

SC-Database

Software version = 5.81 Data version = 4.62

Experiment list contains 447 experiments for

(no ligands specified)

3 metals : Pt(IV), Pt(not2,4), Pt++

(no references specified)

(no experimental details specified)

e- HL Electron (442)
Electron;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt(IV)	EMF	none	25°C	0.00	U T			1972GIa (815)	1	
<p>K=24.54(726mV) K'=20.72(613mV) K: PtCl6-- + 2e=PtCl4-- + 2Cl-. At 60 C, K=21.72(718mV) K': PtBr6-- + 2e=PtBr4-- + 2Br-. At 60 C, K=18.40(608mV)</p>										
Pt(IV)	EMF	NaClO4	25°C	3.00M	U TI			1972GIa (816)	2	
<p>K=-1.12 Medium: HClO4; K: Pt(s) + PtCl6-- + 2Cl-=2PtCl(II)4--; K=-1.70(60 C). In 3M HCl, K=-1.14(25 C), -1.68(60 C). In 3 M NaClO4, K=-0.80(25 C), -1.39(60 C)</p>										
Pt(IV)	EMF	NaClO4	25°C	3.00M	U TI			1972GIa (817)	3	
<p>K=-2.86 Medium: HClO4; K: Pt(s) + PtBr6-- + 2Br-=2PtBr4 --. K=-2.70(60 C). In 3M HBr K=-2.88(25 C), -2.77(60 C); In 3 M NaClO4, K=-2.70(25 C), -2.59(60 C)</p>										
Pt(IV)	oth	oth/un	25°C	0.07M	U M			1969PEa (818)	4	
<p>K=18.59(550mV,A=1/2en) K: trans-PtA4Cl2++ + 2e=PtA4++ + 2Cl-. K=20.39(603mV, A=MeNH2). K=20.28(600mV,A=NH3). K=21.70(642mV, A=EtNH2). Method: from thermodynamics</p>										
Pt(IV)	EMF	KCl	25°C	1.00M	U I M			1968GDd (819)	5	
<p>K=19.58, 579.0 mV K'=20.85, 616.8 mV K: Pt(en)2Cl2 + 2e=Pt(en)2++ + 2Cl; K': Pt(MeNH2)4Cl2+2e=Pt(MeNH2)4+2Cl Data in DMSO and with HCl and many substituted amines</p>										
Pt(IV)	oth	NaClO4	60°C	3.00M	U			1968GLa (820)	6	
<p>K=16.01, 529mV Medium: 3 M NaCl+NaClO4. In HCl+HClO4: K= 15.82, 523mV. K: PtCl6-- + 2Ag(s) = PtCl4-- + 2AgCl(s)</p>										
Pt(IV)	EMF	NaCl	20°C	0.10M	U T M			1968ZMa (821)	7	
<p>K=22.83(664mV,20 C) K: PtAX2+ + 2e=PtA+ + 2X-(A=(MeNH2)3NO2,X=Cl). K=19.35(678mV,80 C). X=Br: 23.97,(697mV,20 C), 15.64(548,80 C). X=OH: 4.68(136mV,20 C), 3.08(108mv,80C)</p>										

Pt(IV) oth NaClO4 60°C 3.00M U 1967GLa (822) 8

K=-1.35

Medium: 3 NaCl+NaClO4. With HCl+HClO4: K=-1.70. K:Pt(s)+PtCl6+2Cl=2Pt(II)Cl4

Pt(IV) EMF none 25°C 0.0 U M 1966CMB (823) 9

K=26.17, 759 mV

K'=26.97, 763 mV

K: Pt(NH3)2(NO2)2Cl2+2e=Pt(NH3)2(NO2)2+2Cl. K'=Br in place of Cl. Data also for many similar equilibria

Pt(IV) EMF oth/un 25°C 3.00M U 1964KSA (824) 10

K=23.94(0.708V)

Medium: H2SO4. K: PtCl6-- + 2e=PtCl4-- + 2Cl-

Pt(IV) EMF oth/un 35°C 1.00M U T 1964YTa (825) 11

K=23.88(730mV, 35 C)

Medium:HCl. K:PtCl6-- + 2e=PtCl4-- + 2Cl-. K=21.94(747mV, 70 C), 21.01(757mV, 90 C)

Pt(IV) EMF none 25°C 0.0 U T H 1961YTa (826) 12

K=24.71(730.8 mV)

K:Pt(IV)Cl6+2e=Pt(II)Cl4+2Cl. DH(K)=-113.8 kJ mol-1, DS=217. At 40 C: K=24.8 770 mV)

Pt(IV) EMF none 25°C 0.0 U 1952LAB (827) 13

K=34(1010 mV)

K: PtO2(s)+2H+2e=Pt(OH)2(s). K(Pt(IV)Cl6+2e=PtCl4+2Cl)=23.0(680 mV).

