 M LiNO3

Ag+ gl oth/un ? 0.20M U K1=4.6 B2=6.7 1974UPb (34939)1518
 Medium: DMF, 0.2 M LiNO3. In DMSO: K1=3.3, B2=5.3

Ag+ ISE mixed 25°C 60% U I K1=4.74 B2=6.18 1973MPf (34940)1519
 B3=6.78
 Medium: 20-95% acetone, 0.4 M LiNO3
 K1(20%)=4.17, B2(20%)=5.53, B2(95%)=6.85, B3(20%)=6.20, B3(95%)=7.61

Ag+ ISE diox/w 25°C 40% U I K1=4.78 B2=5.95 1972MPc (34941)1520
 B3=7.08
 Medium: 20-70% dioxan, 0.4 M LiNO3
 K1(20%)=3.87, B2(20%)=5.57, B2(70%)=6.23, B3(20%)=6.62, B3(70%)=7.20

Ag+ ISE KNO3 25°C 0.50M U K1=2.70 B2=5.64 1972PEa (34942)1521

Ag+ ISE alc/w 25°C 100% U I K1=5.40 B2=6.98 1965MPb (34943)1522
 B3=7.68
 Medium: EtOH, 0.4 LiNO3. K1=3.48(0%), 4.30(40%), 4.90(80%), 5.04(90%); B2=5.60(0%)
 6.20(40%), 6.68(80%), 6.74(90%); B3=6.2(0%), 6.53(40%), 7.08(80%), 7.28(90%)

Ag+ ISE oth/un 25°C 0.01M U B2=5.44 1961ALb (34944)1523

Ag+ gl KNO3 25°C 0.50M U K1=2.69 B2=5.48 1956BJb (34945)1524

Ag+ gl alc/w 25°C 50% U K1=2.69 B2=5.48 1955ANc (34946)1525
 Medium: 50 mol % EtOH

 C4H11NO2 L CAS 115-69-5 (949)
 2-Amino-2-methyl-1,3-propanediol; HO.CH2.C(NH2)(CH3).CH2.OH

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

Ag+ gl oth/un 25°C .027M U K1=3.20 B2=6.86 1959DGa (34981)1526

C4H11NO3 L Tris buffer CAS 77-86-1 (550)
 2-Amino-2-(hydroxymethyl)-propan-1,3-diol; (HO.CH2)3C.NH2

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+        ISE NaClO4 25°C 3.00M C          K1=3.406 B2=7.198 1982GFb (35039)1527
          B(AgH-1L)=-6.40
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Ag+        vlt NaClO4 25°C 2.00M U          B2=6.45      1975BMb (35040)1528
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Ag+        gl  KNO3   60°C 0.05M U T      K1=2.79  B2=5.69 1966DGa (35041)1529
K1=3.50(0 C),3.39(10 C),3.22(20 C),3.05(30 C),2.90(40 C),2.90(50 C);
K2=4.04(0 C),3.77(10 C),3.53(20 C),3.33(30 C),3.16(40 C),3.02(50 C)
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Ag+        gl  KNO3   0°C 0.05M U T H      1966DGa (35042)1530
DH(K1)=-10(0C),-29(20),-24(40),7(60) kJ mol-1; DS=32,-36,-21,75 J K-1 mol-1
DH(K2)=-42(0C),-36(20),-33(40),-22(60); DS=-78(0), -55(20), -32(40), -10(60)
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Ag+        oth KNO3   ? 0.50M U          K1=3.05  B2=6.53 1959SWb (35043)1531
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Ag+        gl  oth/un 23°C ? U          K1=3.09  B2=6.56 1955BBa (35044)1532
*****
C4H11NO3S          HL          CAS 14064-34-7 (4286)
4-Aminobutanesulfonic acid; H2N.CH2CH2CH2CH2.SO3H
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KNO3   25°C 0.50M U          K1=3.38  B2=7.08 1972PTa (35068)1533
*****
C4H11NS          L          CAS 36489-03-9 (1216)
1-Amino-3-thiapentane; H2N.CH2.CH2.S.CH2.CH3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KNO3   25°C 0.50M U          K1=5.07  B2=9.66 1977TGa (35122)1534
          B(2Ag+L)=7.42
          B(2Ag+2L)=13.66
          B(Ag+HL)=2.99
          B(Ag+L+HL)=8.09
B(Ag+2HL)=4.66
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Ag+        cal KNO3   25°C 0.50M C H      1977TGc (35123)1535
DH(Ag+HL)=-31.0 kJ mol-1, DH(Ag+2HL)=-58.2, DH(Ag+HL+L)=-77.0,
DH(B2)=-84.9, DH(2Ag+2L)=-127, DH(2Ag+L)=-72.0.
*****
C4H11NS          L          CAS 4104-45-4 (1219)
1-Amino-4-thiapentane; H2N.CH2.CH2.CH2.S.CH3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KNO3   25°C 0.50M U          K1=4.79  B2=7.82 1977TGa (35126)1536
          B(2Ag+L)=7.20
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B(2Ag+2L)=13.69
B(Ag+HL)=3.33
B(Ag+HL+L)=7.13

B(Ag+2HL)=5.60

Ag+ cal KNO3 25°C 0.50M C H 1977TGc (35127)1537
DH(Ag+HL)=-31.6 kJ mol⁻¹, DH(Ag+2HL)=-59.0, DH(Ag+HL+L)=-69.5,
DH(B2)=-72.8, DH(2Ag+2L)=-124, DH(2Ag+L)=-60.7.

C4H110PS2 HL CAS 995-79-9 (4283)
O-Ethyl hydrogen P-ethylphosphonodithioate;

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

Ag+ ISE alc/w 25°C 90% U B2=16.39 1971TCa (35204)1538
Medium: 90% EtOH, 0.3 M NaClO4

C4H1102PS2 H3L CAS 298-06-6 (210)
O,O'-Diethyldithiophosphoric acid; (C2H5O)2P(S)SH

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

Ag+ ISE alc/w 25°C 90% U K2=15.24 1971TCa (35223)1539
Medium: 90% EtOH, 0.3 M NaClO4

C4H1103PS 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

Ag+ ISE oth/un 25°C 1.0M U B3=10.81 1961TSa (35249)1540

C4H12N2 L CAS 881-93-8 (3581)
1,2-Diamino-2-methylpropane; H2N.CH2.C(NH2)(CH3)2

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

Ag+ gl KNO3 25°C 1.0M C B2=8.04 1994GYb (35322)1541
B(AgHL)=12.30
B(AgH2L2)=24.58
B(AgHL2)=16.96
B(Ag2L2)=12.70

B(Ag2HL2)=19.67, B(Ag2L3)=15.20

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

Ag+ gl KNO3 25°C 1.0M C K1=5.45 1999GYa (35355)1542
 K(Ag+HL)=3.28
 K(Ag+2HL)=6.50
 B(Ag2L)=7.24
 B(Ag2L2)=14.45

Additional method: Ag/Ag2S electrode. B(AgHL)=14.20, B(AgH2L2)=28.36

 Ag+ gl oth/un 25°C 3.00M C K1=6.4 B2=8.6 19770Ca (35356)1543
 B(AgHL)=14.68
 B(AgH2L2)=29.83
 B(AgH-1L)=-4.4, B(Ag2L)=7.2
 B(Ag2L2)=15.27

Medium: LiClO4

 Ag+ gl oth/un 20°C ->0 U T H K1=5.67 1958BFa (35357)1544
 DH(K1)=-44.8 kJ mol⁻¹, DS1=-46. K1=6.00(10 C), 5.30(30 C), 5.19(40 C)

 Ag+ gl NaNO3 20°C 0.10M U K1=5.9 1952SMa (35358)1545
 K(Ag+HL)=3.1

 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
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Ag+	gl	KNO3	25°C	1.0M	C			K1=3.49 B2=6.53	1994GYb (35415)	1546
								B(AgHL)=12.09		
								B(AgHL2)=15.69		
								B(Ag2L2)=10.52		

 Ag+ vlt non-aq 25°C 100% U K1=2.00 1979SZa (35416)1547
 Medium: DMSO. 0.1 M NaClO4

 C4H12N2 L CAS 108-00-9 (2661)
 N,N-Dimethyl-1,2-diaminoethane; (CH3)2N.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ag+	EMF	non-aq	25°C	100%	C	H		K1=4.75 B2= 8.86	2002CNa (35452)	1548
	Method: Ag electrode. Medium: DMSO, 0.10 M Et4NClO4. By calorimetry,									
	DH(K1)=-42.1 kJ mol ⁻¹ , DS(K1)=-50 J K ⁻¹ mol ⁻¹ ; DH(B2)=-86.5, DS(B2)=-120.									

 Ag+ gl KNO3 25°C 1.0M C K1=3.74 B2=7.15 1994GYb (35453)1549
 B(AgHL)=11.78
 B(AgH2L2)=23.57
 B(AgHL2)=15.92
 B(Ag2L2)=9.74

B(Ag2L3)=13.09

 C4H12N2 L CAS 6291-84-5 (2679)

N-Methyl-1,3-diaminopropane; CH3.NH.CH2.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	1.00M	C			B2=7.37 B(AgHL)=13.62 B(AgH2L2)=27.69 B(AgHL2)=17.68 B(Ag2L2)=13.50	1994GYa (35475)	1550

B(Ag2HL2)=21.19

C4H12N2O L CAS 2752-17-2 (312)

Bis-(2-aminoethyl)ether; H2N.CH2.CH2.O.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	alc/w	25°C	100%	U	H		K1=7.14	1985BUb (35500)	1551
Medium: MeOH, 0.05M Et4NClO4. DH=-61.5 kJ mol-1										

Ag+ gl oth/un 20°C 0.0 U T H K1=5.59 1959LBb (35501)1552
DH(K1)=-60.7 kJ mol-1, DS=-100. K1=6.01(10 C), 5.31(30 C), 5.91(40 C)

C4H12N2S L CAS 871-76-1 (1854)

1,5-Diamino-3-thiapentane; H2N.CH2.CH2.S.CH2.CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	alc/w	25°C	100%	U	H		K1=8.51	1985BUb (35561)	1553
Medium: MeOH, 0.05M Et4NClO4. DH=-66.4 kJ mol-1										

Ag+ gl KNO3 25°C 0.50M C B2=9.80 1984SGe (35562)1554
K(Ag+H2L)=1.52
K(Ag+2H2L)=2.3
K(Ag+HL)=3.9
K(2Ag+2HL)=10.7

Additional method: Ag electrode. K(2Ag+HL+L)=14.64, B(Ag2L2)=17.21,
K(Ag+H2L+HL)=5.7, K(Ag+2HL)=8.18, K(Ag+HL+L)=9.25, B(Ag2L)=9.60.

Ag+ cal KNO3 25°C 0.50M C H 1984STc (35563)1555
DH(Ag+H2L)=-22 kJ mol-1, DS(Ag+H2L)=-45 J K-1 mol-1; DH(Ag+2H2L)=-39,
DS(Ag+2H2L)=-87; DH(2Ag+2L)=-143.9, DS=-153; DH(B2)=-78.3, DS(B2)=-75.

Ag+ gl KNO3 0°C 1.0M U T K1=8.18 1951G0a (35564)1556
30 C: K1=7.00; 50 C: K1=6.30

C4H13N3 L CAS 14478-63-8 (3000)

1,3-Diamino-2-aminomethylpropane; H2N.CH2.CH(CH2.NH2).CH2.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ag+ gl KNO3 20°C 0.10M U K1=8.70 1962ANb (35630)1557

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

Ag+ EMF NaClO4 25°C 100% C H K1=10.21 B2=13.18 2000CDa (35731)1558
Medium: DMF, 0.10 M Et4N[CF3SO3]. Method: Ag/Ag+ electrode.
By calorimetry: DH(K1)=-90.4, DH(B2)=-108.8 kJ mol-1.

Ag+ cal non-aq 25°C 100% U H 1989CDa (35732)1559
Medium: DMSO. DH(K1)=-78.2 kJ mol-1; DS=-119. DH(B2)=-94; DS=-120.

Ag+ ISE non-aq 25°C 100% C K1=7.46 B2=10.20 1988CBa (35733)1560
Medium: DMSO

Ag+ ISE alc/w 25°C 100% U H K1=8.07 1985BUB (35734)1561
Medium: MeOH, 0.05M Et4NClO4. DH=-55.2 kJ mol-1

Ag+ ISE NaNO3 25°C 1.30M C B2=7.90 1984YMa (35735)1562
B(AgH2L)=20.30, B(AgHL)=13.73
B(AgH2L2)=27.29, B(AgHL2)=17.78
B(Ag2H2L2)=30.03, B(Ag2L2)=15.1
B(Ag2HL2)=22.72, B(Ag3L2)=17.94
B(AgH-1L)=-5.54, B(Ag2L3)=16.39. Measured using glass and Ag electrodes

Ag+ gl NaNO3 20°C 0.10M U K1=6.1 1950PSa (35736)1563
K(Ag+HL)=3.2
K(Ag+AgL)=1.4

C5H4NBr L CAS 626-55-1 (3617)
3-Bromopyridine; C5H4N.Br

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

Ag+ EMF KNO3 25°C 0.50M U H K1=1.66 B2= 3.31 1976BEb (35992)1564
Method: Ag electrode. By calorimetry, DH(K1)=-17.2 kJ mol-1,
DS(K1)=-25.8 J K-1 mol-1, DH(B2)=-39.3, DS(B2)=-68.49.

C5H4NCl L CAS 626-60-8 (322)
3-Chloropyridine; C5H4N.Cl

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

Ag+ gl NaNO3 25°C 0.50M C K1=1.37 1984ERa (36015)1565

Ag+ EMF KNO3 25°C 0.50M U H K1=1.59 B2= 3.02 1976BEb (36016)1566
Method: Ag electrode. By calorimetry, DH(K1)=-16.3 kJ mol-1,

DS(K1)=-24.3 J K⁻¹ mol⁻¹, DH(B2)=-37.6, DS(B2)=-68.33.

C5H4NI L CAS 1120-90-7 (8297)
3-Iodoopyridine;

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

Ag+ EMF KNO3 25°C 0.50M U K1=1.80 B2= 4.12 1976BEb (36027)1567
Method: Ag electrode.

C5H4O3 HL 2-Furoic acid CAS 88-14-2 (2492)
Furan-2-carboxylic acid; C4H3O.COOH

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

Ag+ gl NaNO3 25°C 0.10M U K1=1.76 1982MPc (36289)1568

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

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

Ag+ ISE mixed 25°C 0.10M C I K1=2.54 B2= 4.81 2002PRa (36489)1569
Ag-electrode; Medium:0.1 M NaClO4 in 0.4 mol parts DMFA in H2O
for 100% H2O K1=2.81; K2=2.26; for 100% DMFA K1=2.27; K2=2.56;

Ag+ gl alc/w 25°C 0.04M U I K1=2.40 B2= 4.40 1998SGb (36490)1570
In 100% H2O K1=1.96
Medium: 0.04 M Et4NClO4 in 0.7 mol parts EtOH in H2O;

Ag+ ISE non-aq 25°C 100% U K1=2.09 B2=5.0 1991IGc (36491)1571
Medium: propylenecarbonate

Ag+ ISE KNO3 25°C 0.10M U K1=2.20 B2=4.26 1989IGa (36492)1572

Ag+ cal oth/un 25°C dil C H K1=2.07 B2= 4.17 1989OFa (36493)1573
DH(K1)=-20.38 kJ mol⁻¹, DH(B2)=-51.71.

Ag+ ISE non-aq 25°C 100% C H K1=1.41 B2=2.11 1987CBa (36494)1574
DH1=-13.93, DH(K2)=-27.00, DS1= -19.7, DS(K2)= -77.0.
Ag/AgCl Ion Selective Electrode used in DMSO

Ag+ ISE KNO3 25°C 0.10M C K1=2.33 B2=4.13 1985YWa (36495)1575

Ag+ ISE non-aq ? 100% U B2=3.42 1984IGa (36496)1576
Medium: CH3CN

Ag+ ISE non-aq 25°C 100% U K1=4.40 B2=9.3 1981TLa (36497)1577
B3=10.3
B4=10.7

Medium: Propylene carbonate

Ag+ EMF NaClO4 25°C 0.10M C K1=1.91 B2= 4.22 1977PMa (36498)1578
Method: Ag electrode.

Ag+ cal KNO3 25°C 0.50M U H 1974BEa (36499)1579
DH(K1)=-19.8, DH(B2)=-46.8 kJ mol⁻¹. B values from: E M Foundou,
K Hougbossa, G Berthon et al, Acad. Sci.,274,832 (1972)

Ag+ gl KNO3 25°C 0.10M U K1=1.95 B2=3.97 1974ILa (36500)1580

Ag+ gl KNO3 25°C 0.50M U K1=2.01 B2=4.16 1972BJa (36501)1581

Ag+ ISE KNO3 25°C 0.50M U K1=2.06 B2=4.18 1972FHb (36502)1582

Ag+ ISE alc/w 25°C 42% U I K1=2.01 B2=4.08 1972MAB (36503)1583
Medium: 9-93.8% EtOH, 0.1 M
K1(9.9%)=1.87, K1(93.8%)=2.20, B2(9.9%)=4.01, B2(93.8%)=4.50

Ag+ ISE alc/w 25°C 96% U K1=2.20 B2=4.50 1972MTb (36504)1584
Medium: 96% EtOH, 0.1 M NaClO4

Ag+ cal oth/un 25°C 0.0 U H K1=2.05 B2=4.10 1968IEa (36505)1585
DH(K1)=-19.2 kJ mol⁻¹,DS=-25.1 J K⁻¹ mol⁻¹; DH(B2)=-46.8,DS=-79.0

Ag+ gl KNO3 25°C 0.61M U K1=2.12 B2=4.25 1967SBd (36506)1586

Ag+ cal KNO3 25°C 0.50M U H K1=2.00 B2=4.11 1966PVa (36507)1587
DH(K1)=-20.2 kJ mol⁻¹,DS=-29.3 J K⁻¹ mol⁻¹; DH(K2)=-27.2,DS=51

Ag+ EMF alc/w 25°C 75% U I B2=3.88 1965NAb (36508)1588
Medium: 75% EtOH, 0.2 M LiNO3. K1=1.96(0%),B2=4.19(0);B2=4.19(25%),3.86(50%)

Ag+ ISE mixed 25°C 90% U I B2=5.12 1965PLa (36509)1589
Medium: 90% acetone. B2=4.21(0%),4.20(10%),4.18(20%),4.16(30%),4.18(40%),
4.23(50%),4.35(60%),4.47(70%),4.72(80%)

Ag+ ISE diox/w 25°C 90% U I B2=4.80 1965PLa (36510)1590
Medium: 90% dioxan. B2=4.14(10%),4.05(30%),4.06(50%),4.30(70%). In EtOH:
B2=4.26(10%),4.25(30%),4.12(50%),3.97(70%),4.16(90%)

Ag+ cal oth/un 25°C ? U H K1=2.25 B2=4.19 1963BBc (36511)1591
DH(K1)=-19.9 kJ mol⁻¹,DS=-23.8 J K⁻¹ mol⁻¹; DH(K2)=-28.3,DS=-57.7

Ag+ ISE NaClO4 ? 0.10M U K1=1.87 B2=4.09 1962NAb (36512)1592

Ag+ ISE KNO3 25°C 0.10M U K1=1.90 B2=4.25 1961CSa (36513)1593

Ag+ ISE alc/w 20°C 100% U I K1=4.68 1958PPa (36514)1594
Medium: EtOH. In MeCN K1=4.45

Ag+ gl alc/w 25°C 50% U K1=1.87 B2=3.92 1955ANc (36515)1595
Medium: 50 mol % EtOH

Ag+ gl oth/un 25°C ->0 U K1=1.97 B2=4.35 1955MBc (36516)1596

Ag+ ISE oth/un 25°C ->0 U B2=3.82 1952FYb (36517)1597

Ag+ gl oth/un 25°C 0.50M U K1=2.01 B2=4.16 1950BJa (36518)1598
Medium: 0.5 M C5H5N.HNO3

Ag+ gl KNO3 25°C 0.50M U T K1=2.04 B2=4.22 1948BVa (36519)1599
35 C: K1=1.93, K2=2.07

Ag+ sol oth/un 25°C ->0 U K1=2.00 B2=4.11 1943VCa (36520)1600

Ag+ ISE oth/un 18°C 0.02M U B2=4.44 1936BWa (36521)1601

Ag+ ISE alc/w 25°C 50% U B2=3.88 1934LAb (36522)1602
Medium: 50 mol % EtOH

Ag+ sol oth/un 16°C 0.01M U B2=4.42 1933TAa (36523)1603

Ag+ ISE oth/un 18°C 0.10M U B2=4.14 1930K0a (36524)1604

Ag+ ISE oth/un 18°C 0.25M U B2=4.40 1904EUb (36525)1605

C5H5NO L 3-Pyridinol CAS 109-00-2 (1475)
3-Hydroxypyridine; C5H4N.OH

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

Ag+ ISE KNO3 25°C 0.50M U K1=1.35 B2=3.49 1985KLa (36704)1606
Simultaneous measurement of Ag+ and H+

C5H5N2Br L CAS 1072-97-5 (2630)
5-Bromo-2-aminopyridine; C5H3N(Br)(NH2)

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

Ag+ ISE alc/w 25°C 50% U B2=3.78 1980BTb (36854)1607

C5H6N2 L 2-Aminopyridine CAS 504-29-0 (1478)
2-Aminoazine, 2-Pyridylamine; C5H4N.NH2

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

Ag+ ISE KNO3 25°C 0.50M U K1=2.32 B2=4.80 1985KLa (37112)1608

Ag+ ISE alc/w 25°C 50% U I B2=5.03 1973BNd (37113)1609

Medium: 0-96% EtOH, 0.2 M LiNO₃. B₂(0%)=4.85, B₂(50%)=5.03, B₂(60%)=5.85
0-90% propanol, B₂(50%)=4.96, B₂(90%)=5.70. 0-90% acetone, B₂(90%)=6.19

Ag+ gl KNO₃ 25°C 0.61M U K₁=2.38 B₂=4.79 1967SBd (37114)1610

Ag+ gl oth/un 25°C ? U T K₁=2.17 B₂=5.21 1964PCa (37115)1611
35 C: K₁=2.60, K₂=2.49; 45 C: K₁=2.78, K₂=2.73

C₅H₆N₂ L 2-Methylpyrazin CAS 109-08-0 (1785)
2-Methylpyrazine, 2-Methyl-1,4-diazine; C₄H₃N₂.CH₃

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

Ag+ gl KNO₃ 25°C 0.10M U H K₁=1.65 B₂=2.76 1974HEa (37133)1612
DH(K₁)=-20.04 and DH(B₂)=-70.71 kJ mol⁻¹.

C₅H₆N₂ L 3-Aminopyridine CAS 462-08-8 (1477)
3-Aminoazine, 3-Pyridylamine; C₅H₄N.NH₂

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

Ag+ ISE KNO₃ 25°C 0.50M U K₁=2.19 B₂=4.48 1985KLa (37153)1613

Ag+ ISE alc/w 25°C 50% U B₂=4.62 1980BTb (37154)1614

Ag+ EMF KNO₃ 25°C 0.50M U H K₁=2.24 B₂= 4.41 1976BEb (37155)1615
Method: Ag electrode. By calorimetry, DH(K₁)=-23.0 kJ mol⁻¹,
DS(K₁)=-34.1 J K⁻¹ mol⁻¹, DH(B₂)=-51.88, DS(B₂)=-89.66.

Ag+ gl KNO₃ 25°C 0.61M U K₁=2.21 B₂=4.41 1967SBd (37156)1616

Ag+ gl oth/un 25°C ? U T K₁=2.17 B₂=5.21 1964PCa (37157)1617
35 C: K₁=2.15, K₂=3.00; 45 C: K₁=2.12, k₂=2.95

C₅H₆N₂ L CAS 5053-43-0 (1485)
3-Methyl-1,2-diazine, 3-Methylpyridazine; C₄H₃N₂.CH₃

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

Ag+ ISE KNO₃ 25°C 0.50M U K₁=1.78 B₂=3.26 1986KLa (37164)1618

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

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

Ag+ ISE alc/w 25°C 50% U I B₂=6.21 1973BNd (37172)1619
Medium: 0-96% EtOH, 0.2 M LiNO₃: B₂(0%)=6.04, B₂(96%)=6.90
In 0-90%(v/v) propanol: B₂(50%)=6.21; In 0-90%acetone: B₂(50%)=7.64

Ag+ gl oth/un 25°C ? U T K1=2.80 B2=6.20 1964PCa (37173)1620
35 C: K1=2.76, K2=3.27; 45 C: K1=2.71, K2=3.14

C5H6N2 L CAS 3438-46-8 (1481)

4-Methyl-1,3-diazine; 4-Methylpyrimidine; C4H3N2.CH3

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

Ag+ ISE KNO3 25°C 0.50M U K1=1.91 B2=3.24 1986KLa (37179)1621

C5H7NO L CAS 617-89-0 (3036)

Furfurylamine; C4H3O.CH2.NH2

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

Ag+ gl KNO3 30°C 1.0M U K1=2.64 B2=5.98 1954GFb (37495)1622

C5H7NO2 HL Glutarimide CAS 1121-89-7 (4312)

Piperidine-2,6-dione;

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

Ag+ gl alc/w 45°C 50% C K1=5.37 B2= 9.73 1996MMc (37507)1623

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

Ag+ EMF KNO3 22°C 1.00M U K1=14.12 1970TPb (37553)1624

C5H7NS L CAS 27757-85-3 (3037)

2-Thienylmethylamine (2-Thiophenemethylamine)

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

Ag+ gl KNO3 30°C 1.0M U K1=2.87 B2=6.51 1954GFb (37572)1625

C5H7N3 L (1482)

2-Amino-4-methyl-1,3-diazine; C4H2N2(NH2)(CH3)

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

Ag+ ISE KNO3 25°C 0.50M U K1=2.03 B2=3.67 1986KLa (37576)1626

C5H8 L CAS 1489-60-7 (3598)

1-Methylcyclobutene; CH3.C4H5

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

 Ag+ dis non-aq 30°C 100% U K1=-0.27 1962GHa (37599)1627
 Medium: ethylene glycol, 1.77 M AgNO3. method: gas chromatography

 C5H8 L CAS 1120-56-5 (3599)
 Methylenecyclobutane; CH2:C4H6

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	dis	non-aq	30°C	100%	U			K1=0.91	1962GHa (37601)	1628
Medium: ethylene glycol, 1.77 M AgNO3. Method: gas chromatography										

C5H8N2			L					CAS 930-62-1	(3023)	
2,4-Dimethylimidazole; C3H2N2(CH3)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	1.00M	U			K1=3.44 B2=7.50	1969NNa (37642)	1629

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	1.00M	U			K1=3.06 B2=6.89	1969NNa (37659)	1630

C5H8N2			L			Di-Me-Pyrazole		CAS 67-51-6	(369)	
3,5-Dimethyl-1,2-diazole; C3H2N2(CH3)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.50M	M			K1=2.38 B2=4.83	1986BGa (37673)	1631

Ag+	ISE	alc/w	25°C	20%	C T H			K1=3.15 B2=5.53	1977PGb (37674)	1632

C5H8N2O			L					(1429)		
5-Amino-3,4-dimethylisoxazole; C3NO(CH3)2(NH2)										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.50M	U			K1=1.63 B2=3.58	1983Gwa (37684)	1633

C5H8N4			L					(4293)		
1,5-Tetramethylenetetrazole;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.10M	U	I		B2=3.07	1969DPc (37726)	1634
I=0.4 M, B2=3.03										

C5H8O2 HL CAS 591-80-0 (961)
4-Pentenoic acid; CH2:CH.CH2.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M M T H K1=2.009 1975IPa (37738)1635
Medium: K-acetate. DH = -17.5 kJ mol⁻¹; DS = -20.1 J K⁻¹ mol⁻¹.

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

Ag+ gl diox/w 30°C 75% U K1=9.72 1967SUa (37873)1636

C5H8O2S HL CAS 102970-70-7 (4316)
(Prop-1-enylthio)ethanoic acid; CH2:CH.CH2.S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.20M U T H K1=3.74 B2=6.71 1971BFb (38151)1637
K(Ag+HL)=3.04
K(Ag+2HL)=4.98

DH(K1)=-28.9 kJ mol⁻¹, DH(K2)=-20

K1(0.6 C)=4.18, K1(39 C)=3.50, B2(0.6 C)=7.56, B2(39 C)=6.39

Ag+ ISE oth/un 25°C 0.10M U I K1=3.78 B2=6.76 1968PSb (38152)1638
Acetate buffer. I=0.2, K(Ag+HL)=3.04

C5H8O3 HL CAS 16874-33-2 (2493)
Tetrahydrofuran-2-carboxylic acid; C4H7O.COOH

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

Ag+ gl diox/w 25°C 50% U K1=1.86 1982MPc (38180)1639

C5H8O4S H2L CAS 36303-63-6 (988)
3-Thiahexane-1,6-dioic acid; HOOC.CH2.S.CH2.CH2.COOH

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

Ag+ gl KNO3 25°C 0.10M C K1=4.40 B2=7.46 1975LPa (38379)1640
K(Ag+HL)=3.63
K(Ag+H2L)=3.41

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

Ag+ gl NaClO4 25°C 0.50M U K1=4.60 1981NAa (38392)1641
K(Ag+H)=3.56

Ag+ ISE NaNO3 20°C 1.0M U K1=4.7 B2=6.5 1944LAa (38393)1642

C5H9NO2 H2L CAS 69651-97-4 (1164)
2-Amino-(2-allyl)ethanoic acid; H2N.CH(CH2.CH:CH2)COOH

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

Ag+ ISE KNO3 25°C 0.10M C K1=4.22 B2=7.382 1975IPb (38465)1643
K(Ag+HL)=1.20

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

Ag+ gl oth/un 30°C 0.10M U K1=3.84 B2=6.52 1981PUa (38586)1644

Ag+ gl KNO3 20°C 0.5M U K1=2.90 B2=6.58 1974KHb (38587)1645

C5H9NO3 HL Hydroxyproline CAS 51-35-4 (416)
4-Hydroxy-2-pyrrolidinedicarboxylic acid; C4H7N(OH)(COOH)

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

Ag+ gl KNO3 20°C 0.5M U K1=2.66 B2=6.43 1974KHb (38710)1646

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

Ag+ gl KNO3 25°C 0.10M U K1=4.10 B2=7.36 1976GPd (38999)1647

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

Ag+ gl KCl 25°C .058M U T K1=4.86 1961SMa (39505)1648
K1=5.24(0 C), 4.60(45 C)

C5H10 L Pent-2-ene CAS 109-68-2 (3020)
Pent-2-ene; CH3.CH2.CH:CH.CH3

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

Ag+ dis KNO3 25°C 1.0M U K1=1.80 1938WLa (39620)1649

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

Ag+ gl KCl 22°C 0.10M U K1=3.5 1960REb (39719)1650

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

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

Ag+ ISE mixed 25°C 82% U K1=7.51 B2=10.41 1980TBa (39726)1651
B3=11.92

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

C5H10N3S L (6654)
1,4,5-Trimethyl-1,2,4-triazolium-3-thiol;

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

Ag+ ISE KNO3 23°C 0.10M U K1= 7.31 B2=10.81 1991TEa (40124)1652
B3=12.84
B(Ag2L3)=22.26
B(Ag3L4)=31.94

Data also for Ag complexes with other subst. 1,2,4-triazolium-3-thiolates

C5H10O L Pent-1-en-3-ol CAS 616-25-1 (3024)
1-Penten-3-ol; CH3.CH2.CH(OH)CH:CH2

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

Ag+ sol KNO3 25°C 0.10M U K1=1.15 1949KAb (40141)1653

C5H10O L CAS 4675-87-0 (3025)
2-Methylbut-2-en-1-ol; CH3.CH:C(CH3)CH.OH

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

Ag+ sol KNO3 25°C 0.10M U K1=0.70 1949KAb (40143)1654

C5H10O HL CAS 821-09-0 (64)
Pent-4-en-1-ol; CH2:CH.CH2.CH2.CH2.OH

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

Ag+ ISE NaClO4 25°C 1.0M U TIH K1=1.962 B2=2.30 1977HSa (40145)1655
By temp coeff., DH1=-26.3 kJ mol⁻¹, DS1=-50 J K⁻¹ mol⁻¹, also in MeOH etc

C5H100 L (3603)
cis-1-Ethoxypropene; CH3.CH2O.CH:CH.CH3

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

Ag+ dis non-aq 30°C 100% U T H K1=0.41 1968FKb (40147)1656
Medium: ethylene glycol. K1=0.60(10 C),0.50(20 C). DH(K1)=-16.3 kJ mol-1,
DS=-45 J K-1 mol-1

C5H100 L CAS 928-55-2 (3604)
trans-1-Ethoxypropene; CH3.CH2O.CH:CH.CH3

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

Ag+ dis non-aq 30°C 100% U T H K1=-0.33 1968FKb (40148)1657
Medium: ethylene glycol. K1=-0.17(10 C),-0.27(20 C); DH(K1)=-13.4 kJ mol-1,
DS=-50.6 J K-1 mol-1

C5H1002S HL CAS 20600-60-6 (4322)
(Propylthio)ethanoic acid; CH3.CH2.CH2.S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U K1=3.94 B2=7.24 1968PSb (40235)1658
Medium: Acetate buffer, I=0.2 M, K(Ag+HL)=3.18

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

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

Ag+ gl KCl 25°C 0.10M U K1=3.61 B2=7.83 1980HAa (40391)1659

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

Ag+ ISE non-aq 25°C 100% C H K1=3.11 B2=6.05 1987CBa (40431)1660
DH1= -26.30 kJ mol-1, DH(K2)= -34.10 DS1= -28.0, DS(K2) = -58.6.
Ag/AgCl electrode in DMSO

Ag+ cal KNO3 25°C 0.50M C H 1975EBa (40432)1661
DH(K1)=-22.0 kJ mol-1, DS(K1)=-14 J K-1 mol-1.
DH(B2)=-50.21, DS(B2)=-45.2.

Ag+ EMF KNO3 25°C 0.50M U K1=3.20 B2=6.43 1973BBa (40433)1662

Ag+ ISE non-aq ? 100% U B2=10.97 1965MMa (40434)1663
Medium: acetone, 0.1 M NaCl04 .

Ag+ ISE alc/w 25°C 90% U I B2=7.10 1963PLa (40435)1664
Medium: 90% MeOH. B2=6.68(0%),6.70(20%),6.88(40%),6.92(50%,60%),7.04(80%)

Ag+ gl KNO3 25°C 0.50M U K1=3.16 B2=6.61 1950BJa (40436)1665

Ag+ gl KNO3 25°C 0.50M U K1=3.03 B2=6.48 1948BVa (40437)1666

Ag+ ISE alc/w 25°C 50% U B2=6.45 1934LAb (40438)1667
Medium: 50 mole % EtOH

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

Ag+ EMF KNO3 25°C 0.10M C K1=3.7 1979BCb (40653)1668
K(AgL+H)=7.6
K(AgHL+H)=3.3

Method: Ag electrode.

Ag+ gl KNO3 20°C 0.5M U K1=3.29 B2=7.31 1974KHb (40654)1669

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

Ag+ ISE KNO3 25°C 0.10M C T K1=3.08 B2=6.27 1975IPb (40820)1670
Glass electrode also used.

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

Ag+ gl KNO3 15°C 0.50M U T K1=3.66 B2=7.61 1970PTa (40856)1671
K1(0 C)=4.01, K1(40 C)=3.31, B2(0 C)=8.09, B2(40 C)=6.85

Ag+ gl KNO3 20°C 0.50M U K1=3.5 B2=7.41 1968ALc (40857)1672
By Ag/AgCl ISE: B2=7.51

Ag+ gl KNO3 25°C 0.50M U K1=3.56 B2=7.35 1968TPb (40858)1673

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

Ag+ EMF KNO3 25°C 0.50M C K1=4.8 B2= 7.88 1984TSb (41046)1674

K(Ag+H2L)=3.11
 K(Ag+HL)=3.37
 K(Ag+2H2L)=5.40
 K(Ag+H2L+HL)=5.88

Method: Ag electrode. K(Ag+2HL)=5.88, K(Ag+HL+L)=7.38, B(Ag2L2)=13.49,
 B(Ag2L)=7.46.

Ag+	ISE KNO3	25°C	0.10M	C				K1=5.22 B(AgHL)=12.28 B(AgH2L2)=24.2	1981PSb (41047)1675
Ag+	gl oth/un	30°C	0.10M	U				K1=3.29 B2=5.38	1981PUa (41048)1676
Ag+	ISE KNO3	30°C	0.10M	U				K1=4.9 B2=7.60	1977PUa (41049)1677
Ag+	ISE oth/un	25°C	0.60M	U				K1=6.45?	1967AMb (41050)1678
Ag+	gl KNO3	25°C	0.10M	U				K1=3.17	1964LMa (41051)1679

C5H11NO2S		HL						CAS 2442-39-9	(8307)
3-(2-Aminoethyl)thiopropanoic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	EMF	KNO3	25°C	0.50M	C			K1=5.1 B2= 9.61 K(Ag+H2L)=2.36 K(Ag+HL)=2.78 K(Ag+2H2L)=3.77 K(Ag+H2L+HL)=4.45	1984TSb (41140)1680	

Method: Ag electrode. K(Ag+2HL)=4.64, K(Ag+HL+L)=8.17, B(Ag2L2)=13.5,
 B(Ag2L)=7.61.

 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
Ag+	gl	KNO3	25°C	0.10M	U			K(Ag+HL)=12.42	1964LMa (41241)1681	

C5H11NO2S		HL						CAS 2629-59-6	(2461)	
S-Ethyl-L-cysteine; H2N.CH(CH2.S.C2H5).COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	EMF	KNO3	25°C	0.50M	C			K1=5.18 B2= 9.77 K(Ag+H2L)=1.57 K(Ag+HL)=2.88 K(Ag+2H2L)=3.4 K(Ag+H2L+HL)=4.49	1984TSb (41291)1682	

Method: Ag electrode. $K(\text{Ag}+2\text{HL})=4.53$, $K(\text{Ag}+\text{HL}+\text{L})=8.01$, $B(\text{Ag}2\text{L}2)=13.65$,
 $B(\text{Ag}2\text{L})=7.46$.

C5H11NS2 HL CAS 147-84-2 (2126)
 Diethyldithiocarbamic acid; $(\text{CH}_3.\text{CH}_2)_2\text{N}.\text{CSSH}$

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

Ag+ ISE mixed 25°C 64% U I B2=19.47 1982BGc (41334)1683
 Medium: 64% DMSO/H2O. Data for other ratios and solvents

 Ag+ EMF alc/w 25°C 75% U K1=9.00 1972BSe (41335)1684
 Medium: 75% MeOH, 0.01 M KNO3

 Ag+ EMF diox/w ? 75% U K1=9.75 1971BSg (41336)1685

 Ag+ ISE diox/w 25°C 75% U K1=8.3 1968BSc (41337)1686
 Medium: 75% dioxan, 0.01 M KNO3

 Ag+ sp non-aq ? 100% U M 1968SRg (41338)1687
 $K(\text{AgHA}+\text{HL}=\text{AgL}+\text{H}_2\text{A})=2.58$

Medium: CCl4. H2A=dithizone.

C5H12N2S L CAS 2782-91-4 (6088)
 N,N,N',N'-Tetramethylthiourea; $(\text{CH}_3)_2\text{N}.\text{CS}.\text{N}(\text{CH}_3)_2$

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

Ag+ EMF alc/w 25°C 100% M T H K1=4.49 B2=9.08 1994MGa (41625)1688
 B3=12.37

Medium: EtOH, 0-40 C. $\text{DH}(K1)=-30 \text{ kJ mol}^{-1}$, $\text{DS}=-17 \text{ J K}^{-1} \text{ mol}^{-1}$; $\text{DH}(B2)=-26$,
 $\text{DS}+85$; $\text{DH}(B3)=-39$, $\text{DS}+106$. Method: Ag elect. Other alkyl-thioureas also

 Ag+ ISE KNO3 23°C 0.10M U K1= 5.63 B2=10.16 1991TEa (41626)1689
 B3=12.93

 Ag+ EMF alc/w 25°C 100% M T H K1=6.39 B2=9.70 1990MMF (41627)1690
 B3=12.58

Medium: MeOH, 0-40 C. $\text{DH}(K1)=-33.8 \text{ kJ mol}^{-1}$, $\text{DS}+9 \text{ J K}^{-1} \text{ mol}^{-1}$; $\text{DH}(B2)=-32.4$
 $\text{DS}+77$; $\text{DH}(B3)=-32$, $\text{DS}+133$. Method: Ag electrode

C5H12O3S HL (4330)
 Monothiopentaerythritol; $(\text{HS}.\text{CH}_2)\text{C}(\text{CH}_2.\text{OH})_3$

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

Ag+ ISE KNO3 20°C 0.10M U K1=13 1971TSa (41649)1691
 $K(10\text{Ag}+9\text{L}=\text{Ag}10\text{L}9)=175.4$
 $K(2\text{Ag}+\text{L})=19.0$

C5H12O3S4 H3L CAS 19872-38-9 (4331)
2,3-Dimercaptopropylthioethanesulfonic acid;

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

Ag+ sp oth/un ? ? U 1971EPd (41651)1692

K(2Ag+L)=35.5

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

Ag+ sp oth/un ? ? U 1971EPd (41665)1693

B(Ag2L)=36.7

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

Ag+ sp oth/un ? ? U 1971EPd (41696)1694

B(Ag2L)=36.6

C5H13N L 1-Pentylamine CAS 110-58-7 (3613)
1-Pentylamine; CH3.CH2.CH2.CH2.CH2.NH2

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

Ag+ cal R4N.X 25°C 0.05M C H 2002BSd (41709)1695

Medium: propylene carbonate, 0.05 M Et4NC104. DH(K1)=-54.5.

Ag+ gl none 25°C 0.00 M K1=3.69 B2=7.76 1971HTa (41710)1696

Ag+ gl KNO3 20°C 0.50M U K1=3.55 B2=7.70 1968ALc (41711)1697

By Ag/AgCl ISE: B2=7.67

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

Ag+ gl oth/un 25°C 0.50M U K1=3.53 B2=7.73 1983HNa (41715)1698

Medium: 0.1 M LHNO3

C5H13N L CAS 616-39-7 (5641)
N,N-Diethylmethylamine; (C2H5)2N.CH3

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

Ag+ gl KNO3 25°C 1.00M U K1=2.175 B2=3.86 1993GYa (41718)1699

C5H13NO L CAS 2508-29-4 (3627)
5-Amino-1-pentanol; H2N(CH2)5.OH

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

Ag+ gl KNO3 20°C 0.50M U K1=3.42 B2=7.55 1968ALc (41726)1700
By Ag/AgCl ISE: B2=7.55

C5H13NO2 L CAS 35152-18-2 (4334)
1,1'-Imino-2-ethanol-3-propanol; HO.CH2.CH2.NH.CH2.CH2.CH2.OH

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

Ag+ gl KNO3 25°C 0.50M U K1=2.32 B2=5.34 1972PEa (41730)1701

C5H13NO2 L CAS 105-59-9 (1070)
N-Methyldiethanolamine; CH3.N(CH2.CH2.OH)2

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

Ag+ gl alc/w 25°C 50% U K1=2.77 B2=5.21 1955ANc (41742)1702
Medium: 50 mole % EtOH

C5H13NO3S HL CAS 37043-68-8 (4341)
5-Aminopentanesulfonic acid; H2N.CH2.CH2.CH2.CH2.CH2.SO3H

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

Ag+ gl KNO3 25°C 0.50M U K1=3.49 B2=7.40 1972PTa (41745)1703

C5H13NS L (1217)
1-Amino-3-thiahexane; H2N.CH2.CH2.S.CH2.CH2.CH3

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

Ag+ gl KNO3 25°C 0.50M U K1=5.29 B2=9.70 1977TGa (41773)1704
B(2Ag+L)=7.40
B(2Ag+2L)=13.59
B(Ag+HL)=2.95
B(Ag+L+HL)=8.08

B(Ag+2HL)=4.61

Ag+ cal KNO3 25°C 0.50M C H 1977TGc (41774)1705
DH(Ag+HL)=-31.4 kJ mol⁻¹, DH(Ag+2HL)=-59.0, DH(Ag+HL+L)=-77.8,
DH(B2)=-84.5, DH(2Ag+2L)=-130, DH(2Ag+L)=-72.8.

C5H13NS L CAS 93243-37-9 (1221)
1-Dimethylamino-3-thiabutane; (CH3)2N.CH2.CH2.S.CH3

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

Ag+ gl KNO3 25°C 0.50M U K1=4.30 B2=8.42 1977TGa (41777)1706
B(2Ag+L)=5.96
B(2Ag+2L)=11.37
B(Ag+HL)=2.52
B(Ag+HL+L)=6.68
B(Ag+2HL)=3.84

Ag+ cal KNO3 25°C 0.50M C H 1977TGc (41778)1707
DH(Ag+HL)=-26.4 kJ mol⁻¹, DH(Ag+2HL)=-52.34, DH(Ag+HL+L)=-66.1,
DH(B2)=-69.5, DH(2Ag+2L)=-90.4, DH(2Ag+L)=-61.9.

C5H13NS HL (5870)
3-(Dimethylamino)-1-propanethiol; (Me)₂N.CH₂.CH₂.CH₂.SH

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

Ag+ ISE alc/w 25°C 10% C 1990GVa (41781)1708
B(6,3)=61.4
B(6,4)=77.35
B(8,6)=113.85
B(7,6)=109.10

B(10,9)=162.64, B(12,12)=209.22, B(5,6)=91.31, B(4,6)=77.41, B(1,3)=21.35.
In 10% v/v methanol/H₂O, 0.10 M NaNO₃. B(p,q): pAg+qHL=(Ag)_p(HL)_q

C5H13OPS2 HL CAS 1000-64-2 (4339)
O-Butyl hydrogen-P-methylphosphonodithioate;

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

Ag+ ISE alc/w 25°C 90% U B2=16.14 1971TCa (41808)1709
Medium: 90% EtOH, 0.3 M NaClO₄

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

Ag+ gl KNO3 25°C 1.0M C K1=6.22 B2= 8.33 1999GYa (41860)1710
K(Ag+HL)=3.33
K(Ag+2HL)=7.58
K(Ag₂L+2H)=21.69
B(Ag₂L₂)=15.05

Additional method: Ag/Ag₂S electrode. B(AgHL)=14.55, B(AgHL₂)=20.08,
B(AgH₂L₂)=30.02, B(Ag₂HL₂)=23.58.

Ag+ ISE alc/w 25°C 100% U H K1=6.74 1985BUB (41861)1711
Medium: MeOH, 0.05M Et₄NClO₄. DH=-58.4 kJ mol⁻¹

Ag+ gl NaNO3 20°C 0.10M U K1=5.95 1952SMa (41862)1712
K(Ag+HL)=3

C5H14N2 L CAS 7328-91-8 (3029)
2,2-Dimethyl-1,3-diaminopropane; H2N.CH2.C(CH3)2.CH2.NH2

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

Ag+ gl KNO3 30°C 1.0M U K1=4.66 1952HAa (41873)1713

C5H14N2 L CAS 111-33-1 (938)
2,6-Diazaheptane, N,N'-Dimethyl-1,3-diaminopropane; CH3.NH.CH2.CH2.CH2.NH.CH3

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

Ag+ ISE KNO3 25°C 1.00M C B2=6.27 1994GYa (41881)1714

B(AgHL)=13.13
B(AgH2L2)=26.37
B(Ag2L2)=12.12

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

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

Ag+ gl KNO3 25°C 1.0M C K1=3.22 B2=6.14 1994GYb (41885)1715

B(AgHL)=11.07
B(Ag2L2)=8.29

C5H14N2 L (4302)
N,N-Dimethyl-1,3-diaminopropane; (CH3)2N.(CH2)3.NH2

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

Ag+ EMF non-aq 25°C 100% C H K1=3.95 B2= 7.49 2002CNa (41891)1716

Method: Ag electrode. Medium: DMSO, 0.10 M Et4NC104. DH(K1)=-40.9
kJ mol⁻¹, DS(K1)=-62 J K⁻¹ mol⁻¹; DH(B2)=-73.4, DS(B2)=-103.

Ag+ ISE KNO3 25°C 1.00M C K1=3.55 B2=7.11 1994GYa (41892)1717

B(AgHL)=12.81
B(AgH2L2)=25.86
B(AgHL2)=16.70
B(Ag2L2)=11.02

C5H14N2S L CAS 56973-49-0 (1855)
1,6-Diamino-3-thiahexane;H2N.CH2.CH2.S.CH2.CH2.CH2.NH2

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

Ag+ gl KNO3 25°C 0.50M C B2=9.83 1984SGe (41925)1718
 K(Ag+H2L)=2.30
 K(Ag+2H2L)=3.17
 K(Ag+HL)=4.52
 K(2Ag+2HL)=12.10

Additional method: Ag electrode. K(2Ag+HL+L)=14.87, B(Ag2L2)=16.75,
 K(Ag+H2L+HL)=6.9, K(Ag+2HL)=8.72, K(Ag+HL+L)=9.50, B(Ag2L)=10.0.

 Ag+ cal KNO3 25°C 0.50M C H 1984STc (41926)1719
 DH(Ag+H2L)=-28 kJ mol⁻¹, DS(Ag+H2L)=-50 J K⁻¹ mol⁻¹; DH(Ag+2H2L)=-56,
 DS(Ag+2H2L)=-127; DH(2Ag+2L)=-139.2, DS=-146; DH(B2)=-79.6, DS(B2)=-79.

 C5H15N3 L CAS 34066-95-0 (1066)
 1,4,7-Triazaooctane; H2N.CH2.CH2.NH.CH2.CH2.NH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ag+	ISE	NaNO3	25°C	1.30M	C			B2=7.87	1984YMa (41978)	1720
								B(AgH2L)=20.56, B(AgHL)=13.77		
								B(AgH2L2)=27.33, B(AgHL2)=17.75		
								B(Ag2H2L2)=30.04, B(Ag2L2)=14.4		
								B(Ag2HL2)=22.33, B(Ag3L2)=16.74		

B(AgH-1L)=-6.10. Measured using glass and Ag electrodes

 C6H3N3O7 HL Picric acid CAS 88-89-1 (593)
 2,4,6-Trinitrophenol; HO.C6H2(NO2)3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ag+	ISE	none	25°C	dil	C	M		K1=0.45	2004KUa (42081)	1721
								K(AgA+L)=2.75		
								K(AgB+L)=3.20		
								K(AgC+L)=2.28		
								K(AgD+L)=2.20		

Method: Ag ion-selective electrode; self medium. A is 15-crown-5 ether,
 B is benzo-15-crown-5, C is 18-crown-6, D is benzo-18-crown-6 ether.

Ag+	con	mixed	25°C	20%	C			K1=2.38	1994SSb (42082)	1722
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Medium:20% w/w propylene carbonate/ethylene carbonate.

 C6H4Br2 L p-Dibromobenzen CAS 106-37-6 (3056)
 1,4-Dibromobenzene; Br.C6H4.Br

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ag+	sol	oth/un	25°C	?	U			K1=-0.21 B2=-0.81	1950AKa (42166)	1723
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 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
Ag+	sp	non-aq	25°C	100%	U		K1=-0.377	1991PZa (42167)	1724
Ag+	sol	oth/un	25°C	?	U		K1=-0.46	1950AKa (42168)	1725

C6H4I2		L						o-Diiodobenzene CAS 615-42-9	(3058)
1,2-Di-iodobenzene; I.C6H4.I									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	sol	oth/un	25°C	?	U		K1=0.76 B2=1.22	1951AKb (42170)	1726

C6H4I2		L						m-Diiodobenzene CAS 626-00-6	(3057)
1,3-Di-iodobenzene; I.C6H4.I									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	sol	oth/un	25°C	?	U		K1=1.22 B2=1.40	1951AKb (42171)	1727

C6H4I2		L						p-Diiodobenzene CAS 624-38-4	(3059)
1,4-Di-iodobenzene; I.C6H4.I									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	sol	oth/un	25°C	?	U		K1=0.88 B2=1.25	1950AKa (42172)	1728

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	->0	U		B2=2.90	1955MBc (42184)	1729

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	gl	NaNO3	25°C	0.50M	C		K1=0.81	1984ERa (42190)	1730
Ag+	ISE	oth/un	25°C	->0	U		B2=3.08	1955MBc (42191)	1731

C6H5Br		L						Bromobenzene CAS 108-86-1	(3061)
Bromobenzene; C6H5.Br									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	sol	oth/un	25°C	?	U		K1=-0.01 B2=-0.93	1950AKa (42334)	1732

C6H5Cl L Chlorobenzene CAS 108-90-7 (3060)
Chlorobenzene; C6H5.Cl

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

Ag+ sol oth/un 25°C ? U K1=-0.16 B2=-2.11 1950AKa (42335)1733

C6H5F L Fluorobenzene CAS 462-06-6 (3063)
Fluorobenzene; C6H5.F

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

Ag+ sol oth/un 25°C ? U K1=-0.34 B2=-0.96 1950AKa (42339)1734

C6H5I L Iodobenzene CAS 591-50-4 (3062)
Iodobenzene; C6H5.I

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

Ag+ sol oth/un 25°C ? U K1=0.70 B2=0.61 1950AKa (42340)1735

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

Ag+ ISE non-aq 25°C 100% U K1=1.56 B2=2.73 1994IGa (42466)1736
Medium: MeCN, 0.1 M Et4NClO4. Method: Ag electrode

Ag+ gl KNO3 25°C 0.10M U K1=3.51 B2=6.10 1993IGa (42467)1737

Ag+ EMF KNO3 25°C 0.10M C K1=3.5 1979BCb (42468)1738
K(AgL+H)=4.1

Method: Ag electrode.

Ag+ gl NaNO3 20°C 0.10M U K1=3.40 B2=5.9 1960ANb (42469)1739

Ag+ gl oth/un 25°C 0.0 U K1=3.24 1958LUa (42470)1740

C6H5NO2 HL Nicotinic acid CAS 59-67-6 (419)
3-Pyridine-carboxylic acid; C5H4N.COOH

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

Ag+ ISE KNO3 25°C 2.00M C K1=2.39 B2=4.14 1981LZa (42657)1741

C6H5NO2 L Nitrobenzene CAS 98-95-3 (3085)
Nitrobenzene; C6H5.NO2

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

 Ag+ sol oth/un 25°C ? U K1=-0.72 1950AKa (42700)1742

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

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

 Ag+ sp non-aq 20°C 100% U T H K1=1.66 1964TJa (43162)1743
 Medium: benzene,ClO4-. K1=1.04(1.4C); DH(K1)=16.7 kJ mol-1

Ag+ sol alc/w 25°C 50% U T H K1=0.04 19560Aa (43163)1744
 Medium: 50% MeOH. DH(K1)=-12.0 kJ mol-1, DS=-39.3. 1.6 C: K1=0.22

Ag+ sol oth/un 5°C ? U K1=0.38 B2=1.05 1949AKa (43164)1745

 C6H6NBr L o-Bromoaniline CAS 615-36-1 (3091)
 2-Bromoaniline (1-amino-2-bromobenzene); Br.C6H4.NH2

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

 Ag+ ISE mixed 25°C 59% U B2=2.8 1952FYa (43171)1746

 C6H6NBr L 3-Bromoaniline CAS 591-19-5 (758)
 3-Bromoaniline; H2N.C6H4.Br

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

 Ag+ ISE mixed 25°C 59% U B2=2.8 1952FYa (43175)1747

 C6H6NBr L 4-Bromoaniline CAS 106-40-1 (757)
 4-Bromoaniline; H2N.C6H4.Br

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

 Ag+ ISE mixed 25°C 59% U B2=2.75 1952FYa (43183)1748

 C6H6NCl L o-Chloroaniline CAS 95-51-2 (3088)
 2-Chloroaniline (1-amino-2-chlorobenzene); Cl.C6H4.NH2

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

 Ag+ ISE alc/w 25°C 100% U B2=1.71 1960ALa (43197)1749
 Medium: EtOH

Ag+ oth alc/w 25°C 59% U B2=2.50 1952FYa (43198)1750
 Medium :59% w/w EtOH

 C6H6NCl L m-Chloroaniline CAS 108-42-9 (3089)
 3-Chloroaniline; Cl.C6H4.NH2


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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+        ISE alc/w  25°C 100% U          B2=2.13      1960ALa (43200)1751
Medium: EtOH
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Ag+        ISE alc/w  25°C 59% U          B2=2.55      1952FYa (43201)1752
*****
C6H6NCl    L    p-Chloroaniline  CAS 106-47-8 (3090)
4-Chloroaminobenzene; Cl.C6H4.NH2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE alc/w  25°C 100% U          B2=2.65      1960ALa (43213)1753
Medium: EtOH
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Ag+        ISE mixed  25°C 59% U          B2=2.5       1952FYa (43214)1754
*****
C6H6NI     L    4-Iodoaniline    CAS 540-37-4 (3689)
4-Iodoaniline; I.C6H4.NH2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE alc/w  25°C 100% U          B2=2.50      1960ALa (43216)1755
Medium: EtOH
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C6H6N2O    L    Isonicotinamide  CAS 1453-82-3 (1949)
Isonicotinamide, Pyridine-4-carboxylic acid amide; C5H4N.CO.NH2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE none   25°C 0.0 U            K1=3.01      1955MBc (43257)1756
*****
C6H6N2O    L    Nicotinamide     CAS 98-92-0 (1473)
Pyridine-3-carboxylic acid amide, Vitamin PP, C5H4N.CO.NH2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+        ISE KNO3   25°C 0.50M U          K1=1.67  B2=3.06      1985KLa (43334)1757
Simultaneous measurement of Ag+ and H+
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Ag+        ISE alc/w  25°C 50% U          B2=3.11      1980BTb (43335)1758
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Ag+        ISE none   25°C 0.0 U            K1=3.22      1955MBc (43336)1759
*****
C6H6N2O2   L    o-Nitroaniline   CAS 88-74-4 (463)
2-Nitroaminobenzene; H2N.C6H4.NO2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+ oth alc/w 25°C 59% U B2=1.9 1952FYa (43360)1760

C6H6N2O2 L m-Nitroaniline CAS 99-09-2 (464)
3-Nitroaminobenzene; H2N.C6H4.NO2

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

Ag+ ISE alc/w 25°C 100% U B2=1.88 1960ALa (43383)1761
Medium: EtOH

Ag+ ISE alc/w 25°C 50% U B2=1.7 1954LAa (43384)1762
Medium: EtOH, 50 mole%

Ag+ oth alc/w 25°C 50% U B2=1.7 1952FYa (43385)1763

C6H6N2O2 L p-Nitroaniline CAS 100-01-6 (465)
4-Nitroaminobenzene; H2N.C6H4.NO2

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

Ag+ ISE alc/w 25°C 100% U B2=1.55 1960ALa (43400)1764
Medium: EtOH

Ag+ ISE alc/w 25°C 50% U B2=1.6 1954LAa (43401)1765
Medium: 50 mol % EtOH

Ag+ oth alc/w 25°C 50% U B2=1.7 1952FYa (43402)1766
Medium: 50 mol % EtOH

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

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

Ag+ dis KNO3 25°C 1.0M U K1=0.34 1938WLa (43532)1767

C6H6O3S HL CAS 98-11-3 (3087)
Benzenesulfonic acid; C6H5.SO3H

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

Ag+ ISE NaClO4 25°C 1.0M U K1=-0.04 1958ACb (44132)1768

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

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

Ag+ ISE KNO3 25°C 0.50M U K1=2.33 B2=4.66 1972FHb (44580)1769

Ag+ ISE alc/w 25°C 96% U K1=2.45 B2=4.93 1972MTb (44581)1770
Medium: 96% EtOH, 0.1 M NaClO4

Ag+ gl KNO3 25°C 0.61M U K1=2.36 B2=4.71 1967SBd (44582)1771

Ag+ ISE mixed 25°C 90% U I B2=5.48 1965PLa (44583)1772
Medium:90% acetone. B2=4.61(0%),4.58(10%),4.55(20%),4.54(30%),4.55(40%),
4.60(50%),4.67(60%),4.78(70%),5.00(80%)

Ag+ ISE diox/w 25°C 90% U I B2=5.09 1965PLa (44584)1773
Medium: 90% dioxan. B2=4.53(10%),4.48(20%),4.44(30%),4.43(40%),4.46(50%),4.52
(60%),4.64(70%),4.82(80%). In EtOH:B2=4.69(10%),4.36(50%),4.49(90%)

Ag+ gl KNO3 25°C 0.50M U K1=2.27 B2=4.68 1964PCa (44585)1774
dlogB2/dt=-0.002

Ag+ sp alc/w 20°C 100% U I B2=4.68 1958PPa (44586)1775
Medium: EtOH. In MeCN: B2=4.45

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

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

Ag+ ISE KNO3 25°C 0.50M U K1=2.25 B2=4.48 1972FHb (44665)1776

Ag+ ISE alc/w 25°C 96% U K1=2.40 B2=4.82 1972MTc (44666)1777
Medium: 96% EtOH, 0.1 M NaClO4

Ag+ gl KNO3 25°C 0.61M U K1=2.15 B2=4.44 1967SBd (44667)1778

Ag+ ISE alc/w 25°C 90% U I B2=4.34 1965PMa (44668)1779
Medium:0-90% EtOH. B2=4.36(0%),4.41(10%),4.40(20%),4.35(30%),4.27(40%),
4.19(50%),4.14(60%),4.17(70%),4.24(80%)

Ag+ sp alc/w 20°C 100% U I B2=5.23 1958PPa (44669)1780
Medium: EtOH. In MeCN: B2=4.99

Ag+ gl oth/un 25°C ->0 U K1=2.00 B2=4.35 1955MBc (44670)1781

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

Ag+ ISE NaNO3 25°C 50% U I B2=4.53 1973BNd (44779)1782
Medium: 0-96% (v/v) EtOH, 0.2 M LiNO3. B2(0%)=4.75, B2(96%)=4.74
In 0.2 LiNO3, 0-90% acetone, B2(25%)=4.69, B2(75%)=4.84, B2(90%)=4.95

Ag+ ISE NaNO3 25°C 50% U I B2=4.36 1973BNd (44780)1783

Medium: 0-90% (v/v) PrOH, 0.2 M LiNO3. B2(0%)=4.75, B2(90%)=4.58

Ag+ ISE KNO3 25°C 0.50M U K1=2.18 B2=4.64 1972Fhb (44781)1784

Ag+ ISE alc/w 25°C 96% U K1=2.45 B2=4.91 1972MTb (44782)1785
Medium: 96% EtOH, 0.1 M NaClO4

Ag+ gl KNO3 25°C 0.61M U K1=2.21 B2=4.70 1967SBd (44783)1786

Ag+ ISE alc/w 25°C 90% U I B2=4.41 1965PMa (44784)1787
Medium: 90% EtOH. B2=4.49(0%), 4.57(10%), 4.53(20%), 4.46(30%), 4.37(40%),
4.29(50%), 4.24(60%), 4.25(70%), 4.31(80%)

Ag+ sp alc/w 20°C 100% U I B2=5.05 1958PPa (44785)1788
Medium: EtOH. In MeCN: B2=4.79

Ag+ gl oth/un 25°C ->0 U K1=2.03 B2=4.39 1955MBc (44786)1789

Ag+ gl KNO3 25°C 0.50M U K1=2.24 B2=4.70 1948Bva (44787)1790
dlogB2/dt=0.020

C6H7N L Aniline CAS 62-53-3 (583)
Aminobenzene, aniline; C6H5.NH2

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

Ag+ ISE alc/w 25°C 100% U B2=3.07 1960ALa (44857)1791
B3=3.53
Medium: EtOH

Ag+ gl alc/w 25°C 50% U K1=1.38 B2=2.88 1955ANc (44858)1792
Medium: 50 mole % EtOH

Ag+ gl alc/w ? 59% U B2=3.0 1952FYa (44859)1793
Medium: 59% w/w EtOH

Ag+ dis KNO3 25°C 1.0M U K1=1.44 1952G0a (44860)1794

Ag+ ISE oth/un 17°C 0.20M U B2=3.47 1936Bwa (44861)1795

Ag+ ISE alc/w 25°C 50% U B2=3.17 1934LAb (44862)1796
Medium: 50 mole % EtOH

Ag+ ISE oth/un 20°C 0.10M U B2=3.23 1924PAa (44863)1797

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

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

Ag+ gl KNO3 25°C 0.61M U K1=2.14 B2=4.37 1967SBd (44961)1798

C6H7NO L Pyridylcarbinol CAS 100-55-0 (2036)
3-(Hydroxymethyl)azine; C5H4N.CH2OH

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

Ag+ gl KNO3 25°C 0.61M U K1=2.01 B2=4.09 1967SBd (44981)1799

C6H7NO L CAS 7295-76-3 (3095)
3-Methoxypyridine; C5H4N.OCH3

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

Ag+ ISE none 25°C 0.0 U K1=1.58 B2=3.67 1955MBc (44991)1800

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

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

Ag+ ISE KNO3 25°C 0.50M U K1=1.816 B2=3.887 1987KLa (45004)1801

Ag+ ISE KNO3 25°C 0.50M U K1=2.20 B2=4.26 1985KLa (45005)1802
Simultaneous measurement of Ag+ and H+

Ag+ gl KNO3 25°C 0.61M U K1=2.15 B2=4.23 1967SBd (45006)1803

C6H7NO L CAS 620-08-6 (3096)
4-Methoxypyridine; C5H4N.OCH3

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

Ag+ ISE none 25°C 0.0 U K1=2.28 B2=4.44 1955MBc (45015)1804

C6H7NO3S HL Sulfanilic CAS 121-57-3 (2865)
4-Aminobenzenesulfonic acid; H2N.C6H4.SO3H

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

Ag+ ISE NaClO4 25°C 1.0M U K1=1.03 B2=1.67 1958ACb (45066)1805
K3=0.40
K4=-0.1

Ag+ ISE NaClO4 25°C 0.10M U K1=1.14 B2=2.09 1958ACb (45067)1806

C6H7NO3S HL Metanilic acid (3121)
Aniline-3-sulfonic acid; H2N.C6H4.SO3H

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

Ag+ ISE NaClO4 25°C 1.0M U K1=1.23 B2=2.13 1958ACb (45068)1807
K3=0.18
K4=0.11

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

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

Ag+ ISE alc/w 25°C var U I K1=7.67 1986BBa (45122)1808
In 0.07 mol EtOH/H2O, 0.1 M NaNO3(NaClO4). Ag-electrode
In 0.79 mol K1=6.41; In 0.79 mol DMFA/H2O: K1=5.61. Data also for DMSO

C6H8N2 L CAS 123-32-0 (2532)
2,5-Dimethylpyrazine, 2,5-Dimethyl-1,4-diazine; C4H2N2(CH3)2

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

Ag+ gl KNO3 25°C 0.10M U H K1=1.96 B2=3.13 1974HEa (45284)1809
DH(K1)=-21.67 and DH(B2)=-39.96 kJ mol-1.

C6H8N2 L CAS 108-50-9 (2531)
2,6-Dimethylpyrazine, 2,6-Dimethyl-1,4-diazine; C4H2N2(CH3)2

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

Ag+ gl KNO3 25°C 0.10M U H K1=1.95 B2=3.46 1974HEa (45286)1810
DH(K1)=-20.92 and DH(B2)=-31.84 kJ mol-1.

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

Ag+ gl KNO3 25°C 0.0 U K1=3.588 B2=7.174 1974GEa (45333)1811
B(Ag2L)=5.37
B(Ag2L2)=11.223
B(AgHL)=9.982

Ag+ EMF NaNO3 20°C 0.10M U K1=4.11 1971ANa (45334)1812

C6H8N2 L CAS 1603-40-3 (3648)
2-Amino-3-methylpyridine (2-Amino-3-picoline)

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

Ag+ gl KNO3 25°C 0.61M U K1=2.42 B2=4.85 1967SBd (45363)1813

C6H8N2 L CAS 695-34-1 (1501)

2-Amino-4-methylpyridine; H2N.C5H4N.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.50M	U			K1=2.47 B2=4.931	1987KLa (45365)	1814

C6H8N2		L						CAS 1603-41-4	(1500)	

2-Amino-5-methylpyridine; H2N.C5H4N.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.50M	U			K1=2.04 B2=4.726	1987KLa (45367)	1815

C6H8N2		L						CAS 2851-95-8	(4349)	

2-Methyl-1-vinylimidazole;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	1.00M	U			K1=3.48 B2=7.01	1969NNa (45373)	1816

C6H8O4		H2L						CAS 2583-25-7	(958)	

2-Allylpropanedioic acid; HOOC.CH(CH2.CH:CH2).COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.10M	M			K1=2.086	1975IPa (45461)	1817

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

Ascorbic acid (Vitamin C);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.10M	U			K1=3.66	1964NMc (45611)	1818

C6H8O6S		H3L						CAS 99-68-3	(3692)	

(Carboxymethylthio)butanedioic acid; HOOC.CH(S.CH2.COOH).CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	20°C	0.10M	U			K1=3.52	1977CAd (45682)	1819

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
Ag+	sol	oth/un	20°C	0.0	U	H			1959DMb (45923)	1820

								B(Ag2L)=7.1		
								B(Ag3L2)=9.9		

DH(Ag2L)=-66.1 kJ mol⁻¹, DS=-89

Ag+ sol oth/un 25°C 0.0 U 1958PSa (45924)1821

Kso=-12.2

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

Ag+ gl KNO3 25°C 1.00M C K1=4.29 1992ANa (46600)1822

Ag+ ISE NaClO4 25°C 1.00M U I K1=4.11 1989MIa (46601)1823

Ag+ ISE KNO3 25°C 0.10M C H K1=4.67 1981SCa (46602)1824

By calorimetry: DH(K1)=-26.2 kJ mol⁻¹, DS=1.2

Ag+ dis NaClO4 20°C 0.10M U T K1=5.16 1963STc (46603)1825

C6H9N3 L (1483)

2-Amino-4,6-dimethyl-1,3-diazine; C4HN2(NH2)(CH3)2

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

Ag+ ISE KNO3 25°C 0.50M U K1=2.26 B2=6.19 1986KLa (47142)1826

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

Ag+ gl KNO3 25°C 0.5M U K1=2.30 B2= 3.05 2002LKa (47455)1827
K(AgL+H)=6.93

Ag+ gl oth/un 30°C 0.10M U K1=5.42 B2=8.44 1981PUa (47456)1828

Ag+ gl KCl 25°C .058M U T K1=6.45 1961SMa (47457)1829

K1=8.50(0 C), 4.60(45 C)

Ag+ ISE oth/un ? .162M U K1=7.37 B2=16.27 1953VAa (47458)1830

At I=0.01 M, by spectrophotometry, B(Ag2L)=2.12

C6H10 L CAS 693-89-0 (3641)

1-Methylcyclopentene; C5H7.CH3

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

Ag+ dis non-aq 30°C 100% U K1=0.46 1962GHa (47663)1831

Medium: ethylene glycol, 1.77 M AgNO3. Method: gas chromatography

C6H10 L CAS 1120-62-3 (3642)
3-Methylcyclopentene; C5H7.CH3

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

Ag+ dis non-aq 30°C 100% U K1=1.08 1962GHa (47664)1832
Medium: ethylene glycol, 1.77 M AgNO3. Method: gas chromatography

C6H10 L CAS 1759-81-5 (3643)
4-Methylcyclopentene; C5H7.CH3

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

Ag+ dis non-aq 30°C 100% U K1=0.74 1962GHa (47665)1833
Medium: ethylene glycol, 1.77 M AgNO3. Method: gas chromatography

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

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

Ag+ nmr non-aq 30°C 100% U K1=0.58 1973DBa (47666)1834
Medium: CH3CN

Ag+ dis KNO3 0°C 1.0M U K1=2.28 1938WLa (47667)1835

C6H10 L CAS 1528-30-9 (3644)
Methylenecyclopentane; CH2:C5H8

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

Ag+ dis non-aq 30°C 100% U K1=0.78 1962GHa (47670)1836
Medium: ethylene glycol, 1.77 M AgNO3. Method: gas chromatography

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

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

Ag+ gl KNO3 25°C 1.00M U K1=3.64 B2=7.74 1969NNa (47682)1837

C6H10N2 L Tri-Me-Pyrazole CAS 822-90-2 (370)
3,4,5-Trimethyl-1,2-diazole; C4HN2(CH3)3

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

Ag+ ISE alc/w 25°C 20% C T H K1=3.86 B2=5.90 1977PGb (47688)1838

C6H10N2O3S H2L CAS 60197-98-0 (1858)
2-(4-Sulfonyl)-pyrrylmethyl-methylamine; HO3S.C4H3N.CH2.NH.CH3

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KNO3   25°C 1.00M C                                1978SAa (47711)1839
                                         K(Ag+HL)=2.6
                                         K(AgHL+HL)=2.96
Various assumptions and stability constants
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C6H10N2O4      H2L                      CAS 96705-91-8 (3103)
Piperazine-2,5-dicarboxylic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KCl    22°C 0.10M U                      K1=3.0          1964PCa (47725)1840
*****
C6H10N2O4      H2L                      CAS 89601-09-2 (3102)
trans-Piperazine-2,3-dicarboxylic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KCl    22°C 0.10M U                      K1=4.4          1964PCa (47743)1841
*****
C6H10N4        L      Metrazole          CAS 54-95-5 (2046)
1,5-Pentamethylenetetrazole, 6,7,8,9-Tetrahydro-5H-tetrazoloazepine;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE KNO3  25°C 0.50M U                      K1=1.51  B2=2.76  1976LWa (47876)1842
-----
Ag+        ISE KNO3  25°C 0.10M U I                      1969DPc (47877)1843
                                         B(Ag+2L)=3.05
I=0.4 M, B(AgL2)=3.00
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Ag+        gl  non-aq 25°C 100% U                      B2=0.47          1959PHa (47878)1844
Medium: CH3CN
*****
C6H10N4O5      L                      (6141)
2,4-Dimethyl-2,4,6,8-tetraazobicyclo(3,3,0)octa-3-one-7-thione;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE mixed 25°C 82% U                      K1=7.70  B2=10.45  1980TBa (47883)1845
                                         B3=12.11
Medium: 82% v/v DMFA/H2O; 0.2 M KNO3
*****

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C6H10O2        HL                      CAS 1577-22-6 (962)
5-Hexenoic acid; CH2:CH.CH2.CH2.CH2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+ ISE oth/un 25°C 0.10M M K1=2.057 1975IPa (47951)1846
Medium: K-acetate

C6H1002S HL CAS 29431-24-1 (4369)

(But-1-enylthio)ethanoic acid; CH2:CH.CH2.CH2.S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.20M U T H K1=4.77 B2=7.02 1971BFb (47954)1847

K(Ag+HL)=4.157

K(Ag+2HL)=6.37

B(Ag2L)=6.83

0.6 C, K1=5.49, B2=9.00. 39 C, K1=4.25. DH(K1)=-46.1 kJ mol⁻¹, DH(K2)=-80

Ag+ ISE oth/un 25°C 0.10M U I K1=4.80 B2=7.05 1968PSb (47955)1848

In acetate buffer, I=0.2 M, K(Ag+HL)=4.16

C6H1002Se HL (4371)

(But-1-enylseleno)ethanoic acid; CH2:CH.CH2.CH2.Se.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.20M U T H K1=5.16 B2=7.96 1971BFb (47978)1849

K(Ag+HL)=4.75

K(Ag+2HL)=7.54

K(2Ag+HL)=6.85

B(Ag2L)=7.13

0.9 C: K1=6.04, B2=10.00. 39 C: K1=4.77. DH(K1)=-54.5 kJ mol⁻¹, DH(K2)=-101

C6H1004S H2L CAS 42715-54-8 (986)

2,2'-Thiodipropanoic acid; HOOC.CH(CH3).S.CH(CH3).COOH

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

Ag+ gl KNO3 25°C 0.10M C K1=3.81 B2=6.02 1975LPa (48123)1850

K(Ag+HL)=3.15

K(Ag+H2L)=2.74

C6H1004S H2L CAS 111-17-1 (139)

3,3'-Thiodipropanoic acid; HOOC.CH2.CH2.S.CH2.CH2.COOH

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

Ag+ EMF NaClO4 25°C 3.0M U K1=4.24 B2= 7.02 1985HIa (48167)1851

B(AgHL)=8.84

B(AgH2L)=12.83

B(AgH2L2)=17.01

B(AgH4L2)=24.55

Method: Ag/AgCl electrode.

Ag+ gl KNO3 25°C 0.10M C I K1=3.85 1975LPa (48168)1852
K(Ag+HL)=3.34
K(Ag+H2L)=3.22

Also by ISE in 0.2 M acetate: K2 = 2.53; K(AgH2L+H2L) = 2.41

Ag+ ISE NaNO3 20°C 1.0M U K1=2.9 B2=6.7 1944LAa (48169)1853

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

Ag+ gl NaClO4 25°C 0.50M U K1=5.82 B2=9.55 1981NAa (48226)1854

K(AgL+H)=3.80
K(AgL2+H)=4.18
K(AgHL2+H)=3.45
K(AgH2L2+H)=2.97

Ag+ ISE oth/un 25°C 0.20M U K1=4.95 1971FPa (48227)1855

B(Ag2L)=7.01
K(Ag+HL)=4.45
K(2Ag+HL)=6.16
K(Ag+2HL)=8.24

Medium: 0.2 M acetate buffer, pH 1.5 and 5.95

Ag+ ISE NaNO3 20°C 1.0M U K1=6.5 B2=10.4 1944LAa (48228)1856

C6H10O4S2 H2L CAS 1119-62-6 (3697)

3,3'-Di(thiopropionic acid); HOOC.CH2.CH2.S.S.CH2.CH2.COOH

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

Ag+ EMF NaClO4 25°C 3.0M U 1985HIa (48265)1857

B(AgHL)=8.13
B(AgH2L)=11.59

Method: Ag/AgCl electrode.

C6H10O4Se H2L CAS 80030-00-8 (987)

2,2'-Selenodipropionic acid; HOOC.CH(CH3).Se.CH(CH3).COOH

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

Ag+ gl KNO3 25°C 0.10M C K1=4.55 B2=6.92 1975LPa (48280)1858

K(Ag+HL)=3.72
K(Ag+H2L)=3.01

C6H10O4Se H2L CAS 2168-88-9 (982)

3,3'-Selenodipropionic acid; HOOC.CH2.CH2.Se.CH2.CH2.COOH

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

C6H12 L CAS 763-29-1 (2770)
2-Methyl-1-pentene; CH2:C(CH3).CH2.CH2.CH3

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

Ag+ oth non-aq 30°C 100% U K1=-0.30 1974KKb (49016)1865
Medium: N-Methylacetamide. Method: gas chromatography.

C6H12 L CAS 691-37-2 (2767)
4-Methyl-1-pentene; CH2:CH.CH2.CH(CH3)2

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

Ag+ oth non-aq 30°C 100% U K1=-0.21 1974KKb (49018)1866
Medium: N-Methylacetamide. In Ethylene glycol (40 C) K1=0.45

Method: gas chromatography.

C6H12 L CAS 7668-21-3 (2774)
cis-2-Hexene; CH3.CH:CH.CH2.CH2.CH3

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

Ag+ oth non-aq 30°C 100% U K1=-0.21 1974KKb (49020)1867
Medium: N-Methylacetamide. In ethylene glycol, 40 C, K1=0.49

Method: gas chromatography.

C6H12 L (2768)
cis-4-Methyl-2-pentene; CH3.CH:CH.CH(CH3)2

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

Ag+ oth non-aq 30°C 100% U K1=-0.18 1974KKb (49022)1868
Medium: N-Methylacetamide. In ethylene glycol, 40 C, K1=0.49

Method: gas chromatography.

C6H12 L CAS 4050-45-7 (2773)
trans-2-Hexene; CH3.CH:CH.CH2.CH2.CH3

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

Ag+ oth non-aq 30°C 100% U K1=-0.69 1974KKb (49024)1869
Medium: N-Methylacetamide. In ethylene glycol, 40 C, K1=-0.10

Method: gas chromatography.

C6H12 L CAS 4461-48-7 (2769)
trans-4-Methyl-2-pentene; CH3.CH:CH.CH(CH3)2

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

Ag+ oth non-aq 30°C 100% U K1=-0.62 1974KKb (49026)1870

Medium: N-Methylacetamide. In ethylene glycol (40 C) K1=-0.15

Method: gas chromatography.

C6H12N2 L TED / DABCO CAS 280-57-9 (3076)

1,4-Diazobicyclo[2,2,2]octane (triethylenediamine)

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

Ag+ gl NaNO3 20°C 0.10M U K1=1.65 1950SMa (49041)1871

C6H12N2O2S2 L (2821)

N,N'-Dihydroxyethyl-dithiooxamide; HO.C2H4.NH.CS.CS.NH.C2H4.OH

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

Ag+ ISE NaClO4 25°C 0.10M U I K1=10.01 1968PHa (49050)1872

B(Ag2L3)=20.53

B(Ag3L4)=31.05

Medium: 0.1 M NaClO4 0.05 HClO4. With 0.01 M HClO4:K1=10.09, B(Ag2L3)=20.69, B(Ag3L4)=31.29

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

Hexamethylenetetramine;

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

Ag+ ISE NaNO3 25°C 0.20M U I B2=3.49 1975BNa (49380)1873

Medium: LiNO3. In 50% EtOH B2=3.94; 50% PrOH B2=3.02, 50% Acetone B2=4.23

Ag+ sol oth/un 20°C 0.30M U 1967MGd (49381)1874

K(AgLC103+L=AgL2+C103)=3.65

K(AgLC103+2L=AgL3+C103)=3.10

Medium: ClO3-

Ag+ sol oth/un 20°C ? U K2=3.24 1963GYa (49382)1875

K3=2.89

Ag+ ISE oth/un 20°C 0.01M U T B2=3.58 1924PAa (49383)1876

At 16 C K1=3.50

C6H12O L CAS 927-61-7 (3654)

1-Ethoxy-2-methylprop-1-ene; CH3.CH2O.CH:C(CH3)2

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

Ag+ dis non-aq 30°C 100% U T H K1=-0.77 1968FKb (49404)1877

Medium: ethylene glycol. Method: gas chromatog. K1=-0.57(10 C), -0.68(20 C)

DH(K1)=-14.6 kJ mol⁻¹, DS=-50 J K⁻¹ mol⁻¹

C6H12O L Butylvinylether CAS 111-34-2 (3655)

Butoxyethene; CH3.CH2.CH2.CH2.O.CH:CH2

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

Ag+ dis non-aq 30°C 100% U T H K1=0.75 1968FKb (49406)1878
Medium: ethylene glycol. Method: gas chromatog. K1=0.94(10 C), 0.89(20 C)
DH(K1)=-15.5 kJ mol⁻¹, DS=-36.8 J K⁻¹ mol⁻¹

C6H12O HL CAS 821-41-0 (65)
Hex-5-en-1-ol; CH2:CH.(CH2)4.OH

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

Ag+ ISE NaClO4 25°C 1.0M U TIH K1=1.515 B2=1.19 1977HSa (49407)1879
By temp coeff., DH1=-21.0 kJ mol⁻¹, DS1=-42 J K⁻¹ mol⁻¹, also in MeOH etc.

C6H12O L (3656)
Isobutyl vinyl ether; (CH3)2.CH.CH2.O.CH:CH2

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

Ag+ dis non-aq 30°C 100% U T H K1=0.75 1968FKb (49408)1880
Medium: ethylene glycol. Method: gas chromatog. K1=0.94(10 C), 0.83(20 C)
DH(K1)=-16.7 kJ mol⁻¹, DS=41 J K⁻¹ mol⁻¹

C6H12O L CAS 4884-01-9 (3652)
cis-1-Ethoxybutene; CH3.CH2O.CH:CH.CH2.CH3

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

Ag+ dis non-aq 30°C 100% U T H K1=0.49 1968FKb (49409)1881
Medium: ethylene glycol. Method: gas chromatog. K1=0.75(10 C), 0.63(20 C)
DH(K1)=-17.6 kJ mol⁻¹, DS=-50 J K⁻¹ mol⁻¹

C6H12O L CAS 1528-20-7 (3653)
trans-1-Ethoxybutene; CH3.CH2O.CH:CH.CH2.CH3

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

Ag+ dis non-aq 30°C 100% U T H K1=-0.20 1968FKb (49410)1882
Medium: ethylene glycol. Method: gas chromatog. K1=-0.02(10 C), -0.14(20 C)
DH(K1)=-13.8 kJ mol⁻¹, DS=-50 J K⁻¹ mol⁻¹

C6H12O2S HL CAS 22683-64-3 (4376)
(1-Methylpropylthio)ethanoic acid; CH3.CH2.CH(CH3).S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U I K1=4.16 B2=7.04 1968PSb (49435)1883
In acetate buffer. I=0.2, K(Ag+HL)=3.34

C6H12O2S HL CAS 20600-61-7 (4375)
(Butylthio)ethanoic acid; CH3.(CH2)3.S.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.20M	U	T H		K1=3.92 B2=6.70 K(Ag+HL)=3.15 K(Ag+2HL)=5.31	1971BFb	(49443)1884

K1(0.6 C)=4.37, B2=7.80. K1(39.1 C)=3.69, B2=6.04. DH(K1)=-28.5 kJ mol⁻¹, DH(K2)=-30

Ag+	ISE	oth/un	25°C	0.10M	U	I		K1=3.95 B2=6.74	1968PSb	(49444)1885
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In acetate buffer, I=0.2: K(Ag+HL)=3.16

C6H12O2Se HL (4379)
(Butylseleno)ethanoic acid; C4H9.Se.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.20M	U	T H		K1=4.58 B2=8.01 K(Ag+HL)=3.81 K(Ag+2HL)=6.69	1971BFb	(49454)1886

K1(0.8 C)=5.04, B2=8.87; K1(39 C)=4.28, B2=7.45. DH(K1)=-32.6 kJ mol⁻¹, DH(K2)=-27

C6H13N L 2-Pipecoline CAS 109-05-7 (1651)
2-Methylpiperidine; C5H10N.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	cal	KNO3	25°C	0.50M	C	H			1975EBa	(49783)1887

DH(K1)=-23.0 kJ mol⁻¹, DS(K1)=-11 J K⁻¹ mol⁻¹.
DH(B2)=-51.76, DS(B2)=-41.

Ag+	EMF	KNO3	25°C	0.50M	U			K1=3.53 B2=6.95	1973BBa	(49784)1888
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C6H13N L 3-Pipecoline CAS 626-56-2 (1650)
3-Methylpiperidine; C5H10N.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	cal	KNO3	25°C	0.50M	C	H			1975EBa	(49786)1889

DH(K1)=-23.2 kJ mol⁻¹, DS(K1)=-20 J K⁻¹ mol⁻¹.
DH(B2)=-50.92, DS(B2)=-47.7.

Ag+	EMF	KNO3	25°C	0.50M	U			K1=3.20 B2=6.43	1973BBa	(49787)1890
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C6H13N L 4-Pipecoline CAS 626-58-4 (1649)
4-Methylpiperidine; C5H10N.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	cal	KNO3	25°C	0.50M	C	H			1975EBa (49789)	1891
DH(K1)=-22.6 kJ mol ⁻¹ , DS(K1)=-14.4 J K ⁻¹ mol ⁻¹ . DH(B2)=-50.33, DS(B2)=-44.4.										
Ag+	EMF	KNO3	25°C	0.50M	U			K1=3.26 B2=6.49	1973BBa (49790)	1892

C6H13N		L						CAS 108-91-8	(314)	
Cyclohexylamine; C6H11.NH2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KCl	25°C	0.10M	U			K1=3.72 B2=8.02	1980HAa (49800)	1893

C6H13N		L				MePiperidine		CAS 626-67-5	(1254)	
N-Methylpiperidine; C5H10N.CH3										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.50M	U			K1=2.64 B2=3.8	1973BBa (49809)	1894

C6H13NO		L						CAS 100-74-3	(3111)	
4-Ethylmorpholine; C4H8ON.CH2.CH3										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	alc/w	25°C	50%	U			K1=2.07 B2=3.02	1955ANc (49816)	1895
Medium: 50 mole % EtOH/H2O *****										
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
Ag+	gl	KNO3	20°C	0.5M	U			K1=3.19 B2=7.26	1974KHb (49884)	1896

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
Ag+	gl	NaClO4	30°C	0.20M	U	T		K1=3.74 B2=7.20	1975JBb (50029)	1897

Ag+	gl	KNO3	20°C	0.5M	U			K1=3.41 B2=7.44	1974KHb (50030)	1898

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
Ag+	ISE	KNO3	25°C	0.10M	C		T	K1=3.21 B2=6.71	1975IPb (50156)	1899

Glass electrode also used.

Ag+	ISE oth/un	25°C	0.60M	U		T	K1=3.48 B2=6.76	1967AMb (50157)	1900
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C6H13NO2 HL CAS 60-32-2 (1846)
6-Aminoheptanoic acid; H2N.CH2.CH2.CH2.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	15°C	0.50M	U	T		K1=3.69 B2=7.82	1970PTa (50210)	1901

K1(0 C)=3.97, K1(4 0C)=3.33, K2(0 C)=4.25, K2(40 C)=3.53

Ag+	gl	KNO3	20°C	0.50M	U			K1=3.6 B2=7.54	1968ALc (50211)	1902
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Using Ag-AgCl electrode: B2=7.65

Ag+	gl	KNO3	25°C	0.50M	U			K1=3.59 B2=7.54	1968TPb (50212)	1903
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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
Ag+	EMF	KNO3	25°C	0.50M	C			K1=5.1 B2= 8.34	1984TSb (50258)	1904

K(Ag+H2L)=3.44
K(Ag+HL)=3.75
K(Ag+2H2L)=5.94
K(Ag+H2L+HL)=6.49

Method: Ag electrode. K(Ag+2HL)=6.37, K(Ag+HL+L)=8.04, B(Ag2L2)=14.09, B(Ag2L)=7.93.

Ag+	ISE	KNO3	25°C	0.10M	C			B2=9.66	1981PSb (50259)	1905
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B(AgHL)=12.71
B(AgH2L2)=24.03

Ag+	gl	KNO3	25°C	0.10M	U			K1=5.25	1964LMa (50260)	1906
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C6H13NS HL CAS 1072-99-7 (284)
1-Methyl-4-mercaptopyridine; C5H9N(CH3)(SH)

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	alc/w	25°C	10%	C				1990GVa (50544)	1907

B(6,3)=63.67
B(6,4)=79.95
B(8,6)=117.37
B(7,6)=111.72
B(10,9)=166.01, B(12,12)=212.2, B(7,8)=128.52, B(6,8)=113.4, B(2,3)=36.67,

B(1,3)=20.71. In 10% methanol/H2O, 2.0 M NaNO3. B(p,q): pAg+qHL=(Ag)p(HL)q.

C6H13NS2 L (6801)
 1,4-Dithia-7-azacyclononane;

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

 Ag+ gl R4N.X 25°C 0.10M M K1=6.43 B2=12.03 1990CKb (50547)1908
 Medium: 0.1 M Me4NNO3

 C6H14N2 L CAS 106-55-8 (3438)
 2,5-Dimethylpiperazine;

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

 Ag+ ISE KNO3 25°C 0.10M C I K1=3.60 B2=5.98 1974HBa (50653)1909
 for the cis-isomer
 trans isomer: K1=3.48, B2=6.43
 cis isomer. For trans isomer: K1=3,48, B2=6.43. In 52% EtOH, cis isomer:
 K1=3,87, B2=6.48; trans isomer: 4.25, 6.31

 C6H14N2 L CAS 108-49-6 (3437)
 2,6-Dimethylpiperazine;

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

 Ag+ ISE KNO3 25°C 0.10M C I K1=3.30 B2=6.66 1974HBa (50654)1910
 In 52% EtOH, K1=3.86; B2=6.90

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

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

 Ag+ ISE KNO3 25°C 0.10M C I K1=2.20 B2=3.46 1974HBa (50655)1911
 In 52% EtOH, K1=2.55; B2=3.41

 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

 Ag+ gl oth/un 30°C 0.10M U K1=4.72 B2=6.94 1981PUa (50987)1912

 Ag+ gl oth/un 17°C ? U K1=4.12 B2=8.07 1960PEd (50988)1913

 Ag+ gl oth/un 30°C .024M U T H K1=3.04 B2=6.66 1959DGA (50989)1914
 K1=3855.2/T-18.452+0.029208T
 K2=4898.35/T-23.905+0.037321T

At 25C:DH(K1)=-24 kJ mol-1, DS=-20 J K-1 mol-1; DH(K2)=-30, DS=32. At 0 C:

K1=3.65,K2=4.18;10 C:3.36,4.03;20 C:3.37,3.71;40 C: 3.02,3.32;50 C:2.91,3.36

C6H14O2S2 L CAS 5244-34-8 (4390)
3,6-Dithiaoctan-1,8-diol; HO.CH2.CH2.S.CH2.CH2.S.CH2.CH2.OH

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

Ag+ ISE KNO3 20°C 1.00M U H 1970WSa (51037)1915
pH=3 DH(K1)=-50.6 kJ mol⁻¹, DS=-64.0 J K⁻¹ mol⁻¹
DH(K2)=-55.6 kJ mol⁻¹, DS=-100.4 J K⁻¹ mol⁻¹

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

Ag+ ISE non-aq 25°C 100% U K1=2.03 B2=3.48 1983MMc (51135)1916
B3=4.35
B4=4.63

Medium: MeCN. Data also for other dialkyl sulfides

C6H15N L CAS 37007-11-7 (4353)
Diisopropylamine; ((CH3)2.CH)2.NH

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

Ag+ gl oth/un 25°C 0.50M U K1=3.41 B2=6.73 1983HNa (51146)1917
Medium: 0.1 M LHNO3

Ag+ ISE R4N.X 25°C 2.00M U K1=3.00 B2=7.05 1969MPd (51147)1918
Medium: NH4NO3

C6H15N L Dipropylamine CAS 142-84-7 (3666)
Dipropylamine, 4-azaheptane; (CH3.CH2.CH2)2.NH

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

Ag+ oth non-aq ? 100% U B2=10.05 1965MMa (51153)1919
Method: coulometric titration. Medium: acetone, 0.1 M NaClO4

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

Ag+ gl none 25°C 0.00 U K1=3.66 B2=7.83 1971HTa (51157)1920

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
Ag+	gl	KNO3	25°C	1.00M	U		K1=2.326 B2=4.29	1993GYa (51172)	1921
Ag+	oth	non-aq	23°C	100%	C		K2=0.41	1988SBa (51173)	1922
Medium: toluene, by I.R. spectroscopy.									
Ag+	gl	alc/w	25°C	50%	U		K1=2.31 B2=4.10	1955ANc (51174)	1923
Medium: 50 mol % EtOH									
Ag+	gl	oth/un	25°C	0.40M	U		K1=2.6 B2=4.7	1950BJa (51175)	1924
Medium: 0.4 C6H15N,HNO3									
Ag+	ISE	oth/un	15°C	0.30M	U		B2=4.50	1935BWa (51176)	1925
By solubility B2=4.27									
Ag+	ISE	oth/un	20°C	.001M	U		B2=4.05	1924PAa (51177)	1926

C6H15NO			L			CAS 4048-33-3 (4392)			
6-Amino-1-hexanol; NH2.CH2.CH2.CH2.CH2.CH2.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.50M	U		K1=3.33 B2=7.64	1972PEa (51182)	1927

C6H15NO			L			CAS 100-37-8 (3117)			
N,N-Diethyl-2-aminoethanol; (CH3.CH2)2N.CH2.CH2.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	2.00M	U		B2=4.85	1970UPa (51194)	1928
Ag+	sol	oth/un	20°C	0.0	U		B2=4.62	1961ALa (51195)	1929
By glass electrode: B2=4.66									
Ag+	gl	alc/w	25°C	50%	U		K1=2.60 B2=6.02	1955ANc (51196)	1930
Medium: 50% mol% EtOH									

C6H15NO2			L			CAS 14002-33-6 (3706)			
3,3'-Iminodipropanol; HO.CH2.CH2.CH2.NH.CH2.CH2.CH2.OH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	gl	oth/un	20°C	0.0	U		K1=2.95 B2=5.71	1964AKb (51200)	1931
By solubility: B2=5.71									

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ag+ gl NaNO3 25°C 0.20M U K1=2.6 B2=4.2 1974UPa (51263)1932
Medium: LiNO3

Ag+ gl alc/w 25°C 100% U K1=3.3 B2=5.6 1974UPa (51264)1933
B3 5.2

Medium: MeOH, 0.2 M LiNO3

Ag+ gl alc/w 25°C 100% U K1=3.3 B2=5.1 1974UPa (51265)1934
B3 5.5

Medium: MeOH, 0.1 M LiNO3

Ag+ gl oth/un ? 0.20M U K1=2.6 B2=4.7 1974UPb (51266)1935
Medium: DMF, 0.2 M LiNO3. In DMSO: K1=1.8, B2=3.0

Ag+ ISE mixed 25°C 40% U I K1=3.08 B2=4.59 1973MPf (51267)1936
B3=5.08

Medium: 20-95% acetone, 0.4 M LiNO3

K1(20%)=2.89, B2(20%)=4.28, B2(95%)=5.72, B3(20%)=4.57, B3(95%)=6.50

Ag+ ISE diox/w 25°C 40% U I K1=2.56 B2=4.28 1972MPc (51268)1937
B3=5.28

Medium: 20-70% dioxan, 0.4 M LiNO3

K1(20%)=2.49, B2(20%)=4.08, B2(70%)=5.04, B3(20%)=5.56, B3(70%)=5.95

Ag+ gl KNO3 25°C 0.50M U K1=2.34 B2=4.09 1972PEa (51269)1938

Ag+ ISE alc/w 25°C 20% U I M K1=2.90 B2=4.78 1965MPb (51270)1939
B3=5.15

Medium: EtOH, 0.4 m LiNO3. K1=2.78(0%), 3.00(40%); B2=4.54(0%), 4.93(40%), 5.2
(60%), 5.38(80%), 5.49(90%), 5.81(100%); B3=5.08(0%), 5.53(60%), 6.59(100%)

Ag+ ISE oth/un 25°C 0.01M U B2=5.28 1961ALb (51271)1940

Ag+ gl alc/w 25°C 50% U K1=2.72 B2=4.44 1955ANc (51272)1941
Medium: 50% mol% EtOH

Ag+ gl KNO3 25°C 0.50M U K1=2.30 B2=3.64 1950BJa (51273)1942

C6H15NS L CAS 22572-38-9 (1218)

1-Amino-3-thia-4,4-dimethylbutane; H2N.CH2.CH2.S.C(CH3)3

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

Ag+ gl KNO3 25°C 0.50M U K1=5.27 B2=9.99 1977TGa (51345)1943
B(2Ag+L)=7.88
B(2Ag+2L)=14.17
B(Ag+HL)=3.35
B(Ag+HL+L)=8.41

B(Ag+2HL)=4.99

Ag+ cal KNO3 25°C 0.50M C H 1977TGc (51346)1944
DH(Ag+HL)=-35.1 kJ mol-1, DH(Ag+2HL)=-61.38, DH(Ag+HL+L)=-74.9,
DH(B2)=-82.4, DH(2Ag+2L)=-131, DH(2Ag+L)=-69.5.

C6H15N3 L CAS 26150-46-9 (149)
1,3,5-cis,cis-Triaminocyclohexane; C6H9.(NH2)3

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

Ag+ gl NaNO3 20°C 0.10M U 1962BSb (51370)1945
K(Ag+HL)=5.3
K(AgL+H)=8.8
K(AgL+Ag)=2.4

C6H15N3 L CAS 4730-54-5 (26)
1,4,7-Triazacyclononane; cyclo(-NH.CH2.CH2.NH.CH2.CH2.NH.CH2.CH2-)

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

Ag+ ISE R4N.X 22°C 0.10M U I K1=4.97 B2=7.90 1994GRa (51397)1946
Medium: Et4NClO4. In CH3CN: K1=5.78; K2=5.53. Method: Ag-electrode

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

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

Ag+ ISE alc/w 25°C 90% U B2=15.55 1971TCa (51484)1947
Medium: 90% EtOH, 0.3 M NaClO4

C6H15O2PS2 HL CAS 25134-38-7 (4401)
Phosphorodithioic acid O,O-diisopropyl ester; (CH3.CH(CH3)O)2PS.SH

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

Ag+ ISE alc/w 25°C 90% U B2=15.80 1971TCa (51497)1948
Medium: 90% EtOH, 0.3 M NaClO4

C6H16N2 L (7148)
N,N',N'-Trimethyl-1,3-diaminopropane

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

Ag+ ISE KNO3 25°C 1.00M C K1=2.91 B2=5.52 1994GYa (51596)1949
B(AgHL)=12.20
B(Ag2L2)=9.61

C6H16N2 L Tetraameen 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

Ag+ EMF non-aq 25°C 100% C H K1=3.25 B2= 6.24 2002CNa (51639)1950
Method: Ag electrode. Medium: DMSO, 0.10 M Et4NClO4. By calorimetry,
DH(K1)=-30.8 kJ mol⁻¹, DS(K1)=-41 J K⁻¹ mol⁻¹; DH(B2)=-69.3, DS(B2)=-113.

Ag+ gl KNO3 25°C 1.0M C K1=2.97 B2=5.48 1994GYb (51640)1951
B(AgHL)=10.25

C6H16N2OS L (3128)
3-Oxa-6-thiaoctane-1,8-diamine; H2N.CH2.CH2.O.CH2.CH2.S.CH2.CH2.NH2

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

Ag+ gl none 20°C 0.0 U T H K1=8.42 1959LBb (51670)1952
K1=8.80(10 C), 8.12(30 C), 7.71(40 C). DH(K1)=-60.2 kJ mol⁻¹, DS=-46

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

Ag+ ISE R4N.X 25°C 0.05M U H K1=15.42 2002BSd (51694)1953
Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M
Et4NClO4. By calorimetry: DH(K1)=-106.7 kJ mol⁻¹, DS(K1)=-64.1 J K⁻¹ mol⁻¹

Ag+ ISE alc/w 25°C 100% U H K1=9.59 1985BUB (51695)1954
Medium: MeOH, 0.05M Et4NClO4. DH(K1)=-58.3 kJ mol⁻¹

Ag+ ISE R4N.X 25°C 0.10M U I K1=7.70 1983CSa (51696)1955
Also data for 0.05-1.0 mol fraction MeCN/H2O

Ag+ gl R4N.X 25°C 0.10M C H K1=7.7 1975ANa (51697)1956
From calorimetry: DH1=-57.5 kJ mol⁻¹, DS1=-45.6

Ag+ gl oth/un 20°C ->0 U T H K1=8.04 1959LBb (51698)1957
DH(K1)=-55.2 kJ mol⁻¹, DS=-33 J K⁻¹ mol⁻¹. K1=8.33(10 C), 7.71(30 C), 7.41(40C)

C6H16N2S L (1873)
1,7-Diamino-3-thiaheptane; H2N.CH2.CH2.S.CH2.CH2.CH2.CH2.NH2

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

Ag+ gl KNO3 25°C 0.50M C B2=9.86 1984SGe (51719)1958
K(Ag+H2L)=2.62
K(Ag+2H2L)=3.70
K(Ag+HL)=4.82
K(2Ag+2HL)=12.5

Additional method: Ag electrode. K(2Ag+HL+L)=15.77, B(Ag2L2)=17.20,

K(Ag+H2L+HL)=7.31, K(Ag+2HL)=9.08, K(Ag+HL+L)=9.86, B(Ag2L)=10.26.

Ag+ cal KNO3 25°C 0.50M C H 1984STc (51720)1959
DH(Ag+H2L)=-30.1 kJ mol⁻¹, DS(Ag+H2L)=-51 J K⁻¹ mol⁻¹; DH(Ag+2H2L)=-61,
DS(Ag+2H2L)=-134; DH(2Ag+2L)=-140, DS=-140; DH(B2)=-79.8, DS(B2)=-79.

C6H16N2S L CAS 13643-20-4 (1856)
1,7-Diamino-4-thiaheptane; H2N.CH2.CH2.CH2.S.CH2.CH2.CH2.NH2

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

Ag+ gl KNO3 25°C 0.50M C 1984Sge (51723)1960
K(Ag+H2L)=3.04
K(Ag+2H2L)=4.48

Additional method: Ag electrode.

Ag+ cal KNO3 25°C 0.50M C H 1984STc (51724)1961
DH(Ag+H2L)=-31.8 kJ mol⁻¹, DS(Ag+H2L)=-48 J K⁻¹ mol⁻¹; DH(Ag+2H2L)=-64.8,
DS(Ag+2H2L)=-132.

C6H16N2S2 L (3120)
3,6-Dithiaoctane-1,8-diamine; H2N.CH2.CH2.S.CH2.CH2.S.CH2.CH2.NH2

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

Ag+ ISE alc/w 25°C 100% U H K1=10.06 1985Bub (51754)1962
Medium: MeOH, 0.05M Et4NClO4. DH=-64.9 kJ mol⁻¹

Ag+ gl NaClO4 25°C 0.10M U K1=8.34 1977ASg (51755)1963
B(AgHL)=15.32

Ag+ gl KNO3 30°C 1.0M U K1=5.08 1951GOa (51756)1964

C6H17N3 L CAS 56-18-8 (968)
1,5,9-Triazanone, 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

Ag+ ISE non-aq 25°C 100% C H K1=7.08 1989CDa (51888)1965
B(Ag2L)=9.98
B(Ag3L2)=20.64

Medium: DMSO. DH(K1)=-68.3 kJ mol⁻¹; DS=-94. DH(Ag2L)=-99.2; DS=-142.
DH(Ag3L2)=-216.2; DS=-330

Ag+ gl KNO3 40°C 1.00M C T H 1974DFa (51889)1966
B(Ag2L2)=8.04
DH(Ag2L2)=-15.6 kJ mol⁻¹ (40 C). At 25 C: B(Ag2L2)=8.59 (by polarography)
35 C: 8.25; 45 C: 7.87

C6H17N3 L CAS 24229-52-6 (4355)

4-Methyl-1,4,7-triazaoctane; H2N.CH2.CH2.N(CH3).CH2.CH2.NH.CH3

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

Ag+ EMF NaNO3 25°C 1.3M C K1=5.35 B2= 7.83 1983YMb (51909)1967
B(AgHL)=13.68
B(AgHL2)=17.74
B(AgH2L2)=27.13
B(Ag2L2)=13.75

Ag electrode. B(Ag3L2)=15.33, B(AgH-1L)=-6.35

C6H17N3 L CAS 38977-99-0 (1067)

7-Methyl-1,4,7-Azaoctane; H2N.CH2.CH2.NH.CH2.CH2.N(CH3).CH3

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

Ag+ ISE NaNO3 25°C 1.30M C B2=7.74 1984YMa (51916)1968
B(AgH2L)=25.99, B(AgHL)=13.18
B(AgH2L2)=25.99, B(Ag2L2)=13.84
B(Ag2H2L2)=28.41
B(Ag2HL2)=20.86, B(Ag3L2)=15.35

B(AgH-1L)=-5.96 Measured using glass and Ag electrodes

C6H18N3OP L HMPA CAS 680-31-9 (603)

Hexamethylphosphoramide, Tris-(dimethylamino)phosphine oxide; ((CH3)2N)3PO

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

Ag+ ISE non-aq ? 100% U I 1972LUa (51974)1969
B3=6.17

Medium: acetone. In C2H5NO2, B3=8.8. In MeOH, K1=-0.2, B2=0.2

Ag+ ISE non-aq 25°C 100% U K1=0.30 B2=0.34 1972LUa (51975)1970
B3=0.30

Medium: CH3CN. In 2-butanol: K1=0.68, B2=0.97, B3=0.30, B4=1.48. In MeOH:
K1=-0.2, B2=0.2. In sulfolane: 0.1 Et4NClO4, K1=4.04, B2=4.30, B3=5.20

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

Ag+ ISE non-aq 25°C 100% C H K1=10.32 1990CBd (52062)1971
Medium: DMSO, 0.1 M R4NX. DH(K1)=-91.5 kJ mol⁻¹, DS=109 J K⁻¹ mol⁻¹ (calor.)

Ag+ ISE a/c/w 25°C 100% U H K1=10.12 1985BUb (52063)1972
Medium: MeOH, 0.05M Et4NClO4. DH=-69.4 kJ mol⁻¹

Ag+ EMF non-aq 25°C 100% U K1=5.30 1979SZa (52064)1973
Medium: DMSO

Benzimidazole; C7H6N2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	0.50M	U			K1=3.1 B2=6.25	1979BBa (53459)	1981

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
Ag+	con	alc/w	35°C	0%	C	I		K1=1.40	1989MSh (53803)	1982
Data for 0-60% w/w MeOH/H2O. In 60%, K1=1.88.										

Ag+	sol	none	25°C	0.0	C	T	H		1976DRa (53804)	1983
Kso(AgL)=-4.137										
Medium: 0.0001-0.0075 M NaClO4. Data for 20-35 C. At 20 C, Kso(AgL)=-4.145										
DH(Kso)=31.79 kJ mol-1, DS(Kso)=28.29 J K-1 mol-1.										

Ag+	ISE	NaClO4	30°C	1.0M	U			K1=3.4 B2=4.2	1967VSb (53805)	1984

Ag+	ISE	NaClO4	25°C	1.0M	U	I		K1=0.519 B2=0.56	1949LEa (53806)	1985
At I=0, K1=0.914; I=0.2 K1=0.602										

C7H7Cl		L		p-Chlorotoluene				CAS 95-49-8	(3130)	
2-Chlorotoluene; Cl.C6H4.CH3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sol	oth/un	25°C	0.50M	U			K1=0.77	19560Aa (55107)	1986

C7H7N		L						CAS 100-69-6	(299)	
2-Vinylpyridine; C5H4N.CH:CH2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	0.10M	U			K1=1.75 B2=3.55	1974ILa (55114)	1987

C7H7N		L						CAS 100-43-6	(294)	
4-Vinylpyridine; C5H4N.CH:CH2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	0.10M	U			K1=1.98 B2=4.08	1974ILa (55122)	1988

C7H7NO		L						CAS 350-03-8	(1479)	
3-Acetylpyridine; C5H4N.CO.CH3										

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

Ag+ ISE KNO3 25°C 0.50M U K1=1.696 B2=3.117 1987KLa (55137)1989

C7H7NO2 HL Anthranilic CAS 118-92-3 (1589)
2-Aminobenzoic acid, Anthranilic acid; H2N.C6H4.COOH

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

Ag+ gl oth/un 25°C ->0 U K1=1.86 1958LUa (55197)1990

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

Ag+ gl NaNO3 20°C 0.10M U K1=3.85 B2=7.00 1960ANb (55420)1991

C7H7NO2 L CAS 2549-09-8 (3153)
Methyl isonicotinate; C5H4N.CO.OCH3

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

Ag+ ISE oth/un 25°C ->0 U B2=2.45 1955MBc (55529)1992

C7H7NO2 L Me-Nicotinate CAS 92-60-7 (3152)
Methyl nicotinate; C5H4N.CO.OCH3

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

Ag+ ISE oth/un 25°C ->0 U B2=2.99 1955MBc (55530)1993

C7H8 L CAS 108-88-3 (2144)
Toluene; C6H5.CH3

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

Ag+ sp non-aq 20°C 100% U T H K1=3.97 1964TJa (55779)1994
Medium: toluene,C104-. K1=2.67(1.4 C); DH(K1)=14.2 kJ mol-1

Ag+ sol oth/un 25°C 0.50M U T H K1=0.08 19560Aa (55780)1995
DH(K1)=-11.4 kJ mol-1, DS=-36.7 J K-1 mol-1. K1=0.25(1.6 C)

Ag+ sol NaClO4 25°C 1.0M U K1=0.42 1952AKa (55781)1996

Ag+ sol KNO3 25°C 1.0M U K1=0.47 B2=1.14 1949AKa (55782)1997

C7H8N2O L Benzhydrazide CAS 613-94-5 (2565)
Benzoic acid hydrazide; C6H5.CO.NH.NH2

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

Ag+ ISE alc/w 25°C var U I K1=7.40 1986BBa (55833)1998
 In 0.07 mol parts EtOH/H2O, 0.1 M NaNO3(NaClO4); Ag-electrode.
 In 0.79 mol EtOH K1=6.47; In 0.79 mol DMFA/H2O: K1=5.62. Data also for DMSO

C7H8N2O L CAS 19547-38-7 (1474)
 Pyridine-2-carboxylic acid N-methylamide, Picolinic acid N-methylamide;

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

Ag+ ISE KNO3 25°C 0.50M U K1=1.52 B2=3.18 1985KLa (55840)1999
 Simultaneous measurement of Ag+ and H+

 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

Ag+ ix KNO3 20°C 0.50M U K1=5.6 1958H0b (55850)2000

 C7H8N2O2 L CAS 15513-52-7 (5516)
 3-Nitro-2,6-dimethylpyridine;

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

Ag+ gl NaNO3 25°C 0.50M C K1=1.12 1984ERa (55896)2001

 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

Ag+ ISE mixed 25°C 82% U K1=8.75 B2=11.56 1979TBa (55938)2002
 B3=3.70

Medium: 82% formamide

 Ag+ ISE mixed 25°C 0.20M U I B3=14.62 1978BMb (55939)2003

Medium: 40 mol/l H2O in H2O/Dimethylformamide mixed solvent

 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

Ag+ sp oth/un 25°C 0.10M U K1=13.4 1975LMb (56020)2004

 C7H8O L Anisole CAS 100-66-3 (3131)
 Methoxybenzene; C6H5.OCH3

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

 Ag+ sol oth/un 25°C ? U K1=0.40 1950AKa (56052)2005

 C7H8O4S HL (3159)
 4-Methoxybenzenesulfonic acid; CH3O.C6H4.SO3H

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

 Ag+ oth NaClO4 25°C 1.0M U K1=-0.12 B2=-0.22 1958ACb (56138)2006

 C7H9N L 2,3-Lutidine CAS 583-61-9 (4415)
 2,3-Dimethylpyridine; C5H3N.(CH3)2

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

 Ag+ ISE KNO3 25°C 0.50M U K1=2.45 B2=4.78 1972FHB (56181)2007

 C7H9N L 2,4-Lutidine CAS 108-37-4 (319)
 2,4-Dimethylpyridine; C5H3N.(CH3)2

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

 Ag+ ISE KNO3 25°C 0.10M U K1=1.93 B2=4.626 1987KLa (56192)2008

 Ag+ ISE KNO3 25°C 0.50M U K1=2.54 B2=5.07 1972FHB (56193)2009

 Ag+ ISE alc/w 25°C 96% U K1=2.66 B2=5.23 1972MTb (56194)2010
 Medium: 96% EtOH, 0.1 M NaClO4

 Ag+ gl KNO3 25°C 0.50M U K1=2.47 B2=5.18 1948BVA (56195)2011

 C7H9N L 2,5-Lutidine CAS 589-93-5 (3728)
 2,5-Dimethylpyridine; C5H3N(CH3)2

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

 Ag+ ISE KNO3 25°C 0.50M U K1=2.56 B2=4.91 1972FHB (56203)2012

 Ag+ gl KNO3 25°C 0.61M U K1=2.42 B2=4.95 1967SBd (56204)2013

 C7H9N L 2,6-Lutidine CAS 108-44-1 (723)
 2,6-Dimethylpyridine; C5H3N.(CH3)2

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

 Ag+ gl NaNO3 25°C 0.50M C K1=2.51 1984ERa (56211)2014

 Ag+ ISE KNO3 25°C 0.50M U K1=2.68 B2=5.06 1972FHB (56212)2015

 Ag+ ISE alc/w 25°C 96% U K1=2.65 B2=5.14 1972MTb (56213)2016

Medium: 96% EtOH, 0.1 M NaClO4

Ag+ ISE mixed 25°C 80% U I B2=5.28 1965PLa (56214)2017
Medium: acetone. B2=4.95(0%),4.90(10%),4.85(20%),4.81(30%),4.80(40%),
4.83(50%),4.89(60%),5.01(70%)

Ag+ ISE diox/w 25°C 90% U I B2=5.36 1965PLa (56215)2018
Medium: B2=4.83(10% dioxan),4.75(20%),4.70(30%),4.68(40%),4.70(50%),
4.76(60%),4.89(70%),5.10(80%)

Ag+ ISE alc/w 25°C 90% U I B2=4.81 1965PLa (56216)2019
Medium: EtOH. B2=5.01(10%),4.99(20%),4.92(30%),4.82(40%),4.71(50%),
4.60(60%),4.59(70%),4.66(80%)

C7H9N L CAS 100-71-0 (721)
2-Ethylpyridine; C5H4N.C2H5

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

Ag+ ISE KNO3 25°C 0.50M U K1=1.66 B2=4.469 1987KLa (56223)2020

Ag+ EMF KNO3 25°C 0.50M U H K1=2.29 B2= 4.55 1976BEb (56224)2021
Method: Ag electrode. By calorimetry, DH(K1)=-24.0 kJ mol⁻¹,
DS(K1)=-36.8 J K⁻¹ mol⁻¹, DH(B2)=-41.6, DS(B2)=-52.47.

Ag+ ISE alc/w 25°C 96% U K1=2.49 B2=4.92 1972MTb (56225)2022
Medium: 96% EtOH, 0.1 M NaClO4

C7H9N L 2-Methylaniline CAS 95-53-4 (3133)
2-Methylaminobenzene (o-Toluidine); CH3.C6H4.NH2

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

Ag+ ISE alc/w 25°C 100% U K1=2.04 B2=3.25 1960ALa (56233)2023
B3=3.48
Medium: EtOH

Ag+ oth alc/w 25°C 59% U B2=3.65 1952FYa (56234)2024

Ag+ dis KNO3 25°C 1.0M U K1=1.51 1952G0a (56235)2025
K(Ag+AgL)=0.15

Ag+ ISE alc/w 25°C 50% U B2=3.17 1934LAb (56236)2026
Medium: 50 mol% EtOH

Ag+ ISE oth/un 20°C 0.02M U B2=3.61 1924PAa (56237)2027

C7H9N L 3,4-Lutidine CAS 583-58-4 (2056)
3,4-Dimethylpyridine; C5H3N.(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.50M	U			K1=2.43 B2=4.85	1972FHb	(56251)2028

Ag+	ISE	alc/w	25°C	96%	U			K1=2.63 B2=5.20	1972MTb	(56252)2029
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Medium: 96% EtOH, 0.1 M NaClO4

C7H9N	L	3,5-Lutidine						(323)		
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3,5-Dimethylpyridine; C5H3N.(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.50M	U			K1=2.36 B2=4.66	1972FHb	(56274)2030

Ag+	ISE	alc/w	25°C	96%	U			K1=2.59 B2=4.99	1972MTb	(56275)2031
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Medium: 96% EtOH, 0.1 M NaClO4

Ag+	gl	KNO3	25°C	0.61M	U			K1=2.37 B2=4.65	1967SBd	(56276)2032
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C7H9N	L	3-Ethylpyridine						CAS 536-78-7 (2038)		
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3-Ethylazine, 3-Ethylpyridine; C5H4N.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	EMF	KNO3	25°C	0.50M	U	H		K1=2.23 B2= 4.53	1976BEb	(56294)2033

Method: Ag electrode. By calorimetry, DH(K1)=-21.8 kJ mol⁻¹, DS(K1)=-30.6 J K⁻¹ mol⁻¹, DH(B2)=-50.04, DS(B2)=-81.13.

C7H9N	L	3-Methylaniline						CAS 108-44-1 (755)		
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3-Methylaniline (3-Toluidine); CH3.C6H4.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	alc/w	25°C	100%	U			K1=2.35 B2=3.63 B3=3.98	1960ALa	(56303)2034

Medium: EtOH

Ag+	oth	alc/w	25°C	59%	U			B2=3.46	1952FYa	(56304)2035
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Ag+	dis	KNO3	25°C	1.0M	U			K1=1.47 K(Ag+AgL)=0.22	1952G0a	(56305)2036
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C7H9N	L	4-Ethylpyridine						CAS 536-75-4 (2055)		
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4-Ethylazine, 4-Ethylpyridine; C5H4N.C2H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	EMF	KNO3	25°C	0.50M	U	H		K1=2.34 B2= 4.67	1976BEb	(56319)2037

Method: Ag electrode. By calorimetry, DH(K1)=-25.6 kJ mol⁻¹, DS(K1)=-41.0 J K⁻¹ mol⁻¹, DH(B2)=-52.93, DS(B2)=-88.12.

Ag+ ISE a/c/w 25°C 96% U K1=2.46 B2=4.96 1972MTb (56320)2038
Medium: 96% EtOH, 0.1 M NaClO4

C7H9N L 4-Methylaniline CAS 106-49-0 (754)
4-Methylaniline (4-Toluidine); CH3.C6H4.NH2

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

Ag+ ISE a/c/w 25°C 100% U B2=3.86 1960ALa (56336)2039
B3=4.22

Medium: EtOH

Ag+ oth a/c/w 25°C 50% U B2=3.9 1952FYa (56337)2040

Ag+ dis KNO3 25°C 1.0M U K1=1.56 1952G0a (56338)2041
K(Ag+AgL)=0.09

Ag+ ISE a/c/w 25°C 50% U B2=3.48 1952G0a (56339)2042
Medium: 50 mol% EtOH

C7H9N L Benzylamine CAS 100-46-9 (3132)
Benzylamine; C6H5.CH2.NH2

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

Ag+ gl oth/un 25°C 0.50M U K1=3.02 B2=7.04 1983HNa (56353)2043
Medium: 0.1 M LHNO3

Ag+ ISE a/c/w 25°C 100% U B2=7.79 1960ALa (56354)2044
Medium: EtOH

Ag+ gl KNO3 30°C 1.0M U K1=3.02 B2=6.80 1954GFb (56355)2045

Ag+ gl KNO3 25°C 0.50M U T K1=3.29 B2=7.14 1948BVa (56356)2046
b(logB2)/dt=0.032

Ag+ ISE a/c/w 25°C 50% U B2=7.06 1934LAb (56357)2047

C7H9N L N-Me-Aniline CAS 100-61-8 (1344)
N-Phenyl-N-methylamine; C6H5.NH.CH3

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

Ag+ ISE a/c/w 25°C 96% U K1=1.38 B2=1.74 1961ALb (56365)2048
Medium: 96% EtOH

Ag+ dis KNO3 25°C 1.0M U K1=1.00 1952G0a (56366)2049
K(Ag+AgL)=-0.10

C7H9NO3S HL CAS 87655-41-2 (5520)
2,6-Dimethylpyridine-3-sulfonic acid;

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

Ag+ gl NaNO3 25°C 0.50M C K1=1.95 1984ERa (56449)2050

C7H9N3S L CAS 5351-69-9 (3161)
4-Phenylthiosemicarbazide;C6H5.NH.NH.CS.NH2

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

Ag+ ISE NaClO4 25°C 0.1M C K1=8.08 B2=10.66 1976BBh (56503)2051

C7H10N2 L CAS 25086-88-8 (4418)
2-Ethyl-1-vinylimidazole;

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

Ag+ gl KNO3 25°C 1.0M U K1=2.97 B2=6.22 1969NNa (56616)2052

C7H10N2 L CAS 6627-60-7 (3729)
6-Methyl-2-(aminomethyl)pyridine; CH3.C5H3N.CH2.NH2

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

Ag+ EMF NaNO3 20°C 0.10M U K1=4.4 1971ANa (56651)2053

C7H10N2O L (4442)
2-Hydroxyethyl-1-vinylimidazole;

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

Ag+ gl KNO3 25°C 1.0M U K1=2.86 B2=6.24 1969NNa (56663)2054

C7H10N2O L (4443)
4-Hydroxyethyl-1-vinylimidazole;

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

Ag+ gl KNO3 25°C 1.0M U K1=3.03 B2=6.40 1969NNa (56665)2055

C7H10N2OS HL CAS 51-52-5 (4468)
6-Propyl-2-thiouracil (6-propyl-4-hydroxy-2-mercaptopyrimidine);

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

Ag+ EMF none 25°C 0.0 C T H K1=11.8 B2=20.90 2002DZa (56675)2056
Method: Ag electrode. Data for 5-45 C. DH(K1)=-7.9 kJ mol⁻¹, DS(K1)=64.4
J K⁻¹ mol⁻¹; DH(B2)=-4.2, DS(B2)=163.

C7H10O2 L CAS 1670-46-8 (4416)
2-Acetylcyclopentanone;

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

Ag+ gl diox/w 30°C 75% U K1=4.22 1967SUa (56708)2057

C7H10O4 H2L CAS 5164-76-1 (959)
Pent-1-ene-5-dioic acid; CH2:CH.CH2.CH2.CH(COOH)2

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

Ag+ ISE oth/un 25°C 0.10M M K1=2.280 1975IPa (56743)2058
Medium: CH3COOK

C7H11NO4 H2L CAS 16598-06-4 (965)
N-(Prop-2-enyl)iminodiethanoic acid; CH2:CH.CH2.N(CH2.COOH)2

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

Ag+ ISE oth/un 25°C 0.10M M K1=4.71 B2=6.9 1975IPa (56783)2059
Medium: 0.1M K-acetate

C7H11N2+ L (4420)
2'-Aminoethylpyridinium cation

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

Ag+ gl KNO3 25°C 0.50M U K1=2.08 B2=4.46 1969PBa (57021)2060

C7H12 L CAS 2146-38-5 (3720)
1-Ethylcyclopentene; C5H7.CH2.CH3

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

Ag+ dis non-aq 30°C 100% U K1=0.56 1962GHa (57025)2061
Medium: ethylene glycol, 1.77 M AgNO3

C7H12 L CAS 591-49-1 (3716)
1-Methylcyclohexene; C6H9.CH3

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

Ag+ dis non-aq 30°C 100% U K1=0.10 1962GHa (57026)2062
Medium: ethylene glycol, 1.77 M AgNO3

C7H12 L CAS 694-35-9 (3721)
3-Ethylcyclopentene; C5H7.CH2.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	non-aq	30°C	100%	U		K1=1.07	1962GHa (57027)	2063
Medium: ethylene glycol, 1.77 M AgNO3									

C7H12		L					CAS 591-48-0	(3717)	
3-Methylcyclohexene; C6H9.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	non-aq	30°C	100%	U		K1=0.74	1962GHa (57028)	2064
Medium: ethylene glycol, 1.77 M AgNO3									

C7H12		L					CAS 3742-38-9	(3722)	
4-Ethylcyclopentene; C5H7.CH2.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	non-aq	30°C	100%	U		K1=0.85	1962GHa (57029)	2065
Medium: ethylene glycol, 1.77 M AgNO3									

C7H12		L					CAS 591-47-9	(3718)	
4-Methylcyclohexene; C6H9.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	non-aq	30°C	100%	U		K1=0.71	1962GHa (57030)	2066
Medium: ethylene glycol, 1.77 M AgNO3									

C7H12		L					CAS 1192-37-6	(3719)	
Methylenecyclohexane; CH2:C6H10									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	non-aq	30°C	100%	U		K1=0.98	1962GHa (57032)	2067
Medium: ethylene glycol, 1.77 M AgNO3									

C7H12N4		L					CAS 7198-75-6	(4423)	
1,5-Hexamethylenetetrazole;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	KNO3	25°C	0.10M	U	I	B2=3.05	1969DPc (57203)	2068
I=0.4: B2=2.98									

C7H12O2		HL					CAS 1119-60-4	(963)	
5-Heptenoic acid; CH3.CH:CH.CH2.CH2.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Ag+ ISE oth/un 25°C 0.10M M K1=2.075 1975IPa (57221)2069
Medium: K-acetate

C7H12O2S HL (4446)
(Pent-1-enylthio)ethanoic acid; CH2:CH.CH2.CH2.CH2.S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.20M U T H K1=4.19 B2=7.00 1971BFb (57252)2070
K(Ag+HL)=3.43
K(Ag+2HL)=5.85
B(Ag2L)=6.10
K1(0.6 C)=4.73, K1(39 C)=3.90, B2(0.6 C)=7.38, B2(39 C)=6.40
DH(K1)=-35.1 kJ mol⁻¹, DH(K2)=-20

Ag+ ISE oth/un 25°C 0.10M U I K1=4.21 B2=6.95 1968PSb (57253)2071
In acetate buffer, I=0.2 M: K(Ag+HL)=3.44

C7H12O2Se HL (4447)
(Pent-1-enylseleno)ethanoic acid; CH2:CH.CH2.CH2.CH2.Se.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.20M U T H K1=4.63 B2=7.97 1971BFb (57255)2072
K(Ag+HL)=3.99
K(Ag+2HL)=6.72
B(Ag2L)=6.44
K1(0.8 C)=5.30, K1(39.1 C)=4.43, B2(0.8 C)=9.05, B2(39.1 C)=7.42
DH(K1)=-38.2 kJ mol⁻¹, DH(K2)=-33

C7H12O4 H2L CAS 534-59-8 (480)
Butylpropanedioic acid (Butylmalonic acid); HOOC.CH(C4H9).COOH

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

Ag+ ISE oth/un 25°C 0.10M M K1=0.74 1975IPa (57329)2073
Medium: K-acetate

C7H12O4S2 H2L (1094)
1,3-Dithiopropene-S,S'-diethanoic acid; (HOOC.CH2.S.CH2)2.CH2

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

Ag+ ISE NaNO3 20°C 1.0M U K1=5.7 B2=8.1 1944LAa (57382)2074

C7H13NO2 HL CAS 103067-99-4 (1127)
2-Amino-hept-6-enoic acid; CH2:CH.CH2.CH2.CH2.CH(NH2).COOH

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

Ag+ gl KNO3 25°C 0.10M C K1=3.34 B2=6.41 1975IPb (57435)2075
K(Ag+HL)=1.73

C7H13NO3 HL (7175)

3,3'-Dimethylglutaramide; HOOCCH2C(CH3)2CH2CONH2

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

Ag+ gl KNO3 25°C 0.10M U K1=1.25 B2=4.82 1995Mwb (57470)2076

C7H13NO4 H2L CAS 16578-07-5 (341)

N-Propyliminodiethanoic acid; CH3.CH2.CH2.N(CH2.COOH)2

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

Ag+ ISE oth/un 25°C 0.10M M K1=4.29 B2=7.5 1975IPa (57522)2077
Medium: 0.10M K-acetate

C7H14N2O3S HL Gly-Met CAS 554-94-9 (726)

Glycyl-methionine; H2N.CH2.CO.NH.CH(CH2.CH2.S.CH3).COOH

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

Ag+ gl KNO3 25°C 0.10M C K1=4.7 B2=8.03 1984LPa (57790)2078

B(AgHL)=11.91

B(AgH2L)=17.4

B(Ag2L2)=12.34

C7H14N2O3S HL Met-Gly CAS 14486-03-4 (727)

Methionyl-glycine; H2N.CH(CH2.CH2.S.CH3).CO.NH.CH2.COOH

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

Ag+ gl KNO3 25°C 0.10M C K1=4.63 B2=8.29 1984LPa (57811)2079

B(AgHL)=10.72

B(AgH2L)=15.47

B(Ag2L2)=12.45

B(Ag2HL2)=18.70

C7H14N2O4S2 H2L CAS 28052-93-7 (526)

S,S'-Methylenebis(L-cysteine); H2N(HOOC)CH.CH2.S.CH2.S.CH2.CH(COOH)NH2

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

Ag+ gl KNO3 20°C 0.10M U K1=8.69 1975SSf (57826)2080

K(AgL)=6.40

C7H14O L CAS 6439-54-9 (3736)

cis-1-(2'-Methylpropoxy)propene; (CH3)2.CH.CH2.O.CH:CH.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	dis	non-aq	30°C	100%	U T H			K1=0.37	1968FKb (57846)	2081
Medium:ethylene glycol. K1=0.55(10 C),0.46(20 C). DH(K1)=-15.5 kJ mol-1, DS=-43.5 J K-1 mol-1										

C7H14O		L						CAS 16969-31-6	(3734)	
cis-1-Ethoxy-3-methylbut-1-ene; CH3.CH2.O.CH:CH.CH(CH3)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	dis	non-aq	30°C	100%	U T H			K1=0.54	1968FKb (57847)	2082
Medium:ethylene glycol. K1=0.78(10 C),0.65(20 C). DH(K1)=-19.7 kJ mol-1, DS=-53.9 J K-1 mol-1										

C7H14O		L						CAS 23186-68-7	(3737)	
trans-1-(2'-Methylpropoxy)propene; (CH3)2.CH.CH2.O.CH:CH.CH3										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	dis	non-aq	30°C	100%	U T H			K1=-0.26	1968FKb (57848)	2083
Medium:ethylene glycol. K1=-0.11(10 C),-0.22(20 C). DH(K1)=-11.7 kJ mol-1, DS=-44.3 J K-1 mol-1										

C7H14O		L						CAS 16969-18-9	(3735)	
trans-1-Ethoxy-3-methylbut-1-ene; CH3.CH2.O.CH:CH.CH(CH3)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	dis	non-aq	30°C	100%	U T H			K1=-0.30	1968FKb (57849)	2084
Medium:ethylene glycol. K1=-0.11(10 C),-0.23(20 C). DH(K1)=-14.6 kJ mol-1, DS=-53.9 J K-1 mol-1										

C7H14O2S		HL						CAS 22683-44-9	(4457)	
(Pentylthio)ethanoic acid; CH3.CH2.CH2.CH2.CH2.S.CH2.COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.10M	U I			K1=3.92 B2=6.95	1968PSb (57856)	2085
In acetate buffer, I=0.2 M, K(Ag+HL)=3.15										

C7H15N		L						CAS 108-49-6	(1648)	
2,6-Dimethylpiperidine; C5H9N.(CH3)2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	cal	KN03	25°C	0.50M	C H				1975EBa (57897)	2086
DH(K1)=-24.4 kJ mol-1, DS(K1)=-5.9 J K-1 mol-1.										
DH(B2)=-48.37, DS(B2)=-14.										

Ag+ EMF KNO3 25°C 0.50M U K1=3.93 B2=7.77 1973BBa (57898)2087

C7H15N L CAS 1484-80-6 (1647)
2-Ethylpiperidine; C5H10N.C2H5

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

Ag+ ISE KNO3 25°C 0.50M U K1=3.84 B2=7.36 1973BBa (57900)2088

C7H15N L CAS 766-09-6 (4425)
N-Ethylpiperidine; C5H10N-C2H5

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

Ag+ ISE KNO3 25°C 0.50M U K1=3.12 B2=5.20 1973BBa (57904)2089

C7H15NS2 L (6802)
7-Methyl-1,4-dithia-7-azacyclononane;

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

Ag+ gl R4N.X 25°C 0.10M M K1=7.66 B2=13.72 1990CKb (58012)2090
Medium: 0.1 M Me4NNO3

C7H16O2S2 L CAS 54278-31-8 (4462)
3,7-Dithianonan-1,9-diol; HO.CH2.CH2.S.CH2.CH2.S.CH2.CH2.OH

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

Ag+ ISE KNO3 20°C 1.0M U H 1970WSa (58089)2091
DH(K1)=-53.1 kJ mol⁻¹, DS=-79.1 J K⁻¹ mol⁻¹, DH(K2)=-43.5 kJ mol⁻¹,
DS=-97.1 J K⁻¹ mol⁻¹. DH(AgL+Ag)=1.7 kJ mol⁻¹, DS=51.5 J K⁻¹ mol⁻¹. pH=3

C7H17NS L CAS 3492-79-3 (1222)
1-Diethylamino-3-thiabutane; (C2H5)2N.CH2.CH2.S.CH3

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

Ag+ gl KNO3 25°C 0.50M U K1=4.88 B2=8.66 1977TGa (58182)2092
B(2Ag+L)=6.16
B(2Ag+2L)=11.23
B(Ag+HL)=2.59
B(Ag+HL+L)=7.00

B(Ag+2HL)=3.98

Ag+ cal KNO3 25°C 0.50M C H 1977TGc (58183)2093
DH(Ag+HL)=-27.3 kJ mol⁻¹, DH(Ag+2HL)=-53.6 DH(Ag+HL+L)=-57.7,
DH(B2)=-63.72, DH(2Ag+2L)=-64.31, DH(2Ag+L)=-34.9.

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

Ag+ EMF non-aq 25°C 100% C H K1=1.67 B2= 2.83 2002CNa (58241)2094
Method: Ag electrode. Medium: DMSO, 0.10 M Et₄NClO₄. By calorimetry,
DH(K1)=-21.7 kJ mol⁻¹, DS(K1)=-41 J K⁻¹ mol⁻¹; DH(B2)=-39.6, DS(B2)=-79.

Ag+ ISE KNO₃ 25°C 1.00M C K1=2.21 1994GYa (58242)2095
B(AgHL)=11.26

C7H18N₂ L Thiospermidine CAS 86108-46-5 (8300)
4-[(3-Aminopropyl)thio]-1-butanamine;

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

Ag+ gl KNO₃ 25°C 0.50M C B2=8.72 1984SGe (58263)2096
K(Ag+H₂L)=3.23
K(Ag+2H₂L)=5.10
K(2Ag+2HL)=13.16
K(2Ag+HL+L)=14.98

Additional method: Ag electrode. B(Ag₂L₂)=15.76,
K(Ag+H₂L+HL)=6.83, K(Ag+2HL)=7.67, K(Ag+HL+L)=8.56, B(Ag₂L)=10.46.

Ag+ cal KNO₃ 25°C 0.50M C H 1984STc (58264)2097
DH(Ag+H₂L)=-33.1 kJ mol⁻¹, DS(Ag+H₂L)=-49 J K⁻¹ mol⁻¹; DH(Ag+2H₂L)=-66.9,
DS(Ag+2H₂L)=-127; DH(2Ag+2L)=-127.6, DS=-126; DH(B₂)=-68.0, DS(B₂)=-61.

C7H19N₃ L CAS 105-84-0 (4429)
5-Methyl-2,5,8-triazanonane; CH₃.NH.CH₂.CH₂.N(CH₃).CH₂.CH₂.NH.CH₃

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

Ag+ EMF NaNO₃ 25°C 1.3M C K1=5.18 B2= 7.38 1983Ymb (58323)2098
B(AgHL)=13.52
B(AgHL₂)=16.95
B(Ag₂L₂)=12.40
B(Ag₃L₂)=14.29

Ag electrode. B(AgH-1L)=-6.67

C8H5N5O₆ H3L Murexide (453)
Purpuric acid (Murexide is ammonium salt);

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

Ag+ sp alc/w 25°C 100% U I K1=3.87 1987GKb (58467)2099
Medium: MeOH. Also in DMF (K1=4.33)

C8H5O₂F₃ HL TTA CAS 326-91-0 (165)
4,4,4-Trifluoro-1-(2-thienyl)butane-1,3-dione; F₃C.CO.CH₂.CO.C₄H₃S

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

Ag+ dis NaClO4 25°C 0.10M U K1=1.10 1973STa (58591)2100

C8H6 L Ethynylbenzene CAS 536-74-3 (4471)
Phenylacetylene; C6H5.CCH

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

Ag+ EMF NaNO3 25°C 1.0M U K1=0.44 1973STd (58731)2101

C8H7NO2 HL (296)
2-(Carboxyvinyl)pyridine; C5H4N.CH:CH.COOH

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

Ag+ gl KNO3 25°C 0.10M U K1=1.83 B2=3.6 1974ILa (59093)2102

C8H7NO4S HL CAS 6375-65-1 (4563)
(2-Nitrophenylthio)ethanoic acid; O2N.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=1.94 1968PRa (59150)2103
Acetate buffer. I=0.2, K(Ag+HL)=1.84

C8H7NO4S HL CAS 3406-75-5 (4564)
(4-Nitrophenylthio)ethanoic acid; O2N.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U T K1=1.86 1969BLc (59155)2104
Acetate buffer.
K1(1.2C)=2.13, K1(38.4C)=1.71, B2(1.2C)=3.6

Ag+ ISE oth/un 20°C 0.10M U I K1=1.98 1968PRa (59156)2105
Acetate buffer. I=0.2, K(Ag+HL)=1.58

C8H7NO4Se HL (4565)
(2-Nitrophenylseleno)ethanoic acid; O2N.C6H4.Se.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=2.66 B2=4.90 1968PSa (59158)2106
Acetate buffer. I=0.2, K(Ag+HL)=2.18

C8H7NO4Se HL (4566)
(3-Nitrophenylseleno)ethanoic acid; O2N.C6H4.Se.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	20°C	0.10M	U	I		K1=3.09 B2=5.60	1968PSa	(59160)2107
Acetate buffer. I=0.2, K(Ag+HL)=2.35										

C8H7N04Se			HL					(4567)		
(4-Nitrophenylseleno)ethanoic acid; O2N.C6H4.Se.CH2.COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.10M	U	T		K1=2.82 B2=5.15	1969BLc	(59162)2108
Acetate buffer.										
K1(1.2C)=3.17, K1(38.6C)=2.6, B2(1.2C)=5.71, B2(38.6C)=5.00										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	20°C	0.10M	U	I		K1=2.89 B2=5.32	1968PSa	(59163)2109
Acetate buffer. I=0.2, K(Ag+HL)=2.26										

C8H7O2BrS			HL					CAS 3406-76-6 (4560)		
(4-Bromophenylthio)ethanoic acid; Br.C6H4.S.CH2.COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.10M	U	T		K1=2.53 B2=4.56	1969BLc	(59194)2110
Acetate buffer.										
K1(1.2C)=2.89, K1(38.3C)=2.35, B2(1.2C)=4.78, B2(38.3C)=4.48										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	20°C	0.10M	U	I		K1=2.61 B2=4.64	1968PRa	(59195)2111
Acetate buffer. I=0.2, K(Ag+HL)=2.21										

C8H7O2BrSe			HL					CAS 78377-03-4 (4561)		
(2-Bromophenylseleno)ethanoic acid; Br.C6H4.Se.CH2.COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	20°C	0.10M	U	I		K1=3.36 B2=6.28	1968PSa	(59197)2112
Acetate buffer. I=0.2, K(Ag+HL)=2.69										

C8H7O2BrSe			HL					CAS 17893-52-6 (4562)		
(4-Bromophenylseleno)ethanoic acid; Br.C6H4.Se.CH2.COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.10M	U	T		K1=3.42 B2=6.01	1969BLc	(59199)2113
Acetate buffer.										
K1(1.2C)=3.85, K1(38.4C)=3.21, B2(1.2C)=6.67, B2(38.4C)=5.80										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	20°C	0.10M	U	I		K1=3.49 B2=6.31	1968PSa	(59200)2114
Acetate buffer. I=0.2, K(Ag+HL)=2.73										

C8H7O2ClS			HL					CAS 18619-18-6 (4554)		

(2-Chlorophenylthio)ethanoic acid; Cl.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=2.49 B2=4.63 1968PRa (59228)2115
Acetate buffer. I=0.2, K(Ag+HL)=1.87

C8H7O2ClS HL CAS 3996-38-1 (4555)
(3-Chlorophenylthio)ethanoic acid; Cl.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U T K1=2.43 B2=4.28 1969BLc (59230)2116
Acetate buffer
K1(2.1C)=2.78, K1(38.6C)=2.28, B2(2.1C)=4.80, B2(38.6C)=4.16

Ag+ ISE oth/un 20°C 0.10M U I K1=2.51 B2=4.57 1968PRa (59231)2117
Acetate buffer. I=0.2, K(Ag+HL)=2.04

C8H7O2ClS HL CAS 3405-88-7 (4556)
(4-Chlorophenylthio)ethanoic acid; Cl.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U T K1=2.57 B2=4.41 1969BLc (59233)2118
Acetate buffer
K1(1.3C)=2.9, K1(39.7C)=2.38, B2=(1.3C)=4.83, B2(38.7C)=4.36

Ag+ ISE oth/un 20°C 0.10M U I K1=2.64 B2=4.70 1968PRa (59234)2119
I= 0.2, K(Ag+HL)=2.07

C8H7O2ClSe HL (4557)
(2-Chlorophenylseleno)ethanoic acid; Cl.C6H4.Se.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=3.27 B2=5.98 1968PSa (59236)2120
Acetate buffer. I=0.2, K(Ag+HL)=2.57

C8H7O2ClSe HL (4558)
(3-Chlorophenylseleno)ethanoic acid; Cl.C6H4.Se.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U T K1=3.33 B2=5.64 1969BLc (59238)2121
Acetate buffer.
K1(2.3C)=3.75, K1(38.7C)=3.10, B2(2.3C)=6.39, B2(38.7C)=5.57

Ag+ ISE oth/un 20°C 0.10M U I K1=3.39 B2=5.99 1968PSa (59239)2122
Acetate buffer. I=0.2, K(Ag+HL)=2.67

C8H7O2ClSe HL (4559)
(4-Chlorophenylseleno)ethanoic acid; Cl.C6H4.Se.CH2.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.10M	U	T		K1=3.44 B2=5.90	1969BLc	(59241)2123

Acetate buffer. T=24.9C
K1(1.2C)=3.87, B2(1.2C)=6.53)

Ag+	ISE	oth/un	20°C	0.10M	U	I		K1=3.50 B2=6.19	1968PSa	(59242)2124
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Acetate buffer. I=0.2, K(Ag+HL)=2.75

C8H8 L Vinylbenzene CAS 100-42-5 (811)
Styrene; C6H5.CH:CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	nmr	non-aq	30°C	100%	U			K1=0.35	1973DBa	(59249)2125

Medium: CH3CN

Ag+	ISE	alc/w	25°C	100%	U			K1=0.71	1973STd	(59250)2126
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Medium: aq. EtOH, 1.0 M NaNO3

Ag+	sol	KNO3	25°C	1.0M	U	T		K1=1.24 B2=1.19	1969INa	(59251)2127
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K1(0 C)=1.56, K2(0 C)=0.08

Ag+	dis	KNO3	25°C	1.0M	U			K1=1.28 B2=1.48	1968FKa	(59252)2128
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Ag+	dis	KNO3	25°C	1.0M	U			K1=1.26 K(Ag+AgL)=-0.09	1950AKa	(59253)2129
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C8H8N2 L CAS 39965-81-6 (5519)
4-Cyano-2,6-dimethylpyridine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	NaNO3	25°C	0.50M	C			K1=1.56	1984ERa	(59303)2130

C8H8O HL Acetophenone CAS 98-86-2 (3187)
Acetophenone; C6H5.CO.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sol	KNO3	25°C	1.0M	U			K1=-0.27 B2=-1.23	1950AKa	(59417)2131

C8H8O L Phenoxyethene CAS 98-86-2 (3794)
Phenyl vinyl ether; C6H5.O.CH:CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ag+ dis KNO3 25°C 1.0M U K1=0.72 B2=0.62 1968FKa (59418)2132

C8H8O2S HL CAS 103-04-8 (3223)
(Phenylthio)ethanoic acid; C6H5.S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U T K1=2.77 B2=4.86 1969BLc (59621)2133
In acetate buffer. K1(1.8 C)=3.10, K1(38.7 C)=2.59, B2(1.8 C)=5.10,
B2(38.7 C)=5.94

Ag+ ISE oth/un 20°C 0.10M U I K1=2.82 B2=4.77 1968PRa (59622)2134
In acetate buffer, I=0.2: K(Ag+HL)=2.29

Ag+ ISE NaNO3 20°C 1.0M U B2=7.27 1944LAa (59623)2135

C8H8O2S HL 2-Thenoylacetone CAS 3151-27-2 (3224)
2-Thenoylacetone, 1-(2'-Thienyl)butane-1,3-dione; C4H3S.CO.CH2.CO.CH3

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

Ag+ gl diox/w 30°C 75% U K1=5.19 1967SUa (59635)2136

C8H8O2S HL CAS 13205-48-6 (4506)
4-(Methylthio)benzoic acid; CH3.S.C6H4.COOH

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

Ag+ ISE oth/un 25°C 0.20M U K1=2.79 1968PSb (59651)2137
Acetate buffer

C8H8O2Se HL CAS 17893-46-8 (4507)
(Phenylseleno)ethanoic acid; C6H5.Se.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U T K1=3.62 B2=6.10 1969BLc (59658)2138
Acetate buffer. K1(4 C)=3.99, K1(38.7 C)=3.39; B2(4 C)=6.95, B2(38.7 C)=5.94

Ag+ ISE oth/un 20°C 0.10M U I K1=3.70 B2=6.42 1968PSa (59659)2139
In acetate buffer, I=0.2: K(Ag+HL)=2.96

C8H8O3 HL Fuoylacetone CAS 67748-89-4 (3192)
Fuoylacetone; C4H3O.CO.CH2.CO.CH3

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

Ag+ gl diox/w 30°C 75% U K1=7.61 1967SUa (60007)2140

C8H8O3 HL Phenoxyacetic CAS 122-59-8 (1153)
Phenoxyethanoic acid; C6H5.O.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.20M U T K1=0.92 1969BLc (60032)2141
K1(1.7 C)=1.01, K1(38.8 C)=0.91, acetate buffer

Ag+ ISE oth/un 20°C 0.20M U K1=0.58 1968PSa (60033)2142

C8H9N L CAS 17618-94-9 (300)

2-Allylpyridine; C5H4N.CH2.CH:CH2

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

Ag+ gl KNO3 25°C 0.10M U K1=2.97 B2=4.8 1974ILa (60144)2143

C8H9NO2S HL CAS 104-18-7 (4575)
(4-Aminophenylthio)ethanoic acid; H2N.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=3.22 B2=5.60 1968PRa (60368)2144
Acetate buffer. K(Ag+H2L)= 1.98

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

Ag+ sol alc/w 25°C 50% U K1=0.16 19560Aa (60674)2145
Medium: 50% MeOH

Ag+ sol none 25°C 0.0 U K1=0.46 B2=0.96 1949AKa (60675)2146

C8H10 L m-Xylene CAS 108-38-3 (3073)
1,3-Dimethylbenzene, 3-Xylene; CH3.C6H4.CH3

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

Ag+ sp non-aq 20°C 100% U T H K1=6.07 1964TJa (60677)2147
Medium: m-xylene, C104. K1=3.62(1.4 C); DH=18.8 kJ mol-1

Ag+ sol alc/w 25°C 50% U K1=0.13 19560Aa (60678)2148
Medium: 50% MeOH

Ag+ sol none 25°C 0.0 U K1=0.48 B2=0.99 1949AKa (60679)2149

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

Ag+ sol none 25°C 0.0 U K1=0.42 B2=0.94 1949AKa (60680)2150

C8H10 L Ethylbenzene CAS 100-41-4 (3186)
Ethylbenzene; C6H5.CH2.CH3

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

Ag+ sol alc/w 25°C 50% U K1=0.01 19560Aa (60684)2151
Medium: 50% MeOH

C8H10N2O L 0-Tolylurea CAS 614-77-7 (4583)
1-Methyl-2-(N-carbamyl)benzene; CH3.C6H4.NH.CO.NH2

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

Ag+ ISE mixed 25°C 82% U K1=9.31 B2=12.01 1979TBd (60708)2152
B3=14.50
Medium: 82% v/v DMFA/H2O; 0.2 M KNO3

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

Ag+ gl KNO3 25°C 0.10M U 1970GSb (60713)2153
K(Ag+HL)=4.40
K(Ag+2HL)=9.32
K(Ag(HL)2+OH)=5.02

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

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

Ag+ ISE mixed 25°C 82% U K1=8.95 B2=11.45 1979TBa (60771)2154
B3=13.50
Medium: 82% formamide

C8H10O3S2 HL (3228)
4-(Ethylthio)benzenesulfonic acid; CH3.CH2.S.C6H4.SO3H

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

Ag+ ISE NaCl04 25°C 0.20M U K1=2.59 B2=4.28 1958ACb (60841)2155
K3=1.23
K4=1.04

Ag+ ISE NaClO4 25°C 0.10M U K1=2.62 B2=4.30 1957ACa (60842)2156
K3=0.4

C8H11N L CAS 69376-33-6 (542)

2,4,6-Trimethylpyridine; C5H2N.(CH3)3

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

Ag+ ISE KNO3 25°C 0.10M U B2=4.675 1987KLa (60939)2157

Ag+ ISE alc/w 25°C 96% U K1=2.86 B2=5.76 1972MTb (60940)2158
Medium: 96% EtOH, 0.1 M NaClO4

Ag+ ISE alc/w 25°C 50% U B2=4.75 1934LAb (60941)2159

Medium: 50 mole % EtOH

C8H11N L 2,4-Xylidine CAS 95-78-3 (3803)

2,4-Dimethylaniline; (CH3)2.C6H3.NH2

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

Ag+ ISE alc/w 25°C 100% U K1=2.49 B2=3.71 1960ALa (60946)2160
B3=3.99

Medium: EtOH

C8H11N L 2,6-Xylidine CAS 87-62-7 (3200)

2,6-Dimethylaniline; H2N.C6H3(CH3)2

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

Ag+ gl alc/w 25°C 50% U K1=1.47 B2=2.80 1955ANc (60949)2161
Medium: 50 mole % EtOH

Ag+ dis KNO3 25°C 1.0M U K1=1.62 1952G0a (60950)2162
K(Ag+AgL)=0.4

C8H11N L CAS 622-39-9 (303)

2-(n-Propyl)pyridine; C5H4N.CH2.CH2.CH3

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

Ag+ EMF KNO3 25°C 0.50M U H K1=2.12 B2= 4.11 1976BEb (60956)2163
Method: Ag electrode. By calorimetry, DH(K1)=-23.4 kJ mol⁻¹,
DS(K1)=-37.7 J K⁻¹ mol⁻¹, DH(B2)=-40.7, DS(B2)=-57.87.

Ag+ gl KNO3 25°C 0.10M U K1=2.15 B2=4.45 1974ILa (60957)2164

C8H11N L 3,5-Xylidine CAS 108-69-0 (3201)

3,5-Dimethylaniline; H2N.C6H3(CH3)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	dis	KNO3	25°C	1.0M	U		K1=1.63 K(Ag+AgL)=0.04	1952G0a (60968)	2165

C8H11N		L					CAS 1122-81-2	(3802)	
4-Propylpyridine; C5H4N.CH2.CH2.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	alc/w	25°C	96%	U		K1=2.53 B2=4.92	1972MTb (60978)	2166
Medium: 96% EtOH, 0.1 M NaClO4									

C8H11N		L					CAS 104-90-5	(4480)	
5-Ethyl-2-methylpyridine; CH3.C5H3N.CH2.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	alc/w	25°C	96%	U		K1=2.57 B2=5.09	1972MTb (60982)	2167
Medium: 96% EtOH, 0.1 M NaClO4									

C8H11N		L					CAS 103-69-5	(3804)	
N-Ethylaniline; C6H5.NH.CH2.CH3									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	alc/w	25°C	96%	U		K1=1.95 B2=2.95	1961ALb (60985)	2168
Medium: 96% EtOH, <0.01 M									

C8H11N		L				DiMethylaniline	CAS 121-69-7	(1343)	
N-Phenyl-N,N-dimethylamine; C6H5.N(CH3)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	alc/w	25°C	96%	U		K1=0.98	1961ALb (60987)	2169
Medium: 96% EtOH, <0.01 M									

C8H11NO		L					CAS 20819-02-5	(5524)	
4-Methoxy-2,6-dimethylpyridine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	gl	NaNO3	25°C	0.50M	C		K1=2.62	1984ERa (61031)	2170

C8H11NO3S		HL					CAS 121-58-4	(3241)	
N,N-Dimethylsulfanilic acid; 4-(CH3)2N.C6H4.SO3H									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	NaClO4	25°C	0.10M	U		K1=0.76 B2=1.36	1958ACb (61171)	2171

C8H12N2 H2L CAS 6971-57-9 (1099)
6-Methyl-2-(methylaminomethyl)pyridine; (CH3.NH.CH2)(CH3)C5H3N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	0.50M	U			K1=3.588 B2=7.262 B(AgHL)=10.457 B(Ag2L)=5.37 B(Ag2L2)=10.660	1974GEa	(61366)2172

C8H12N2S L CAS 38585-75-0 (8242)
2-[(2-Pyridinylmethyl)thio]ethanamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	0.50M	C			K(Ag+H2L)=1.16 K(Ag+2H2L)=1.89 K(Ag+HL)=3.32 K(2Ag+2HL)=8.9	1983SGb	(61537)2173

Additional method: Ag ion selective electrode. K(2Ag+HL+L)=12.77,
B(Ag2L2)=15.28, K(Ag+H2L+HL)=4.2, K(Ag+2HL)=6.53, B(Ag2L)=8.42.

Ag+	cal	KNO3	25°C	0.50M	C	H			1983SHe	(61538)2174
DH(Ag+H2L)=-20 kJ mol-1, DH(Ag+HL)=-31.8, DH(Ag+2HL)=-65.6, DH(Ag+HL+H2L)=-41, DH(2Ag+2HL)=-87.7, DH(2Ag+HL+L)=-115, DH(2Ag+2L)=-133.6										

C8H12O2 HL CAS 874-23-7 (3203)
2-Acetylcyclohexanone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	diox/w	30°C	75%	U			K1=6.52	1967SUa	(61664)2175

C8H12O4 H2L CAS 6018-58-3 (960)
Hex-1-ene-6-dioic acid; CH2:CH.CH2.CH2.CH2.CH(COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.10M	M			K1=2.343	1975IPa	(61725)2176
Medium: K-acetate										

C8H13N2 + L (4483)
3'-Aminopropylpyridinium cation

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	0.50M	U			K1=2.91 B2=6.01	1969PBa	(61879)2177

C8H14 L CAS 453-24-3 (3790)
1-Ethylcyclohexene; CH3.CH2.C6H9

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

Ag+ dis non-aq 30°C 100% U K1=0.11 1962GHa (61880)2178
Medium: ethylene glycol, 1.77 M AgNO3

C8H14 L CAS 695-12-5 (3789)
Ethylidenecyclohexane; CH3.CH:C6H10

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

Ag+ dis non-aq 30°C 100% U K1=0.48 1962GHa (61881)2179
Medium: ethylene glycol, 1.77 M AgNO3

C8H14N4 L (4490)
1,5-Heptamethylenetetrazole;

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

Ag+ ISE KNO3 25°C 0.10M U I B2=3.08 1969DPc (61969)2180
I=0.4: B2=3.32

C8H14N4 L CAS 46002-63-5 (3210)
1-Cyclohexyl-5-methyl-1,2,3,4-tetrazole;

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

Ag+ gl non-aq 25°C 100% U B2=2.26 1959PHa (61970)2181
medium: CH3CN

C8H14O4S H2L (141)
4,4'-Thiodibutanoic acid; HOOC.CH2.CH2.CH2.S.CH2.CH2.CH2.COOH

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

Ag+ EMF NaClO4 25°C 3.0M U K1=4.53 B2= 7.52 1985HIa (62105)2182
B(AgHL)=9.70
B(AgH2L)=14.24
B(AgH2L2)=18.51
B(AgH4L2)=27.16

Method: Ag/AgCl electrode.

Ag+ ISE NaNO3 20°C 1.0M U K1=4 B2=7 1944LAa (62106)2183

C8H14O4S2 H2L CAS 2906-60-7 (8435)
4,4'-Dithiodibutanoic acid;

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

Ag+ EMF NaClO4 25°C 3.0M U 1985HIa (62107)2184

B(AgHL)=8.28
B(AgH2L)=12.80

Method: Ag/AgCl electrode.

C8H14O4S2 H2L (3233)
Tetramethylenedithiodiethanoic acid; HOOC.CH2.S.(CH2)4.S.CH2.COOH

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

Ag+ ISE NaNO3 20°C 1.0M U K1=6.0 B2=8.3 1944LAa (62109)2185

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

Ag+ ISE oth/un 25°C 0.20M U K1=8.52 1971FPa (62118)2186

B(Ag2L)=10.99
B(Ag3L)=12.2
K(Ag+HL)=5.47
K(2Ag+HL)=7.48

Medium: acetate buffers at pH 1.5 and 5.95

C8H14O5S2 H2L CAS 4408-66-6 (8332)
Oxybis(ethylenethio)diethanoic acid;

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

Ag+ gl KNO3 20°C 0.10M U K1=4.53 1977CAc (62132)2187

C8H15N04 H2L CAS 33994-68-7 (347)
N-Butyliminodiethanoic acid; C4H9.N(CH2.COOH)2

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

Ag+ ISE oth/un 25°C 0.10M M K1=4.36 B2=7.6 1975IPa (62186)2188

Medium: 0.10M K-acetate

C8H16N2O3S2 HL SMC-SMC CAS 28910-52-4 (734)
S-Methylcysteinyl-S-methylcysteine; H2N.CH(CH2.S.CH3)CO.NH.CH(CH2.S.CH3).COOH

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

Ag+ gl KNO3 25°C 0.10M C K1=6.19 B2=9.59 1984LPa (62450)2189

B(AgHL)=11.53
B(AgH2L)=14.75
B(Ag2L2)=15.13
B(Ag2HL2)=20.79

C8H16N2O4S2 H2L (4896)
2,9-Diamino-4,7-dithiadecane-1,10-dioic acid; HOOCCH(NH2)CH2SCH2CH2SCH2CH(NH2)COOH

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

Ag+ gl KNO3 20°C 0.10M U K1=8.32 1975SSf (62553)2190
K(Ag+H)=6.05

C8H16O2S HL CAS 22683-45-0 (4546)
(Hexylthio)ethanoic acid; CH3.CH2.CH2.CH2.CH2.CH2.S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U I K1=3.94 B2=7.10 1968PSb (62623)2191
Acetate buffer. I=0.2, K(Ag+HL)=3.16

C8H16O2S L (5721)
2-Methyl-3-oxa-5-thianon-4-one; (CH3)2CH.O.CO.S.C4H9

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

Ag+ EMF alc/w 25°C 100% U K1=1.04 B2=1.61 1989MSa (62624)2192
0.1 M NaClO4 in EtOH

C8H16O2S2 L CAS 294-95-1 (8604)
1,7-Dioxa-4,10-dithiacyclododecane;

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

Ag+ cal non-aq 25°C 100% C H K1=7.56 B2=12.85 1986BUe (62625)2193
DH(K1)=-60.8 kJ mol⁻¹, DS(K1)=-59.7 J K⁻¹ mol⁻¹; DH(K2)=ca. 0,
DS(K2)=ca. 101. Medium: MeOH.

C8H16O4 L 12-Crown-4 CAS 294-93-9 (174)
1,4,7,10-Tetraoxacyclododecane; cyclo(-O.(CH2.CH2.O)3.CH2.CH2-)

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

Ag+ cal non-aq 25°C 100% C H K2=1.72 1992BCf (62645)2194
Medium: MeOH. DH(K2)=-31.7 kJ mol⁻¹, DS(K2)=-73.5 J K⁻¹ mol⁻¹.

Ag+ gl non-aq 25°C 100% C K1=3.98 B2=7.29 1989BPa (62646)2195
Medium: anhydrous propylene carbonate, 0.1 M Et4NC104

Ag+ ISE alc/w 25°C 100% C H T K1=1.61 B2=3.51 1987BUa (62647)2196
Medium: MeOH. DH(K1)=-10.7 kJ mol⁻¹; DS=-5.4 J K⁻¹ mol⁻¹; DH(B2)=-38.6; DS=-63

Ag+ cal non-aq 25°C 100% C H K2=1.90 1986BUe (62648)2197
DH(K1)=-10.7 kJ mol⁻¹, DS(K1)=-5.4 J K⁻¹ mol⁻¹; DH(K2)=-27.9, DS(K2)=-57.4

Medium: MeOH.

C8H17N L CAS 10388-95-1 (1646)
2-Propylpiperidine; C5H10N.CH2.CH2.CH3

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

Ag+ ISE KNO3 25°C 0.50M U K1=4.0 B2=7.52 1973BBa (62745)2198

C8H17NO3 L CAS 41775-76-2 (6751)
10-Aza-1,4,7-trioxacyclododecane;

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

Ag+ EMF alc/w 25°C 100% C I K1=4.34 B2= 8.14 2003TCb (62756)2199
Medium: 100% MeOH. Also data for EtOH, DMSO, acetonitrile, propylene carbonate and nitromethane.

Ag+ EMF non-aq 25°C 100% C K1=3.73 B2= 6.80 1999THa (62757)2200
Medium: acetonitrile. Method: Ag/Ag+ electrode.

Ag+ EMF non-aq 25°C 100% U K1=3.24 B2= 5.98 1998HTb (62758)2201
Medium: DMSO. Method: Ag/Ag+ electrode

C8H18N2O2 L CAS 294-92-8 (654)
1,7-Dioxo-4,10-diazacyclododecane;

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

Ag+ ISE R4N.X 25°C 0.05M U H K1=11.47 B2=16.51 2002BSd (62836)2202
Method: Ag+ ISE. Medium: propylene carbonate, 0.05 M Et4NClO4. By calorimetry: DH(K1)=-82.0 kJ mol⁻¹, DS=-56.4 J K⁻¹ mol⁻¹; DH(K2)=-26.7, DS=6.4.

Ag+ cal non-aq 25°C 100% C H K1=6.514 B2= 9.52 1986BUe (62837)2203
DH(K1)=-31.9 kJ mol⁻¹, DS(K1)=17 J K⁻¹ mol⁻¹; DH(K2)=-21.5, DS(K2)=-15.
Medium: MeOH.

Ag+ gl R4N.X 25°C 0.10M U K1=4.65 B2=12.0 1985NSb (62838)2204
B(AgHL)=12.0

C8H18O2S2 L (4550)
3,8-Dithiadecan-1,10-diol; HO.CH2.CH2.S.(CH2)4.S.CH2.CH2.OH

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

Ag+ ISE KNO3 20°C 1.0M U H K1=5.07 B2=8.06 1970WSa (62974)2205
K(AgL+Ag)=2.47
DH(K1)=-51.0 kJ mol⁻¹, DS=-77.4 J K⁻¹ mol⁻¹; DH(K2)=-28.9, DS=-40.6.
DH(AgL+Ag)=-8.4 kJ mol⁻¹, DS=18.4 pH=3

C8H18O2S3 L CAS 14440-77-8 (4551)
3,6,9-Trithiaundecan-1,11-diol; (HO.CH2.CH2.S.CH2.CH2.)2S

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

Ag+ ISE KNO3 20°C 1.0M U H K1=7.61 B2=11.64 1970WSa (62975)2206
K(AgL+Ag)=2.24
DH(K1)=-78.2 kJ mol⁻¹, DS=-120.5 J K⁻¹ mol⁻¹; DH(K2)=-28.0, DS=-18.8;
DH(AgL+Ag)=-7.5 kJ mol⁻¹, DS=17.2 pH=3

C8H18O4 L Triglyme CAS 112-49-2 (2358)
1,2-Bis(methoxyethoxy)ethane; CH3O.C2H4O.CH2.CH2.OC2H4.OCH3

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

Ag+ ISE non-aq 25°C 100% C K1=2.83 B2=3.73 1989BPa (62977)2207
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

C8H19N L t-Octylamine CAS 107-45-9 (3212)
1,1,3,3-Tetramethylbutylamine; (CH3)3C.CH2.C(CH3)2.NH2

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

Ag+ gl alc/w 25°C 50% U K1=4.02 B2=8.16 1955ANc (63010)2208
Medium: 50 mole% EtOH

C8H19N L (3810)
Bis(2-methylpropyl)amine, di-isobutylamine; (CH3.CH(CH3).CH2)2NH

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

Ag+ oth non-aq ? 100% U B2=8.8 1965MMa (63011)2209
Method: coulometric titration. Medium: acetone, 0.1 M NaClO4

C8H19N L CAS 111-92-2 (3211)
Di-s-butylamine; CH3.CH2.(CH3)CH.NH.CH(CH3).CH2.CH3

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

Ag+ gl alc/w 25°C 50% U K1=3.38 B2=6.32 1955ANc (63014)2210
Medium: 50 mole% EtOH

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

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

Ag+ EMF non-aq 25°C 100% C I K1=3.26 B2= 5.94 1999THa (63018)2211
Medium: acetonitrile. Method: Ag/Ag+ electrode.
Also data for medium: DMSO

Ag+ ISE non-aq 25°C 100% C H K1=2.66 B2=5.16 1987CBa (63019)2212
DH1= -31.80 kJ mol⁻¹, DH(K2) = -29.80, DS1= -56.0, DS(K2) = -51.5.
Ag/AgCl electrode in DMSO

Ag+ oth non-aq ? 100% U B2=10.18 1965MMA (63020)2213
Method: coulometric titration. Medium: acetone, 0.1 M NaClO4

Ag+ gl alc/w 25°C 50% U K1=3.14 B2=6.56 1955ANc (63021)2214
Medium: 50 mole% EtOH

C8H19NO L CAS 96-80-0 (2664)
2-Di(isopropyl)aminoethanol; ((CH3)2CH)2N.CH2.CH2.OH

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

Ag+ sol oth/un 20°C 0.0 U B2=3.84 1961ALa (63027)2215
By glass electrode: B2=4.07

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

Ag+ ISE alc/w 25°C 90% U B2=15.62 1971TCa (63151)2216
Medium: 90% EtOH, 0.3 M NaClO4

C8H19O2PS2 HL CAS 2253-52-3 (4584)
O,O-Di-isobutyl phosphorodithioic acid; ((CH3)2CH)2P(S)SH

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

Ag+ ISE alc/w 25°C 90% U B2=15.52 1971TCa (63164)2217
Medium: 90% EtOH, 0.3 M NaClO4

C8H20N2 L CAS 373-44-4 (5746)
1,8-Diaminooctane; NH2.(CH2)8.NH2

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

Ag+ ISE alc/w 25°C 100% U H K1=6.93 1985BUB (63212)2218
Medium: MeOH, 0.05M Et4NClO4. DH=-47.2 kJ mol⁻¹

C8H20N2O3 L (5747)
1,11-Diamino-3,6,9-trioxaundecane; NH2.C2H4.0.C2H4.0.C2H4.0.C2H4.NH2

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

Ag+ ISE R4N.X 25°C 0.05M U H K1=14.58 2002BSd (63227)2219
Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M

Et4NClO4. By calorimetry: DH(K1)=-102.6 kJ mol⁻¹, DS(K1)=-66.4 J K⁻¹ mol⁻¹

Ag+ ISE a/c/w 25°C 100% U H K1=8.55 1985BUb (63228)2220
Medium: MeOH, 0.05M Et4NClO4. DH=-58.4 kJ mol⁻¹

C8H20N2S L CAS 86108-47-6 (8373)
1,9-Diamino-5-thianonane;

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

Ag+ gl KNO3 25°C 0.50M C 1984SGe (63238)2221
K(Ag+H2L)=3.53
K(Ag+2H2L)=5.85

Additional method: Ag electrode.

Ag+ cal KNO3 25°C 0.50M C H 1984STc (63239)2222
DH(Ag+H2L)=-34.3 kJ mol⁻¹, DS(Ag+H2L)=-47 J K⁻¹ mol⁻¹; DH(Ag+2H2L)=-69.9,
DS(Ag+2H2L)=-123.

C8H20N2S3 L CAS 64691-71-0 (5748)
1,11-Diamino-3,6,9-trithiaundecane; NH2-C2H4.S.C2H4.S.C2H4.S.C2H4.NH2

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

Ag+ ISE a/c/w 25°C 100% U H K1=10.97 1985BUb (63247)2223
Medium: MeOH, 0.05M Et4NClO4. DH=-77.8 kJ mol⁻¹

C8H20N4 L Cyclen CAS 294-90-6 (10)
1,4,7,10-Tetraazacyclododecane; cyclo(-(NH.CH2.CH2.)4-)

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

Ag+ EMF non-aq 25°C 100% U I K1=9.43 1996WPa (63276)2224
Medium: acetonitrile, 0.05 M NEt4ClO4. In propylene carbonate K1=11.3; in
dimethylformamide K1=9.1

C8H21N3 L (1068)
2,8-Dimethyl-2,5,8-triazanonane; CH3.N(CH3).CH2.CH2.NH.CH2.CH2.N(CH3).CH3

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

Ag+ ISE NaNO3 25°C 1.30M C K1=4.14 B2=7.74 1984YMa (63317)2225
B(AgH2L)=18.81, B(AgHL)=12.59
B(AgH2L2)=24.15, B(AgHL2)=15.81
B(Ag2L2)=10.89
B(Ag3L2)=12.35, B(AgLOH)=-6.12

Measured using glass and Ag electrodes

C8H22N4 L CAS 41240-14-6 (4494)
1,5,8,12-Tetraazadodecane; NH2.(CH2)3.NH.(CH2)2.NH.(CH2)3.NH2

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE non-aq 25°C 100% C  H   K1=7.93  B2=9.72  1990CBd (63399)2226
          B(Ag2L)=11.20
          B(Ag2L2)=17.66
          B(Ag3L2)=22.90

```

Medium: DMSO, 0.1 M R4NX. By calorimetry: DH(K1)=-77 kJ mol⁻¹, DS=106 J K⁻¹ m⁻¹
 DH(B2)=-88, DS=109; DH(Ag2L)=-114; DH(Ag2L2)=-162; DH(Ag3L2)=-224

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*****
C8H23N5          L   Tetren          CAS 112-57-2 (715)
1,4,7,10,13-Pentaazatridecane (Tetraethylenepentamine);
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE non-aq 25°C 100% U  H   K1=10.45      1997BTa (63451)2227
          B(Ag2L)=13.71
          B(Ag3L2)=26.4

```

Medium: DMSO, 0.1 M Et4NClO4. DH(K1)=-87.5 kJ mol⁻¹, DS=-94; DH(Ag2L)=120.1,
 DS=140; DH(Ag3L2)=245, DS=316

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-----
Ag+        ISE alc/w 25°C 100% U  H   K1=10.59      1985BUB (63452)2228
Medium: MeOH, 0.05M Et4NClO4. DH=-81.5 kJ mol-1
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Ag+        ISE oth/un 25°C 0.10M U          K1=7.4        1973HTc (63453)2229
          B(AgHL)=8.8
          B(AgH2L)=15.8
          B(AgH3L)=21.3

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*****
C9H6N04IS          H2L   Ferron          CAS 547-91-1 (275)
7-Iodo-8-hydroxyquinoline-5-sulfonic acid; (HO)(HO3S)C9H4NI
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KNO3  25°C 0.10M C          K1=7.35      1985ZHa (63761)2230

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*****
C9H6N2O3          HL          CAS 5437-99-0 (3865)
5-Nitro-8-hydroxyquinoline;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  diox/w 25°C 60% U          K1=4.82      1973SCd (63857)2231
Medium: 60% dioxan, 0.1 M NaClO4

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C9H6N2O6S          H2L          CAS 15851-63-3 (1433)
7-Nitro-8-hydroxyquinoline-5-sulfonic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        EMF NaClO4 32°C 0.01M C  I   K1=3.66      1995MBc (63902)2232

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Method: Ag electrode. Data for dioxane/H2O mixtures: K1=3.86 (20% dioxane)
 K1=4.35 (30% dioxane), K1=4.52 (40% dioxane), K1=4.60 (50% dioxane).

 Ag+ EMF oth/un 40°C ? U K1=3.54 1972PBf (63903)2233

 C9H7N L CAS 119-65-3 (487)
 Isoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	sp	alc/w	20°C	100%	U		B2=4.05	1958PPa (64021)	2234

Medium: EtOH

Ag+	sp	non-aq	20°C	100%	U		B2=5.27	1958PPa (64022)	2235
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Medium: CH3CN

Ag+	ISE	alc/w	25°C	59%	U		B2=3.89	1952FYb (64023)	2236
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Medium: 59% w/w EtOH

 C9H7N L CAS 91-22-5 (1538)
 Quinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	alc/w	25°C	50%	U		B2=3.96	1980BTb (64043)	2237

Ag+	sp	alc/w	20°C	100%	U		B2=4.78	1958PPa (64044)	2238
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Medium: EtOH

Ag+	sp	non-aq	20°C	100%	U		K2=5.12	1958PPa (64045)	2239
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Medium: CH3CN

Ag+	gl	alc/w	25°C	50%	U		K1=1.79 B2=3.74	1955ANc (64046)	2240
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Medium: 50 mol% EtOH

Ag+	ISE	alc/w	25°C	59%	U		B2=4.10	1952FYb (64047)	2241
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Medium 59% w/w EtOH

Ag+	ISE	alc/w	25°C	50%	U		B2=3.67	1934LAb (64048)	2242
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Medium: 50 mol% EtOH

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	gl	diox/w	25°C	60%	U		K1=6.06	1973SCd (64190)	2243

Medium: 60% dioxan, 0.1 M NaClO4

Ag+	dis	NaClO4	22°C	0.10M	U		K1=5.20 B2=9.56	1965HAa (64191)	2244
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C9H7NO2S HL CAS 17893-44-6 (4672)
(4-Cyanophenylthio)ethanoic acid; NC.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=2.09 B2=3.8 1968PRa (64417)2245
Acetate buffer. I=0.2, K(Ag+HL)=1.68

C9H7NS HL Quinolinethiol CAS 491-33-8 (1028)
8-Mercaptoquinoline;

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

Ag+ gl non-aq 25°C 100% U K1=13.8 B2=18.2 1984UBa (64640)2246
Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

Ag+ EMF non-aq 25°C 100% U K1=13.8 B2=18.20 1983UBa (64641)2247
Medium: DMF, 0.1 M LiClO4

C9H7O2F3S HL CAS 102687-63-6 (4674)
(3-Trifluoromethylphenylthio)ethanoic acid; F3C.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=2.42 B2=4.0 1968PRa (64744)2248
Acetate buffer. I=0.2, K(Ag+HL)=1.76

C9H8 L Indene CAS 95-13-6 (4589)
Indene;

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

Ag+ nmr oth/un 30°C 100% U K1=0.20 1973DBa (64745)2249

Ag+ sol KNO3 25°C 0.10M U K1=0.93 B2=0.88 1969INa (64746)2250

C9H8O4S H2L CAS 135-13-7 (4620)
(2-Carboxyphenylthio)ethanoic acid; HOOC.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M C K1=3.13 1968PRa (65001)2251
Medium: acetate buffer. K(Ag+H2L)=1.77, I=0.2

C9H8O4S H2L CAS 18619-33-5 (4621)
(3-Carboxyphenylthio)ethanoic acid; HOOC.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M C K1=2.90 B2=5.1 1968PRa (65005)2252
Medium: acetate buffer. K(Ag+H2L)=1.94, I=0.2

C9H8O4S H2L CAS 18619-34-6 (4622)
(4-Carboxyphenylthio)ethanoic acid; HOOC.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M C K1=2.80 B2=5.32 1968PRa (65007)2253
Medium: acetate buffer. K(Ag+H2L)=2.47, I=0.2

C9H8O4Se H2L CAS 39857-38-0 (4623)
(4-Carboxyphenylseleno)ethanoic acid; HOOC.C6H4.Se.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M C K1=3.52 B2=6.02 1968PSa (65009)2254
Medium: acetate buffer. K(Ag+H2L)=2.8, I=0.2

C9H10 L CAS 98-83-9 (4590)
alpha-Methylstyrene; C6H5.C(CH3):CH2

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.91 B2=0.91 1969INa (65169)2255
0 C: K1=1.35, K2=0.04

C9H10 L CAS 766-90-5 (806)
cis-beta-Methylstyrene; C6H5.CH:CH.CH3

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.87 B2=0.87 1969INa (65170)2256
0 C: K1=1.14, K2=0.15

C9H10 L CAS 873-66-5 (807)
trans-beta-Methylstyrene; C6H5.CH:CH.CH3

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.73 B2=0.63 1969INa (65172)2257
0 C: K1=1.01, K2=0.34

C9H10NOClS L CAS 25092-90-4 (7032)
(N-3-Chlorophenyl)-ethylthiolurethane;

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

Ag+ kin NaClO4 25°C 0.50M U T H K1=0.36 1993SSd (65174)2258
K(AgL=AgH-1L+H)=-1.36

DH(K1)=-17 kJ mol⁻¹, DS=23 J K⁻¹ mol⁻¹. Also K at 13.8, 37.9, 51C. For N-3-methoxyphenyl- K1=1.40 at 25C (also at I=0.03-0.31 M); for N-phenyl- K1=0.97

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

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

 Ag+ ISE mixed 25°C 82% U K1=7.60 B2=10.40 1979TBa (65241)2259
 B3=11.87
 Medium: 82% formamide

 Ag+ ISE mixed 25°C 82% U K1=5.85 B2=10.89 1979TBd (65242)2260
 Medium: 82% v/v DMFA/H2O; 0.2M KNO3

 C9H10O2 L Ethylbenzoate CAS 93-89-0 (3249)
 Ethylbenzoate; C6H5.CO.OCH2CH3

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

 Ag+ sol oth/un 25°C ? U K1=-0.25 B2=-0.92 1950AKa (65383)2261

C9H10O2S HL CAS 18619-15-3 (4629)
 (2-Tolylthio)ethanoic acid; CH3.C6H4.S.CH2.COOH

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

 Ag+ ISE oth/un 20°C 0.10M U I K1=2.73 B2=4.80 1968PRa (65385)2262
 Acetate buffer. I=0.2: K(Ag+HL)=2.16

C9H10O2S HL CAS 3996-30-3 (4630)
 (3-Tolylthio)ethanoic acid; CH3.C6H4.S.CH2.COOH

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

 Ag+ ISE oth/un 20°C 0.10M U I K1=2.86 B2=5.06 1968PRa (65387)2263
 Acetate buffer. I=0.2: K(Ag+HL)=2.30

C9H10O2S HL CAS 3996-29-0 (4631)
 (4-Tolylthio)ethanoic acid; CH3.C6H4.S.CH2.COOH

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

 Ag+ ISE oth/un 25°C 0.10M U T K1=2.91 B2=4.95 1969BLc (65391)2264
 Acetate buffer. 1.3-38.6 C
 K1(1.3C)=3.29, K1(38.6C)=2.72, B2(1.3C)=5.64, B2(38.6C)=4.82

 Ag+ ISE oth/un 20°C 0.10M U I K1=2.98 B2=5.30 1968PRa (65392)2265
 Acetate buffer. I=0.2: K(Ag+HL)=2.34

C9H1002S HL CAS 103-46-8 (3266)
(Benzylthio)ethanoic acid; C6H5.CH2.S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U I K1=3.67 B2=6.76 1968PSb (65399)2266
Acetate buffer. I=0.2, K(Ag+HL)=2.92

Ag+ ISE NaNO3 20°C 1.0M U B2=7.13 1944LAa (65400)2267

C9H1002S HL CAS 13205-49-7 (4628)
4-(Ethylthio)benzoic acid; C2H5.S.C6H4.COOH

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

Ag+ ISE oth/un 25°C 0.20M U K1=2.82 1968PSb (65412)2268
Acetate buffer.

C9H1002Sse HL (4679)
(2-Methylthiophenylseleno)ethanoic acid; CH3.S.C6H4.Se.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=4.56 B2=8.30 1968PSa (65414)2269
Acetate buffer. I=0.2, K(Ag+HL)=3.86

C9H1002S2 HL CAS 83167-33-3 (4632)
(2-Methylthiophenylthio)ethanoic acid; CH3.S.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=3.95 B2=7.15 1968PRa (65416)2270
Acetate buffer. I=0.2: K(Ag+HL)=3.14

C9H1002Se HL CAS 19188-12-6 (4633)
(2-Tolylseleno)ethanoic acid; CH3.C6H4.Se.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=3.53 B2=6.37 1968PSa (65418)2271
Acetate buffer. I=0.2: K(Ag+HL)=2.77

C9H1002Se HL (4634)
(3-Tolylseleno)ethanoic acid; CH3.C6H4.Se.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=3.74 B2=6.64 1968PSa (65420)2272
Acetate buffer. I=0.2: K(Ag+HL)=2.99

C9H1002Se HL (4635)
(4-Tolylseleno)ethanoic acid; CH3.C6H4.Se.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U T K1=3.73 B2=6.54 1969BLc (65422)2273
Acetate buffer. 1.6-38.5 C
K1(1.6C)=4.19, K1(38.5C)=3.50, B2(1.6C)=7.23, B2(38.5C)=6.24

Ag+ ISE oth/un 20°C 0.10M U I K1=3.82 B2=6.72 1968PSa (65423)2274
Acetate buffer. I=0.2: K(Ag+HL)=3.02

C9H1003S HL CAS 18619-21-2 (4637)
(2-Methoxyphenylthio)ethanoic acid; CH3O.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=3.02 B2=6.19 1968PRa (65497)2275
Acetate buffer. I=0.2: K(Ag+HL)=2.75

C9H1003S HL CAS 3996-32-5 (4638)
(3-Methoxyphenylthio)ethanoic acid; CH3O.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U T K1=2.65 B2=4.60 1969BLc (65505)2276
Acetate buffer. 1.3-38.6 C
K1(1.3C)=2.99, K1(38.6C)=2.45, B2(1.3C)=5.22, B2(38.6C)=4.54

Ag+ ISE oth/un 20°C 0.10M U I K1=2.73 B2=4.90 1968PRa (65506)2277
Acetate buffer. I=0.2: K(Ag+HL)=2.12

C9H1003S HL CAS 3406-77-7 (4639)
(4-Methoxyphenylthio)ethanoic acid; CH3O.C6H4.S.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U T K1=2.97 B2=5.24 1969BLc (65511)2278
Acetate buffer. 1.3-38.4 C
K1(1.3C)=3.37, K1(38.4C)=2.76, B2(1.3C)=5.87, B2(38.4C)=5.04

Ag+ ISE oth/un 20°C 0.10M U I K1=3.07 B2=5.49 1968PRa (65512)2279
Acetate buffer. I=0.2: K(Ag+HL)=2.45

C9H1003Se HL (4640)
(2-Methoxyphenylseleno)ethanoic acid; CH3O.C6H4.Se.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U I K1=3.72 B2=6.83 1968PSa (65519)2280

Acetate buffer. I=0.2: K(Ag+HL)=3.02

C9H10O3Se HL (4641)
(3-Methoxyphenylseleno)ethanoic acid; CH3O.C6H4.Se.CH2.COOH

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

Ag+ ISE oth/un 20°C 0.10M U K1=3.61 B2=6.53 1968PSa (65524)2281
K(Ag+HL)=2.90

Acetate buffer

C9H10O3Se HL (4642)
(4-Methoxyphenylseleno)ethanoic acid; CH3O.C6H4.Se.CH2.COOH

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

Ag+ ISE oth/un 25°C 0.10M U T K1=3.75 B2=6.68 1969BLc (65526)2282
Acetate buffer. 1.2-38.3 C
K1(1.2C)=4.23, K1(38.3C)=3.49, B2(1.2C)=7.38, B2(38.3C)=6.51

Ag+ ISE oth/un 20°C 0.10M U I K1=3.84 B2=6.79 1968PSa (65527)2283
Acetate buffer. I=0.2: K(Ag+HL)=3.07

C9H11N L CAS 2294-75-9 (301)
2-(But-3-enyl)pyridine; C5H4N.CH2.CH2.CH:CH2

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

Ag+ gl KNO3 25°C 0.10M U K1=2.72 B2=4.5 1974ILa (65659)2284

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

Ag+ EMF KNO3 25°C 0.10M C T H K1=4.3 1981SBe (65890)2285
K(AgL+H)=6.2
K(AgHL+H)=2.4

Method: Ag/Ag+ electrode. Data for 25-45C. DH(K1)=58.9 kJ mol⁻¹.

Ag+ ISE oth/un 25°C 0.60M U K1=5.30 B2=7.8 1967AMb (65891)2286

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

Ag+ gl oth/un 30°C 0.10M U K1=5.72 B2=8.42 1981PUa (66005)2287

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

Ag+ gl oth/un 30°C 0.10M U K1=5.70 B2=8.30 1981PUa (66191)2288

C9H11NO4S2 H3L CAS 97512-83-9 (1330)
N-Benzenesulfonyl-L-cysteine;

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

Ag+ gl diox/w 29°C 50% M K1=10.65 1981MUb (66440)2289
*K(AgH2L)=-5.20
*K(AgHL)=-10.65
K(Ag+H3L=AgH2L+H)=0.26

Medium: 50% v/v dioxane/H2O, 0.5 M NaClO4.

C9H11NO5 H2L CAS 57362-11-5 (3876)
N-(2'-Furfuryl)iminodiethanoic acid; C4H3O.CH2.N(CH2.COOH)2

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

Ag+ gl KNO3 20°C 0.10M U K1=3.92 1963IFa (66447)2290

C9H12 L Pseudocumene CAS 95-63-6 (3244)
1,2,4-Trimethylbenzene; C6H3(CH3)3

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

Ag+ sol alc/w 25°C 50% U K1=0.12 19560Aa (66539)2291
Medium: 50 mol% MeOH, 0.5 M NaNO3

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

Ag+ sol alc/w 25°C 50% U T H K1=-0.10 19560Aa (66540)2292
Medium: 50 mol% MeOH, 0.5 M NaNO3. K1=0.09(1.6C); DS=-43 J K-1 mol-1.
In aqueous soln. K1=0.19; DH(K1)=12.3, DS=-43

C9H12 L Cumene CAS 98-82-8 (1177)
Isopropylbenzene, 2-Phenylpropane; C6H5.CH(CH3)2

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

Ag+ sol alc/w 25°C 50% U K1=0.01 19560Aa (66542)2293
Medium: 50 mol% MeOH, 0.5 M NaNO3

C9H12 L n-Propylbenzene CAS 103-65-1 (3243)

Propylbenzene; C6H5.CH2.CH2.CH3

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

Ag+ dis KNO3 25°C 1.0M U K1=0.46 1950AKa (66544)2294

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

Ag+ gl KNO3 25°C 0.10M U 1970GSb (66557)2295
K(Ag+HL)=4.16
K(Ag+2HL)=8.86
K(Ag(HL)2+OH)=3.90

C9H13N L CAS 609-72-3 (3861)
2-N,N-Trimethylaniline; CH3.C6H4.N(CH3)2

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

Ag+ ISE alc/w 25°C 96% U K1=1.01 1961ALb (66773)2296
Medium: 96% EtOH, <0.01 M

C9H13N L Cumidine CAS 99-88-7 (3251)
4-Isopropylaniline; (CH3)2.CH.C6H4.NH2

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

Ag+ ISE alc/w 20°C 50% U B2=3.69 1934LAb (66776)2297
Medium: 50 mol% EtOH

C9H13N5O L CAS 29767-70-2 (8165)
9-(1-Ethoxyethyl)adenine;

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

Ag+ kin NaClO4 40°C 0.01M C 1981LOa (67104)2298
K(Ag+HL)=0.78
Medium: 0.0025 M HClO4

C9H14N2S L CAS 80191-93-1 (8262)
2-[[2-(2-Pyridinyl)ethyl]thio]ethanamine;

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

Ag+ gl KNO3 25°C 0.50M C 1983Sgb (67165)2299
K(Ag+H2L)=1.94
K(Ag+2H2L)=2.51
K(Ag+HL)=3.15

K(2Ag+2HL)=8.50

Additional method: Ag ion selective electrode. K(2Ag+HL+L)=12.37, B(Ag2L2)=15.16, K(Ag+H2L+HL)=4.6, K(Ag+2HL)=5.70, K(2Ag+HL)=3.9, B(Ag2L)=8.66.

Ag+ cal KNO3 25°C 0.50M C H 1983SHe (67166)2300
DH(Ag+H2L)=-27 kJ mol⁻¹, DH(Ag+2H2L)=-49, DH(Ag+HL)=-29, DH(Ag+2HL)=-60.5,
DH(Ag+HL+H2L)=-59, DH(2Ag+2HL)=-93.7, DH(2Ag+HL+L)=-115.8, DH(2Ag+2L)=-134

C9H14N2S L CAS 80191-92-0 (352)
3-[(2-Pyridinylmethyl)thio]-1-propanamine;

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

Ag+ gl KNO3 25°C 0.50M C 1983SGb (67169)2301

K(Ag+H2L)=1.83
K(Ag+2H2L)=2.63
K(Ag+HL)=3.81
K(2Ag+2HL)=10.3

Additional method: Ag ion selective electrode. K(2Ag+HL+L)=13.18, B(Ag2L2)=15.12, K(Ag+H2L+HL)=5.4, K(Ag+2HL)=7.44, K(2Ag+HL)=4.71, B(Ag2L)=8.72

Ag+ cal KNO3 25°C 0.50M C H 1983SHe (67170)2302
DH(Ag+H2L)=-24 kJ mol⁻¹, DH(Ag+2H2L)=-46, DH(Ag+HL)=-37, DH(Ag+2HL)=-68.6,
DH(Ag+HL+H2L)=-66, DH(2Ag+2HL)=-100, DH(2Ag+HL+L)=-121, DH(2Ag+2L)=-127.4

C9H14O2 L CAS 86616-78-6 (4603)
2-Acetylcycloheptanone;

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

Ag+ gl diox/w 30°C 75% U K1=6.67 1967SUa (67361)2303

C9H15N2+ (4604)

4'-Aminobutylpyridinium cation
L+

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

Ag+ gl KNO3 25°C 0.50M U K1=3.24 B2=6.61 1969PBa (67598)2304

C9H16 L CAS 2539-75-5 (3851)

1-(2'-Propyl)cyclohexene;

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

Ag+ dis non-aq 30°C 100% U K1=0.02 1962GHa (67601)2305

Medium: ethylene glycol, 1.77 M AgNO3. Method: gas chromatography

C9H16O4S2 H2L CAS 32386-31-5 (3273)
Pentamethylenedithiodiethanoic acid; HOOC.CH2.S(CH2)5.S.CH2.COOH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+        ISE NaNO3  20°C  1.0M U          K1=6.3   B2=8.9   1944LAa (67801)2306
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C9H17N          L          CAS 2051-28-7 (3256)
Decahydroquinoline;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl alc/w  25°C  50% U          K1=3.57  B2=7.04  1955ANc (67803)2307
Medium: 50 mol% EtOH
*****
C9H18N2O3S2    HL   D-Met-SMC          CAS 95657-16-2 (731)
D-Methionyl-S-methylcysteine; H2N.CH(CH2.CH2.S.CH3).CO.NH.CH(CH2.S.CH3).COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KNO3   25°C  0.10M C          K1=5.77  B2=8.61  1984LPa (67920)2308
B(AgHL)=12.40
B(AgH2L)=17.1
B(Ag2L2)=14.45
B(Ag2HL2)=21.07
*****
C9H18N2O3S2    HL   Met-SMC          CAS 95657-15-1 (730)
Methionyl-S-methylcysteine; H2N.CH(CH2.CH2.S.CH3).CO.NH.CH(CH2.S.CH3).COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  KNO3   25°C  0.10M C          K1=5.72  B2=8.1   1984LPa (67923)2309
B(AgHL)=12.05
B(AgH2L)=16.61
B(Ag2L2)=14.19
B(Ag2HL2)=20.84
*****
C9H18N2O3S2    HL   SMC-D-Met          CAS 95657-18-4 (733)
S-Methylcysteinyll-D-methionine; H2N.CH(CH2.S.CH3)CO.NH.CH(CH2.CH2.S.CH3).COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+        gl  KNO3   25°C  0.10M C          K1=5.86  B2=9.40  1984LPa (67925)2310
B(AgHL)=11.76
B(AgH2L)=15.51
B(Ag2L2)=14.74
B(Ag2HL2)=20.66
*****
C9H18N2O3S2    HL   SMC-L-Met          CAS 95657-17-3 (732)
S-Methylcysteinyll-L-methionine; H2N.CH(CH2.S.CH3)CO.NH.CH(CH2.CH2.S.CH3).COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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By solubility: B2=4.27

C9H21NS L (1223)
1-Diisopropylaminoethyl-methylsulfide; ((CH3)2CH)2N.CH2.CH2.S.CH3

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

Ag+ gl KNO3 25°C 0.50M U K1=4.33 B2=7.62 1977TGa (68146)2317
B(2Ag+L)=6.25
B(Ag+HL)=2.61
B(Ag+HL+L)=6.31
B(Ag+2HL)=4.40

Ag+ cal KNO3 25°C 0.50M C H 1977TGc (68147)2318
DH(Ag+HL)=-29.5 kJ mol⁻¹, DH(Ag+2HL)=-44.18.

C9H23N3 L CAS 3030-47-5 (4605)
N,N,N',N'',N'''-Pentamethyl-diethylenetriamine; (CH3)2NCH2CH2N(CH3)CH2CH2N(CH3)2

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

Ag+ EMF NaNO3 25°C 1.3M C K1=4.67 B2= 6.50 1983Ymb (68276)2319
B(AgHL)=12.10
B(AgH2L2)=24.04
B(Ag2L2)=9.940
B(Ag3L2)=12.10

Ag electrode. B(AgH-1L)=-6.59

C10H7NOS2 HL CAS 5806-42-6 (3921)
5-Benzylidene-2-thioxo-1,3-thiazolidin-4-one;

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

Ag+ dis NaClO4 20°C 0.10M U K1=8.35 B2=15.85 1965NKb (68543)2320

C10H7NO2 HL CAS 131-91-9 (2668)
1-Nitroso-2-naphthol, alpha-Nitroso-beta-naphthol;

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

Ag+ gl diox/w 30°C 75% U K1=7.74 1957CFa (68565)2321

C10H7NO2 HL CAS 132-53-6 (2524)
2-Nitroso-1-naphthol;

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

Ag+ gl diox/w 30°C 50% U I K1=7.55 1957CFa (68633)2322
In 75% dioxan K1=7.74

C10H7NO2 HL CAS 86-59-9 (873)
 Quinoline-8-carboxylic acid;

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

 Ag+ gl oth/un 25°C 0.0 U K1=2.13 1958LUa (68746)2323

C10H8 L Naphthalene CAS 91-20-3 (3289)
 Naphthalene;

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

 Ag+ sp non-aq 25°C 100% U K1=0.450 B2=0.48 1991PZa (69167)2324

 Ag+ sol KNO3 20°C 1.0M U T K1=0.505 1954KLa (69168)2325
 B(Ag2L)=-0.015
 K1=0.467(25 C),0.436(30 C); B(Ag2L)=-0.042(25 C),-0.063(30 C)

 Ag+ sol none 25°C 0.0 U K1=0.49 B2=0.53 1949AKa (69169)2326

 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

 Ag+ ISE mixed 25°C 0.10M C I K1=4.04 B2= 7.79 2002PRa (69446)2327
 Ag-electrode; Medium:0.1 M NaClO4 in 0.4 mol parts DMFA in H2O
 for 100% H2O K1=4.59; K2=4.43; for 100% DMFA K1=3.52; K2=3.32

 Ag+ gl mixed 25°C 0.1M U I K1=2.95 B2= 5.90 1998SGb (69447)2328
 In 100% H2O K1=3.64
 In 100% DMSO K1=2.25
 in 100% H2O B2=6.7
 In !00% DMSO B2=4.5
 Medium: 0.1M Et4NC1O4 in 0.5 mol parts DMSO in H2O;
 For 0.1 M Et4NC1O4 in 0.3 mol parts EtOH in H2O K1=2.07; B2=5.4

 Ag+ sp non-aq 25°C 100% U I K1=2.4 1985MKb (69448)2329
 Medium: DMSO. In DMF: K1=3.4; MeCN: 3.6; MeOH: 4.3

 Ag+ ISE KNO3 25°C 0.10M C K1=3.44 B2=6.78 1985YWa (69449)2330

 Ag+ ISE non-aq ? 100% U B2=5.33 1984IGa (69450)2331
 Medium: CH3CN

 Ag+ sp NaNO3 25°C 1.00M U T H 1981HWa (69451)2332
 K(AgL2+H=AgL+HL)=-0.086
 5-45 C. DH=11.5 kJ mol-1, DS=-9 J K-1 mol-1

 Ag+ ISE non-aq 25°C 100% U K1=7.1 B2=13.1 1981TLa (69452)2333

Medium: Propylene carbonate

Ag+ ISE alc/w 25°C 25% U I B2=7.59 1973BNb (69453)2334
Medium: EtOH, 0.2 M LiNO3. In 50% EtOH: B2=7.34; 75%: B2=7.46; 96%: B2=7.74

Ag+ ISE mixed 25°C 25% U I B2=7.48 1973BNb (69454)2335
Medium: PrOH, 0.2 M LiNO3. 50% PrOH: B2=7.27; 75%: B2=7.36; 90%: 7.66
In 25% acetone: B2=7.48; 50%: B2=7.46; 75%: B2=7.61; 90%: B2=7.72

Ag+ ISE oth/un 25°C 1.0M U K1=3.0 B2=7.11 1972KMF (69455)2336

Ag+ ISE KNO3 35°C 0.10M U K1=3.03 B2=6.67 1967Lub (69456)2337

Ag+ ISE KNO3 20°C 0.10M U T H K1=3.84 B2=7.37 1958CSc (69457)2338
K1=3.70(25 C),3.61(30 C),3.53(35 C),3.46(40 C); B2=7.22, 7.08, 6.93, 6.80
DH(K1)=-32.0 kJ mol⁻¹, SD=-36.6; DH(K2)=-17.1, DS=10.0

Ag+ sp alc/w 20°C 100% U B2=8.89 1958PPa (69458)2339
Medium: EtOH

Ag+ gl none 25°C 0.0 U B2=6.8 1954SSa (69459)2340

C10H9N L CAS 134-32-7 (3891)
1-Aminonaphthalene;

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

Ag+ ISE alc/w 25°C 100% U K1=2.20 B2=2.76 1960ALa (69991)2341
Medium: EtOH

C10H9NS HL CAS 10222-10-3 (1029)
2-Methyl-8-mercaptoquinoline;

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

Ag+ gl non-aq 25°C 100% U K1=14.7 B2=19.3 1984UBa (70255)2342
Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

Ag+ EMF non-aq 25°C 100% U K1=14.7 B2=19.30 1983UBa (70256)2343
Medium: DMF, 0.1 M LiClO4

C10H9NS HL CAS 13982-83-7 (1030)
4-Methyl-8-mercaptoquinoline;

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

Ag+ gl non-aq 25°C 100% U K1=15.7 B2=21.0 1984UBa (70272)2344
Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

Ag+ EMF non-aq 25°C 100% U K1=15.7 B2=21.00 1983UBa (70273)2345

Medium: DMF, 0.1 M LiClO4

C10H9NS HL CAS 15759-04-3 (1031)

6-Methyl-8-mercaptoquinoline;

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

Ag+ gl non-aq 25°C 100% U K1=14.9 B2=20.4 1984UBa (70286)2346

Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

Ag+ EMF non-aq 25°C 100% U K1=14.9 B2=20.40 1983UBa (70287)2347

Medium: DMF, 0.1 M LiClO4

C10H9NS HL CAS 15759-05-4 (1032)

7-Methyl-8-mercaptoquinoline;

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

Ag+ gl non-aq 25°C 100% U K1=15.1 B2=20.9 1984UBa (70298)2348

Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

Ag+ EMF non-aq 25°C 100% U K1=15.1 B2=20.90 1983UBa (70299)2349

Medium: DMF, 0.1 M LiClO4

C10H9N3 L Dipyritydylamine CAS 1202-34-2 (2428)

(2,2'-Dipyritydyl)amine; C5H4N.NH.C5H4N

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

Ag+ ISE alc/w 25°C 50% U B2=3.23 1934LAb (70331)2350

Medium: 50 mol% EtOH

C10H10 L CAS 447-53-0 (4691)

1,2-Dihydronaphthalene;

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

Ag+ sol KNO3 25°C 1.0M U K1=1.45 B2=1.60 1969INa (70462)2351

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

Ag+ gl diox/w 30°C 75% U K1=5.43 1967SUa (70692)2352

C10H10O2S HL CAS 17892-66-6 (4724)

4-(Prop-1-enylthio)benzoic acid; CH2:CH.CH2.S.C6H4.COOH

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

Ag+ ISE oth/un 25°C 0.20M U K1=2.76 1968PSb (70792)2353
Acetate buffer

C10H1004AsCl H2L (4788)
Bis(carboxymethyl)(2-chlorophenyl)arsine; (HOOC.CH2)2.As.(C6H4Cl)

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

Ag+ ISE KNO3 20°C 0.10M U K1=5.20 1972FGb (70825)2354
K(Ag+HL)=4.13
K(Ag+H2L)=4.045

C10H1004AsCl H2L (4789)
Bis(carboxymethyl)(4-chlorophenyl)arsine; (HOOC.CH2)2.As.(C6H4Cl)

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

Ag+ ISE KNO3 20°C 0.10M U K1=5.92 1972FGb (70827)2355
K(Ag+HL)=4.96
K(Ag+H2L)=4.466

C10H1004S2 H2L CAS 36198-83-1 (4728)
1,2-Phenylenebis(thioethanoic acid); C6H4(S.CH2.COOH)2

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

Ag+ ISE oth/un 25°C 0.20M U K1=3.97 1971FPa (70829)2356
Medium: 0.2 M acetate buffers at pH 1.5 and 5.95

C10H11N03S 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

Ag+ ISE NaNO3 25°C 0.15M U K1=11.75 1976ZNa (70953)2357
K(AgL+H)=4.88

Method: Ag-electrode

C10H11N04 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

Ag+ gl KNO3 20°C 0.10M U K1=1.0 1964PIa (70985)2358

C10H1104As 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

Ag+ ISE KNO3 20°C 0.10M U K1=6.13 1972FGb (71125)2359
K(Ag+HL)=5.126
K(Ag+H2L)=4.643

Ag+ ISE KNO3 20°C 0.10M U K1=5.37 1964PIa (71126)2360
K(Ag+HL)=3.73
K(AgL+H)=3.40

C10H12 L CAS 28106-30-1 (4695)
alpha-Ethylstyrene; C6H5.C(C2H5):CH2

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

Ag+ sol KNO3 25°C 1.0M U T K1=1.04 B2=1.24 1969INa (71142)2361
0 C, K1=1.26, K2=0.38

C10H12 L CAS 27496-76-0 (4694)
beta,beta-Dimethylstyrene; C6H5.CH:C(CH3)2

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

Ag+ sol KNO3 25°C 1.0M U K1=0.70 B2=0.60 1969INa (71143)2362

C10H12 L CAS 7525-62-4 (4696)
cis-Ethylstyrene; C6H5.CH:CH.C2H5

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

Ag+ sol KNO3 25°C 1.0M U T K1=1.18 B2=1.29 1969INa (71144)2363
0 C, K1=1.36, K2=0.40

C10H12 L CAS 2039-90-9 (4692)
cis-alpha,beta-Dimethylstyrene; C6H5.C(CH3):C.CH3

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

Ag+ sol KNO3 25°C 1.0M U K1=0.72 B2=0.57 1969INa (71145)2364

C10H12 L CAS 7564-63-8 (4697)
trans-Ethylstyrene; C6H5.CH:C(C2H5)H

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.91 B2=1.02 1969INa (71146)2365
0 C, K1=1.17, K2=0.34

C10H12 L CAS 2039-89-6 (4693)
trans-alpha,beta-Dimethylstyrene; C6H5.C(CH3):C.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	sol	KNO3	25°C	1.0M	U		K1=0.48 B2=0.59	1969INa (71147)	2366

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
Ag+	gl	KNO3	25°C	0.10M	C	H	K1=5.64 B(AgHL)=9.73 B(Ag2L2)=14.83 B(Ag2L)=7.15	1981ANb (71234)	2367

Ag+	ISE	oth/un	25°C	0.10M	M		K1=6.03 B2=9.5	1975IPa (71235)	2368
Medium: 0.10M K-acetate									

Ag+	gl	KNO3	20°C	0.10M	U		K1=6.09	1963IFc (71236)	2369

C10H12O2S		HL					CAS 2899-66-3	(3324)	
3-(Benzylthio)propanoic acid; C6H5.CH2.S.CH2.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	NaNO3	20°C	1.0M	U		B2=7.34	1944LAa (71640)	2370

C10H12O2S		HL					CAS 21213-10-5	(4738)	
4-(n-Propylthio)benzoic acid; CH3.CH2.CH2.S.C6H4.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.20M	U		K1=2.82	1968PSb (71641)	2371
Acetate buffer.									

C10H12O3Se		HL					(4739)		
(2-Ethoxyphenylseleno)ethanoic acid; C2H5O.C6H4.Se.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	oth/un	20°C	0.10M	U	I	K1=3.78 B2=7.07	1968PSa (71648)	2372
Acetate buffer. I=0.2, K(Ag+HL)=2.93									

C10H12O3Se		HL					(4740)		
(4-Ethoxyphenylseleno)ethanoic acid; C2H5O.C6H4.Se.CH2.COOH									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	oth/un	20°C	0.10M	U	I	K1=3.85 B2=6.78	1968PSa (71649)	2373
Acetate buffer. I=0.2, K(Ag+HL)=3.09									

C10H13N L CAS 100190-73-6 (302)
2-(Pent-4-enyl)pyridine; C5H4N.CH2.CH2.CH2.CH:CH2

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

Ag+ gl KNO3 25°C 0.10M U K1=2.27 B2=4.37 1974ILa (71690)2374

C10H13NO L (5523)
3-Acetyl-2,4,6-trimethylpyridine;

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

Ag+ gl NaNO3 25°C 0.50M C K1=2.13 1984ERa (71696)2375

C10H13NS L (7469)
4-Phenyl-1-thia-4-azacyclohexane; C6H5.C4H8NS

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

Ag+ EMF non-aq 25°C 100% U K1=1.71 B2= 3.01 1999ISa (71779)2376
Medium: CH3CN. 0.1 M Me4NC104

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

Ag+ ISE oth/un 25°C 0.00 U K1=2.02 B2=3.86 1968PGb (71933)2377

C10H14 L Prehnitene CAS 488-23-3 (3292)
1,2,3,4-Tetramethylbenzene; C6H2(CH3)4

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

Ag+ sol alc/w 25°C 50% U K1=0.23 19560Aa (72034)2378
Medium: 50% MeOH, 0.5 M NaNO3

C10H14 L Isodurene CAS 527-53-7 (3293)
1,2,3,5-Tetramethylbenzene; C6H2(CH3)4

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

Ag+ sol alc/w 25°C 50% U K1=0.06 19560Aa (72035)2379
Medium: 50% MeOH, 0.5 M NaNO3

C10H14 L Durene CAS 95-93-2 (2828)
1,2,4,5-Tetramethylbenzene; C6H2.(CH3)4

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

Ag+ sol diox/w 25°C 50% U K1=0.06 19560Aa (72036)2380
Medium: 50% MeOH, 0.5 M NaNO3

C10H14 L CAS 141-93-5 (3290)

1,3-Diethylbenzene; C2H5.C6H4.C2H5

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

Ag+ sol alc/w 25°C 50% U K1=0.03 19560Aa (72038)2381

Medium: 50% MeOH, 0.5 M NaNO3

C10H14 L CAS 98-06-0 (3291)

t-Butylbenzene; C6H5.C(CH3)3

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

Ag+ sol alc/w 25°C 50% U K1=0.05 19560Aa (72039)2382

Medium: 50% MeOH, 0.5 M NaNO3

C10H15N L CAS 91-66-7 (3897)

N,N-Diethylaniline; C6H5.N(CH2.CH3)2

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

Ag+ ISE alc/w 25°C 96% U K1=1.28 1961ALb (72630)2383

Medium: 96% EtOH, <0.01 M

C10H15N04BrPS2 HL (4801)

(4-Bromo)phenylsulfonylamidothiophosphoric acid 0,0-diethyl ester;

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

Ag+ ISE alc/w 20°C 100% U K1=10.15 B2=13.15 1968ZAb (72656)2384

Ag+ ISE alc/w 20°C 100% U K1=11.0 1968ZGa (72657)2385

C10H15N04ClPS2 HL (4800)

(4-Chloro)phenylsulfonylamidothiophosphoric acid 0,0-diethyl ester;

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

Ag+ ISE alc/w 20°C 100% U K1=11.0 1968ZGa (72659)2386

C10H15N04FPS2 HL (4803)

(4-Fluoro)phenylsulfonylamidothiophosphoric acid 0,0-diethyl ester;

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

Ag+ ISE alc/w 20°C 100% U K1=10.36 B2=13.30 1968ZAb (72661)2387

Ag+ ISE alc/w 20°C 100% U K1=11.3 1968ZGa (72662)2388

C10H15N04IPS2 HL (4802)
(4-Iodo)phenylsulfonylamidothiophosphoric acid 0,0-diethyl ester;

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

Ag+ ISE alc/w 20°C 100% U K1=10.9 B2=17.5 1968ZGa (72664)2389

C10H16N04PS2 HL (4798)
Phenylsulfonylamidothiophosphoric acid 0,0-diethyl ester;

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

Ag+ ISE alc/w 20°C 100% U K1=11.5 1968ZGa (73025)2390

C10H16N203S HL Vitamin H CAS 58-85-5 (410)
D-Biotin (Coenzyme R);

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

Ag+ nmr NaClO4 27°C 3.00M U T K1=4.20 1982SSb (73045)2391
Medium: D2O. In DMF: K1=2.09. At 34 C in d6-DMSO, 0.01 M DN03: K1=1.45

C10H16N208 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

Ag+ gl KNO3 25°C 1.00M C K1=6.50 1992ANa (73432)2392
B(AgHL)=12.30
B(Ag2L)=7.60

Ag+ ISE NaClO4 25°C 1.00M U I K1=5.42 1989MIa (73433)2393
K(AgL+H)=5.95

Ag+ ISE KNO3 25°C 0.10M C M K1=7.32 1985YWa (73434)2394
K(AgL+H)=6.19

Ag+ gl KNO3 20°C 0.10M U K1=7.31 1981SKf (73435)2395
K(AgL+H)=6.01

Ag+ EMF KNO3 25°C 0.10M C K1=7.2 1979BCb (73436)2396
K(AgL+H)=6.5
K(AgHL+H)=4.5

Method: Ag electrode.

Ag+ ISE oth/un 25°C 0.01M C H K1=7.05 1978RLb (73437)2397

Method: silver sulfide electrode. Medium: 0.01 M KOH.
By calorimetry: DH(K1)=-23.8 kJ mol⁻¹, DS(K1)=53.0 J K⁻¹ mol⁻¹.

Ag+ ISE KNO3 25°C 0.10M C H K1=6.99 1978SLa (73438)2398
By calorimetry: DH(K1)=-23.8 kJ mol⁻¹, DS=+53.0

Ag+ cal KNO3 20°C 0.1M C K1=7.32 1976ANb (73439)2399
DH1= -41.1 kJ/mol

Ag+ ISE KNO3 25°C 0.10M U M T K1=7.31 1968WRa (73440)2400
K(AgL+H)=6.49

Ternary complexes with oxalic acid

Ag+ EMF oth/un 35°C 0.01M U T K1=7.15 1967RLa (73441)2401
K(Ag+HL)=3.29

Method: silver-sensitive glass electrode. K1=7.37(15 C),7.28(25 C);
K(Ag+HL)=3.46(15 C),3.36(25 C)

Ag+ gl KNO3 20°C 0.10M U K1=7.72 B2=11.72 1964JCa (73442)2402

Ag+ gl KNO3 20°C 0.10M U K1=7.32 1964PCa (73443)2403
K(Ag+HL)=3.07

Ag+ dis NaClO4 20°C 0.10M U K1=7.11 1963STc (73444)2404
Medium: KClO4

C10H16N2S L CAS 80191-94-2 (8263)

3-[[2-(2-Pyridinyl)ethyl]thio]-1-propanamine;

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

Ag+ gl KNO3 25°C 0.50M C 1983SGb (74392)2405

K(Ag+H2L)=2.66
K(Ag+2H2L)=3.88
K(Ag+HL)=3.76
K(2Ag+2HL)=9.89

Additional method: Ag ion selective electrode. K(2Ag+HL+L)=12.82, B(Ag2L2)
=14.74, K(Ag+H2L+HL)=3.88, K(Ag+2HL)=6.55, K(2Ag+HL)=5.2, B(Ag2L)=9.04

Ag+ cal KNO3 25°C 0.50M C H 1983SHe (74393)2406

DH(Ag+H2L)=-34 kJ mol⁻¹, DH(Ag+2H2L)=-63, DH(Ag+HL)=-36, DH(Ag+2HL)=-64,
DH(Ag+HL+H2L)=-69, DH(2Ag+2HL)=-107, DH(2Ag+HL+L)=-117, DH(2Ag+2L)=-122

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

Ag+ gl NaClO4 25°C 0.10M C K1=9.36 1992PPb (74937)2407

B(Ag2L)=14.83
B(AgHL)=13.85


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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE R4N.X  25°C 0.05M U  H   K1=2.52      2002BSd (75220)2415
Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M
Et4NClO4. By calorimetry: DH(K1)=-4.2 kJ mol-1, DS(K1)=33.9 J K-1 mol-1.
*****
C10H18N2O7      H3L  HEDTA      CAS 150-39-0 (392)
N-(Hydroxyethyl)diaminoethane-N,N',N'-triethanoic acid;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE KNO3   25°C 0.10M U      K1=6.71      1968WRa (75303)2416
*****
C10H18N4        L          CAS 46323-29-9 (3312)
6,7,8,9-Tetrahydro-10-isopropyl-7-methyl-5H-tetrazoloazepine;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl non-aq  25°C 100% U      B2=2.22      1959PHa (75550)2417
Medium: MeCN
*****
C10H18N4        L          CAS 89991-85-5 (3311)
6,7,8,9-Tetrahydro-9-isopropyl-7-methyl-5H-tetrazoloazepine;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl non-aq  25°C 100% U      B2=2.19      1959PHa (75551)2418
Medium: MeCN
*****
C10H18N4        L          CAS 4643-29-9 (3309)
8-s-Butyl-6,7,8,9-tetrahydro-5H-tetrazoloazepine;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl non-aq  25°C 100% U      B2=2.18      1959PHa (75552)2419
Medium: CH3CN
*****
C10H18N4        L          CAS 25717-83-3 (3310)
8-t-Butyl-6,7,8,9-tetrahydro-5H-tetrazoloazepine;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl non-aq  25°C 100% U      B2=2.14      1959PHa (75553)2420
Medium: CH3CN
*****
C10H18O4S2      H2L          CAS 79695-59-3 (3327)
Hexamethylenedithiodiethanoic acid; HOOC.CH2.S(CH2)6.S.CH2.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+ ISE NaNO3 20°C 1.0M U K1=6.0 B2=8.6 1944LAa (75608)2421

C10H20N2O3 HL Val-D-Val CAS 95657-14-0 (725)

L-Valyl-D-valine; H2N.CH(CH(CH3)2).CO.NH.CH(CH(CH3)2).COOH

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

Ag+ gl KNO3 25°C 0.10M C K1=3.24 B2=7.24 1984LPa (75728)2422

C10H20N2O3 HL Val-Val CAS 3918-94-3 (724)

L-Valyl-L-valine; H2N.CH(CH(CH3)2).CO.NH.CH(CH(CH3)2).COOH

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

Ag+ gl KNO3 25°C 0.10M C K1=3.03 B2=6.93 1984LPa (75738)2423

C10H20N2O3S2 HL Met-D-Met CAS 89680-20-6 (729)

Methionyl-D-methionine; H2N.CH(CH2.CH2.S.CH3).CO.NH.CH(CH2.CH2.S.CH3).COOH

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

Ag+ gl KNO3 25°C 0.10M C K1=5.71 1984LPa (75757)2424

B(AgHL)=12.40

B(AgH2L)=17.3

B(Ag2L2)=14.51

B(Ag2HL2)=21.17

C10H20N2O3S2 HL Met-Met CAS 89680-18-2 (728)

Methionyl-methionine; H2N.CH(CH2.CH2.S.CH3).CO.NH.CH(CH2.CH2.S.CH3).COOH

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

Ag+ gl KNO3 25°C 0.10M C K1=5.81 B2=8.7 1984LPa (75763)2425

B(AgHL)=11.86

B(AgH2L)=16.31

B(Ag2L2)=14.44

B(Ag2HL2)=20.88

C10H20O2 HL Capric acid CAS 334-48-5 (2542)

Decanoic acid; CH3.(CH2)8.COOH

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

Ag+ gl oth/un 20°C var U 1981HTc (75903)2426

Kso=-7.5

C10H20O3S2 L CAS 40253-98-3 (8606)

1,4,10-Trioxa-7,13-dithiacyclopentadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	cal	non-aq	25°C	100%	C	H		K1=6.05	1988BUB (75910)	2427
Medium: acetonitrile. DH(K1)=-39.7 kJ mol ⁻¹ , DS(K1)=-18 J K ⁻¹ mol ⁻¹ .										

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
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Ag+	ISE	none	25°C	dil	C	M		K1=1.06	2004KUA (75931)	2428
Method: Ag ion-selective electrode; self medium. For extraction into benzene, K(Ag+L(org))+HA(org)=AgLA(org)+H)=2.11. HA is picric acid.										

Ag+	ISE	alc/w	25°C	100%	C	IH	T	K1=3.62 B2= 6.69	2003ADA (75932)	2429
IUPAC Tentative. Medium: 0-0.1 M various. DH(K1)=-27.2 kJ mol ⁻¹										
In PC: K1=6.27, K2=1.77, DH(K1)=-41.2										

Ag+	con	mixed	25°C	90%	C			K1=1.42	2003ISA (75933)	2430
Medium: 90% v/v DMSO/H2O. By potentiometry (Ag electrode), K1=1.45.										

Ag+	con	mixed	25°C	20%	C			K1=4.52	2003SIA (75934)	2431
Medium: 20% w/w propylene carbonate/ethylene carbonate. By potentiometry (Pt/Ag electrode), K1=4.65.										

Ag+	con	alc/w	25°C	40%	C			K1=1.26	2002ISA (75935)	2432
Medium: 40% EtOH/H2O. By potentiometry, K1=1.26										

Ag+	cal	none	25°C	0.1M	C	T	H	K1=0.89	2002VOA (75936)	2433
DH(K1)=-10.4 kJ mol ⁻¹										
Ionic strength is provided by AgNO3 used: 0.06-0.2 M.										
for 35 C K1=0.83; DH(K1)=-10.61; for 45 C K1=0.78, DH(K1)=-10.3										

Ag+	con	alc/w	25°C	40%	C			K1=1.35	2001ISA (75937)	2434
Medium: 40% v/v EtOH/H2O. By potentiometry, K1=1.37.										

Ag+	EMF	non-aq	25°C	100%	C			K1=6.24 B2= 8.01	2000KA (75938)	2435
Medium: propylene carbonate										

Ag+	con	non-aq	25°C	100%	C	H		K1=1.80 B2= 2.30	1999WBA (75939)	2436
Medium: N,N-dimethylformamide. By calorimetry: DH(K1)=-18.0 kJ mol ⁻¹ , DH(K2)=2.9 kJ mol ⁻¹ .										

Ag+	con	mixed	25°C	90%	C	TIH		K1=4.96	1998MTA (75940)	2437
Medium: 90% CH3CN/H2O. Data for 20-35 C. DH(K1)=17.3 kJ mol ⁻¹ , DS(K1)=36.9 J K ⁻¹ mol ⁻¹ . In 50% CH3CN/H2O, K1=4.58, DH(K1)=4.8, DS(K1)=71.4.										

Ag+	EMF	non-aq	25°C	100%	C	T		K1=3.12	1998PSA (75941)	2438
DH=-21.4 kJ mol ⁻¹ , DS=-13 J K ⁻¹ mol ⁻¹ . Method: Ag electrode.										
Data for 10-55 C. Medium: EtOH.										

Ag+ con non-aq 25°C 100% C K1=4.80 1992STa (75942)2439
Medium: propylene carbonate. By potentiometry with Ag electrode, K1=4.81.

Ag+ gl non-aq 25°C 100% C K1=6.24 B2=8.01 1989BPa (75943)2440
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

Ag+ ISE non-aq 25°C 100% C K1=5.67 1983ANb (75944)2441
The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4

Ag+ cal alc/w 25°C 100% U H T K1=3.62 1980LIa (75945)2442
Medium: MeOH. DH=-27.5 kJ mol⁻¹.

Ag+ oth oth/un 25°C ? U K1=0.94 1977RLa (75946)2443
Method: ultrasound absorption

Ag+ cal oth/un 25°C 0.10M U H T K1=0.94 1976ITb (75947)2444
DH=-13.5 kJ mol⁻¹.

C10H21NO3 L (6568)
Trans-1-(bis(2-hydroxyethyl)amino)-2-hydroxycyclohexane;

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

Ag+ gl NaNO3 25°C 0.10M C K1=2.09 1991DCa (76172)2445

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

Ag+ EMF alc/w 25°C 100% C I K1=5.48 B2= 8.33 2003TCb (76178)2446
Medium: 100% MeOH. Also data for EtOH, DMSO, acetonitrile, propylene carbonate and nitromethane.

Ag+ EMF non-aq 25°C 100% C K1=9.75 B2=14.52 2000Ka (76179)2447
Medium: propylene carbonate. Also data for N-anthryl-derivatives.

Ag+ EMF non-aq 25°C 100% C K1=4.10 B2= 6.55 1999THa (76180)2448
Medium: acetonitrile. Method: Ag/Ag+ electrode.

Ag+ EMF non-aq 25°C 100% C K1=4.06 B2= 6.71 1998ACa (76181)2449
Medium: CH3CN

C10H22N2OS2 L CAS 40236-04-2 (2343)
1-Oxa-4,13-diaza-7,10-dithiacyclopentadecane;

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

Ag+ gl NaClO4 25°C 0.10M U H K1=8.95 1979ASb (76231)2450

B(AgHL)=14.15

B(Ag2L)=12.21

Also DH values

Ag+ gl NaClO4 25°C 0.10M U K1=9.91 B2=12.64 1977LAa (76232)2451
B(AgHL)=15.22

Ag+ gl NaClO4 25°C 0.10M U K1=8.95 1975ASc (76233)2452

C10H22N2OS2 L CAS 40236-30-4 (5395)
1-Oxa-4,13-dithia-7,10-diazacyclopentadecane;

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

Ag+ gl NaClO4 25°C 0.10M U H K1=9.91 1979ASb (76249)2453
B(AgHL)=15.22
B(Ag2L)=12.6

Also DH values

C10H22N2O3 L CAS 60350-17-6 (2471)
1,4,7-Trioxa-10,13-diazacyclopentadecane;

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

Ag+ EMF mixed 25°C 90% C K1=5.12 2003ISa (76258)2454
Medium: 90% v/v DMSO/H2O. Method: Ag electrode.

Ag+ ix non-aq 25°C 100% U K1=5.17 1981SAa (76259)2455
Medium: DMSO, 0.1 M R4NX

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

Ag+ EMF alc/w 25°C 100% C I K1=7.49 2003TCb (76279)2456
Medium: 100% MeOH. Also data for EtOH, acetonitrile and propylene
carbonate.

Ag+ ISE R4N.X 25°C 0.05M U H K1=13.15 B2=16.66 2002BSd (76280)2457
Method: Ag+ ISE. Medium: propylene carbonate, 0.05 M Et4NClO4. By calorim-
etry: DH(K1)=-76.5 kJ mol⁻¹, DS=-6.0 J K⁻¹ mol⁻¹; DH(K2)=-38.2, DS=-61.4.

Ag+ EMF alc/w 25°C 40% C K1=5.83 2002ISa (76281)2458
Medium: 40% EtOH/H2O. Method: Ag/Ag+ electrode.

Ag+ EMF non-aq 25°C 100% C K1=13.75 B2=16.92 20000Ka (76282)2459
Medium: propylene carbonate. Also data for N-anthryl and N,N'-dianthryl
derivatives.

Ag+ EMF non-aq 30°C 100% C K1=7.40 1999KBa (76283)2460
Method: Ag/Ag+ electrode. Medium: MeOH.

Ag+ EMF non-aq 25°C 100% C K1=6.43 1999THa (76284)2461
Medium: acetonitrile. Method: Ag/Ag+ electrode.

Ag+ EMF non-aq 25°C 100% U K1=5.71 1998HTb (76285)2462
Medium: DMSO. Method: Ag/Ag+ electrode

Ag+ ISE alc/w 25°C 100% U K1=7.45 1988CFa (76286)2463
Medium: MeOH

Ag+ ISE non-aq 30°C 100% C T H K1=13.0 1986ALa (76287)2464
Medium: propylene carbonate, 0.1M Et4NClO4. DH and DS given

Ag+ ISE non-aq 25°C 100% U H K1=6.55 1986BUB (76288)2465
In CH3CN. DH=-31.7 kJ mol⁻¹

Ag+ ISE alc/w 25°C 100% U H K1=7.63 1985BUB (76289)2466
Medium: MeOH, 0.05M Et4NClO4. DH=-34.6 kJ mol⁻¹

Ag+ ISE R4N.X 25°C 0.10M U I K1=5.88 1983CSa (76290)2467
Also data for 0.05-1.0 mol fraction MeCN/H2O

Ag+ gl alc/w 25°C 100% C K1=7.61 1980SAa (76291)2468
B(Ag2L)=11.21
Medium: MeOH, 0.05 M Et4NClO4

Ag+ gl R4N.X 25°C 0.10M C K1=5.85 1977ASc (76292)2469

C10H22N2S2 L (7059)
8-Methyl-1,5-dithia-8,11-diazacyclotridecane;

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

Ag+ gl KNO3 425°C 0.10M M K1=10.06 B2=12.58 1995RKa (76368)2470
B(AgHL)=13.72
B(AgH2L)=16.554

C10H22O2S4 L CAS 78010-97-6 (4759)
3,6,9,12-Tetrathiatetradecan-1,14-diol; (HO.CH2.CH2.S.CH2.CH2.S.CH2.)2

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

Ag+ ISE KNO3 20°C 0.10M U K1=10.00 B2=13.58 1970WSa (76431)2471
K(AgL+Ag)=3.50 pH 3

C10H22O5 L Tetraglyme CAS 143-24-8 (121)
2,5,8,11,14-Pentaoxapentadecane; (CH3.O.CH2.CH2.O.CH2.CH2.)20

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	non-aq	25°C	100%	C			K1=3.93 B2=5.94	1989BPa (76433)	2472
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4										

		C10H23N	L					CAS 2050-92-2	(8927)	
Dipentylamine;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	cal	R4N.X	25°C	0.05M	C	H			2002BSd (76485)	2473
Medium: propylene carbonate, 0.05 M Et4NClO4. DH(K1)=-49.8 kJ mol ⁻¹ .										

		C10H24N2O5	L					CAS 68704-79-0	(1787)	
8-Oxa-2,14-diaza-5,11-dithiapentadecane;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	NaClO4	25°C	0.10M	U	H		K1=7.32	1979ASb (76554)	2474
								B(AgHL)=15.13		
								B(Ag2L)=10.19		

Also DH values

Ag+	gl	NaClO4	25°C	0.10M	U			K1=7.34	1975ASb (76555)	2475
								B(Ag2L)=10.90		
								B(AgHL)=15.04		

		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
Ag+	EMF	mixed	25°C	90%	C			K1=7.88	2003ISa (76652)	2476
Medium: 90% v/v DMSO/H2O. Method: Ag electrode.										

Ag+	EMF	alc/w	25°C	40%	C			K1=8.36	2002ISa (76653)	2477
Medium: 40% EtOH/H2O. Method: Ag/Ag+ electrode.										

Ag+	sp	non-aq	25°C	100%	C			K1=3.43	19970Db (76654)	2478
Medium: DMSO, 0.10 M Et4NClO4.										

		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
Ag+	gl	NaNO3	25°C	1.0M	C			K1=10.83	2001GLb (76864)	2479
								B(AgHL)=20.37		
								B(AgH2L)=28.93		

C11H9NO2 HL CAS 92609-55-3 (4827)
5-Acetyl-8-hydroxyquinoline;

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

Ag+ gl diox/w 25°C 60% U K1=5.35 1973SCd (77324)2480
Medium: 60% dioxan, 0.1 M NaClO4

C11H9NO2S2 HL CAS 27477-29-8 (3952)
5-(4'-Methoxybenzylidene)-2-thioxo-1,3-thiazolidin-4-one;

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

Ag+ dis NaClO4 20°C 0.10M U K1=8.80 1965NKb (77354)2481

C11H9N3O HL CAS 10335-29-2 (3937)
2-(2'-Pyridylazo)phenol; C5H4N.N:N.C6H4.OH

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

Ag+ gl alc/w 25°C 50% U K1=5.4 1967ANa (77453)2482
Medium: 50% MeOH, 0.1 M NaClO4

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

Ag+ gl KNO3 20°C 0.10M U K1=3.33 B2=6.41 1970BAa (77655)2483
K(Ag+HL)=1.0
K(Ag+AgL)=1.4

C11H11NO6 H3L CAS 1147-65-5 (425)
N-(2'-Carboxyphenyl)iminodiethanoic acid; HOOC.C6H4.N(CH2.COOH)2

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

Ag+ gl R4N.X 20°C 0.10M U K1=3.54 1963IFb (77811)2484
Medium: Me4NNO3

C11H11NS HL CAS 54128-50-6 (1033)
2,7-Dimethyl-8-mercaptoquinoline;

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

Ag+ gl non-aq 25°C 100% U K1=14.1 B2=20.8 1984UBa (77855)2485
Medium: DMF, 0.1 M LiClO4. Similar data to reference UB83a

Ag+ EMF non-aq 25°C 100% U K1=14.1 B2=20.80 1983UBa (77856)2486
Medium: DMF, 0.1 M LiClO4

C11H1106As H3L (4836)
Bis(carboxymethyl)(4-carboxyphenyl)arsine; (HOOC.CH2)2.As.C6H4.COOH

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

Ag+ ISE KNO3 20°C 0.10M U K1=6.1 1969PRa (77971)2487
K(Ag+HL)=5.4

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

Ag+ gl oth/un 25°C 0.5M U K1=3.53 B2= 8.47 2002LKa (78158)2488
In 0.5 M HNO3

C11H12O2 HL CAS 3318-61-4 (4814)
1-Phenylpentane-2,4-dione; C6H5.CH2.CO.CH2.CO.CH3

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

Ag+ gl diox/w 30°C 75% U K1=5.44 1967SUa (78380)2489

C11H12O2S HL (4838)
4-(But-1-enylthio)benzoic acid; CH2:CH.CH2.CH2.S.C6H4.COOH

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

Ag+ ISE oth/un 25°C 0.20M U K1=2.84 1968PSb (78384)2490
Acetate buffer.

C11H12O4S2 H2L CAS 4265-49-0 (4840)
4-Methyl-1,2-phenylenebisthioethanoic acid; CH3.C6H3(S.CH2.COOH)2

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

Ag+ ISE oth/un 25°C 0.20M U K1=4.17 1971FPa (78413)2491
Medium: acetate buffer, pH 1.5 and 5.95

C11H13N04 H2L CAS 3987-53-9 (966)
N-Benzyliminodiethanoic acid; C6H5.CH2.N(CH2.COOH)2

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

Ag+ ISE oth/un 25°C 0.10M M K1=4.31 B2=7.1 1975IPa (78574)2492
Medium: 0.10M K-acetate

C11H13N05 H2L CAS 4596-54-7 (3945)
N-(2'-Methoxyphenyl)iminodiethanoic acid; CH3O.C6H4.N(CH2.COOH)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	gl	R4N.X	20°C	0.10M	U		K1=2.75	1963IFb (78599)	2493
Medium: Me4NNO3									

C11H13N7O4			HL				CAS 362468-50-6	(8659)	
N-(4-Amino-1,6-dihydro-1-methyl-5-nitroso-6-oxo-2-pyrimidinyl)-L-histidine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	0.10M	C		B2=8.88 B(AgHL)=8.60 B(Ag3L3)=20.68 B(AgH-2L)=-17.51 B(AgHL2)=14.55	2002PLb (78730)	2494

C11H13O4As			H2L				CAS 36198-36-4	(4846)	
Bis(carboxymethyl)(2-tolyl)arsine; (HOOC.CH2)2.As.C6H4.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	KNO3	20°C	0.10M	U		K1=5.93 K(Ag+HL)=4.981 K(Ag+H2L)=4.412	1972FGb (78732)	2495

C11H13O4As			H2L				CAS 36198-37-5	(4847)	
Bis(carboxymethyl)(3-tolyl)arsine; (HOOC.CH2)2.As.C6H4.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	KNO3	20°C	0.10M	U		K1=6.06 K(Ag+HL)=4.967 K(Ag+H2L)=4.403	1972FGb (78734)	2496

C11H13O4As			H2L				CAS 36198-38-6	(4848)	
Bis(carboxymethyl)(4-tolyl)arsine; (HOOC.CH2)2.As.C6H4.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	KNO3	20°C	0.10M	U		K1=6.44 K(Ag+HL)=5.577 K(Ag+H2L)=4.827	1972FGb (78736)	2497

C11H13O4AsS			H2L				CAS 36198-36-4	(4870)	
Bis(carboxymethyl)-2-(methylthiophenyl)arsine; (HOOC.CH2)2.As.C6H4.S.CH3									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.20M	U		K1=5.14	1971FPa (78741)	2498

B(Ag2L)=7.88
 K(Ag+HL)=4.64
 K(2Ag+HL)=6.82
 K(Ag+2HL)=8.73

Medium: 0.2 M acetate buffer, pH 1.5 and 5.95

C11H13O5As H2L (4849)
 Bis(carboxymethyl)(2-methoxyphenyl)arsine; (HOOC.CH2)2.As.C6H4.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	20°C	0.10M	U			K1=6.14 K(Ag+HL)=4.67 K(Ag+H2L)=4.54	1972FGb (78751)	2499

C11H13O5As H2L (4850)
 Bis(carboxymethyl)(3-methoxyphenyl)arsine; (HOOC.CH2)2.As.C6H4.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	20°C	0.10M	U			K1=6.20 K(Ag+HL)=4.804 K(Ag+H2L)=4.556	1972FGb (78753)	2500

C11H13O5As H2L (4851)
 Bis(carboxymethyl)(4-methoxyphenyl)arsine; (HOOC.CH2)2.As.C6H4.OCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	KNO3	20°C	0.10M	U			K1=6.36 K(Ag+HL)=5.495 K(Ag+H2L)=4.759	1972FGb (78755)	2501

C11H14 L CAS 2055-40-5 (4806)
 alpha-Isopropylstyrene; C6H5.C(CH(CH3)2):CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sol	KNO3	25°C	1.0M	U T			K1=1.13 B2=1.28	1969INa (78756)	2502
K1(0 C)=1.52, K2(0 C)=0.11										

C11H14 L CAS 62985-48-2 (4809)
 alpha-n-Propylstyrene; C6H5.C(CH2.CH2.CH3):CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sol	KNO3	25°C	1.0M	U T			K1=0.91 B2=1.14	1969INa (78757)	2503
K1(0 C)=1.28, K2(0 C)=0.23										

C11H14 L CAS 79211-50-0 (4807)

cis-beta-Isopropylstyrene; C6H5.CH:CH.CH(CH3)2

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

Ag+ sol KNO3 25°C 1.0M U T K1=1.14 B2=1.18 1969INa (78758)2504
K1(θ C)=1.37, K2(θ C)=0.26

C11H14 L CAS 7642-18-4 (4810)
cis-beta-n-Propylstyrene; C6H5.CH:CH.CH2.CH2.CH3

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

Ag+ sol KNO3 25°C 1.0M U T K1=1.06 B2=1.17 1969INa (78759)2505
K1(θ C)=1.32, K2(θ C)=0.26

C11H14 L CAS 21003-53-2 (4808)
trans-beta-Isopropylstyrene; C6H5.CH:CH.CH(CH3)2

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

Ag+ sol KNO3 25°C 1.0M U T K1=1.02 B2=0.97 1969INa (78760)2506
K1(θ C)=1.35, K2(θ C)=0.26

C11H14 L (4811)
trans-beta-n-Propylstyrene; C6H5.CH:CH.CH2.CH2.CH3

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.74 B2=0.97 1969INa (78761)2507
K1(θ C)=0.99, K2(θ C)=0.40

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

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

Ag+ kin NaCl 80°C 0.25M C 1980LKa (78769)2508
K(Ag+HL=AgL+H)=2.19

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

Ag+ gl KNO3 25°C 0.10M C H K1=6.10 1981ANb (78872)2509
B(AgHL)=10.25
B(Ag2L2)=15.85

C11H14O2S HL CAS 76003-63-9 (4856)
4-(n-Butylthio)benzoic acid; CH3.CH2.CH2.CH2.S.C6H4.COOH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+       ISE oth/un 25°C 0.20M U      K1=2.82      1968PSb (79006)2510
Acetate buffer
*****
C11H15N02S2          L          CAS 85692-71-3 (2453)
Di((ethylthio)methyl)-4'-nitrobenzene; O2N.C6H4.CH(SC2H5)2
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+       kin diox/w 25°C 1% U T      K1=0.18      1989SSa (79025)2511
K1=-0.22 (16 C); 0.95 (44 C); 1.48 (59 C)
*****
C11H15N03          L          (6281)
Benzaldehyde:tris-buffer Schiff's base; C6H5.CH:N.C(CH2.OH)3
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+       gl alc/w 26°C 60% U      K1=3.89      1978TPb (79029)2512
*****
C11H15N03C1PS      L          (4882)
O,O-Diethyl-4-chlorobenzoylphosphoramidothioate;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+       ISE alc/w 20°C 100% U      K1=10.8 B2=13.80 1968ZAb (79033)2513
Medium: EtOH
*****
C11H15N205PS      L          (4877)
O,O-Diethyl-4-nitrobenzoylphosphoramidothioate;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+       ISE alc/w 20°C 100% U      K1=11.3 B2=14.30 1968ZAb (79056)2514
Medium: EtOH
*****
C11H16          CAS 700-12-9 (3343)
Pentamethylbenzene; C6H(CH3)5
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+       sol oth/un 25°C 0.50M U      K1=0.06      19560Aa (79077)2515
*****
C11H16N03PS      L          (4878)
O,O-Diethylbenzoylphosphoramidothioate;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+       ISE alc/w 20°C 100% U      K1=11.1 B2=14.10 1968ZAb (79080)2516
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Medium: EtOH

C11H16S2 L CAS 7734-52-3 (2452)
Di((ethylthio)methyl)benzene; C6H5.CH(S.CH2.CH3)2

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

Ag+ kin diox/w 25°C 1% U K1=2.48 1989SSa (79147)2517

C11H18N04PS2 HL (4879)
(4-Methyl)phenylsulfonylamidothiophosphoric acid 0,0-diethyl ester;

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

Ag+ ISE alc/w 20°C 100% U K1=10.60 B2=13.50 1968ZAb (79192)2518

Medium: EtOH

C11H18N05PS2 HL (4880)
(4-Methoxy)phenylsulfonylamidothiophosphoric acid 0,0-diethyl ester;

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

Ag+ ISE alc/w 20°C 100% U K1=10.66 B2=13.52 1968ZAb (79194)2519

Medium: EtOH

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

Ag+ gl KNO3 20°C 0.10M U K1=7.86 1981SKf (79238)2520
K(AgL+H)=5.80

Ag+ EMF KNO3 25°C 0.10M C K1=7.5 1979BCb (79239)2521
K(AgL+H)=7.4
K(AgHL+H)=5.1
K(AgH2L+H)=3.4

Method: Ag electrode.

C11H18N2O8 H4L CAS 4408-81-5 (923)
1,3-Diaminopropane-N,N,N',N'-tetraethanoic acid; ((H0OC.CH2)2N.CH2.)2.CH2

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

Ag+ gl KNO3 25°C 1.00M C K1=5.02 1992ANa (79402)2522
B(AgHL)=13.45
B(Ag2L)=8.22
B(Ag2L2)=13.01

Ag+ gl KNO3 20°C 0.10M U K1=5.45 1981SKf (79403)2523

K(AgL+H)=8.62

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

Ag+ gl KCl 25°C 0.10M U K1=5.28 1975HAa (79516)2524
B(AgHL)=17.09
K(Ag+AgL=Ag2L)=3.0

C11H18N4 L CAS 78668-34-5 (6708)
3,6,9,15-Tetraazabicyclo[9.3.1]pentadeca-1(15),11,13-triene;

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

Ag+ EMF KNO3 25°C 0.10M C K1=6.00 2002SGc (79616)2525
Method: Ag electrode.

C11H22N2O2S2 HL (7063)
10-Methyl-1,4-Dithia-7,10-diazacyclododecane-7-ethanoic acid;

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

Ag+ gl KNO3 25°C 0.10M M K1=12.32 1995RKa (79817)2526
B(AgHL)=16.53
B(AgH2L)=18.329

C11H22O5 L 16-Crown-5 CAS 55477-28-8 (1592)
1,4,7,10,13-Pentaoxacyclohexadecane; cyclo(-(O.CH2.CH2)5.CH2.CH2-)

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

Ag+ ISE none 25°C 0.0 C K1=1.10 1991TKa (79845)2527
Self medium (ca. 0.0008M). Method: Ag ion-selective electrode.

Ag+ dis none 25°C 0.0 C M 1989TKc (79846)2528
K(AgL+A=AgAL(org))=3.13

Method: extraction of metal picrate/L from H2O into benzene.
K(Ag+HA(org)+L(org)=AgAL(org)+H)=2.235. HA is picric acid.

C11H24N2S2 L (7060)
8-Methyl-1,4-dithia-8,11-diazacyclotetradecane;

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

Ag+ gl KNO3 25°C 0.10M M K1=8.08 B2=10.24 1995RKa (79902)2529
B(AgHL)=14.36
B(AgH2L)=18.628
B(AgH2L2)=26.90

 C11H24O2S4 L CAS 88458-56-4 (4861)
 3,6,10,13-Tetrathiapentadecan-1,15-diol;

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

 Ag+ ISE KNO3 20°C 0.10M U K1=10.08 B2=13.66 1970WSa (79913)2530
 K(AgL+Ag)=3.14 pH 3

C11H25N3S2 L (7062)
 10-Methyl-7(2-aminoethyl)-1,4-dithia-7,10-diazacyclododecane;

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

 Ag+ gl KNO3 25°C 0.10M M K1=14.43 1995Rka (79944)2531
 B(AgHL)=20.56
 B(AgH2L)=22.418

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

 Ag+ sp non-aq 25°C 100% C K1=4.26 19970Db (79989)2532
 Medium: DMSO, 0.10 M Et4NClO4.

C12H6O2Cl4S H2L CAS 97-18-7 (4944)
 Bithionol; Cl2.C6H2(OH).S.C6H2(OH).Cl2

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

 Ag+ gl alc/w 25°C 75% U K1=4.55 B2=7.15 1970FGa (80095)2533
 Medium: 75% EtOH, 1.0 M NaClO4

C12H7N2Br L CAS 40000-20-2 (2750)
 5-Bromo-1,10-phenanthroline;

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

 Ag+ gl KNO3 25°C 0.10M C K1=5.30 B2=11.74 1974B0a (80118)2534

C12H7N2Cl L CAS 4199-89-7 (2751)
 5-Chloro-1,10-phenanthroline;

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

 Ag+ gl KNO3 25°C 0.10M C K1=4.70 B2=11.02 1974B0a (80140)2535

C12H8N2 L Phenanthroline CAS 66-71-7 (144)
 1,10-Phenanthroline;

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

Ag+ ISE non-aq 25°C 100% U B2=12.40 1988IGa (80365)2536
Medium: 0.1 M Et4NNO3 in propylene carbonate

Ag+ EMF oth/un 25°C 0.10M U B2=11.5 1986IGa (80366)2537
Solutions containing 0.1 M (C2H5)4N.C104 and 0.01 M AgNO3
Kso (AgL2NO3) = -7.20

Ag+ ISE non-aq ? 100% U B2=9.87 1984IGa (80367)2538
Medium: CH3CN

Ag+ ISE NaNO3 25°C 0.50M U 1967SPa (80368)2539
Ks(AgL2NO3)=-18.95

Ag+ ISE oth/un 25°C 0.10M U K1=5.02 B2=12.07 1963DBa (80369)2540

Ag+ ISE alc/w 20°C 100% U I 1958PPa (80370)2541
K3=13.40
Medium: EtOH. In MeCN K1=15.04

C12H9NOS2 HL CAS 15328-87-7 (3997)
5-(3'-Phenylallylidene)-2-thioxo-1,3-thiazolidin-4-one;

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

Ag+ dis NaClO4 20°C 0.10M U K1=9.08 1965NKb (80569)2542

C12H9N3 L CAS 1137-68-4 (2517)
2-(2'-Pyridyl)benzimidazole;

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

Ag+ ISE non-aq 25°C 100% U K1=7.0 B2=13.1 1981TLa (80623)2543
Medium: Propylene carbonate

C12H10 L Biphenyl CAS 92-52-4 (3368)
Biphenyl; C6H5.C6H5

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

Ag+ sp non-aq 25°C 100% U K1=0.589 B2=0.21 1991PZa (80648)2544

Ag+ sol oth/un 25°C ? U K1=0.60 B2=0.60 1949AKa (80649)2545

C12H10N2O5S H3L Tropeolin 0 CAS 547-57-9 (1090)
Chrysoin; HS03.C6H4.N:N.C6H3(OH)2

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

 Ag+ ISE mixed 20°C 75% C 1987KMa (80736)2546
 K(Ag+H2L)=0.77
 K(Ag+2H2L)=2.76
 K(Ag(H2L)2+H2L)=1.89

Medium: 75% v/v acetone/H2O

C12H10S L CAS 139-66-2 (6001)
 Diphenylsulfide;

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

Ag+ ISE non-aq 25°C 100% U H K1=0.48 1987ZPa (80804)2547
 In DMSO; 0.1M NH4ClO4.

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

Ag+ gl KNO3 20°C 0.10M U K1=3.20 B2=5.93 1970BAa (80989)2548
 K(Ag+HL)=1.3
 K(Ag+AgL)=1.6

C12H12N2OS2 L CAS 536-17-4 (1815)
 5-(4-Dimethylaminobenzylidene)-2-thioxo-4-thiazolidinone;

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

Ag+ dis NaClO4 20°C 0.10M U K1=9.15 1965NKb (81035)2549

C12H12N2O2 L CAS 4114-95-8 (3976)
 N,N'-Di(furfurylidene)ethylenediamine; (C4H3O.CH:N.CH2.)2

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

Ag+ ISE alc/w 20°C 0.10M U K1=6.70 B2=8.95 1966HSc (81048)2550
 Medium: MeOH, 0.1 M NaNO3

C12H12N2S2 L CAS 4144-94-7 (3977)
 N,N'-Di(thienylidene)ethylenediamine; (C4H3S.CH:N.CH2.)2

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

Ag+ ISE alc/w 20°C 0.10M U K1=7.54 B2=9.42 1966HSc (81112)2551
 Medium: MeOH, 0.1 M NaNO3

C12H13NS HL CAS 54421-21-5 (1034)
 2-(2-Propyl)-8-mercaptoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	gl	non-aq	25°C	100%	U		K1=8.9 B2=17.4	1984UBa	(81253)2552

Medium: DMF, 0.1 M LiClO4

 C12H13N3 L CAS 1539-42-0 (932)
 bis-((2-Pyridyl)methyl)-amine (Di-2-picolyamine); C5H4N.CH2NHCH2.C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	gl	KNO3	20°C	0.10M	C		K1=5.46 B2=8.16	1977AHc	(81277)2553

Ag+	gl	KNO3	25°C	0.10M	U		K1=5.1 B2=8.2	1968RBa	(81278)2554
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 C12H14O2S HL (4918)
 4-(Pent-1-enylthio)benzoic acid; CH2:CH.CH2.CH2.CH2.S.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.20M	U		K1=3.05	1968PSb	(81395)2555

Acetate buffer.

 C12H14O4AsCl H2L (4006)
 4'-Chlorophenyl-3,3'-arsinodipropanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	KNO3	20°C	0.10M	U		K1=5.00 K(Ag+HL)=3.98	1964PIa	(81407)2556

 C12H16 L CAS 76206-42-9 (4883)
 alpha-n-Butylstyrene; C6H5.C(CH2.CH2.CH2.CH3):CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	sol	KNO3	25°C	1.0M	U T		K1=0.81 K(AgL+Ag)=0.18	1969INa	(81542)2557

0 C: K1=1.11, K(AgL+Ag)=0.23

 C12H16 L CAS 35243-57-3 (4886)
 alpha-sec-Butylstyrene; C6H5.C(CH(CH3).CH2.CH3):CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	sol	KNO3	25°C	1.0M	U T		K1=0.84 K(AgL+Ag)=0.11	1969INa	(81543)2558

0 C: K1=1.12, K(AgL+Ag)=0.23

 C12H16 L CAS 38338-64-6 (4889)
 alpha-tert-Butylstyrene; C6H5.C(C(CH3)3):CH2

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.93 1969INa (81544)2559
K(AgL+Ag)=0.08

Ø C: K1=1.17, K(AgL+Ag)=0.26

C12H16 L CAS 6111-83-6 (4884)
cis-beta-n-Butylstyrene; C6H5.CH:CH.CH2.CH2.CH2.CH3

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.93 1969INa (81545)2560
K(AgL+Ag)=0.04

Ø C: K1=1.18, K(AgL+Ag)=0.18

C12H16 L CAS 63444-56-4 (4887)
cis-beta-sec-Butylstyrene; C6H5.CH:CH.CH(CH3).CH2.CH3

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.94 1969INa (81546)2561
K(AgL+Ag)=0.00

Ø C: K1=1.19, K(AgL+Ag)=0.20

C12H16 L CAS 42268-77-9 (4890)
cis-beta-tert-Butylstyrene; C6H5.CH:CH.C(CH3)3

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.97 1969INa (81547)2562
K(AgL+Ag)=0.04

Ø C: K1=1.19, K(AgL+Ag)=0.32

C12H16 L CAS 828-15-9 (4885)
trans-beta-n-Butylstyrene; C6H5.CH:CH.CH2.CH2.CH2.CH3

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.43 1969INa (81548)2563
K(AgL+Ag)=0.00

Ø C: K1=0.81, K(AgL+Ag)=0.23

C12H16 L CAS 25358-51-6 (4888)
trans-beta-sec-Butylstyrene; C6H5.CH:CH.CH(CH3).CH2.CH3

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.71 1969INa (81549)2564
K(AgL+Ag)=-0.05

0 C: K1=1.01, K(AgL+Ag)=-0.10

C12H16 L CAS 37849-09-5 (4891)
trans-beta-tert-Butylstyrene; C6H5.CH:CH.C(CH3)3

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

Ag+ sol KNO3 25°C 1.0M U T K1=0.82 1969INa (81550)2565
K(AgL+Ag)=0.15

0 C: K1=1.11, K(AgL+Ag)=0.36

C12H16O2S HL CAS 53551-39-6 (4932)
4-(n-Pentylthio)benzoic acid; CH3.CH2.CH2.CH2.CH2.S.C6H4.COOH

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

Ag+ ISE oth/un 25°C 0.20M U K1=2.84 1968PSb (81666)2566
Acetate buffer.

C12H17NS2 L (7473)
7-Phenyl-1,4-dithia-7-azacyclononane; C6H5.C6H12NS2

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

Ag+ EMF non-aq 25°C 100% C K1=3.70 B2= 6.70 1999ISa (81720)2567
Medium: acetonitrile, 0.1 M Me4NClO4

C12H18 L CAS 877-44-1 (3370)
1,2,4-Triethylbenzene; C6H3(CH2.CH3)3

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

Ag+ sol NaNO3 25°C 0.50M U K1=0.07 19560Aa (81787)2568

C12H18 L CAS 99-62-7 (3369)
1,3-Di-isopropylbenzene; C6H4(CH(CH3)2)2

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

Ag+ sol NaNO3 25°C 0.50M U K1=0.03 19560Aa (81788)2569

C12H18 L CAS 87-85-4 (2406)
Hexamethylbenzene; C6(CH3)6

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

Ag+ sol NaNO3 25°C 0.50M U H K1=-0.44 19560Aa (81789)2570
DH(K1)=-14.4 kJ mol-1, DS=-52.3 J K-1 mol-1

Ag+ sol NaNO3 1.6°C 0.50M U K1=0.01 19560Aa (81790)2571

C12H18NO3PS L (4968)
O,O-Diethyl-4-methylbenzoylphosphoramidothioate;

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

Ag+ ISE alc/w 20°C 100% U K1=11.4 B2=14.40 1968ZAb (81792)2572

C12H18OS2 L CAS 25837-15-2 (2455)
4-Methoxy-di(ethylthio)methyl-benzene; CH3O.C6H4.CH(S.CH2.CH3)2

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

Ag+ kin diox/w 25°C 1% U T K1=2.20 1989SSa (81959)2573
K1=2.14 (34 C); 1.95 (43 C)

C12H18S2 L CAS 160581-14-6 (4912)
1,3-Bis[(ethylthio)methyl]benzene;

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

Ag+ dis KNO3 22°C 0.5M U 1998FRa (81967)2574
B(Ag(NO3)L)(org)=1.91
B(Ag(NO3)L2)(org)=4.37
B(Ag3(NO3)3L3)(aq)=13.85

Organic medium: chloroform. B(Ag(NO3)L)(org): Ag(aq)+NO3(aq)+L(org)=
Ag(NO3)L(org). B(Ag3(NO3)3L3)(aq): Ag(aq)+NO3(aq)+L(org)=Ag3(NO3)3L3(aq).

C12H18S2 L CAS 22914-06-3 (2454)
Di-(1,1-thioethyl)ethylbenzene; C6H5.CH(SC2H5)2CH3

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

Ag+ kin diox/w 25°C 1% U T K1=2.36 1989SSa (81968)2575
K1=2.12 (34 C); 1.97 (43 C)

C12H20N2O8 H4L CAS 1798-13-6 (4935)
1,2-Diaminobutane-N,N,N',N'-tetraethanoic acid;
(HOOC.CH2)2N.CH2.CH(C2H5).N(CH2.COOH)2

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

Ag+ gl KNO3 20°C 0.10M U K1=7.93 1981SKf (82015)2576
K(AgL+H)=5.92

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

Ag+ gl KNO3 25°C 1.00M C K1=5.15 1992ANa (82198)2577
 B(AgHL)=14.10
 B(Ag2L)=8.20
 B(Ag2L2)=13.70

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

Ag+ gl KNO3 20°C 0.10M U K1=8.01 1981SKf (82266)2578
 K(AgL+H)=6.49

 Ag+ EMF KNO3 25°C 0.10M C K1=5.5 1979BCb (82267)2579
 K(AgL+H)=9.1
 K(AgHL+H)=6.1
 K(AgH2L+H)=3.0

Method: Ag electrode.

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

Ag+ gl KNO3 20°C 0.10M U K1=6.70 1981SKf (82348)2580
 K(AgL+H)=6.75

C12H20O7S L CAS 63689-64-5 (2171)
 4-Thia-1,7,10,13,16-pentaoxacyclooctadecane-2,6-dione;
 cyclo(-S.CH2.CO.(O.CH2.CH2)4.O.CO.CH2-)

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

Ag+ cal alc/w 25°C 100% U H K1=3.05 1980LIb (82644)2581
 Medium: MeOH. DH=-29.2 kJ mol⁻¹

 Ag+ sp alc/w 25°C 100% U H K1=3.05 1977ILc (82645)2582
 Medium: Methanol. DH(K1)= -29.2 kJ mol⁻¹

C12H20O8 L CAS 62796-84-3 (2141)
 1,4,7,10,13,16-Hexaoxacyclooctadecane-2,6-dione;

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

Ag+ cal alc/w 25°C 100% U H K1=2.50 1980BMA (82646)2583
 Medium: MeOH. DH=-6.40 kJ mol⁻¹.

 Ag+ cal alc/w 25°C 100% U H K1=2.50 1980LIb (82647)2584

Medium: MeOH. DH=-6.40 kJ mol⁻¹.

C12H22N2O6 L CAS 23978-54-3 (8931)

1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-6,17-dione;

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

Ag+ ISE R4N.X 25°C 0.05M U H K1=2.55 2002BSd (82780)2585

Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M Et4NClO4. By calorimetry: DH(K1)=-29.5 kJ mol⁻¹, DS(K1)=-50.3 J K⁻¹ mol⁻¹.

C12H23NO5 L (6793)

10-Methoxycarbonylethyl-1,4,7-trioxa-10-azacyclododecane;

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

Ag+ cal alc/w 25°C 100% U H 1990KMb (82942)2586

Medium: MeOH. DH=-49.9 kJ mol⁻¹

C12H23P L CAS 829-84-5 (5982)

Dicyclohexylphosphine; HP(C6H11)2

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

Ag+ EMF non-aq 25°C 100% U H K1=5.40 B2=8.12 1987HPb (83010)2587

In pyridine; medium: 0.1 M Et4NClO4

C12H24O2 HL Lauric acid CAS 143-07-7 (2540)

Dodecanoic acid, CH3.(CH2)10.COOH

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

Ag+ gl oth/un 20°C var U 1981HTc (83109)2588

Kso=-9.00

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

Ag+ ix none 25°C 0.0 U K1=11.3 1991BTa (83116)2589

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

Ag+ cal non-aq 25°C 100% C H K1=6.30 1988BUb (83126)2590

Medium: acetonitrile. DH(K1)=-41.5 kJ mol⁻¹, DS(K1)=-19 J K⁻¹ mol⁻¹.

Ag+ cal non-aq 25°C 100% C H 1986BUe (83127)2591
Medium: MeOH. DH(K1)=-64.0 kJ mol⁻¹, DS(K1)=-17.8 J K⁻¹ mol⁻¹.

Ag+ ISE oth/un 25°C .001M U H K1=1.84 1986PBa (83128)2592

Ag+ ISE oth/un 25°C dil A K1=4.34 1971FRa (83129)2593

C12H24O5S L Thia-18-crown-6 CAS 52559-79-2 (2263)
1-Thia-4,7,10,13,16-pentaoxacyclooctadecane;

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

Ag+ cal alc/w 25°C 100% U H K1=>5.5 1980LIa (83153)2594
Medium: MeOH. DH=-51.5 kJ 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

Ag+ ISE none 25°C dil C M 2004KUa (83183)2595
Method: Ag ion-selective electrode; self medium. For extraction into
benzene, K(Ag+L(org))+HA(org)=AgLA(org)+H)=2.15. HA is picric acid.

Ag+ EMF alc/w 25°C 100% C K1=4.29 2004ZTa (83184)2596
Medium: 100% methanol, 0.05 M Bu4NClO4. Method: Ag electrode.

Ag+ ISE alc/w 25°C 100% C IH R K1=4.61 2003ADa (83185)2597
IUPAC Recommended. Medium: 0-0.1 M various. DH(K1)=-39 kJ mol⁻¹
In H2O: K1=1.50, DH(K1)=-9. In PC: K1=7.0, DH(K1)=-49.6

Ag+ con mixed 25°C 90% C K1=2.11 2003ISa (83186)2598
Medium: 90% v/v DMSO/H2O. By potentiometry (Ag electrode), K1=2.15.

Ag+ con non-aq 25°C 100% C TIH K1=3.54 2003RZa (83187)2599
Medium: acetonitrile. Data for 15-55 C. DH(K1)=75 kJ mol⁻¹, DS(K1)=321 J K
mol⁻¹. In MeOH, K1=4.6, DH=25, DS=172. Data for AN/MeOH mixtures and BN.

Ag+ con mixed 25°C 20% C K1=4.92 2003SIa (83188)2600
Medium: 20% w/w propylene carbonate/ethylene carbonate. By potentiometry
(Pt/Ag electrode), K1=4.89.

Ag+ con alc/w 25°C 40% C K1=1.97 2002ISa (83189)2601
Medium: 40% EtOH/H2O. By potentiometry, K1=1.99

Ag+ ISE alc/w 25°C 100% U K1=4.28 2002LDA (83190)2602
for 1.0 M KCl in H2O K1=1.70
Medium: 1.0 M KCl in MeOH; for 0.2 mass parts of MeOH/H2O K1=1.83;
for 0.6 mass parts of MeOH/H2O K1=2.72; Ag-electrode

Ag+ ISE mixed 25°C 100% U I K1=2.61 2002LDa (83191)2603
for 1.0 M KCl in H2O K1=1.70
Medium: 1.0 M KCl in n-Propanol; for 0.2 mass parts of PrOH/H2O K1=1.91;
for 0.6 mass parts of PrOH/H2O K1=1.75; Ag-electrode

Ag+ con alc/w 25°C 40% C K1=2.06 2001ISa (83192)2604
Medium: 40% v/v EtOH/H2O. By potentiometry, K1=2.07.

Ag+ cal mixed 25°C U I K1=0.35 2001USa (83193)2605
DH(K1)=-13.0 kJ mol⁻¹
Medium: 0.97 mol parts DMSO in H2O; for 100% H2O K1=1.4; DH(K1)=-10.2
for 0.6 m.p. DMSO K1=1.0; DH(K1)=-18.2; for 0.2 m.p. DMSO K1=1.75

Ag+ gl oth/un 25°C 0.05M M IH T K1=1.50 2000BSa (83194)2606
Medium: 0.05 M Et4N[ClO4]. By calorimetry, DH=-9.1 kJ mol⁻¹.
Also data for other media: DMSO, PC, DMI, AN, DMF, MeOH, TFE, EtOH, AN.

Ag+ EMF non-aq 30°C 100% C K1=2.78 1999KBa (83195)2607
Method: Ag/Ag+ electrode. Medium: N-methyl-2-pyrrolidinone.

Ag+ ISE alc/w 25°C C T H K1=2.72 1999LPa (83196)2608
Medium: 60% mass MeOH in H2O; for 100 H2O K1=1.77; for 100% MeOH: 4.28
For 60% MeOH and T=45 C K1=2.56; T=35 C K1=2.62; Also data for 20, 40, 80%

Ag+ cal non-aq 25°C 100% C H K1=2.62 1999WBa (83197)2609
Medium: N,N-dimethylformamide. DH(K1)=-18.1 kJ mol⁻¹.

Ag+ EMF non-aq 25°C 100% C T K1=3.36 1998PSa (83198)2610
DH=-29.9 kJ mol⁻¹, DS=-36 J K⁻¹ mol⁻¹. Method: Ag electrode.
Data for 10-55 C. Medium: EtOH

Ag+ cal oth/un 25°C 0.01M C T H K1=1.51 1997V0a (83199)2611
For T=35 C K1=1.46; for T=45 C K1=1.40

Ag+ con non-aq 25°C 100% C I K1=4.79 1993JHa (83200)2612
Medium: acetone. Data for DMF media.

Ag+ con oth/un 25°C 0.05M M K1=4.67 1992BUb (83201)2613
K1=4.58 (by calorimetry); K1=4.65 (by potentiometry)

Ag+ con non-aq 25°C 100% C K1=5.75 1992STa (83202)2614
Medium: propylene carbonate. By potentiometry with Ag electrode, K1=5.78.

Ag+ ix none 25°C 0.0 U K1=1.6 1991BMb (83203)2615

Ag+ ISE non-aq 25°C 100% C K1=6.86 1989BPa (83204)2616
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

Ag+ cal non-aq 25°C 100% C H 1986BUe (83205)2617
Medium: MeOH. DH(K1)=-39.1 kJ mol⁻¹, DS(K1)=-44.0 J K⁻¹ mol⁻¹.

Ag+ ISE non-aq 25°C 100% C K1=7.05 1983ANb (83206)2618
The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4

Ag+ cal alc/w 25°C 100% U H K1=4.58 1980BMa (83207)2619
Medium: MeOH. DH=-38.3 kJ mol⁻¹.

Ag+ cal alc/w 25°C 100% U H T K1=4.58 1980LIa (83208)2620
Medium: MeOH. DH=-38.3 kJ mol⁻¹.

Ag+ cal oth/un 25°C 0.10M U H T K1=1.5 1976ITb (83209)2621
DH=-9.08 kJ mol⁻¹.

Ag+ ISE oth/un 25°C dil A K1=1.6 1971FRa (83210)2622

C12H24S6 L 18-Ane-S6 (7196)
1,4,7,10,13,16-Hexathiacyclooctadecane;

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

Ag+ ISE alc/w 25°C 100% U K1=12.67 1996ANa (83693)2623
Medium: MeOH, 0.1 M Bu4NClO4

C12H25NO5 L CAS 33941-15-0 (4939)
1,4,7,10,13-Pentaoxa-16-azacyclooctadecane;

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

Ag+ EMF alc/w 25°C 100% C I K1=6.08 B2= 8.43 2003TCb (83697)2624
Medium: 100% MeOH. Also data for EtOH, DMSO, acetonitrile, propylene
carbonate and nitromethane.

Ag+ EMF non-aq 25°C 100% C K1=3.56 B2= 5.40 1999THa (83698)2625
Medium: acetonitrile. Method: Ag/Ag+ electrode.

Ag+ EMF non-aq 25°C 100% U K1=3.05 B2= 4.64 1998HTb (83699)2626
Medium: DMSO. Method: Ag/Ag+ electrode

Ag+ ISE oth/un 25°C dil A K1=3.3 1971FRa (83700)2627

C12H26N2O2S2 L CAS 28843-76-7 (8376)
1,4-Dioxa-10,13-dithia-7,16-diazacyclooctadecane;

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

Ag+ EMF non-aq 25°C 100% C I K1=11.5 1994BCe (83722)2628
Method: Ag/Ag+ electrode. Medium: 100% MeOH, 0.05 M Et4NClO4. Data for
acetone (K1=14.5), CH3CN (9.4), DMF (11.3), DMSO (8.7), CH3NO2 (15.4).

Ag+ cal non-aq 25°C 100% C I 1994BFb (83723)2629

Medium: 100% MeOH. DH(K1)=-67.7 kJ mol⁻¹, DS(K1)=-2.0 J K⁻¹ mol⁻¹. Data for several media: acetone DH(K1)=-94.9, DS(K1)=-12.1; CH₃CN (-58.9, -5.2)

 C12H26N2O4 L CAS 41775-36-4 (2470)
 1,4,7,13-Tetraoxa-10,16-diazacyclooctadecane;

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

Ag+ con non-aq 25°C 100% C I K1=>6.5 1993JHa (83728)2630
 Medium: acetone. Data for DMF media.

 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

Ag+ EMF alc/w 25°C 100% C K1=9.43 2003TCb (83762)2631
 Medium: 100% EtOH.

 Ag+ ISE R4N.X 25°C 0.05M U H K1=15.57 2002BSd (83763)2632
 Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M Et₄NClO₄. By calorimetry: DH(K1)=-82.3 kJ mol⁻¹, DS(K1)=17.1 J K⁻¹ mol⁻¹.

 Ag+ EMF non-aq 30°C 100% C K1=9.35 1999KBa (83764)2633
 Method: Ag/Ag+ electrode. Medium: MeOH.

 Ag+ EMF non-aq 25°C 100% U K1=3.30 B2= 5.26 1998HTb (83765)2634
 Medium: DMSO. Method: Ag/Ag+ electrode

 Ag+ EMF non-aq 25°C 100% C K1=9.45 1995DGa (83766)2635
 Medium: benzonitrile, 0.05 M Et₄NClO₄. Method: Ag/Ag+ electrode.

 Ag+ EMF non-aq 25°C 100% C I K1=7.9 1994BCe (83767)2636
 Method: Ag/Ag+ electrode. Medium: 100% CH₃CN, 0.05 M Et₄NClO₄. Data for acetone (K1=13.4), DMF (9.9), DMSO (7.4), nitromethane (13.6), PC (15.6).

 Ag+ cal non-aq 25°C 100% C I 1994BFb (83768)2637
 Medium: 100% MeOH. DH(K1)=-51.4 kJ mol⁻¹, DS(K1)=5.7 J K⁻¹ mol⁻¹.
 Data for several media: DMF, DH(K1)=-58.9, DS(K1)=-2.4; PC (-85.7, 3.4).

 Ag+ ISE non-aq 25°C 100% U H K1=7.6 1990MGa (83769)2638
 In acetonitrile, 0.1 M Et₄NClO₄. DH=-88 kJ mol⁻¹.

 Ag+ ISE non-aq 25°C 100% C T H K1=15.9 1986ALa (83770)2639
 Medium: propylene carbonate, 0.1 M Et₄NClO₄. DH and DS given

 Ag+ ISE non-aq 25°C 100% U H K1=7.93 1986BUb (83771)2640
 In CH₃CN. DH=-30.5 kJ mol⁻¹

 Ag+ cal non-aq 25°C 100% C H 1986BUe (83772)2641

Medium: MeOH. DH(K1)=-44.9 kJ mol⁻¹, DS(K1)=40.3 J K⁻¹ mol⁻¹.

Ag+ ISE alc/w 25°C 100% U H K1=10.02 1985BUb (83773)2642
Medium: MeOH, 0.05M Et4NClO4. DH=-44.9 kJ mol⁻¹

Ag+ gl R4N.X 25°C 0.10M C K1=7.27 1985CSb (83774)2643
Medium: 0.10 M Et4NClO4.

Ag+ ISE non-aq 25°C 100% C K1=13.3 1983ANb (83775)2644
The equilibration took 7-12 days. Medium: PC, 0.10 M Et4NClO4

Ag+ ISE non-aq 25°C 100% U I K1=13.63 1983CFa (83776)2645
Medium: CH3NO2. K1=13.39 in acetone; 9.91 in DMF; K1=7.39 in DMSO;
7.94 in MeCN; 9.99 in MeOH; 15.57 in propylene carbonate

Ag+ ISE R4N.X 25°C 0.10M U I K1=7.70 1983CSa (83777)2646
Also data for 0.05-1.0 mol fraction MeCN/H2O

Ag+ gl NaClO4 25°C 0.50M U K1=8.08 1981KMb (83778)2647

Ag+ ix non-aq 25°C 100% U K1=6.21 1981SAa (83779)2648
Medium: DMSO, 0.1 M R4NX

Ag+ gl alc/w 25°C 100% C K1=10.18 1980SAa (83780)2649
B(Ag2L)=15.51
Medium: MeOH, 0.05 M Et4NClO4

Ag+ gl R4N.X 25°C 0.10M C K1=7.90 1977ASc (83781)2650

Ag+ gl R4N.X 25°C 0.10M C H K1=7.8 1975ANa (83782)2651
Calorimetry: DH1=-38.3 kJ mol⁻¹, DS1=20.9

Ag+ ISE oth/un 25°C dil A K1=7.8 1971FRa (83783)2652

C12H26N2S4 L CAS 20934-69-4 (8375)
1,4,10,13-Tetrathia-7,16-diazacyclooctadecane;

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

Ag+ EMF non-aq 25°C 100% C I K1=13.7 1994BCe (83935)2653
Method: Ag/Ag+ electrode. Medium: 100% MeOH, 0.05 M Et4NClO4. Data for
acetone (K1=15.9), CH3CN(10.9), DMF(12.3), DMSO (9.7), nitromethane (16.2)

Ag+ cal non-aq 25°C 100% C IH 1994BFb (83936)2654
Medium: 100% MeOH. DH(K1)=-83.2 kJ mol⁻¹, DS(K1)=-5.0 J K⁻¹ mol⁻¹. Data
for several media: acetone, DH(K1)=-109.9, DS=-19.1; CH3CN (-75.7, -13.5).

C12H26O6 L Pentaglyme CAS 1191-87-3 (2498)
2,5,8,11,14,17-Hexaoxaoctadecane; (CH3.O.CH2.CH2.O.CH2.CH2.O.CH2.)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	cal	oth/un	25°C	0.05M	M			K1=1.80	1992BUb (83984)	2655
Ag+	gl	non-aq	25°C	100%	C			K1=4.44	1989BPa (83985)	2656
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4										
Ag+	ISE	alc/w	25°C	100%	U	H		K1=1.80	1985BUB (83986)	2657
Medium: MeOH, 0.05M Et4NClO4. DH=-15.8 kJ mol ⁻¹										

C12H27N			L					CAS 102-82-9	(1341)	
Tributylamine; (C4H9)3N										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	EMF	non-aq	25°C	100%	C	I		K1=1.9	1999THa (84039)	2658
Medium: acetonitrile. Method: Ag/Ag+ electrode. Also data for medium: DMSO										
Ag+	oth	non-aq	23°C	100%	C			K2=0.26	1988SBa (84040)	2659
Medium: toluene, by I.R. spectroscopy.										
Ag+	gl	alc/w	25°C	50%	U			K1=2.22 B2=3.82	1955ANc (84041)	2660
Medium: 50 mole% EtOH										

C12H27O4P			L					CAS 126-73-8	(2432)	
Tri-n-butyl phosphate; (C4H9O)3PO										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sol	non-aq	25°C	100%	U				1985MMb (84117)	2661
K(AgNO3+L)=3.04 K(AgLN03+L)=1.10										
Medium: benzene. Data for other solvents are also given.										

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
Ag+	EMF	non-aq	25°C	100%	U	H		K1=6.38 B2=10.24 B3=12.57	1987HPb (84131)	2662
In pyridine; medium: 0.1 M Et4NClO4										

C12H27Sb			L					Tributylstibine CAS 2155-73-9	(5981)	
Tributylantimony; (C4H9)3Sb										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	EMF	non-aq	25°C	100%	U	H		K1=2.70 B2=4.71	1987HPb (84139)	2663

In pyridine; medium: 0.1 M Et4NC104

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

Ag+ ISE alc/w 25°C 100% U H K1=7.24 1985BUB (84141)2664
Medium: MeOH, 0.05M Et4NC104. DH=-49.4 kJ mol⁻¹

C12H28N4O2 L CAS 296-36-6 (2472)
1,10-Dioxa-4,7,13,16-tetraazacyclooctadecane;

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

Ag+ ISE alc/w 25°C 100% U H K1=11.2 1990CKb (84225)2665
Medium: MeOH. DH=-59.5 kJ mol⁻¹

C12H28N4S2 L (6796)
1,10-Dithia-4,7,13,16-tetraazacyclooctadecane;

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

Ag+ gl R4N.X 25°C 0.10M M IH K1=10.4 1990CKb (84246)2666
K(Ag+HL)=9.05
K(AgHL+H)=5.4
K(AgL+H)=7.91
K(Ag+H2L)=6.00

Medium: 0.1 M Me4NNO3. Also K(AgH2L+H)=3.94; K(Ag+H3L)=4.13. In CH3OH:
K1=14.1 (by ISE), DH=-77 kJ mol⁻¹ (by calorimetry).

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

Ag+ EMF KNO3 25°C 0.10M C 1993GRa (84318)2667
K(Ag+H6L=AgH2L+4H)=12.03

Method: Ag/Ag+ electrode.

C13H9N L Acridine CAS 260-94-6 (3398)
Acridine;

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

Ag+ ISE alc/w 25°C 59% U B2=4.41 1952FYb (84525)2668

C13H9N3OS HL TAN CAS 1147-56-4 (4030)
1-(1',3'-Thiazol-2'-ylazo)-2-hydroxynaphthalene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	dis	oth/un	20°C	0.05M	U			K1=8.67	1966NAa (84611)	2669

C13H10N2		L						CAS 3003-78-6	(2752)	
5-Methyl-1,10-phenanthroline;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	25°C	0.10M	C			K1=7.3 B2=13.35	1974B0a (84800)	2670

Ag+	ISE	alc/w	25°C	50%	U			K1=5.34 B2=10.25	1972BBa (84801)	2671
Medium: 50% EtOH, 0.1 M KNO3										

C13H10O2S		HL						CAS 6310-24-3	(4981)	
4-(Phenylthio)benzoic acid; C6H5.S.C6H4.COOH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	oth/un	25°C	0.20M	U			K1=2.44	1968PSb (84980)	2672
Acetate buffer.										

C13H10O3		HL						CAS 5910-23-6	(3399)	
Benzoyl-2-furoylmethane; C6H5.CO.CH2.CO.C4H3O										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	diox/w	30°C	75%	U			K1=5.74	1967SUa (84996)	2673

C13H12		L						CAS 101-81-5	(3396)	
Diphenylmethane; C6H5.CH2.C6H5										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sol	oth/un	25°C	?	U			K1=0.52 B2=0.54	1949AKa (85321)	2674

C13H12N2O		L						CAS 603-54-3	(6137)	
N,N-Diphenylcarbamide; (C6H5)2N.CO.NH2										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	mixed	25°C	82%	U			K1=9.09 B2=11.12	1979TBd (85337)	2675
Medium: 82% v/v DMFA/H2O; 0.2 M KNO3										

C13H12N4S		L						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
Ag+	sp	NaClO4	25°C	0.10M	U			K1=6.98	1973BSe (85445)	2676

 C13H13N3 L CAS 102-06-7 (994)
 sym-N,N'-Diphenylguanidine; C6H5.NH.C(NH).NH(C6H5)

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

Ag+ oth non-aq ? 100% U B2=10.3 1965MMa (85500)2677
 Method: coulometric titration. Medium: acetone, 0.05 M Bu4NC104

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

Ag+ gl KNO3 20°C 0.10M U K1=3.44 B2=6.43 1970BAa (85571)2678

C13H14N2O3 HL Antineoplaston CAS 91531-30-5 (8098)
 3-(N-Phenylacetyl-amino)-2,6-piperidinedione;

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

Ag+ gl alc/w 45°C 50% C K1=4.79 B2= 7.79 1996MMc (85625)2679
 Medium: 50% v/v MeOH/H2O, 0.10 M KNO3.

C13H18O2S HL CAS 22683-51-8 (5002)
 p-(n-Hexylthio)benzoic acid; CH3(CH2)5.S.C6H4.COOH

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

Ag+ ISE oth/un 25°C 0.20M U K1=2.84 1968PSb (86046)2680
 Acetate buffer

C13H22N2O8 H4L CAS 1198-14-7 (5004)
 1,2-Diaminopentane-N,N,N',N'-tetraethanoic acid; (HOOCCH2)2NCH2CH(C3H7)N(CH2COOH)2

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

Ag+ gl KNO3 20°C 0.10M U K1=8.05 1981SKf (86217)2681
 K(AgL+H)=5.80

C13H22N2O8 H4L (5003)
 3-Methyl-1,2-diaminobutane-N,N,N',N'-tetraethanoic acid;

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

Ag+ gl KNO3 20°C 0.10M U K1=8.13 1981SKf (86272)2682
 K(AgL+H)=5.84

C13H26OS L CAS 60838-34-8 (1929)
 3-Methyl-5-thiatri-deca-2-one; CH3.CO.CH(CH3).CH2.S.C8H17

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        EMF non-aq 25°C 100% U          K1=4.51  B2=7.73  1989MSa (86456)2683
                                     B3=9.85
                                     B4=10.87

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0.1 M NaClO4 in acetone.

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*****
C13H26O5S6      L      19-Ane-S6-OH      (7197)
3,6,9,12,15,18-Hexathiacyclononadecanol;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE a/c/w 25°C 100% U          K1=12.04      1996ANa (86457)2684
Medium: MeOH, 0.1 M Bu4NC1O4

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*****
C13H26O4S2      L          (6656)
1,5-Dithia-8,11,14,17-tetraoxacyclononadecane, 1,5-Dithia-19-crown-6;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ix none 25°C 0.0 U          K1=11.0      1991BTa (86459)2685

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*****
C13H26O5      L          (6410)
15,15-Dimethyl-1,4,7,10,13-pentaoxacyclohexadecane;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        con none 25°C 0.0 C          K1=0.92      2001KMa (86466)2686

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*****
C13H26O6      L      19-Crown-6      CAS 55471-27-7 (8943)
1,4,7,10,13,16-Hexaoxacyclononadecane;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        con oth/un 25°C dil C          K1=0.93      1999TMa (86490)2687
Self medium (AgNO3).

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*****
C13H28N2S2      L          (7061)
9-Methyl-1,5-dithia-9,13-diazacyclohexadecane;

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl KNO3 25°C 0.10M M          K1=7.27      1995RKA (86515)2688

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                                     B(AgHL)=14.83
                                     B(AgH2L)=21.548
                                     B(AgH2L2)=27.30

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*****
C14H9NO4      H2L      Alizarin Maroon CAS 3963-78-8 (1052)
3-Amino-1,2-dihydroxyanthraquinone;

```

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

Ag+ gl NaCl04 25°C 0.10M C M K1=6.45 1984ISe (86809)2689
B(AgAL)=5.15
B(AgBL)=4.9

HA is eosin, H2B is rosebengal.

C14H10 L Phenanthrene CAS 85-01-8 (3419)

Phenanthrene;

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

Ag+ sp non-aq 25°C 100% U K1=0.587 B2=0.86 1991PZa (86877)2690

Ag+ sol oth/un 25°C ? U K1=0.56 B2=0.82 1949AKa (86878)2691

C14H12 L trans-Stilbene CAS 103-30-0 (3420)

trans-Stilbene; C6H5.CH:CH.C6H5

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

Ag+ dis KNO3 25°C 1.0M U K1=0.80 1950AKa (87033)2692
K(Ag+AgL)=-0.20

C14H12O2S HL CAS 15774-73-9 (5053)

4-(Benzylthio)benzoic acid; C6H5.CH2.S.C6H4.COOH

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

Ag+ ISE oth/un 25°C 0.20M U K1=2.76 1968PSb (87336)2693
Acetate buffer

C14H14N4 L CAS 98240-13-2 (4033)

N,N'-Bis(2'-picolinylidene)-1,2-diaminoethane;

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

Ag+ ISE alc/w 20°C 100% U K1=9.78 B2=11.00 1966HSc (87677)2694
Medium: MeOH, 0.1 M NaNO3

C14H15N L CAS 103-49-1 (4034)

Dibenzylamine; C6H5.CH2.NH.CH2.C6H5

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

Ag+ gl mixed 25°C 50% U K1=2.99 B2=6.70 1955ANb (87712)2695
Medium: 50 mole% EtOH

Ag+ gl alc/w 25°C 50% U K1=2.99 B2=6.70 1955ANc (87713)2696

Medium: 50 mole% EtOH

C14H15N3O3S HL Methyl Orange CAS 547-58-0 (1059)
4-(4-(Dimethylamino)-phenylazo)benzenesulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	mixed	20°C	75%	C			K1=1.73 B2=2.20 K3=3.66	1987KMa	(87760)2697

Medium: 75% v/v acetone/H2O

C14H15PS L (6777)
Diphenylphosphino(methylthio)methane; (C6H5)2P.CH2.SCH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	non-aq	25°C	100%	C	H		K1=6.57 B2=10.48 B3=12.69	1990BZa	(87800)2698

Medium: DMSO; DH(K1)=-48.4, DH(B2)=-80.0, DH(B3)+-110 kJ mol-1;
DS(K1)=-37, DS(B2)=-68, DS(B3)=-126 J K-1 mol-1

C14H16N2 L CAS 1620-43-7 (5033)
1,4-Bis(2'-pyridyl)butane; C5H4N.CH2.CH2.CH2.C5H4N

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	KNO3	20°C	0.10M	U			K1=3.72 B2=6.44	1970BAa	(87834)2699

C14H16N2O2S2 L CAS 729600-10-6 (9255)
2,3,5,6,8,9-Hexahydro[1,4,7,10]dioxadithiacyclododecino[2,3-b]quinoxaline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	nmr	mixed	25°C	60%	C			K1=3.45	2004HHa	(87878)2700

Method: 1H nmr. Medium: 60% CD2Cl2/CD3CN.

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
Ag+	gl	KNO3	25°C	0.10M	U	H		K1=6.15 B(Ag2L2)=15.9	1975APc	(88102)2701

DH(Ag2L2)=-110.0 kJ mol-1, DS=-64.4 J K-1 mol-1

C14H20O5 L Benzo15-crown-5 CAS 14098-44-3 (608)
2,3-Benzo-1,4,7,10,13-pentaoxacyclopentadeca-2-ene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Ag+ ISE none 25°C dil C K1=0.70 2004KUa (88209)2702
Method: Ag ion-selective electrode; self medium.

Ag+ con mixed 25°C 90% C K1=1.38 2003ISa (88210)2703
Medium: 90% v/v DMSO/H2O. By potentiometry (Ag electrode), K1=1.37.

Ag+ con mixed 25°C 20% C K1=4.13 2003SIa (88211)2704
Medium: 20% w/w propylene carbonate/ethylene carbonate. By potentiometry (Pt/Ag electrode), K1=4.12.

Ag+ con alc/w 25°C 40% C K1=1.08 2002ISa (88212)2705
Medium: 40% EtOH/H2O. By potentiometry, K1=1.08

Ag+ con alc/w 25°C 40% C K1=1.16 2001ISa (88213)2706
Medium: 40% v/v EtOH/H2O. By potentiometry, K1=1.15.

Ag+ con non-aq 25°C 100% C K1=4.67 B2= 8.87 2000ICa (88214)2707
Medium: nitromethane.

Ag+ con non-aq 25°C 100% C H K1=1.91 1999WBa (88215)2708
Medium: N,N-dimethylformamide. By calorimetry: DH(K1)=-7.6 kJ mol⁻¹.

Ag+ con non-aq 25°C 100% C K1=3.50 1993JHa (88216)2709
Medium: acetone.

Ag+ cal non-aq 25°C 100% C H K1=2.63 1986ICa (88217)2710
Medium: MeOH. DH(K1)=-17.9 kJ mol⁻¹, DS(K1)=-9.6 J K⁻¹ mol⁻¹.

C14H21NS3 L (7474)
10-Phenyl-1,4,7-trithia-10-azacyclododecane;

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

Ag+ EMF non-aq 25°C 100% C K1=5.92 B2= 7.62 1999ISa (88410)2711
K(AgL+Ag)=1.2

Medium: acetonitrile, 0.1 M Me4NC104

C14H22 L CAS 38842-05-6 (3422)
1,2,3,4-Tetraethylbenzene; C6H2(CH2.CH3)4

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

Ag+ sol oth/un 25°C 0.50M U K1=0.02 19560Aa (88419)2712

C14H22 L CAS 33673-20-6 (3423)
1,2,3,5-Tetraethylbenzene; C6H2(CH2.CH3)4

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

Ag+ sol oth/un 25°C 0.50M U K1=0.13 19560Aa (88420)2713

 C14H22 L CAS 635-81-4 (3424)
 1,2,4,5-Tetraethylbenzene; C6H2(CH2.CH3)4

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

 Ag+ sol oth/un 25°C 0.50M U K1=0.12 19560Aa (88421)2714

C14H22 L CAS 1571-86-4 (3421)
 1,4-Di-t-butylbenzene; (CH3)3C.C6H4.C(CH3)3

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

 Ag+ sol oth/un 25°C 0.50M U K1=0.21 19560Aa (88422)2715

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

 Ag+ gl KNO3 20°C 0.10M U K1=8.15 1981SKf (88534)2716
 K(AgL+H)=6.60

 Ag+ ISE KNO3 25°C 0.10M U K1=8.41 1968WRa (88535)2717

 Ag+ dis NaClO4 20°C 0.10M U K1=8.15 1963STc (88536)2718
 Medium: KClO4

 C14H23NS2 L (7476)
 6-Phenyl-3,9-dithia-6-azaundecane;

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

 Ag+ EMF non-aq 25°C 100% C K1=3.59 1999ISa (89006)2719
 Medium: acetonitrile, 0.1 M Me4NC1O4

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

 Ag+ ISE KNO3 25°C 0.10M U K1=8.70 1968WRa (89100)2720

C14H24N2O8 H4L CAS 1633-00-7 (5076)
 4-Methyl-1,2-diaminopentane-N,N,N',N'-tetraethanoic acid;
 (HOOCCH2)2NCH2CH(N(CH2COOH)2CH2CH(CH3)2

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

 Ag+ gl KNO3 20°C 0.10M U K1=8.10 1981SKf (89623)2721

Ag+ ISE non-aq 25°C 100% U I K1=7.70 1981CRa (90318)2734
Medium: MeCN. In DMF: K1=8.60; in EtOH: 9.70; in DMSO: 6.17; in PC: 14.44;
in N-methylpropanoamide: 7.64

Ag+ ix non-aq 25°C 100% U K1=5.45 1981SAa (90319)2735
Medium: DMSO, 0.1 M R4NX. In propylene carbonate: K=15.00

Ag+ ISE non-aq 25°C 100% U K1=14.4 1980CRa (90320)2736
Medium: Propylene carbonate

Ag+ gl alc/w 25°C 100% C K1=10.30 1980SAa (90321)2737
Medium: MeOH, 0.05 M Et4NClO4

Ag+ EMF non-aq 25°C 100% C K1=8.5 1979BLb (90322)2738
Method: Ag electrode. Medium: MeOH, 0.05 M Me4NClO4.

Ag+ ISE alc/w 25°C 100% U K1=10.6 1978CSb (90323)2739
Medium: MeOH

C14H28N2O4 L Cryptand 2,2,0 CAS 95334-31-9 (6544)
4,7,13,16-Tetraoxa-1,10-diazabicyclo[8.8.2]eicosane;

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

Ag+ ISE non-aq 25°C 100% U I K1=9.4 1991ALa (90459)2740
Medium: MeCN, 0.05 M Et4NClO4. In acetone K1=13.1, MeOH K1=10.2, DMF K1=9.4,
in pyridine K1=5.0.

C14H28O5 L 21-Ane-S6-OH (7198)
3,6,9,13,16,19-Hexathiacycloicosanol;

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

Ag+ ISE non-aq 25°C 100% U K1=11.49 1996ANa (90506)2741
Medium: methanol; 0.1 M N(C4H9)4ClO4.

C14H28O2 HL Myristic acid CAS 544-63-8 (2543)
Tetradecanoic acid; CH3(CH2)12.COOH

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

Ag+ oth oth/un 20°C var U Kso=-10.25 1981HTc (90507)2742

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

Ag+ ISE non-aq 25°C 100% C K1=5.79 1989BPa (90512)2743
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

Ag+ cal alc/w 25°C 100% U H K1=2.46 1980LIa (90513)2744
Medium: MeOH. DH=-28.9 kJ mol⁻¹.

C14H29NO6 L Aza-21-crown-7 CAS 66843-21-8 (9236)
1,4,7,10,13,16-Hexaoxa-19-azacycloheneicosane;

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

Ag+ EMF alc/w 25°C 100% C I K1=5.27 B2= 8.34 2003TCb (90549)2745
Medium: 100% MeOH. Also data for EtOH, DMSO, acetonitrile, propylene carbonate and nitromethane.

C14H30N2O2 HL CAS 61559-48-6 (8377)
1,4-Dioxa-7,16-diazacyclooctadecane;

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

Ag+ EMF non-aq 25°C 100% C I K1=9.0 1994BCe (90559)2746
Method: Ag/Ag+ electrode. Medium: 100% MeOH, 0.05 M Et4NClO4. Data for acetone (K1=12.3), CH3CN (7.6), DMF (9.4), DMSO (6.9), nitromethane (12.9)

Ag+ cal non-aq 25°C 100% C I 1994BFb (90560)2747
Medium: 100% MeOH. DH(K1)=-50.6 kJ mol⁻¹, DS(K1)=1.0 J K⁻¹ mol⁻¹.
Data for several media: DMF, DH(K1)=-69.0, DS(K1)=-15.2; PC (-107, -22).

C14H30N2O5 L CAS 23978-10-1 (2955)
1,10-Diaza-4,7,13,16,19-pentaoxacycloheneicosane;

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

Ag+ EMF alc/w 25°C 100% C I K1=9.42 2003TCb (90600)2748
Medium: 100% MeOH. Also data for EtOH and propylene carbonate.

Ag+ ISE R4N.X 25°C 0.05M U H K1=15.34 2002BSd (90601)2749
Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M Et4NClO4. By calorimetry: DH(K1)=-96.4 kJ mol⁻¹, DS(K1)=-30.9 J K⁻¹ mol⁻¹.

Ag+ EMF non-aq 25°C 100% C K1=7.49 1999THa (90602)2750
Medium: acetonitrile. Method: Ag/Ag+ electrode.

Ag+ EMF non-aq 25°C 100% U K1=6.74 1998HTb (90603)2751
Medium: DMSO. Method: Ag/Ag+ electrode

Ag+ ISE alc/w 25°C 100% U K1=9.29 1988CFa (90604)2752
Medium: MeOH

Ag+ ISE alc/w 25°C 100% U H K1=9.60 1985BUB (90605)2753

Medium: MeOH, 0.05M Et4NClO4. DH=-53.4 kJ mol-1

C14H30N2O5 L (6722)
7,13-Bis(2-hydroxyethyl)-1,4,10-trioxa-7,13-diazacyclopentadecane

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

Ag+ ISE non-aq 25°C 100% U K1=9.34 1993RPa (90621)2754
Medium: dimethylformamide, 0.05 M Et4NClO4.

C14H30N2S2 L CAS 160389-59-3 (8378)
1,4-Dithia-7,16-diazacyclooctadecane;

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

Ag+ EMF non-aq 25°C 100% C I K1=10.9 1994BCe (90640)2755
Method: Ag/Ag+ electrode. Medium: 100% MeOH, 0.05 M Et4NClO4. Data for
acetone (K1=13.2), CH3CN (8.5), DMF(10.2), DMSO (8.0), nitromethane (14.6)

Ag+ cal non-aq 25°C 100% C I 1994BFb (90641)2756
Medium: 100% CH3CN. DH(K1)=-66.6 kJ mol-1, DS(K1)=-18.1 J K-1 mol-1.
Data for several media: DMF, DH(K1)=-87.4, DS(K1)=-29.2; PC (-118, -27).

C14H30O7 L CAS 1072-40-8 (2499)
2,5,8,11,14,17,20-Heptaioxaheneicosane; CH3.0.(CH2.CH2.0)6.CH3

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

Ag+ gl non-aq 25°C 100% C K1=5.02 1989BPa (90680)2757
Medium: anhydrous propylene carbonate, 0.1 M Et4NClO4

Ag+ ISE alc/w 25°C 100% U H K1=1.82 1985BUb (90681)2758
Medium: MeOH, 0.05M Et4NClO4. DH=-23.0 kJ mol-1

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

Ag+ gl oth/un 27°C 0.05M U K1=4.38 1959KEc (90733)2759

C14H32N4 L CAS 68966-28-9 (5390)
1,5,10,14-Tetraazacyclooctadecane;

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

Ag+ ISE KNO3 20°C 0.10M U B2=8.0 1984SLb (90807)2760
B(Ag2L3)=16.6

C15H11N3 L CAS 1148-79-4 (488)

2,2':6'2"-Terpyridine; C5H4N.C5H3N.C5H4N

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE non-aq 25°C 100% U          K1=5.27  B2=8.66  1991IGa (91141)2761
Medium: propylenecarbonate, 0.1 M R4NX
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Ag+        gl  KNO3   25°C 0.10M U          K1=5.79  B2=9.68  1989IGb (91142)2762
-----
Ag+        ISE non-aq 25°C 100% U          K1=4.82          1989IGb (91143)2763
Medium: CH3CN, 0.1 Et4NClO4
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C15H11N3O HL PAN CAS 85-85-8 (572)
1-(2-Pyridylazo)-2-naphthol; C5H4N.N:N.C10H6.OH

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        cal diox/w 25°C 55% U  H    K1=4.02  B2=8.31  1986ISa (91199)2764
                    K(Ag+L=Ag(OH)L+H)=-6.97
                    B(AgHL)=11.63
DH(K1)=-34.5, DH(K2)=-40.1 kJ mol-1, DS(K1)=-39.0, DS(K2)=-52.0 J K-1 mol-1.
Medium: 3M LiClO4
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Ag+        cal NaClO4 25°C 3.00M U  H          1986ISa (91200)2765
DH(K1)=-28.2, DH(K2)=-38.9 kJ mol-1, DS(K1)=-26, DS(K2)=-56 J K-1 mol-1
*****
C15H12OS HL (1261)
mono-Thiodibenzoylmethane; C6H5.CO.CH2.CS.C6H5
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  diox/w 30°C 75% U          K1=5.39          1967SUa (91481)2766
*****
C15H12O2 HL Diphenylacac CAS 120-46-7 (362)
1,3-Diphenylpropane-1,3-dione, Dibenzoylmethane; C6H5.CO.CH2.CO.C6H5
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        gl  diox/w 30°C 75% U          K1=6.07          1967SUa (91530)2767
*****
C15H15N3O2 HL Methyl Red CAS 493-52-7 (1089)
2-(4-(Dimethylamino)phenylazo)benzoic acid; (CH3)2N.C6H4.N:N.C6H4.COOH
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE mixed 20°C 75% C          K1=1.31  B2=3.27  1987KMa (91887)2768
                    K3=1.81
Medium: 75% v/v acetone/H2O
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C15H15O2As HL CAS 70096-43-4 (4068)

3-(Diphenylarsino)propanoic acid; (C6H5)2As.CH2.CH2.COOH

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

Ag+ gl diox/w 20°C 20% U K1=3.87 1964PIa (91911)2769
K(Ag+HL)=2.3

Medium: 20% dioxan, 0.10 M KNO3

C15H15O2P HL CAS 85209-41-2 (4067)

3-(Diphenylphosphino)propanoic acid; (C6H5)2P.CH2.CH2.COOH

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

Ag+ gl diox/w 20°C 20% U K1=3.80 1964PIa (91917)2770
K(Ag+HL)=2.7

Medium: 20% dioxan, 0.10 M KNO3

C15H17PS L (6779)

1-Thiomethyl-2-(diphenylphosphino)ethane; CH3S.CH2.CH2.P(C6H5)2

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

Ag+ EMF non-aq 25°C 100% C H K1=12.08 B2=21.70 1995BTa (91990)2771
B3=24.43
B(Ag2L)=15.05
B(Ag2L2)=26.79

Medium: propylene carbonate. DH(K1)=-87 kJ mol⁻¹, DS=-61 J K⁻¹ mol⁻¹; DH(B2)
=-152, DS=-94; DH(B3)=-182, DS=-143; DH(Ag2L)=-105, DS=-64; DH(Ag2L2)=-201.

Ag+ ISE non-aq 25°C 100% C H K1=7.18 B2=12.68 1990BZa (91991)2772
B3=15.31

Medium: DMSO; DH(K1)=-54.5, DH(B2)=-104, DH(B3)=-137 kJ mol⁻¹. With the thio
-ethyl analogue:K1=7.40,B2=12.99,B3=15.5; DH(K1)=-56,DH(B2)=-106,DH(B3)=-139

C15H18NO7Cl L CAS 71022-76-9 (2322)

19-Chloro-3,6,9,12,15-pentaoxa-21-azabicyclo[15.3.1]heneicosa-1(21),17,19-teiene-2,
16-dione;

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

Ag+ cal alc/w 25°C 100% U H K1=3.76 1980BMa (91992)2773

Medium: MeOH. DH=-33.6 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

Ag+ gl KNO3 20°C 0.10M U K1=4.52 1970BAa (92000)2774
K(Ag+HL)=1.7

C15H19NO7 L CAS 64397-58-4 (2170)
3,6,9,12,15-Pentaoxa-21-azabicyclo[15.3.1]heneicosa-1(21),17,19-triene-2,16-dione;

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

Ag+ cal alc/w 25°C 100% U H K1=4.88 1980BMa (92111)2775
Medium: MeOH. DH=-32.8 kJ mol⁻¹.

Ag+ cal alc/w 25°C 100% U H K1=4.88 1980LIb (92112)2776
Medium: MeOH. DH=-32.8 kJ mol⁻¹.

Ag+ sp alc/w 25°C 100% U H K1=4.88 1977ILc (92113)2777
Medium: Methanol. DH(K1)= -32.8 kJ mol⁻¹

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

Ag+ gl KNO3 25°C 0.10M U H K1=6.12 1975APc (92178)2778
DH(K1)=-45.6 kJ mol⁻¹ DS=-32.2 J K⁻¹ mol⁻¹

C15H23NO5 L CAS 53914-89-9 (2262)
3,6,9,12,15-Pentaoxa-21-azabicyclo[15.3.1]heneicosa-1(21),17,19-triene;

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

Ag+ cal alc/w 25°C 100% U H K1=>5.5 1980BMa (92261)2779
Medium: MeOH. DH=-34.9 kJ mol⁻¹.

Ag+ cal alc/w 25°C 100% U H K1=>5.5 B2=8.1 1980LIa (92262)2780
Medium: MeOH. DH(K1)=-34.9 and DH(K2)=-10.8 kJ mol⁻¹.

Ag+ sp alc/w 25°C 100% U H K1=>6.0 B2=8.6 1977ILc (92263)2781
Medium: Methanol. DH(K1)= -34.9 and DH(K2)=-10.8 kJ mol⁻¹

C15H24 L CAS 717-74-8 (3442)
1,3,5-Tri-isopropylbenzene; C6H3(CH(CH3)2)3

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

Ag+ sol oth/un 25°C 0.50M U K1=0.20 19560Aa (92327)2782

C15H30N2O3 L CAS 72640-82-5 (6040)
4,7,13-Trioxa-1,10-diazabicyclo[8.5.5]eicosane;

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

Ag+ EMF non-aq 25°C 100% U I K1=5.68 1993LRa (92509)2783
Medium: triethylphosphate, 0.05 M Et4NClO4
Data also for tri-n-butylphosphate: K1=4.94

Ag+ gl R4N.X 25°C 0.05M U K1=6.04 1991LRc (92510)2784

Ag+ ISE non-aq 25°C 100% U I K1=4.29 1990LAa (92511)2785
Medium: MeCN, 0.05 M Et4NClO4. In MeOH: K1=7.69

Ag+ ISE non-aq 25°C 100% U I K1=5.19 1986LSc (92512)2786
Medium: DMF, 0.05 M Et4NClO4. Method: Ag wire electrode. In MeOH K1=7.62.
Data also in acetone,PC,CH3CN etc.

C15H33N L CAS 621-77-2 (8928)

Tripentylamine;

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

Ag+ cal R4N.X 25°C 0.05M C H 2002BSd (92560)2787
Medium: propylene carbonate, 0.05 M Et4NClO4. DH(K1)=-32.1 kJ mol⁻¹.

C15H33NO6 L CAS 70384-51-9 (838)

Tris(3,6-dioxaheptyl)amine; (CH3.CH2.O.CH2.CH2.O.CH2.)3N

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

Ag+ ISE R4N.X 25°C 0.05M U H K1=8.47 2002BSd (92561)2788
Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M
Et4NClO4. By calorimetry: DH(K1)=-67.9 kJ mol⁻¹, DS(K1)=-66.4 J K⁻¹ mol⁻¹

Ag+ ISE non-aq 25°C 100% C T H K1=8.5 1986ALa (92562)2789
Medium: propylene carbonate, 0.1 M Et4NClO4. DH, DS given.

C15H33N3O3 L CAS 220811-82-5 (7916)

1,4,7-Tris((S)-2-hydroxypropyl)-1,4,7-triazacyclononane;

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

Ag+ EMF non-aq 25°C 100% U K1=7.59 2001WBa (92572)2790
Medium: DMF, 0.05 M Et4NClO4. Also data for the 1,4,7-tris((S)-2-hydroxy-
2-phenylethyl- derivative (K1=7.59).

C16H12N2 L (6848)

6-Phenyl-2,2'-bipyridyl;

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

Ag+ ISE non-aq 22°C 100% U K1=3.38 B2=9.21 1991IGb (92906)2791
Medium: MeCN

C16H12N2O4S H2L Tropeolin 000 CAS 573-89-7 (1092)
4-(4-Hydroxy-1-naphthylazo)benzene-4-sulfonic acid, Orange 1

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

Ag+ gl mixed 20°C 75% C K1=3.31 B2=3.35 1987KMa (93010)2792
K3=4.47

Medium: 75% v/v acetone/H2O

C16H16N2 L CAS 104-71-2 (4074)
1,2-Bis(benzylideneamino)ethane; C6H5.CH:N.CH2.CH2.N:CH.C6H5

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

Ag+ ISE alc/w 20°C 100% U K1=6.48 B2=8.36 1966HSc (93656)2793

Medium: MeOH, 0.1 M NaNO3

C16H20NP L CAS 115290-71-6 (5883)
Diphenyl-(2-N,N-dimethylaminoethyl)phosphine; (C6H5)2P.CH2.CH2.N(CH3)2

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

Ag+ EMF non-aq 25°C 100% C H K1=12.87 B2=22.09 1999DDb (93948)2794

B3=24.45
B(Ag2L)=15.74
B(Ag2L2)=28.66

Medium: propylenecarbonate, 0.1 M NEt4ClO4. By calorimetry: DH(K1)=-94 kJ mol⁻¹, DH(B2)=-152, DH(B3)=-184, DH(Ag2L)=-107, DH(Ag2L2)=-215.

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

Ag+ gl KNO3 20°C 0.10M U K1=4.1 1970BAa (93954)2795
K(Ag+HL)=1.9

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

Ag+ gl KNO3 25°C 0.10M U H K1=5.82 1975APc (94178)2796

DH(K1)=-48.1 kJ mol⁻¹ DS=50.6 J K⁻¹ mol⁻¹

C16H24O6 L Benzo18-crown-6 CAS 14098-24-9 (513)
2,3-Benzo-1,4,7,10,13,16-hexaoxacyclooctadeca-2-ene;

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

Ag+ ISE none 25°C dil C M 2004KUa (94368)2797
Method: Ag ion-selective electrode; self medium. For extraction into
CHCl3, $K(\text{Ag}+\text{L}(\text{org})+\text{HA}(\text{org})=\text{AgLA}(\text{org})+\text{H})=2.46$. HA is picric acid.

Ag+ con non-aq 25°C 100% C K1=4.89 B2= 8.58 2000ICa (94369)2798
Medium: nitromethane.

Ag+ cal non-aq 25°C 100% C H K1=2.71 1999WBa (94370)2799
Medium: N,N-dimethylformamide. $\text{DH}(\text{K1})=-17.4 \text{ kJ mol}^{-1}$.

Ag+ ISE none 25°C 0.0 U K1=1.83 1989TKa (94371)2800

Ag+ cal non-aq 25°C 100% C H K1=4.23 1986ICa (94372)2801
Medium: MeOH. $\text{DH}(\text{K1})=-39.7 \text{ kJ mol}^{-1}$, $\text{DS}(\text{K1})=-52.4 \text{ J K}^{-1} \text{ mol}^{-1}$.

C16H25N04 L (7444)
1-Aza-4,7,10,13-tetraoxa-1-phenyl-cyclopentadecane;

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

Ag+ EMF non-aq 25°C 100% C K1=0.78 1998ACa (94507)2802
Medium: CH3CN

Ag+ con mixed 25°C 90% C TIH K1=4.93 1998MTa (94508)2803
Medium: 90% CH3CN/H2O. Data for 20-35 C. $\text{DH}(\text{K1})=3.4 \text{ kJ mol}^{-1}$, $\text{DS}(\text{K1})=82.8$
 $\text{J K}^{-1} \text{ mol}^{-1}$. In 50% CH3CN/H2O, $\text{K1}=3.99$, $\text{DH}(\text{K1})=3.5$, $\text{DS}(\text{K1})=64.8$.

C16H25NS4 L (7475)
13-Phenyl-1,4,7,10-tetrathia-13-azacyclopentadecane;

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

Ag+ EMF non-aq 25°C 100% C K1=5.67 B2= 8.07 1999ISa (94523)2804
Medium: acetonitrile, 0.1 M Me4NClO4

C16H26 L (3452)
Pentaethylbenzene; $\text{C}_6\text{H}(\text{CH}_2.\text{CH}_3)_5$

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

Ag+ sol oth/un 25°C 0.50M U K1=0.02 19560Aa (94539)2805

C16H26N2O4 L (5849)
2,3-Benzo-1,4,10,13-tetraoxa-7,16-diazacyclooctadeca-2-ene;

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

Ag+ ISE alc/w 25°C 100% U K1=9.74 1988CFa (94553)2806
Medium: MeOH

C16H28N2O7 L CAS 31249-96-4 (8934)
4,7,13,16,21-Pentaoxa-1,10-diazabicyclo[8.8.5]tricosane-2,9-dione;

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

Ag+ ISE R4N.X 25°C 0.05M U H K1=4.26 2002BSd (94699)2807
Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M
Et4NClO4. By calorimetry: DH(K1)=-27.8 kJ mol⁻¹, DS(K1)=-12.1 J K⁻¹ mol⁻¹.

C16H28N4O4 L CAS 120129-34-2 (8665)
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-diacetonitrile;

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

Ag+ ISE R4N.X 25°C 0.05M C H K1=6.71 2002BSb (94805)2808
Medium: 0.05 M Et4NClO4. DH(K1)=-44.7 kJ mol⁻¹, DS(K1)=-22 J K⁻¹ mol⁻¹.

C16H30O6 L CAS 17454-53-4 (5148)
Cyclohexyl-18-crown-6;

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

Ag+ ISE oth/un 25°C dil A K1=1.8 1971FRa (95098)2809

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

Ag+ ISE R4N.X 25°C 0.05M U H K1=18.89 2002BSd (95137)2810
Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M
Et4NClO4. By calorimetry: DH(K1)=-113.6 kJ mol⁻¹, DS(K1)=-21.1 J K⁻¹ mol⁻¹

Ag+ ISE non-aq 25°C 100% C H K1=12.53 1999Wba (95138)2811
Medium: N,N-dimethylformamide. Method: Ag+ ISE.
By calorimetry: DH(K1)=-85.2 kJ mol⁻¹.

Ag+ EMF non-aq 25°C 100% C K1=9.56 1995CDb (95139)2812
Medium: DMSO, 0.1 M Et4NClO4.

Ag+ ISE non-aq 25°C 100% U K1=11.1 1990MGa (95140)2813
In acetonitrile, 0.1 M Et4NClO4.

Ag+ ISE non-aq 25°C 100% C I K1=11.17 1989LEb (95141)2814
In acetonitrile + 0.1 M Et4NClO4. Also DMSO (9.58), DMA (10.69), DMF(12.37)
acetone (15.86), sulpholane (16.80) and propylene carbonate (18.63)

Ag+ ISE non-aq 30°C 100% C T H K1=18.5 1986ALa (95142)2815
Medium: propylene carbonate, 0.1 M Et4NClO4. DH and DS given

Ag+ ISE non-aq 25°C 100% U H K1=11.29 1986BUB (95143)2816
In CH3CN. DH=-62.7 kJ mol-1

Ag+ ISE alc/w 25°C 100% U H K1=14.44 1985BUB (95144)2817
Medium: MeOH, 0.05M Et4NClO4. DH=-81.9 kJ mol-1

Ag+ ISE R4N.X 25°C 0.10M U I K1=11.90 1983CSa (95145)2818
Also data for 0.05-1.0 mol fraction MeCN/H2O

Ag+ gl R4N.X 25°C 0.10M U K1=12.43 1982NSb (95146)2819

Ag+ ISE non-aq 25°C 100% U I K1=11.24 1981CRa (95147)2820
Medium: MeCN. In PC: K1=18.50; in EtOH: 13.84; in DMF: 12.41; in DMSO: 9.61;
in N-methylpropanoamide: 10.45

Ag+ ix non-aq 25°C 100% U K1=9.73 1981SAa (95148)2821
Medium: DMSO, 0.1 M R4NX. In propylene carbonate: K1=18.80

Ag+ ISE non-aq 25°C 100% U K1=18.5 1980CRa (95149)2822
Medium: Propylene carbonate

Ag+ gl alc/w 25°C 100% C K1=14.30 1980SAa (95150)2823
B(Ag2L)=19.50
Medium: MeOH, 0.05 M Et4NClO4

Ag+ ISE alc/w 25°C 100% U K1=14.64 1978CSb (95151)2824
Medium: MeOH

Ag+ gl R4N.X 25°C 0.05M U K1=10.6 1975LSc (95152)2825

C16H32N4O4 L (6794)
4,10-Bis(N,N-dimethylethanamido)-1,7-dioxa-4,10-diazacyclododecane;

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

Ag+ cal alc/w 25°C 100% U H K1=>5 1990KMb (95316)2826
Medium: MeOH. DH=-59.1 kJ mol-1

C16H32N4O6 L CAS 98608-90-3 (1322)
N,N'-Bis(carbamoylmethyl)-1,7,10,16-tetraoxa-4,13-diazacyclooctadecane;

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

Ag+ gl NaClO4 25°C 0.50M U K1=6.25 1981KMb (95330)2827

C16H34N2 L CAS 296-30-0 (8379)
1,10-Diazacyclooctadecane;

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

Ag+ EMF non-aq 25°C 100% C I K1=4.8 1994BCe (95401)2828
Method: Ag/Ag+ electrode. Medium: 100% MeOH, 0.05 M Et4NClO4. Data for
acetone (K1=9.4), CH3CN (4.8), DMF(6.4), DMSO (4.1), nitromethane (10.5)

Ag+ cal non-aq 25°C 100% C I 1994BFb (95402)2829
Medium: 100% MeOH. DH(K1)=-48.1 kJ mol⁻¹, DS(K1)=-20.8 J K⁻¹ mol⁻¹.
Data for several media: DMF, DH(K1)=-61.0, DS(K1)=-24.5; PC (-95.3, -27).

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

Ag+ EMF alc/w 25°C 100% U I K1=9.86 1994LLa (95407)2830
Medium: MeOH, 0.05M Et4NClO4. Also data for acetonitrile: K=7.08,
PC: K=12.2, DMF: K=8.37, H2O: K=1.8 and pyridine: K=6.24.

C16H34N2O6 L CAS 83809-94-3 (8664)
7,16-Bis(methoxymethyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane;

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

Ag+ ISE R4N.X 25°C 0.05M C H K1=9.19 2002BSb (95430)2831
Medium: 0.05 M Et4NClO4. DH(K1)=-60.3 kJ mol⁻¹, DS(K1)=26 J K⁻¹ mol⁻¹.

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

Ag+ ISE non-aq 25°C 100% U K1=9.13 1993RPa (95438)2832
Medium: dimethylformamide, 0.05 M Et4NClO4.

Ag+ gl NaClO4 25°C 0.50M U K1=7.27 1981KMb (95439)2833

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

Ag+ ISE R4N.X 25°C 0.10M U K1=12.7 1978LMa (95465)2834
K(Ag+HL)=6.3

C16H36N4 L CAS 3713-77-7 (5391)
1,6,11,16-Tetraazacycloeicosane;

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

Ag+ ISE KNO3 20°C 0.10M U K1=5.7 B2=8.3 1984SLb (95525)2835

C16H36N4O2 L (6803)
1,10-Oxa-4,7,13,16-tetramethyl-4,7,13,16-tetraazacyclooctadecane;

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

Ag+ ISE a/c/w 25°C 100% U H K1=13.4 1990CKb (95542)2836
Medium: MeOH. DH=-84.3 kJ mol⁻¹

C16H36N4O4 L (6703)
1,4,7,10-Tetrakis(2-hydroxyethyl)-1,4,7,10-tetraazacyclododecane;

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

Ag+ EMF non-aq 25°C 100% U I K1=9.35 1996WPa (95563)2837
Medium: acetonitrile, 0.05 M NEt₄ClO₄. In propylene carbonate K1=14.00

Ag+ gl a/c/w 25°C 100% C I K1=12.57 1993TCa (95564)2838
Medium: MeOH, 0.05 M Et₄NClO₄. In DMF, K1=11.16

C16H36N4S2 L (6797)
1,10-Dithia-4,7,13,16-tetramethyl-4,7,13,16-tetraazacyclooctadecane;

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

Ag+ gl R4N.X 25°C 0.10M M IH K1=9.47 1990CKb (95583)2839
K(Ag+HL)=8.06
K(AgHL+H)=4.6
K(AgL+H)=7.41

Medium: 0.1 M Me₄NNO₃. In MeOH: K1=14.6 (byISE), DH=-102.1 kJ mol⁻¹(calor.)

C17H14NP L CAS 37943-90-1 (7725)
2-(Diphenylphosphino)pyridine;

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

Ag+ gl non-aq 25°C 100% U IH K1=6.34 B2=10.19 2000Cdb (95785)2840
B3=12.64

Medium: DMSO. Also data for medium of propylene carbonate.

DH(K1)=-51.0 kJ mol⁻¹, DH(B2)=-87.8, DH(B3)=-124.1.

C17H16N2S2 L CAS 239107-97-2 (3778)
4-[4'-(Benzothiazol-2"-yl)phenyl]-1-thia-4-azacyclohexane;

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

Ag+ nmr diox/w 25°C 52% C K1=3.29 1999ISb (96045)2841
Medium: 52% v/v 1,4-dioxane-water. Method: 1H nmr.

C17H20N4O6 HL Riboflavin CAS 83-88-5 (1438)
7,8-Dimethyl-10(D-1'-ribityl)isoalloxazine, Vitamin B2, Vitamin H

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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+        ISE KCl    25°C 0.10M U          K1=7.6        1959Bmb (96326)2842
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C17H22NP          L                      (7480)
1-(Diphenylphosphino)-3-(dimethylamino)propane;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+        EMF non-aq 25°C 100% C  H    K1=13.4  B2=20.87  1999DDb (96398)2843
                    B3=24.02
                    B(Ag2L)=16.80
                    B(Ag2L2)=31.1
Medium: propylenecarbonate, 0.1 M NEt4ClO4. By calorimetry: DH(K1)=-95 kJ
mol-1, DH(B2)=-142.2, DH(B3)=-174.6, DH(Ag2L)=-108, DH(Ag2L2)=-223.
*****
C17H26OS          L                      (5720)
1-Phenyl-3-thiadodeca-1-one; C6H5.CO.CH2.CH2.S.C8H17
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        EMF non-aq 25°C 100% U          K1=4.36  B2=7.43  1989MSa (96508)2844
                    B3=9.48
                    B4=10.46
0.1 M NaClO4 in acetone
*****
C17H34N2O4          L                      CAS 142565-14-8 (6562)
4,7,13,16-Tetraoxa-1,10-diazabicyclo[8.8.5]tricosane;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        EMF non-aq 25°C 100% C          K1=14.51      1993DLb (96739)2845
Medium: propylene carbonate, 0.05 M Et4NClO4.
-----
Ag+        gl  R4N.X  25°C 0.05M C  I    K1=9.31      1992CGb (96740)2846
Medium: Et4NClO4. In MeOH: K1=11.13; in DMF K1=9.40
*****
C18H12N2          L    Cuproin          CAS 119-91-5 (2518)
2,2'-Biquinoline; C9H6N.NH6C9
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Ag+        ISE non-aq 25°C 100% U          K1=7.0    B2=13.8  1981TLa (96851)2847
Medium: Propylene carbonate
*****
C18H12N2          L                      CAS 6135-89-5 (3498)
5-Phenyl-1,10-phenanthroline;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Ag+ ISE a/c/w 25°C 50% U K1=4.99 B2=10.14 1972BBa (96860)2848
Medium: 50% EtOH, 0.1 M KNO3

C18H15As L CAS 603-32-7 (2653)
Triphenylarsine; (C6H5)3As

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

Ag+ ISE a/c/w 25°C 100% U K1=3.5 B2=8.5 1987TSa (96964)2849
B3=11.2
B4=13.7

Medium: EtOH, 0.01 M

Ag+ ISE non-aq 25°C 100% C H K1=1.44 1986AHa (96965)2850
Medium: Pyridine; DH(K1)=-15.6 kJ mol⁻¹

Ag+ ISE non-aq 25°C 100% C H K1=3.56 B2=5.37 1977ABc (96966)2851
K3=1.31

Medium: DMSO, 0.1 M NH4ClO4; DH(K1)=-34.5, DH(K2)=-19.4, DH(K3)=-44.5 kJ m⁻¹

Ag+ sp a/c/w 25°C 75% U I K1=5.70 19660Ba (96967)2852
Medium: 75.4% MeOH. K1=5.81(55.6% MeOH)

C18H15Bi L CAS 603-33-8 (5402)
Triphenylbismuthine;

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

Ag+ ISE non-aq 25°C 100% C K1=<-1 1986AHa (96977)2853
Medium: pyridine, 0.1 M Et4NClO4

Ag+ ISE non-aq 25°C 100% C H K1=0.8 1977ABc (96978)2854
Medium: DMSO, 0.1 M NH4ClO4; DH(K1)=-0.5 kJ mol⁻¹

C18H15N L Triphenylamine CAS 603-34-9 (2902)
Triphenylamine; (C6H5)3N

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

Ag+ ISE non-aq 25°C 100% C K1=<-1 1986AHa (96979)2855
Medium: pyridine, 0.1 M Et4NClO4

Ag+ ISE non-aq 25°C 100% C H K1=0.19 1977ABc (96980)2856
Medium: DMSO, 0.1 M NH4ClO4; DH(K1)=-1 kJ mol⁻¹

C18H15N3O3S HL Tropeolin 00 CAS 554-73-4 (1091)
Orange IV; C6H5.NH.C6H4.N:N.C6H4.HSO3

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

Ag+ gl mixed 20°C 75% C K1=1.78 B2=2.28 1987KMa (97018)2857
K3=4.69

Medium: 75% v/v acetone/H2O

C18H15N6O8AsS H3L Sulfarsazen CAS 5941-02-6 (4140)
4-(4'-Sulfophenylazo)anilinoazo-4-nitrobenzene-2-arsonic acid;

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

Ag+ sp oth/un ? ? U M 1969SFa (97087)2858

K(2Ag(phen)2+L)=18.0

K(2Ag(phen)2+HL)=11.9

K(2Ag(bpy)2+HL)=11.0

C18H15O3PS HL CAS 16704-71-5 (3365)
3-Diphenylphosphino-benzene sulfonic acid;

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

Ag+ ISE NaCl04 25°C 0.10M U K1=8.15 B2=14.10 1958ACb (97103)2859

K3=5.40

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

Ag+ cal NaCl04 25°C 0.10M U H K1=8.15 B2=14.10 1976HMa (97112)2860

B3=19.50

B4=23.3

DH(K1)=-71 kJ mol⁻¹, DS=-84 J K⁻¹ mol⁻¹; DH(B2)=-131.6, DS=-168;

DH(B3)=-195, DS=-282; DH(B4)=-225

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

Ag+ cal NaCl04 25°C 0.50M U H K1=4.96 B2=6.7 1976HMa (97116)2861

Calorimetry: DH(K1)=-31 kJ mol⁻¹, DS=-10 J K⁻¹ mol⁻¹, DH(B2)=-48, DS=-34

Ag+ ISE NaCl04 25°C 0.20M U K1=5.36 1958ACb (97117)2862

C18H15P L CAS 603-35-0 (621)
Triphenylphosphine; (C6H5)3P

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

Ag+ ISE non-aq 25°C 100% C H K1=9.95 B2=17.17 1993DDa (97122)2863

B3=21.41

Medium: propylenecarbonate, 0.1 M Et4NClO4. By calorimetry, DH(K1)=-70.5 kJ mol-1, DS=-46; DH(B2)=-122.3, DS=-82; DH(B3)=-167, DS=-150.

Ag+ ISE a/c/w 25°C 100% U K1=6.2 B2=12.6 1987TSa (97123)2864
B3=16.8
B4=20.1

Medium: EtOH

Ag+ ISE non-aq 25°C 100% C H K1=4.31 B2=6.45 1986AHa (97124)2865
K3=1.14

Medium: Pyridine; DH(K1)=-34.4, DH(K2)=-22.0, DH(K3)=-16.1 kJ mol-1

Ag+ ISE non-aq 25°C 100% U I K1=3.9 B2=10.01 1985TSb (97125)2866
B3=13.79
B4=17.13

In CH3CN; data for EtOH solution are also given

Ag+ ISE non-aq 25°C 100% C H K1=6.58 B2=10.73 1977ABc (97126)2867
K3=2.44

Medium: DMSO, 0.1 M NH4ClO4; DH(K1)=-51.8, DH(K2)=-38.1, DH(K3)=-36.3 kJ m-1

C18H15Sb L CAS 603-36-1 (2654)
Triphenylantimony; (C6H5)3Sb

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

Ag+ ISE a/c/w 25°C 100% U K1=2.7 B2=6.8 1987TSa (97153)2868
B3=10.0
B4=12.0

Ag+ ISE non-aq 25°C 100% C H K1=1.09 1986AHa (97154)2869

Medium: Pyridine; DH(K1)=-11.6 kJ mol-1

Ag+ ISE non-aq 25°C 100% C H K1=3.16 B2=4.61 1977ABc (97155)2870
K3=1.45

Medium: DMSO, 0.1 M NH4ClO4; DH(K1)=-32.1, DH(K2)=-8.6, DH(K3)=-57.1 kJ mol-1

C18H18N2O2S2 L CAS 729600-12-8 (9257)
2,3,5,6,8,9-Hexahydrobenzo[g][1,4,7,10]dioxadithiacyclododecino[2,3-b]quinoxaline;

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

Ag+ nmr non-aq 25°C 60% C K1=3.20 2004HHa (97228)2871
Method: 1H nmr. Medium: 60% CD2Cl2/CD3CN.

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

C18H30 L CAS 841-07-6 (3497)
1,3,5-Tri-t-butylbenzene; C6H3(C(CH3)3)3

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

Ag+ sol oth/un 25°C 0.50M U T H K1=-0.49 19560Aa (97897)2878
K1=-0.19(1.6 C). DH(K1)=-13.8 kJ mol⁻¹, DS=-56 J K⁻¹ mol⁻¹

C18H30 L CAS 604-88-6 (3496)
Hexaethylbenzene; C6(CH2.CH3)6

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

Ag+ sol oth/un 25°C 0.50M U K1=0.44 19560Aa (97898)2879

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

Ag+ ISE KNO3 ? 0.10M U K1=8.7 1972RHb (97985)2880
B(AgHL)=17.6
B(AgH2L)=23.8
B(Ag2L)=14.0
B(Ag2HL)=20.5

B(Ag2H2L)=25.6, B(Ag3L)=17.0

Ag+ ISE KNO3 25°C 0.10M U K1=8.67 1968WRa (97986)2881
K(AgL+H)=9.11
B(Ag2L)=5.22

C18H30S2 L CAS 160581-15-7 (5416)
1,3-Bis[(pentylothio)methyl]benzene;

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

Ag+ dis KNO3 22°C 0.5M U 1998FRa (98117)2882
B(Ag(NO3)L)(org)=1.77
B(Ag(NO3)L2)(org)=3.90
B(Ag3(NO3)3L3)(aq)=12.17

Organic medium: chloroform. B(Ag(NO3)L)(org): Ag(aq)+NO3(aq)+L(org)=
Ag(NO3)L(org). B(Ag3(NO3)3L3)(aq): Ag(aq)+NO3(aq)+L(org)=Ag3(NO3)3L3(aq).

C18H31NS4 L (7477)
9-Phenyl-3,6,12,15-tetrathia-9-azaheptadecane:

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

Ag+ EMF non-aq 25°C 100% C K1=6.47 B2= 7.97 1999ISa (98118)2883
K(AgL+Ag)=2.2

Medium: acetonitrile, 0.1 M Me4NClO4

C18H32N2O8 L CAS 24951-52-8 (2560)
Cryptand-2,2,2-dilactam

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

Ag+ ISE R4N.X 25°C 0.05M U H K1=5.17 2002BSd (98131)2884
Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M
Et4NClO4. By calorimetry: DH(K1)=-38.2 kJ mol⁻¹, DS(K1)=-29 J K⁻¹ mol⁻¹.

C18H32N4O4 L CAS 62987-13-7 (8666)
1,4,10,13-Tetraoxa-7,16-diazacyclooctadecane-7,16-dipropanenitrile;

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

Ag+ ISE R4N.X 25°C 0.05M C H K1=7.87 2002BSb (98135)2885
Medium: 0.05 M Et4NClO4. DH(K1)=-62.5 kJ mol⁻¹, DS(K1)=-59.7 J K⁻¹ mol⁻¹.

C18H33P L CAS 2622-14-2 (169)
Tri-(cyclohexyl)phosphine; (C6H11)3P

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

Ag+ EMF non-aq 25°C 100% U H K1=7.19 B2=11.10 1987HPb (98306)2886
In pyridine; medium: 0.1 M Et4NClO4

C18H36N2O4S2 L CAS 28843-77-8 (8380)
4,7,13,16-Tetraoxa-21,24-dithia-1,10-diazabicyclo[8,8,8]hexacosane;

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

Ag+ EMF non-aq 25°C 100% C I K1=13.4 1994BCe (98400)2887
Method: Ag/Ag+ electrode. Medium: 100% MeOH, 0.05 M Et4NClO4. Data for
acetone (K1=15.2), CH3CN (10.4), DMF(11.7), DMSO (8.6), CH3NO2 (16.7)

Ag+ cal non-aq 25°C 100% C I 1994BFb (98401)2888
Medium: 100% MeOH. DH(K1)=-93.2 kJ mol⁻¹, DS(K1)=-16.7 J K⁻¹ mol⁻¹.

Data for several media: DMF, DH(K1)=-77.8, DS(K1)=-11.0; PC (-112, -35).

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

Ag+ ISE R4N.X 25°C 0.05M U H K1=16.65 2002BSd (98451)2889
Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M
Et4NClO4. By calorimetry: DH(K1)=-102.6 kJ mol⁻¹, DS(K1)=-27 J K⁻¹ mol⁻¹.

Ag+ EMF non-aq 30°C 100% C K1=11.57 1999KBa (98452)2890

Method: Ag/Ag+ electrode. Medium: MeOH.

Ag+ ISE non-aq 25°C 100% C H K1=10.00 1999WBa (98453)2891
Medium: N,N-dimethylformamide. Method: Ag+ ISE.
By calorimetry: DH(K1)=-68.1 kJ mol⁻¹.

Ag+ EMF non-aq 25°C 100% C K1=7.15 1995CDb (98454)2892
Medium: DMSO, 0.1 M Et4NClO4.

Ag+ EMF non-aq 25°C 100% C I K1=9.01 1995DGa (98455)2893
Medium: acetonitrile, 0.05 M Et4NClO4. Method: Ag/Ag+ electrode.
In benzonitrile, K1=10.00.

Ag+ EMF non-aq 25°C 100% C I K1=13.4 1994BCe (98456)2894
Method: Ag/Ag+ electrode. Medium: 100% acetone, 0.05 M Et4NClO4.
In 100% nitromethane, 0.05 M Et4NClO4, K1=15.4.

Ag+ cal non-aq 25°C 100% C I 1994BFb (98457)2895
Medium: 100% DMF. DH(K1)=-56.4 kJ mol⁻¹, DS(K1)=0.7 J K⁻¹ mol⁻¹.
Data for several media: acetone, DH(K1)=-82.2, DS=-5.7; PC (-104, -11.1).

Ag+ EMF oth/un 25°C 0.05M M K1=12.23 1992BUB (98458)2896

Ag+ ISE non-aq 25°C 100% U K1=8.88 1992CSc (98459)2897
Ag/Ag+ electrode. Medium: MeCN, 0.05 M Bu4NClO4

Ag+ ISE non-aq 25°C 100% U H K1=8.9 1990MGa (98460)2898
In acetonitrile, 0.1 M Et4ClO4. DH=-50 kJ mol⁻¹.

Ag+ ISE non-aq 25°C 100% C I K1=8.88 1989LEb (98461)2899
In acetonitrile + 0.1 M Et4NClO4. Also DMSO (7.34), DMA (8.37), DMF (9.92),
acetone (13.64), sulpholane (14.61) and propylene carbonate (16.27)

Ag+ ISE non-aq 25°C 100% U H K1=8.94 1986BUB (98462)2900
In CH3CN. DH=-53.3 kJ mol⁻¹

Ag+ ISE alc/w 25°C 100% U H K1=12.22 1985BUB (98463)2901
Medium: MeOH, 0.05M Et4NClO4. DH=-68.3 kJ mol⁻¹

Ag+ cal non-aq 25°C 100% U H 1985DGa (98464)2902
Medium: propylene carbonate. DH1 = -96.9 kJ mol⁻¹

Ag+ cal non-aq 25°C 100% U H 1985DGa (98465)2903
Medium: acetonitrile. DH1 = -53.5 kJ mol⁻¹

Ag+ ISE non-aq 25°C 100% M K1=17.71 1985DGB (98466)2904
Medium: nitromethane

Ag+ cal non-aq 25°C 100% U H 1984DGa (98467)2905
Medium: N,N-dimethylformamide. DH1=-65.6 kJ mol⁻¹; DS1=-27.6 J K⁻¹ mol⁻¹.

Ag+ cal non-aq 25°C 100% U H 1984DGa (98468)2906
Medium: DMSO. DH1=-51.4 kJ mol⁻¹; DS1=-34.3 J K⁻¹ mol⁻¹

Ag+ gl non-aq 25°C 100% U I K1=8.99 1982CGb (98469)2907
Medium: MeCN, 0.1 M Et4NClO4. K1=8.15 (mol.fraction 0.50); K1=8.30 (mf 0.70)
K1=8.55 (mf 0.05); 8.21 (mf 0.10); 8.03 (mf 0.3)

Ag+ ISE non-aq 25°C 100% U I K1=8.99 1981CRa (98470)2908
Medium: MeCN. In DMSO: K1=7.30; in EtOH: 11.51; in PC: 16.33; in DMF: 10.07;
in N-methylpropanoamide: 9.17

Ag+ ix non-aq 25°C 100% U K1=7.15 1981SAa (98471)2909
Medium: DMSO, 0.1 M R4NX. In propylene carbonate: K1=16.33

Ag+ ISE non-aq 25°C 100% U K1=16.3 1980CRa (98472)2910
Medium: Propylene carbonate

Ag+ gl alc/w 25°C 100% C K1=12.00 1980SAa (98473)2911
B(Ag2L)=15.25
Medium: MeOH, 0.05 M Et4NClO4

Ag+ EMF non-aq 25°C 100% C I K1=12.3 1979BLb (98474)2912
Method: Ag electrode. Medium: MeOH, 0.05 M Me4NClO4.
Also K1=9.6 (H2O), 7.2 (DMSO), 8.7 (CH3CN), 9.5 (tetramethylurea).

Ag+ ISE alc/w 25°C 100% U K1=12.2 1978CSb (98475)2913
Medium: MeOH

Ag+ gl R4N.X 25°C 0.10M C K1=9.85 1977ASc (98476)2914

Ag+ gl R4N.X 25°C 0.10M C H K1=9.6 1975ANa (98477)2915
Medium: Me4NNO3. DH(K1)=-53.5 kJ mol⁻¹, DS=-5

Ag+ gl R4N.X 25°C 0.05M C K1=9.6 1975LSc (98478)2916

C18H36N4O4 L (6795)
4,10-Bis(N,N-dimethylpropanamido)-1,7-dioxa-4,10-diazacyclododecane;

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

Ag+ cal alc/w 25°C 100% U H K1=>5 1990KMb (98778)2917
Medium: MeOH. DH=-82.5 kJ mol⁻¹

C18H38N2O6 L CAS 72911-99-0 (649)
4,13-Bis(2-methoxyethyl)-1,7,10,16-tetraoxo-4,13-diazacyclooctadecane;

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

Ag+ gl NaClO4 25°C 0.50M U K1=7.25 1981KMb (98830)2918

C19H1407S H4L Pyrocatechol Vi CAS 369596-29-2 (709)
Pyrocatechol Violet,
3-[3,4-Dihydroxyphenyl-3-hydroxy-4-oxo-2,5-cyclohexadien-1-ylidenemethyl-b.;

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

Ag+ gl KNO3 25°C 0.10M U 1997USa (99099)2919
K(Ag+H2L)=7.23
K(Ag+HL)=11.51

C19H17PS L (6778)
Diphenylphosphino(phenylthio)methane; (C6H5)2P.CH2.SC6H5

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

Ag+ EMF non-aq 25°C 100% C H K1=10.05 B2=16.48 1995BTa (99201)2920
B3=20.65
Medium: propylene carbonate. DH(K1)=-73.2 kJ mol-1, DS(K1)=-53 J K-1 mol-1;
DH(B2)=-114.3, DS(B2)=-68; DH(B3)=-157, DS(B3)=-131.

Ag+ ISE non-aq 25°C 100% C H K1=6.25 B2=10.21 1990BZa (99202)2921
B3=12.78
Medium: DMSO; DH(K1)=-47.4, DH(B2)=-82.3, DH(B3)=-110.9 kJ mol-1;
DS(K1)=-39, DS(B2)=-80, DS(B3)=-127 J K-1 mol-1

C19H18NP L (7481)
1-(Diphenylphosphino)-2-(2-pyridyl)ethane;

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

Ag+ EMF non-aq 25°C 100% C H K1=13.10 B2=20.91 1999DDb (99203)2922
B3=24.08
B(Ag2L)=15.57
B(Ag2L2)=30.18

Medium: propylenecarbonate, 0.1 M NEt4ClO4. By calorimetry: DH(K1)=-91 kJ mol-1, DH(B2)=-142, DH(B3)=-174, DH(Ag2L)=-107, DH(Ag2L2)=-214.

C19H20N2S3 L CAS 239107-98-3 (3779)
7-[4'-(Benzothiazol-2"yl)phenyl]-1,4-dithia-7-azacyclononane;

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

Ag+ nmr diox/w 25°C 52% C K1=5.05 1999ISb (99306)2923
Medium: 52% v/v 1,4-dioxane-water. Method: 1H nmr.

C19H24N2O2 L (1564)
1,5-Diaza-7,8:13,14-dibenzo-9,12-dioxacyclpentadecan-7,13-diene;

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

Ag+ EMF mixed 25°C 90% C K1=4.22 2003ISa (99359)2924
Medium: 90% v/v DMSO/H2O. Method: Ag electrode.

Ag+ con non-aq 25°C 100% C T H K1=5.60 2000MTc (99360)2925
Medium: acetonitrile. Data for 20-35 C. DH(K1)=-3.45 kJ mol⁻¹, DS(K1)=
41.5 J K⁻¹ mol⁻¹.

C19H27N3O7S2 L CAS 211120-71-7 (8704)
24-Methoxy-22-nitro-9,12-dioxa-6,15-dithia-3,18-diazabicyclotetracosane-1,20,22-trien
e-4,17-dione;

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

Ag+ cal alc/w 25°C 70% C H K1=5.66 1998HBc (99399)2926
Medium: 70% MeOH/H2O. DH(K1)=-61.5 kJ mol⁻¹, DS(K1)=-98.0 J K⁻¹ mol⁻¹.

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

Ag+ ISE R4N.X 25°C 0.10M U K1=10.8 1978LMa (99484)2927
K(Ag+HL)=5.6

C20H19O2P L CAS 14180-51-9 (2652)
Di(4-Methoxyphenyl)phenylphosphine; (CH3OC6H4)2P(C6H5)

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

Ag+ ISE alc/w 25°C 100% U K1=6.5 B2=13.1 1987Tsa (99886)2928
B3=17.9
B4=21.4

Medium: EtOH

C20H19PS L (6780)
1-Thiophenyl-2-(diphenylphosphino)ethane; C6H5S.CH2.CH2.P(C6H5)2

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

Ag+ EMF non-aq 25°C 100% C H K1=10.90 B2=19.48 1995BTa (99887)2929
B3=22.8
B(Ag2L)=13.43

Medium: propylene carbonate. DH(K1)=-78 kJ mol⁻¹, DS=-53 J K⁻¹ mol⁻¹; DH(B2)
=-137, DS=-87; DH(B3)=-177, DS=-158; DH(Ag2L)=-100, DS=-78.

Ag+ ISE non-aq 25°C 100% C H K1=7.00 B2=11.77 1990BZa (99888)2930
B3=14.41

Medium: DMSO. DH(K1)=-53.5, DH(B2)=-96.5; DH(B3)=-133 kJ mol⁻¹;
DS(K1)=-45, DS(B2)=-98, DS(B3)=-174 J K⁻¹ mol⁻¹

C20H20NP L (7479)
1-(Diphenylphosphino)-2-(dimethylamino)benzene; (C6H5)2P.C6H4.N(CH3)2

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

Ag+ EMF non-aq 25°C 100% C H K1=10.90 B2=19.94 1999DDb (99889)2931
B3=22.04

Medium: propylenecarbonate, 0.1 M NEt4ClO4. By calorimetry: DH(K1)=-73 kJ mol⁻¹, DH(B2)=-125, DH(B3)=-183.

C20H22O4 L CAS 82645-28-1 (8945)
o,o'-(Triethyleneglycoldiyl)-(Z)-stilbene;

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

Ag+ con non-aq 25°C 100% C K1=4.5 B2= 8.19 2000ICa (99926)2932

Medium: nitromethane.

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

Ag+ EMF alc/w 25°C 100% C K1=4.16 2004ZTa (100061)2933

Medium: 100% methanol, 0.05 M Bu4NClO4. Method: Ag electrode.

Ag+ con mixed 25°C 90% C K1=2.02 2003ISa (100062)2934
Medium: 90% v/v DMSO/H2O. By potentiometry (Ag electrode), K1=1.98.

Ag+ con mixed 25°C 20% C K1=4.55 2003SIa (100063)2935
Medium: 20% w/w propylene carbonate/ethylene carbonate. By potentiometry (Pt/Ag electrode), K1=4.53.

Ag+ con non-aq 25°C 100% C K1=6.22 2000ICa (100064)2936
Medium: nitromethane.

Ag+ EMF non-aq 30°C 100% C K1=2.59 1999KBa (100065)2937
Method: Ag/Ag+ electrode. Medium: N-methyl-2-pyrrolidinone.

Ag+ con non-aq 25°C 100% C I K1=4.52 1993JHa (100066)2938
Medium: acetone. Data for DMF media.

Ag+ con non-aq 25°C 100% C K1=4.86 1992STa (100067)2939
Medium: propylene carbonate. By potentiometry with Ag electrode, K1=4.86.

Ag+ sol none 25°C 0.0 U I K1=1.41 1975SNa (100068)2940

C20H26N2O2S L (7109)
3,4:9,10-Dibenzo-1,12-diaza-5,8-dioxa-15-thiacycloheptadecan-3,9-diene;

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

Ag+ EMF alc/w 25°C 95% U K1=8.6 1995ABa (100303)2941
Medium: 95% MeOH/H2O. Also data for diaza-dioxa-thia ligands with smaller
and larger ring sizes.

Ag+ gl alc/w 25°C 95% U K1=12.0 1994ABg (100304)2942
Medium: 95% v/v MeOH/H2O, 0.1 M Et4NC104

C20H26N2O3 L (7551)
1,12-Diaza-3,4:9:10-dibenzo-5,8,15-trioxacycloheptadecan-3,9-diene;

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

Ag+ gl alc/w 25°C 95% U K1=7.1 1994ABg (100307)2943
Medium: 95% v/v MeOH/H2O, 0.1 M Et4NC104

C20H26N2O3 L OdienNtnH4 CAS 85735-84-8 (5943)
1,15-Diaza-3,4:12,13-dibenzo-5,8,11-trioxacycloheptadecan-3,12-diene;

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

Ag+ gl alc/w 25°C 95% C K1=6.7 1998DLA (100315)2944
Medium: 95% MeOH/H2O, 0.10 M Et4NC104.

Ag+ gl alc/w 25°C 95% U K1=7.1 1994ABh (100316)2945
Medium: 95% MeOH/H2O, 0.10 M NEt4ClO4. For the 4-thia analogue: K1=12.0.

C20H26N2S3 L (6958)
9,10:15,16-Dibenzo-1,7-diaza-4,11,14-trithiacycloheptadeca-9,15-diene;

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

Ag+ gl alc/w 25°C 95% U K1=12.4 1994ABh (100322)2946
Medium: 95% MeOH/H2O, 0.10 M NEt4ClO4. For the 4-oxa analogue: K1=10.3

C20H27N3O2 L OenNdienH4 CAS 77016-63-8 (5938)
1,12,15-Triaza-3,4:9,10-dibenzo-5,8-dioxacycloheptadecan-3,9-diene;

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

Ag+ gl alc/w 25°C 95% C K1=8.7 1998DLA (100365)2947
Medium: 95% MeOH/H2O, 0.10 M Et4NC104.

Ag+ gl alc/w 25°C 95% U K1=8.7 1994ABg (100366)2948
Medium: 95% v/v MeOH/H2O, 0.1 M Et4NC104

Ag+ gl alc/w 25°C 95% U K1=8.7 1994ABh (100367)2949
Medium: 95% MeOH/H2O, 0.1 M NEt4ClO4. For the 11,14-dithia analogue: K1=8.6

Ag+ EMF alc/w 25°C 100% C K1=4.62 2004ZTa (100601)2955
Medium: 100% methanol, 0.05 M Bu4NC104. Method: Ag electrode.

Ag+ con mixed 25°C 90% C K1=2.09 2003ISa (100602)2956
Medium: 90% v/v DMSO/H2O. By potentiometry (Ag electrode), K1=1.99.

Ag+ con mixed 25°C 20% C K1=4.93 2003SIa (100603)2957
Medium: 20% w/w propylene carbonate/ethylene carbonate. By potentiometry (Pt/Ag electrode), K1=4.94.

Ag+ con alc/w 25°C 40% C K1=1.86 2002ISa (100604)2958
Medium: 40% EtOH/H2O. By potentiometry, K1=1.84

Ag+ con alc/w 25°C 40% C K1=1.89 2001ISa (100605)2959
Medium: 40% v/v EtOH/H2O. By potentiometry, K1=1.87.

Ag+ EMF non-aq 25°C 100% C T K1=3.68 1998PSa (100606)2960
DH=-25.9 kJ mol⁻¹, DS=-17 J K⁻¹ mol⁻¹. Method: Ag electrode.
Data for 10-55 C. Medium: EtOH.

Ag+ con non-aq 25°C 100% C I K1=5.38 1993JHa (100607)2961
Medium: acetone. Data for DMF media.

Ag+ con non-aq 25°C 100% C K1=5.16 1992STa (100608)2962
Medium: propylene carbonate. By potentiometry with Ag electrode, K1=5.16.

Ag+ cal oth/un 25°C 0.10M U H K1=2.26 1976ITb (100609)2963
DH(Syn)=0.29 kJ mol⁻¹.

Ag+ ISE oth/un 25°C dil A K1=1.8 1971FRa (100610)2964
Data for isomer B. For isomer A, K1=2.3

Ag+ cal oth/un 25°C 0.0 U K1=1.59 1971INa (100611)2965
Isomer B

Ag+ oth oth/un ? ? U K1=1.59 1970MSa (100612)2966

C20H40N2O4 L (6625)
1,10-Diaza-4,7,13,16-tetraoxabicyclo[8.8.8]hexacosane;

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

Ag+ gl non-aq 25°C 100% C I K1=6.23 1992LSc (100773)2967
Medium: MeCN, 0.05 M Et4NC104. In MeOH K1=10.0; in DMF K1=7.7

C20H44N4O3 L CAS 120981-97-7 (8970)
4,5,11,17-Tetraethyl-1,8,14-trioxa-4,5,11,17-tetraazacyclononadecane;

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

Ag+ cal non-aq 25°C 100% C H K1=3.46 1990DJb (100915)2968
Medium: DMSO. DH(K1)=-53.9 kJ mol⁻¹, DS(K1)=-114 J K⁻¹ mol⁻¹.

C20H44N4O4 L CAS 102202-74-4 (6041)

1,4,7,10-Tetra-(2-hydroxypropyl)-1,4,7,10-tetraazacyclododecane;

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

Ag+ EMF non-aq 25°C 100% C I K1=8.51 1997DMd (100921)2969

Method: Ag electrode. Medium: acetonitrile, 0.05 M Et4NClO4.

Also data for PC (K1=15.3), MeOH (12.8), DMF (11.30), H2O (11.86).

C20H44N4O4 L (6730)

1,4,7,10-Tetra-(2-methoxyethyl)-1,4,7,10-tetraazacyclododecane;

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

Ag+ gl non-aq 25°C 100% U I K1=12.30 1996SDa (100934)2970

Medium: MeCN, 0.05 M Et4NClO4. In MeOH: K1=14.2, DMF: 13.73, DMSO: 11.48,
propylene carbonate: 15.3

C21H16 L CAS 77979-28-3 (3511)

3-Methylcholanthrene;

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

Ag+ sol oth/un 25°C 0.5M U K1=0.52 1954KLa (101057)2971

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

Ag+ gl KNO3 20°C 0.10M C K1=7.53 1977AHc (101242)2972

B(AgHL)=12.14

B(AgH2L)=14.25

B(Ag2L)=9.84

C21H28N2O3 L OdienNtnH4 CAS 85735-85-9 (5944)

1,15-Diaza-3,4:12,13-dibenzo-5,8,11-trioxacyclooctadecan-3,12-diene;

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

Ag+ gl alc/w 25°C 95% C K1=6.0 1998DLA (101323)2973

Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

C21H29N3O2 L OenNentnH4 CAS 77016-65-0 (5941)

1,12,16-Triaza-3,4:9,10-dibenzo-5,8-dioxacyclooctadecan-3,9-diene;

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

Ag+ gl alc/w 25°C 95% C K1=8.8 1998DLA (101347)2974
Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

Ag+ EMF alc/w 25°C 95% U K1=8.8 1995ABa (101348)2975
Medium: 95% MeOH/H2O. Also data for triaza-dioxa ligands with smaller and larger ring sizes.

C22H20N2O4 L CAS 207461-96-9 (8955)
(5Z)-12,13,20,21-Tetrahydrotribenzo[b,f,l][1,8,11,14,4,5]tetraoxadiazacyclohexadecine;

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

Ag+ sp non-aq RT 100% C I K1=2.1 2000GDa (101693)2976
Medium: acetonitrile. In MeOH, K1=3.7.

C22H26O5 L CAS 160978-39-2 (8944)
o,o'-(Tetraethyleneglycoldiyl)-(Z)-stilbene;

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

Ag+ con non-aq 25°C 100% C K1=6.04 2000ICa (101995)2977
Medium: nitromethane.

C22H28O7 L Dibenzo-21-Cr-7 CAS 14098-41-0 (2876)
2,3:11,12-Dibenzo-1,4,7,10,13,16,19-heptaoxacycloheptacosane-2,11-diene;

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

Ag+ con non-aq 25°C 100% C I K1=3.15 1993JHa (102035)2978
Medium: acetone. Data for DMF media.

Ag+ cal non-aq 25°C 100% C H K1=2.41 1986ICa (102036)2979
Medium: MeOH. DH(K1)=-7.61 kJ mol⁻¹, DS(K1)=20.6 J K⁻¹ mol⁻¹.

C22H30N2O3 L CAS 257890-46-3 (8930)
7,13-Diphenyl-1,4,10-trioxa-7,13-diazacyclopentadecane;

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

Ag+ ISE R4N.X 25°C 0.05M U H K1=12.91 2002BSd (102101)2980
Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M Et4NClO4. By calorimetry: DH(K1)=-83.1 kJ mol⁻¹, DS(K1)=-32.6 J K⁻¹ mol⁻¹.

C22H30N2O4 L CAS 173547-24-5 (7560)
1,15-Diaza-3,4:12,13-dibenzo-5,8,11,18-tetraoxacycloeicosan-3,12-diene;

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

Ag+ gl alc/w 25°C 95% C K1=6.2 1998DLa (102106)2981
Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

C22H31N3O3 L CAS 12859-24-4 (7557)
1,15,18-Triaza-3,4:12,13-dibenzo-5,8,11-trioxacycloeicosan-3,12-diene;

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

Ag+ gl alc/w 25°C 95% C K1=8.1 1998DLa (102173)2982
B(AgHL)=14.9

Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

C22H34N6 [22]-Py2N4 (5952)
Di-(2,6-pyridyl)-1,4,9,12,15,20-hexaazacyclodocosane;

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

Ag+ gl NaClO4 25°C 0.01M U K1=6.28 1985NSc (102231)2983
B(Ag2L)=10.88

C22H36N2O6 L Bz-Cryptand 222 CAS 31250-18-7 (2269)
5,6-Benzo-4,7,13,16,21,24-hexaoxa-1,10-diazabicyclo[8:8:8]hexacosane-5-ene;

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

Ag+ EMF non-aq 25°C 100% C K1=8.59 1999THa (102261)2984
Medium: acetonitrile. Method: Ag/Ag+ electrode.

Ag+ ISE NaClO4 25°C 0.10M U K1=9.28 1984CTc (102262)2985

C22H40O7 L (6596)
2,3,11,12,-Dicyclohexano-1,4,7,10,13,16,19-heptaoxacycloheneicosane;
dicyclohexyl-21-crown-7;

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

Ag+ sol non-aq 25°C 100% C K1=3.87 1999KCa (102375)2986
Medium: methanol.

Ag+ sol non-aq 25°C 100% C K1=7.03 1999KCa (102376)2987

Medium: propylene carbonate.

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

Ag+ ISE R4N.X 25°C 0.10M U K1=13.0 1978LMa (102480)2988
K(Ag+HL)=9.7

C23H23NO5 L CAS 218619-58-0 (7808)
Dibenzo-pyridino-18-crown-6;

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

Ag+ EMF alc/w 25°C 100% C K1=5.64 2004ZTa (102649)2989
Medium: 100% methanol, 0.05 M Bu4NClO4. Method: Ag electrode.

Ag+ EMF alc/w 25°C 100% C T H K1=5.45 2001SZb (102650)2990
Medium: methanol, 0.5 M Bu4NClO4. Method: Ag electrode.
Data for 5-35 C. DH(K1)=-28.7 kJ mol⁻¹, DS(K1)=11 J K⁻¹ mol⁻¹.

C23H32N2O5 L (7368)
9-(2'-Hydroxy-5'-methylbenzyl)-3,6,12,15-Tetraoxa-9,21-diazabicyclo[15.3.1]heneicosatriene;

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

Ag+ cal alc/w 25°C 100% U H K1=>9 1997ZBa (102780)2991
Medium: MeOH. Data also for several similar 5'-substituted ligands

C23H32N2O5 L (7369)
9-(2'-Pyridylmethyl)-3,6,12,15-tetraoxa-19-methyl-21-hydroxy-9-azabicyclo[15.3.1]heneicosatriene;

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

Ag+ cal alc/w 25°C 100% U H K1=6.33 1997ZBa (102784)2992
Medium: MeOH

C23H33N3O3 L CAS 173547-19-8 (7558)
1,15,19-Triaza-3,4:12,13-dibenzo-5,8,11-trioxacycloheneicosan-3,12-diene;

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

Ag+ gl alc/w 25°C 95% C K1=8.0 1998DLA (102812)2993
B(AgHL)=14.8

Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

C24H16N2 L Bathophenan CAS 1662-01-7 (2749)
4,7-Diphenyl-1,10-phenanthroline;

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

Ag+ gl alc/w 25°C 50% C I K1=5.13 B2=10.02 1974B0a (102856)2994
In 50% acetone/H2O: K1=5.20, B2=10.33

C24H20B- HL CAS 4358-26-3 (2489)
Tetraphenylborate;

 Ag+ gl KCl 25°C 0.10M C K1=23.57 2003GMb (103276)3004

 C24H42S2 L CAS 160581-16-8 (5456)
 1,3-Bis-[(octylthio)methyl]benzene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	dis	KNO3	22°C	0.5M	U				1998FRa (103402)3005	
								B(Ag(NO3)L)(org)=2.54 B(Ag(NO3)L2)(org)=4.69 B(Ag3(NO3)3L3)(aq)=15.01		
Organic medium: chloroform. B(Ag(NO3)L)(org): Ag(aq)+NO3(aq)+L(org)= Ag(NO3)L(org). B(Ag3(NO3)3L3)(aq):Ag(aq)+NO3(aq)+L(org)=Ag3(NO3)3L3(aq). *****										
C24H44O8	L	Dicy-24-crown-8							CAS 17455-23-1 (2401)	
2,3,14,15-Dicyclohexyl-1,4,7,10,13,16,19,22-octaoxacyclotetracosane; -----										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	con	mixed	25°C	90%	C			K1=1.80	2003ISa (103419)3006	
Medium: 90% v/v DMSO/H2O. By potentiometry (Ag electrode), K1=1.78. -----										
Ag+	con	mixed	25°C	20%	C			K1=4.49	2003SIa (103420)3007	
Medium: 20% w/w propylene carbonate/ethylene carbonate. By potentiometry (Pt/Ag electrode), K1=4.48. -----										
Ag+	sol	non-aq	25°C	100%	C			K1=7.48	1999KCa (103421)3008	
Medium: propylene carbonate -----										
Ag+	sol	non-aq	25°C	100%	C			K1=4.40	1999KCa (103422)3009	
Medium: methanol. *****										
C24H46N2O6	L								(6567)	
7,16-Bis(trans-2-hydroxycyclohexyl)-1,4,10,13-tetraoxa-7,16-diazocyclooctadecane; -----										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	NaNO3	25°C	0.10M	C			K1=5.20	1991DCa (103450)3010	

C24H48N4O2S4	L								CAS 65424-03-5 (5951)	
1,7,13,19-Tetraaza-4,16-dioxa-10,22,27,32-tetrathiatricyclo[17.5.5.5]tetracontane; -----										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	NaClO4	25°C	0.01M	U			K1=13.12 B(Ag2L)=23.02	1985SLa (103471)3011	

C24H48N4O6	L								CAS 56698-26-1 (1536)	
4,10,16,22,27,32-Hexaoxa-1,7,13,19-tetraazatricyclo-tetratriacontane; -----										

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

Ag+ gl R4N.X 25°C 0.10M U 1985NSb (103476)3012
B(AgHL)=16.29
B(Ag2L)=13.54

C24H48N7O5P3 L CAS 254441-66-2 (7955)
2,5,8,11,14-Pentaoxa-16,18,19-triaza-1,15,17-triphosphabicyclo[13.3.1]nonadeca-1,15,
,17-triene,17,

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

Ag+ EMF R4N.X RT 0.10M M K1=3.26 B2= 5.56 2001BSb (103511)3013
Method: Ag/Ag+ electrode. Medium: 0.10 M Et4NNO3.

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

Ag+ ISE non-aq 25°C 100% C H 1993DDa (103644)3014
B(Ag2L)=16.68
B(Ag2L2)=29.50
B(Ag2L3)=35.01

Medium: propylenecarbonate, 0.1 M Et4NClO4. By calorimetry, DH(Ag2L)=-139
kJ mol⁻¹, DS=-147; DH(Ag2L2)=-249, DS=-270; DH(Ag2L3)=-310, DS=-370.

Ag+ ISE non-aq 25°C 100% U H 1990DDa (103645)3015
B(Ag2L)=12.46
B(Ag2L2)=22.75
B(Ag2L3)=25.57

Medium: DMSO, 0.1 M Et4NClO4. DH(Ag2L)=-107, DH(Ag2L2)=-188, DH(Ag2L3)=
-261 kJ mol⁻¹. DS(Ag2L)=-120, DS(Ag2L2)=-195, DS(Ag2L3)=-386 J K⁻¹ mol⁻¹

C25H28N4O10 L CAS 752-13-6 (2940)
Tetraacetylriboflavine;

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

Ag+ nmr non-aq 38°C 100% U K1=3.1 B2=4.21 1975LHa (103671)3016
In acetone. B2 measured by ESR at 38 C, K1 by spectrophotometry at 25 C

C25H30N4O2 L CAS 336181-87-4 (8558)
Octahydro-12H-7,11-nitrilo-6H,18H-dibenzo[b,m][1,15,5,8,11]dioxatriazacyclodocose
;

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

Ag+ gl alc/w 25°C 95% U K1=>13 2002FGa (103696)3017

Medium:95% MeOH/H2O, 0.10 M Et4NC1O4. For the 2,16-t-butyl derivative, K1=>13.

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

Ag+ ISE non-aq 25°C 100% C H K1=13.75 B2=21.94 1993DDa (103927)3018
B(Ag2L)=18.01
B(Ag2L2)=30.63

Medium: propylenecarbonate, 0.1 M Et4NC1O4. By cal, DH(K1)=-114 kJ mol-1
DS=-121; DH(B2)=-173, DS=-160; DH(Ag2L)=-144, DS=-138; DH(Ag2L2)=-233.

Ag+ ISE non-aq 25°C 100% U H K1=7.73 B2=13.91 1990DDa (103928)3019
B(Ag2L)=11.91
B(Ag2L2)=18.28

Medium: DMSO,0.1 M Et4NC1O4. DH(K1)=-87, DH(B2)=-149,DH(Ag2L)=-110,DH(Ag2L2)
=-186 kJ mol-1. DS(K1)=-144, DS(B2)=-233, DS(Ag2L)=-141, DS(Ag2L2)=-274

C26H28N2O5 L (2155)

1,13-Di-(8-quinolyl)-1,4,7,10,13-tetraoxatridecane; C9H6N.O.(CH2.CH2.O)4.C9H6N

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

Ag+ ISE alc/w 25°C 100% U H K1=7.02 1985BUB (103976)3020

Medium: MeOH, 0.05M Et4NC1O4. DH=-37.8 kJ mol-1

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

Ag+ gl KNO3 20°C 0.10M C H K1=11.29 1977AHc (103993)3021
B(Ag2L)=17.40
B(AgHL)=15.45

Calorimetry: DH1=-77.1 kJ mol-1, DS1=-46.4

C26H30N2O2 L CAS 268727-12-4 (8553)

6,7,8,9,10,11,17,18-Octahydro-6-(phenylmethyl)-5H-dibenzo[e,n][1,4,8,12]dioxadiazac
yclopentadecin

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

Ag+ gl alc/w 25°C 95% C K1=4.4 2002KAb (104028)3022

Medium: 95% MeOH/H2O, 0.10 M Et4NC1O4.

C26H34N2O6 L CAS 81897-78-1 (8932)

7,16-Dibenzoyl-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	R4N.X	25°C	0.05M	U	H		K1=2.57	2002BSd (104069)	3023
Method: Ag+ ion selective electrode. Medium: propylene carbonate, 0.05 M Et4NClO4. By calorimetry: DH(K1)=-13.0 kJ mol ⁻¹ , DS(K1)=5.4 J K ⁻¹ mol ⁻¹ .										

C26H36N2O4F2		L						CAS 205439-52-7	(8667)	
7,16-Bis[(2-fluorophenyl)methyl]-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	R4N.X	25°C	0.05M	C	H		K1=8.85	2002BSb (104118)	3024
Medium: 0.05 M Et4NClO4. DH(K1)=-62.9 kJ mol ⁻¹ , DS(K1)=-41.6 J K ⁻¹ mol ⁻¹ . Also data for 4-fluoro, 2-bromo and 4-bromo derivatives.										

C26H36N2O6		L						DiBzCryptand222 (746)		
5,6,14,15-Dibenzo-4,7,13,16,21,24-hexaoxa-1,10-diazabicyclo[8.8.8]hexacosan-5,14-diene;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	cal	non-aq	25°C	100%	U	IH			1988DSa (104120)	3025
Medium: MeCN. DH(K1)=-52.7 kJ mol ⁻¹ . Also data in propylene carbonate, dimethylformamide and dimethylsulphoxide										

Ag+	ISE	non-aq	25°C	100%	U	M		K1=9.20	1987DSa (104121)	3026
Medium: N,N-dimethylformamide										

Ag+	ISE	alc/w	25°C	100%	C	I		K1=11.78	1985CKa (104122)	3027
Medium: MeOH. In acetonitrile K1=8.31; in propylenecarbonate K1=15.88; in DMF K1=9.67; in DMSO K1=6.77.										

C26H36O9		L						DiBz-27-crown-9 CAS 61260-08-0	(1775)	
Dibenzo-27-crown-9. 2,3:17,18-Dibenzo-1,4,7,10,13,16,19,22,25-nonaoxacycloheptacosan-2,15-diene;										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	cal	non-aq	25°C	100%	C	H		K1=2.47	1986ICa (104166)	3028
Medium: MeOH. DH(K1)=-14.0 kJ mol ⁻¹ , DS(K1)=0.3 J K ⁻¹ mol ⁻¹ .										

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
Ag+	EMF	mixed	25°C	90%	C			K1=4.45	2003ISa (104179)	3029
Medium: 90% v/v DMSO/H2O. Method: Ag electrode.										

Ag+	con	non-aq	25°C	100%	C	T	H	K1=6.38	2000MTc (104180)	3030
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Medium: acetonitrile. Data for 20-35 C. DH(K1)=-100.0 kJ mol⁻¹, DS(K1)=214.1 J K⁻¹ mol⁻¹.

Ag+ ix none 25°C 0.0 U K1=7.8 1988IBa (104181)3031
Ligand covalently attached to silica gel

C26H38N4O6Cl2 H2L CAS 227796-03-4 (8914)
7,16-Bis(3-amino-5-chloro-2-hydroxybenzyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane;

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

Ag+ cal alc/w 25°C 100% C H K(Ag+H2L)=>5.5 1999SBf (104197)3032

Medium: MeOH. DH(K)=-47.9 kJ mol⁻¹, DS(K)=>-55.4 J K⁻¹ mol⁻¹.

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

Ag+ ISE non-aq 25°C 100% C H K1=14.1 B2=21.83 1993DDa (104410)3033
B(Ag2L)=18.15
B(Ag2L2)=32.63

Medium: propylenecarbonate, 0.1 M Et4NClO4. By cal, DH(K1)=-120 kJ mol⁻¹
DS=-134; DH(B2)=-198, DS=-246; DH(Ag2L)=-147, DS=-146; DH(Ag2L2)=-253.

Ag+ ISE non-aq 25°C 100% U H K1=8.65 B2=14.39 1990DDa (104411)3034
B(Ag2L)=12.37
B(Ag2L2)=20.13

Medium: DMSO, 0.1 M Et4NClO4. DH(K1)=-95, DH(B2)=-162, DH(Ag2L)=-115, DH(Ag2L2)=-195 kJ mol⁻¹. DS(K1)=-153, DS(B2)=-268, DS(Ag2L)=-149, DS(Ag2L2)=-269

C27H32N5S3 CAS 197148-44-0 (7331)
7,13-Dithia-1,4,10-trioxa-2,3-benzocyclopentadeca-15-ene-3'-vinyl-3-carboxypropylbenzothiazolium;HL+

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

Ag+ sp non-aq 22°C 100% C K1=4.4 1997GFa (104520)3035
Medium: MeCN. Data also for several related ligands

C27H33N3O2 L CAS 540522-39-2 (9154)
1,12,15-Triaza-3,4:9,10-dibenzo-5,8-dioxacycloheptadecane;

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

Ag+ gl alc/w 25°C 95% U K1=9.2 2004FRa (104530)3036
B(AgHL)=14.3

Medium: 95% methanol/water, 0.1 M Et4NClO4.

 C28H36N2O7S2 HL CAS 150196-54-6 (7735)
 3-(3-Sulfopropyl)-2-[4-[N-(1,4,7,10,13-pentaoxa-16-azacyclooctadeca)]]styryl-benzot
 hiazolium;

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

 Ag+ sp none 18°C 0.0 C K1=0.74 1997LHa (104779)3037

C28H40O10 L DiBz-30-crown10 CAS 104946-67-0 (1776)
 2,3:17,18-Dibenzo-1,4,7,10,13,16,19,22,25,28-decaoxacyclotriaconta-2,17-diene;

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

 Ag+ con non-aq 25°C 100% C I K1=3.53 1993JHa (104863)3038
 Medium: acetone. Data for DMF media.

 Ag+ con non-aq 25°C 100% U I K1=5.27 1991ASb (104864)3039
 Medium: 1,2-dichlorethane. In nitromethane: K1=4.79; in MeCN: K=4.22;
 in acetone: K=3.88

 Ag+ sp alc/w 25°C 100% U I K1=4.31 1987GKb (104865)3040
 Medium: MeOH. In DMF, K1=3.42

 C28H42N2O4 L CAS 442126-05-8 (8668)
 7,16-Bis[(2-methylphenyl)methyl]-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane;

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

 Ag+ ISE R4N.X 25°C 0.05M C H K1=8.51 2002BSb (104924)3041
 Medium: 0.05 M Et4NClO4. DH(K1)=-62.9 kJ mol⁻¹, DS(K1)=-41.6 J K⁻¹ mol⁻¹.
 Also data for 4-methylphenyl derivative.

 C28H52N6O5 HL CAS 811431-80-8 (9159)
 2,6-Bis(1,4-dioxa-7,10,13-triazacyclopentadec-10-ylmethyl)-phenol;

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

 Ag+ gl alc/w 25°C 95% U K1=> 14 2004PFa (105003)3042
 Medium: 95 % methanol/H2O, 0.1 M Et4NClO4.

 C28H52O10 L CAS 17455-26-4 (6071)
 2,3:17,18-Dicyclohexyl-1,4,7,10,13,16,19,22,25,28-decaoxacyclotriacontane;

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

 Ag+ sol non-aq 25°C 100% C K1=6.00 1999KCa (105020)3043
 Medium: propylene carbonate.

 C29H37N3O4S2 L CAS 173547-29-0 (7564)

1,8,15-Triaza-3,4:12,13-dibenzo-8-tosyl-5,11-dioxa-18-thiacycloeicosan-3,12-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	alc/w	25°C	95%	C			K1=8.3 B(AgHL)=13.7	1998DLa (105112)	3044

Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

C29H37N3O5S L CAS 173547-28-9 (7563)
1,8,15-Triaza-3,4:12,13-dibenzo-8-tosyl-5,11,18-trioxacycloeicosan-3,12-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	alc/w	25°C	95%	C			K1=6.6 B(AgHL)=13.4	1998DLa (105120)	3045

Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

C29H38N4O4S L CAS 168279-83-2 (7561)
1,8,15,18-Tetraaza-3,4:12,13-dibenzo-8-tosyl-5,11-dioxacycloeicosan-3,12-diene;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	gl	alc/w	25°C	95%	C			K1=8.5 B(AgHL)=15.2	1998DLa (105129)	3046

Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

C30H36N8O3 Furan-cryptand CAS 121954-37-8 (7451)
39,40,41-Trioxa-1,4,11,14,17,24,29,36-octaazapentacyclo[12.12.12.1.1.1]henLetetraco
ntadodecane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	EMF	non-aq	25°C	100%	U	H		K1=7.2 B2=13.30	1996AAb (105246)	3047

Medium: MeCN

tacyclo[12.12.12.1(6,9).1(19,22).1(31,34)]hentetetraconta-4,6,8....dodecaene

C30H38N2O8 L CAS 137571-97-2 (6821)
Anthraquinone[2.2]cryptand;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	ISE	non-aq	25°C	100%	U			K1=5.03	1992CSc (105276)	3048

Ag/Ag+ electrode. Medium: MeCN, 0.05 M Bu4NClO4

C30H40N2O4 L Anthracene-22 (3329)
6,9,17,20-Tetraoxa-3,12-diaza[14:8](9,10)anthracenophane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Ag+	sp	alc/w	25°C	100%	U			K1=9.51	1989FDa (105281)	3049

Medium: MeOH, 0.1 M Bu4NC104

C30H40N4O4S L CAS 173547-27-8 (7562)
1,8,15,19-Tetraaza-3,4:12,13-dibenzo-8-tosyl-5,11-dioxacycloheneicosan-3,12-diene;

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

Ag+ gl alc/w 25°C 95% C K1=8.8 1998DLa (105287)3050
Medium: 95% MeOH/H2O, 0.10 M Et4NC104.

C32H34N2O2S2 L (7281)
3,4:9,10:14,15:20,21-Tetrabenzo-1,12-diaza-5,8-dioxa-16,19-dithiacyclodocosan-3,9,14,20-tetraene;

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

Ag+ gl alc/w 25°C 95% C K1=9.5 1996AKb (105621)3051
Medium: 95% MeOH/H2O, 0.10 M Et4NC104

C32H34N2O4 L (7282)
3,4:9,10:14,15:20,21-Tetrabenzo-1,12-diaza-5,8,16,19-tetraoxacyclododecan-3,9,14,20-tetraene;

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

Ag+ gl alc/w 25°C 95% C K1=8.4 1996AKb (105624)3052
Medium: 95% MeOH/H2O, 0.10 M Et4NC104

C32H34N2S4 L (7283)
3,4:9,10:14,15:20,21-Tetrabenzo-1,12-diaza-5,8,16,19-tetrathiacyclododecan-3,9,14,20-tetraene;

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

Ag+ gl alc/w 25°C 95% C K1=12.5 1996AKb (105628)3053
Medium: 95% MeOH/H2O, 0.10 M Et4NC104

C32H43N2O7S HL CAS 189057-31-6 (7756)
3-(4-Carboxybutyl)-2-[4-[N-(1,4,7,10,13-pentaoxa-16-azacyclooctadeca)]]styryl-benzo thiazolium;

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

Ag+ sp none 18°C 0.0 C K1=0.80 1997LHa (105752)3054

C32H44N2O4 L (6164)
7,10,17,20-Tetraoxa-4,13-diaza[16:8](9,10)anthracenophane;

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

Ag+ sp alc/w 25°C 100% U K1=9.36 1989FDa (105762)3055
Medium: MeOH, 0.1 M Bu4NC104

C32H48N2O3 L CAS 170801-55-5 (8952)

1,5-Bis[2,2'-azo-4,4'-(1,1,3,3-tetramethylbutyl)phenoxy]-3-oxapentane;

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

Ag+ sp alc/w RT 100% C K1=2.9 2000GDa (105793)3056

Medium: MeOH.

C32H48N2O4 L CAS 170801-51-1 (8953)

6,7,9,10-Tetrahydro-2,14-bis(1,1,3,3-tetramethylbutyl)dibenzotrioxadiazacyclotridecine 16-oxide;

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

Ag+ sp alc/w RT 100% C K1=2.0 2000GDa (105797)3057

Medium: MeOH.

C32H64N4O10 L CAS 42133-16-4 (8579)

4,10,13,19,25,28,33,36,41,44-Decaoxa-1,7,16,22-tetraazatricyclo[20.8.8.87,16]hexate tracontane;

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

Ag+ gl alc/w 25°C 90% M K1=ca. 12 1977LSc (105846)3058

Medium: 90% (w/w) MeOH/H2O, 0.1 M Et4NBr.

C32H66N2O4 L 22DD Kryptofix CAS 79495-97-9 (6655)

1,10-Didecyl-1,10-diaza-4,7,13,16-tetraoxacyclooctadecane;

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

Ag+ ISE alc/w 25°C 100% U H K1=10.28 1985BUB (105858)3059

Medium: MeOH, 0.05M Et4NC104. DH=-61.1 kJ mol-1

C33H36N2O2 L CAS 225918-78-5 (8554)

6,7,8,9,10,11,17,18-Octahydro-6,10-bis(phenylmethyl)-5H-dibenzo[1,4,8,12]dioxadiazacyclopentadeci

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

Ag+ gl alc/w 25°C 95% C K1=4.0 2002KAb (105883)3060

Medium: 95% MeOH/H2O, 0.10 M Et4NC104.

C33H38N2O6P2 H2L CAS 361523-72-0 (7842)

1,12-Diaza-3,4:9,10-dibenzo-5,8-dioxacyclopentadecan-1,2-bis(methylenephosphonic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	gl	alc/w	25°C	95%	C		K1=6.8	2001FLa (105903)	3061
Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.									

C33H39N11		L					Pyr-cryptand CAS 141258-00-6 (7452)		
1,4,12,15,18,26,31,39,42,43,44-Undecaazapentacyclo[13.13.13.1.1.1]tetratetraconta pentadecane;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	EMF	non-aq	25°C	100%	U	H	K1=6.0	1996AAb (105911)	3062
Medium: CH3CN									
.13.1(6,10).1(20,24).1(33,37)]tetratetraconta-4-6-8-10(44),11...pentadecaene									

C34H33P3		L					(6539)		
Bis(2-(diphenylphosphino)ethyl)phenylphosphane; C6H5P(CH2CH2P(C6H5)2)2									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	ISE	non-aq	25°C	100%	U	H	K1=11.69 B2=16.69 B(Ag2L)=15.45 B(Ag2L3)=32.01	1990DDa (106004)	3063
Medium: DMSO,0.1M Et4NClO4. DH(K1)=-109, DH(B2)=-159,DH(Ag2L)=-135,DH(Ag2L3)=-291 kJ mol-1. DS(K1)=-142, DS(B2)=-214, DS(Ag2L)=-157, DS(Ag2L3)=-364									

C34H38N2O3		L					CAS 268727-13-5 (8555)		
Decahydro-17,20-bis(phenylmethyl)dibenzo[h,p][1,4,7,11,14]trioxadiazacycloheptadecine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	gl	alc/w	25°C	95%	C		K1=8.9	2002KAb (106022)	3064
Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.									

C34H42N2O4		L					CAS 205743-21-1 (8942)		
N,N'-Bis(1-naphthylmethyl)-1,4,10,13-tetraoxa-7,16-diazacyclooctadecane;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	con	alc/w	25°C	100%	M	H	K1=8.65	2000BSe (106054)	3065
Medium: MeOH. By calorimety: DH(K1)=-51.3 kJ mol-1, DS(K1)=-7.4 J K-1 mol-1.									

C34H54O8		H2L					Lasalocid CAS 25999-20-6 (2335)		
Lasalocid acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Ag+	nmr	non-aq	20°C	100%	C			1998MLa (106109)	3066

K(Ag+HL)=2.0

Medium: CD3OD. Method: 13C nmr.

C35H40N2O3 L CAS 268727-14-6 (8556)
Decahydro-17,21-bis(phenylmethyl)-16H-dibenzo[h,q][1,4,7,11,15]trioxadiazacycloocta
decine;

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

Ag+ gl alc/w 25°C 95% C K1=5.1 2002KAb (106192)3067
Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

C36H42N8 L Xylyl-cryptand CAS 172881-87-7 (7456)
1,4,12,15,18,26,31,39-Octaazapentacyclo[13.13.13.1.1.1]tetraatetracontadecane;

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

Ag+ sp non-aq 25°C 100% U K1=4.8 1996AAAd (106313)3068
B(Ag2L)=8.77

Medium: CH3CN

C36H44N4O2 L CAS 446875-57-6 (8559)
3,17-Bis(1,1-dimethylethyl)-tetrahydro-dinitrilodibenzodioxadiazacyclotetracosine;

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

Ag+ gl alc/w 25°C 95% U K1=>13 2002FGa (106325)3069
Medium:95% MeOH/H2O, 0.10 M Et4NClO4.

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

Ag+ con non-aq 25°C 100% C H K1=1.95 1997PBb (106478)3070
Medium: acetonitrile. Additional method: potentiometry with ISE.
By calorimetry, DH(K1)=-14 kJ mol⁻¹, DS(K1)=-10 J K⁻¹ mol⁻¹.

Ag+ ISE alc/w 25°C 90% U I K1=7.42 1988ACb (106479)3071
Medium: 90% v/v MeOH/H2O. 80% MeOH/H2O, K1=6.71, 70%, K1=6.43, 60%, K1=5.92

Ag+ ISE alc/w 25°C 100% M K1=7.86 1984CTa (106480)3072

Ag+ ISE non-aq 25°C 100% M K1=10.05 1984CTa (106481)3073
Medium: N,N-dimethylformamide. In DMSO K1=5.81

Ag+ ISE alc/w 25°C 100% U K1=8.94 1984CTb (106482)3074
Medium: EtOH

Ag+ gl non-aq 25°C 100% U I K1=5.38 1983RSb (106483)3075

Medium: DMSO. In MeOH: K1=8.1; in PC: 15.0; in DMF: 9.94; in MeCN: 8.6

Ag+ gl alc/w 25°C 100% U K1=8.2 1978HPa (106484)3076

C39H42N4O2 HL CAS 688348-35-8 (9160)
Octahydro-19,22-bis(phenylmethyl)-12H-7,11-nitrilo-6H,18H-dibenzo[1,15,5,8,11]dioxatriazacyclo;

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

Ag+ gl alc/w 25°C 95% U K1=10.2 2004PFa (106709)3077
Medium: 95 % methanol/H2O, 0.1 M Et4NClO4.

C40H52N4O4 L CAS 205066-94-0 (8760)
Tetraphenyl-1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraethanol;

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

Ag+ ISE non-aq 25°C 100% C K1=8.14 1998Wlc (106820)3078
Medium: DMF, 0.05 M Et4NClO4.

Ligand is (all-R)-(all-alpha)-Tetraphenyl-

C41H45N3O2 L CAS 129508-47-0 (8557)
Decahydro-6,9,12-tris(phenylmethyl)-5H-dibenzo[e,p][1,4,8,11,14]dioxatriazacycloheptadecine;

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

Ag+ gl alc/w 25°C 95% C K1=9.3 2002KAb (106878)3079
Medium: 95% MeOH/H2O, 0.10 M Et4NClO4.

C42H42P4 L (6540)
Tris(2-(diphenylphosphino)ethyl)phosphane; P(CH2CH2P(C6H5)2)3

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

Ag+ ISE non-aq 25°C 100% U H K1=13.29 B2=16.25 1990DDa (106942)3080
B(Ag2L)=17.88

Medium: DMSO,0.1M Et4NClO4. DH(K1)=-140, DH(B2)=-173, DH(Ag2L)=-166 kJ mol-1
DS(K1)=-215, DS(B2)=-268, DS(Ag2L)=-215 J K-1 mol-1

C42H50O7 L CAS 177723-38-5 (8793)
1,3-Diisopropoxycalix[4]arene-crown-5, 1,3-alternate;

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

Ag+ sp non-aq 25°C 100% C K1=5.4 2000PBa (106947)3081
Medium: MeOH.

C42H68N2O4 L CAS 188593-77-3 (8954)

2,17-Didodecyl-6,7,9,10,12,13-hexahydro-dibenzo[b,f][1,8,11,14,4,5]tetraoxadiazacyclohexadecine

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

Ag+ sp non-aq RT 100% C I K1=2.7 2000GDa (106971)3082
Medium: acetonitrile. In MeOH, K1=3.65.

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

Ag+ sp NaNO3 25°C 0.10M U 19840Ba (107100)3083
K(2Ag+H2L=Ag2L+2H)=-5.8

C44H54O8 L CAS 162989-76-6 (8794)
1,3-Diisopropoxycalix[4]arene-crown-6, 1,3-alternate;

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

Ag+ sp non-aq 25°C 100% C K1=4.7 2000PBa (107168)3084
Medium: MeOH.

C44H54O8 L CAS 161282-98-0 (8679)
25,27-Bis(1-propyloxy)calix[4]arene-crown-6, 1,3-alternate;

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

Ag+ EMF non-aq 25°C 100% C K1=4.6 1995CUa (107173)3085
Medium: methanol, 0.01 M Et4NClO4. Method: Ag electrode.

C44H54O8 L CAS 161282-96-8 (8678)
25,27-Bis(2-propyloxy)calix[4]arene-crown-6, 1,3-alternate;

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

Ag+ EMF non-aq 25°C 100% C H K1=4.52 1995CUa (107179)3086
Medium: methanol, 0.01 M Et4NClO4. Method: Ag electrode.

By calorimetry, DH(K1)=-13.5 kJ mol⁻¹, DS(K1)=41 J K⁻¹ mol⁻¹.

C46H48N4O2 HL CAS 688348-38-1 (9161)
Octahydro-19,22,25-tris(phenylmethyl)-12H-7,11-nitrilo-6H,18H-dibenzo[1,15,5,8,11]dioxatriazac;

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

Ag+ gl alc/w 25°C 95% U K1=> 8 2004PFa (107265)3087
Medium: 95 % methanol/H2O, 0.1 M Et4NClO4.

C48H96N2O4 L CAS 72469-41-1 (5351)
N,N-Dioctadecyl-N',N'-dipropyl-3,6-dioxaoctanediamide;

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

Ag+ ISE oth/un 21°C 100% C K1=6.5 1999CPa (107442)3088
Medium: PVC/DOS ion selective electrode membrane (DOS: bis(2-ethylhexyl)-
sebacate). Data for structurally related ionophores.

C56H64O10 L CAS 405108-40-9 (8249)
1,2-Di-O-[2-(2-benzyloxyethoxy)ethyl]-3,4,5,6-tetra-O-benzyl-myo-inositol;

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

Ag+ dis non-aq 25°C 100% C 2001SSb (107584)3089
K(Ag.pic+L(org)=AgL.pic)=2.54

Distribution of picrate salt into CHCl3/HL.
K: Ag.pic(aq)+L(org)=AgL.pic(org). Data for series of myo-inositol ligands

C60H80O12 L CAS 97600-39-0 (6158)
Tetraethyl-4-t-butylcalix[4]arenetetraethanoate;

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

Ag+ con alc/w 25°C 100% C H K1=4.25 2002ASc (107647)3090
Medium: MeOH. DH(K1)=-35.66 kJ mol⁻¹, DS(K1)=-37.40 J K⁻¹ mol⁻¹.

C62H84O14 L CAS 135581-11-2 (8630)
9,23-Dioxpentacyclo[23.3.1.13,7.111.15.117.21]dotriacontane, ethanoic acid
derivative;

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

Ag+ sp non-aq 25°C 100% C K1=<1 1991ACc (107688)3091
Medium: acetonitrile, 0.01 M Et4NClO4.

C63H58N8O4S4 H4L (6475)
5,10,15,20-Tetrakis(o-(tetrahydro-2-thenoylamino)phenyl)porphin;

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

Ag+ sp non-aq 25°C 100% U 1992DKa (107718)3092
K(ZnL+2Ag)=7.32

Medium: CH3CN

C64H78O6S2 H2L CAS 506444-38-8 (8850)
25,27-O-[Ethylenedithiodimethylenedi-o-phenylenedioxydiethylene]-p-tert-butylcalix[
4]arene;

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

Ag+ con non-aq 25°C 100% C K1=3.39 2002ASa (107756)3093
Medium: acetonitrile.

C66H82O6S2 H2L CAS 506444-39-9 (8851)
25,27-O-[Thiodiethylenedithiodimethylenedi-o-phenylenedioxydiethylene]-p-t-butylcalix[4]arene;

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

Ag+ con non-aq 25°C 100% C K1=4.50 2002ASa (107782)3094
Medium: acetonitrile.

C68H76N4O4 L CAS 123207-92-1 (7812)
5,11,17,23-Tetra-t-butyl-[25,26,27,28-tetrakis(2-pyridylmethyl)oxy]calix(4)arene;

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

Ag+ ISE non-aq 25°C 100% C H K1=5.18 1998DPa (107783)3095
Medium: MeCN, 0.05 M Bu4NClO4. By calorimetry, DH(K1)=-19.04 kJ mol⁻¹,
DS(K1)=33.60 J K⁻¹ mol⁻¹.

C68H76N4O4 L CAS 178172-53-7 (7803)
5,11,17,23-Tetra-t-butyl-[25,26,27,28-tetrakis(4-pyridylmethyl)oxy]calix[4]arene;

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

Ag+ ISE non-aq 25°C 100% C H K1=2.63 1998DPa (107789)3096
Medium: MeCN, 0.05 M Bu4NClO4. By calorimetry, DH(K1)=-25.63 kJ mol⁻¹,
DS(K1)=-35.6 J K⁻¹ mol⁻¹.

C68H108N4O4 L CAS 179458-65-2 (7813)
Tetra(N,N-dimethylaminoethoxy)-4-t-butylcalix[4]arene;

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

Ag+ EMF non-aq 25°C 100% C I K1=4.62 1999DGb (107822)3097
Method: Ag/Ag+ electrode. Medium: MeOH, 0.05 M Bu4NClO4.
Also values in EtOH (K1=4.10), MeCN (3.07), DMF (3.77), PhCN (3.58).

C69H102N4O9 L CAS 116352-85-3 (9286)
para-t-Butyldihomooxalix[4]arene tetra(diethyl)amide;

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

Ag+ EMF alc/w 25°C 100% C K1=7.0 2004MFa (107826)3098
Medium: MeOH, 0.01 M Et4NCl. Method: Ag ion electrode.

C75H100O15 L CAS 152495-34-6 (7033)
Penta-tert-butylpentakis(ethoxycarbonylmethoxy)calix[5]arene;

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

Ag+ sp alc/w 25°C 100% U K1=4.0 1993BMa (107857)3099
Medium: MeOH, 0.1 M Et4NCl.

C85H80O15 L CAS 269057-77-4 (3302)
5,11,17,23,29-Pentabenzylcalix[5]arene-31,32,33,34,35-pentaethanoate pentamethyl ester;

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

Ag+ sp non-aq 25°C 100% C I K1=3.87 2000AAa (107909)3100
Medium: methanol, 0.01 M Et4NCl. Also data for acetonitrile, 0.01 M Et4NCl and for the pentaethyl ester.

C85H120O15 L CAS 152495-35-7 (7034)
Penta-tert-butylpentakis(tert-butoxycarbonylmethoxy)calix[5]arene;

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

Ag+ EMF alc/w 25°C 100% U K1=4.3 1993BMa (107914)3101
Medium: MeOH, 0.1 M Et4NClO4.

C88H96N8O12S4 L CAS 639027-46-6 (9277)
Tetra(benzoylthiocarbamido)cavitand;

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

Ag+ ISE NaCl rt 0.01M C K1=7.2 2003MGa (107925)3102
Method: segmented sandwich membrane ISE.

C88H96N8O16 L CAS 639030-70-9 (9278)
Tetra(benzoylcarbamido)cavitand;

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

Ag+ ISE NaCl rt 0.01M C K1=3.2 2003MGa (107932)3103
Method: segmented sandwich membrane ISE.

C90H130O15 L CAS 269057-78-5 (3334)
5,11,17,23,29-Penta-tert-octylcalix[5]arene-31,32,33,34,35-pentaethanoate pentamethyl ester;

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

Ag+ sp non-aq 25°C 100% C I K1=3.82 2000AAa (107948)3104
Medium: methanol, 0.01 M Et4NCl. By potentiometry, K1=3.97.
Also data for acetonitrile, 0.01 M Et4NClO4 and for the pentaethyl ester.

C96H144O24 L CAS 169888-22-6 (7534)
C-Undecylcalix[4]resorcinarene octa-alpha-(methyl ethanoate);

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

Ag+ dis non-aq 25°C 100% U 1995FDa (107959)3105

K=3.91

Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.

K: MA(org)+L(org)=MLA(org) where A=picrate.

C112H120N4O16P4 L CAS 195455-62-0 (9276)

1,21,23,25-Tetrapentyl-7,11,15,28-tetra[(diphenylphosphinyl)acetamidomethylene]
cavitand;

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

Ag+ ISE NaCl rt 0.01M C K1=6.4 2003MGa (107986)3106

Method: segmented sandwich membrane ISE.

Phosphonic acid diethyl ester derivative: K1=8.9

C120H192O24 L CAS 175349-58-3 (7495)

C-Undecylcalix[4]resorcinarene octa-alpha-(tert-butyl ethanoate);

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

Ag+ dis non-aq 25°C 100% U 1995FDa (108002)3107

K=4.60

Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.

K: MA(org)+L(org)=MLA(org) where A=picrate.

C120H200N8O16 L CAS 169888-21-5 (7490)

C-Undecylcalix[4]resorcinarene octa-alpha-(N,N-diethyl acetamide);

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

Ag+ dis non-aq 25°C 100% U 1995FDa (108013)3108

K=7.63

Medium: CDCl3. Method: by H2O/CDCl3 extraction of picrate salt.

K: MA(org)+L(org)=MLA(org) where A=picrate.

Polymer DNA (4185)

Deoxyribonucleic acid;

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

Ag+ ISE NaCl04 23°C 0.10M U 1962YDa (108131)3109

K=6.33 to 6.62(purine binding)

K=4.8 to 5.4(other binding)

See reference for definitions

Polymer Gelatin (4187)

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

 Ag+ vlt KNO3 25°C 0.20M U 1966LMc (108192)3110
 K(carboxyl)=2.17
 K(imidazole)=5.02
 K(a-amino)=7.07
 K(e-amino)=5.60

See reference for definitions and more details

Polymer Poly-N-vinylimidazole; (4202)

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

 Ag+ gl KNO3 25°C 1.0M U 1960GGa (108291)3111
 B2eff=8.00

Ag+ bound to two imidazole groups. See reference for definitions

e- HL Electron (442)

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

 Ag++ EMF KCl 135°C 100% U 1969APa (291)3112
 K(Ag + Ag(s)=2Ag(I)) > 12.5

Medium: (Na,K,Al)Cl

 Ag++ sp NaClO4 25°C 3.00M U 1969CMc (292)3113
 K(Ag + e=Ag(I))=34.15(2.02V)

Medium: HClO4. Method: also emf and kinetic methods

 Ag++ sp NaClO4 25°C 3.00M U H 1969CMc (293)3114
 K(Ag + Co++ = Ag+ + Co+++)=1.5

Medium: HClO4. DS=29 J K-1 mol-1. Method:also emf and kinetic methods

 Ag++ kin KNO3 26°C 6.18M U M 1966ZEa (294)3115
 K=6.58

Medium: 6.18 M HNO3. K: Ce+++ + Ag++ = Ce++++ + Ag+. By potentials: K=5.37

 Ag++ kin NaClO4 25°C 3.50M U M 1963KPa (295)3116
 K=0.12

Medium HClO4. K: Co++ + Ag++ = Co+++ + Ag+

 Ag++ EMF none 25°C 0.0 U 1963STe (296)3117
 K=28.92(1711 mV)

K: 0.5Ag2O3(s)+H+e=AgO(s)+0.5H2O. K(0.5Ag2O+3H+2e=Ag+1.5H2O)=59.40(1757 mV)

Ag++ EMF none 25°C 0.0 U 1962DIa (297)3118
K=10.13(599 mV)

K: $\text{AgO}(s)+0.5\text{H}_2\text{O}+e=0.5\text{Ag}_2\text{O}(s)+\text{OH}$

Ag++ EMF none 25°C 0.0 U H 1959BGd (298)3119
K=10.21(604 mV)

K: $\text{AgO}(s)+0.5\text{H}_2\text{O}+e=0.5\text{Ag}_2\text{O}(s)+\text{OH}$. $K(\text{AgO}(s)+\text{Ag}(s)=\text{AgAg}_2\text{O}(s))=4.43(262 \text{ mV})$;
DH=-19.0 kJ mol⁻¹, DS=21.2 J K⁻¹ mol⁻¹

Ag++ EMF NaClO4 25°C 4.0M U T 1937NVa (299)3120
K(Ag+e=Ag(I))=33.82(2000mV)

Medium: HClO4. At 0.2 C: K=36.56(1982 mV). Alternatively: 25 C: K=32.62(1929 mV), 0.2 C: K=35.34(1916 mV)

Ag++ EMF none 25°C 0.0 U 1908LPa (300)3121
K=26.5(1570 mV)

K: $0.5\text{Ag}_2\text{O}_3(s)+\text{H}+e=\text{AgO}(s)+0.5\text{H}_2\text{O}$. $K(\text{AgO}(s)+\text{H}+e=0.5\text{Ag}_2\text{O}(s)+0.5\text{H}_2\text{O})=23.7(1400)$

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

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

Ag++ sp NaClO4 23°C 5.63M U K1=-0.03 1970HKb (9566)3122
K1=-0.14 uncorrected for hydrolysis

OH- HL Hydroxide (57)
Hydroxide;

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

Ag++ kin NaClO4 22°C 5.95M U *K1=-0.5 1972HKb (10884)3123

Medium: HClO4

Ag++ sp NaClO4 22°C 5.63M U *K1=-0.2 1970HKc (10885)3124

Ag++ sol oth/un 25°C var U Ks2=-5.57
Ks3=-3.77

medium:KOH at various concentrations,Ks2 and Ks3 obtained by extrapolation
to I=0; Ks2: $K(\text{AgO}(s)+\text{H}_2\text{O}=\text{Ag}(\text{OH})_2)$, Ks3: $K(\text{AgO}(s)+\text{H}_2\text{O}+\text{OH}=\text{Ag}(\text{OH})_3)$

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

Ag++ gl KNO3 25°C 0.10M M K1=3.94 B2= 6.03 1981GVa (31810)3126

C4H8N2O2 H2L Dimethylglyoxim CAS 95-45-4 (2032)
2,3-Butanedione dioxime, Dimethylglyoxime; CH3.(C:NOH).(C:NOH).CH3

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

Ag++ sp oth/un 10°C 1.2M C 1989KPa (32529)3127
B2eff=8.1

Metal ion is Ag(III). Reaction of Ag(OH)4- with HL in 1.2 M NaOH.

C5H9N04 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

Ag++ gl KNO3 25°C 0.10M M K1=3.80 B2= 5.87 1981GVa (39058)3128

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

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

Ag++ kin NaClO4 25°C 1.00M U 1993DHb (45623)3129

K(AgH2A+H2L)=0.61

*K(Ag(H2A)H2L)=-0.39

K(Ag(H2A)H2L+H)=0.46

Metal is Ag(III). H2A=ethylenebis(biguanide).

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

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

Ag++ gl KCl 22°C 0.10M U K1=4.1 1964PCa (47736)3130

C6H16N10 L (4261)
Ethylenebisbiguanide; (H2N.C(:NH).NH.C(:NH).NH.CH2.)2

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

Ag++ gl oth/un 31°C 0.05M U K1=52? 1950SGa (51768)3131

C7H6N4S HL CAS 86-93-1 (2731)
1-Phenyl-1H-tetrazole-5-thiol; C6H5.CN4.SH

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

Ag++ ISE none 25°C 0.0 U M 1982PPa (53541)3132

Kso(AgL)=-15.26

Kso(AgHL2)=-18.4

Kso(Ag2IL)=-31.4

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

Ag++ vlt KNO3 25°C 0.10M U B2=26.3 1982IGa (69527)3133

C10H22N2S2 CAS 65113-46-4 (5985)

N,N'-Dimethyl-1,7-diaza-4,10-dithiacyclododecane;

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

Ag++ gl NaClO4 25°C 0.10M U K1=11.15 1985SLa (76373)3134

B(AgHL)=14.71

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

Ag++ gl KNO3 25°C 0.1M U 1994GRb (76660)3135

K(2Ag(I)NO3+L=AgL(NO3)2+Ag(0))=12.78

Ag++ vlt oth/un 25°C 0.20M C K1=43.4 1990KMc (76661)3136

Method: polarography

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

Ag++ vlt oth/un 25°C 0.20M C K1=43.6 1990KMc (76731)3137

Method: polarography

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

Ag++ vlt oth/un 25°C 0.20M C K1=43.3 1990KMc (80031)3138

Method: polarography

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

1,10-Phenanthroline;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

Ag++ vlt R4N.X 25°C 0.10M U B2=26.48 1986IGa (80415)3139

Medium: 0.1 M (C₂H₅)₄N.C₁₀O₄, beta obtained by chronovoltammetry

Disproportionation const. $K(2AgL_2+2H=AgL_2+Ag+2HL)=-3.38$

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

Ag++ ISE KNO₃ 25°C 0.1M U 1994GRb (90802)3140

$K(2Ag(I)NO_3+L=AgL(NO_3)_2+Ag(0))=11.78$

C₁₆H₃₆N₄ L CAS 54622-44-5 (147)

5,5,7,12,12,14-Hexamethyl-1,4,8,11-tetraazacyclotetradecane;

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo

Ag++ gl NaClO₄ 25°C 0.10M U 1985PPa (95535)3141

$K(AgH-1L+H)=2.6$

Metal ion: Ag(III)

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

Ag++ vlt oth/un 25°C 0.20M C K₁=39.3 1990KMc (98187)3142

Method: polarography

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

Ag++ vlt oth/un 25°C 0.20M C K₁=42.5 1990KMc (100530)3143

Method: polarography

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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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