K(Pt(OH)2(s)+2H+2e=Pt(s)+2H2O)=33(980 mV).K(PtBr4+2e=Pt(s)+4Br)=19.6(580 mV)

Pt(IV) EMF oth/un 25°C dil U M 1949GOa (828) 14

K=19.71, 583 mV

K'=20.18, 597 mV

K''=20.29, 600 mV

K: Pt(NH3)4Br2++ + 2e = Pt(NH3)4++ + 2Br-. K'=Pt(NH3)2Br2+2e=cis-Pt(NH3)2Br2 +2Be. K''=trans. Data also for I analogues

Pt(IV) EMF oth/un 25°C 1.0M U 1937GPa (829) 15

K=15.83(468 mV)

Medium: KSCN. K: Pt(IV)(SCN)6+2e=Pt(II)(SCN)4+2SCN

Pt(IV) EMF NaCl 25°C 1.0M U TI 1937GPa (830) 16

K=25.6(758 mV)

K: Pt(IV)Cl6+2e=Pt(II)Cl4+2Cl. At 20 C: K=26.0(756 mV). At I=0, 25 C: K=25.26(747 mV). With Pt(IV)Br6 K=21.41(633 mV); Pt(IV)I6: K=13.02(980 mV)

Pt(IV) EMF none 60°C 0.0 U 1931GRb (831) 17

K=22.5(745 mV)

K: Pt(IV)Cl6+2e=Pt(II)Cl4+2Cl

Pt(IV) EMF none 50°C 0.0 U 1931STa (832) 18
 K=23.1(740 mV)
 K:Pt(IV)Cl6+2e=Pt(II)Cl4+2Cl

Pt(IV) EMF KCl 35°C 0.10M U 1930SMa (833) 19
 K=14.96(457.3 mV)
 K: Pt(IV)Cl6+2Hg(l)=PtCl4+Hg2Cl2(s). K(Pt(IV)Cl6=2e=PtCl4+2Cl)=26.79(792 mV)

Pt(IV) EMF none 13°C 0.0 U 1928TEa (834) 20
 K=31(887 mV)
 K: Pt(IV)Cl2(CN)4+2e=Pt(II)(CN)4+2Cl

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

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

 Pt(IV) sol none 25°C 0.0 U I 1985PKb (2242) 21
 Kout(Pt(en)3+Br)=1.58
 Kout(Pt(en)3+2Br)=2.4
 Also Kout (1:1 complex)=0.75 (I=0.10 M), 0.33 (I=0.25 M), -0.11 (I=0.50 M)
 and Kout (1:2 complex)=0.92 (I=0.10 M), 0.38 (I=0.25 M), -0.3 (I=0.50 M)

Pt(IV) sp NaClO4 25°C 0.1M C 1975KNb (2243) 22
 Kout(Pt(pn)3+L)= 0.48
 Also for I=0.5 M K1out=-0.22; for 0 M K1out=1.38;
 pn=propylenediamine

Pt(IV) ISE oth/un 42°C 3.0M U TI 1974KSb (2244) 23
 K6=3.29
 Medium: H2SO4. K6=3.17(50 C), 3.09(55 C), 3.01(60 C), 2.88(70 C) m units
 In 0.2 M H2SO4: K6=2.58(50 C), 2.41(60 C), 3.49(25 C)

Pt(IV) EMF NaNO3 40°C 1.0M U M 1973KSh (2245) 24
 K(PtACl2+L=PtAClL+Cl)=0.93
 K(PtAClL+L=PtAL2+Cl)=0.58
 K(PtBCl2+L=PtBClL+Cl)=1.03
 K(PtBClL+L=PtBL2+Cl)=0.24
 A=(NH3)2(CH3NH2)2; B=(NH3)2(C2H5NH2)2. K(PtCCl2+L=PtCClL+Cl)=1.04, C=(NH3)2
 H2NC2H4OH

Pt(IV) sp NaClO4 25°C 3.0M U HM 1972MNa (2246) 25
 K(Pt(en)3+L)=-0.89
 By solubility: K=-0.92

Pt(IV) sp NaClO4 25°C ? U 1971EGc (2247) 26
 K4=5.04
 K5=4.0
 K6=3.3

Medium: HClO4

 Pt(IV) gl oth/un 25°C var U T 1967NPc (2248) 27
 K6=2.4
 K(PtL5OH+H)=5.7

Pt(IV) gl oth/un 25°C 0.10M U M 1967NPc (2249) 28
 K(Pt(OH)6+L=Pt(OH)5L)=-4.23
 K(Pt(OH)5L+L=Pt(OH)4L2)=-4.3
 K(Pt(OH)4Cl2+L=Pt(OH)3L3)=-4.5
 K(Pt(OH)3Cl3+L=Pt(OH)2L4)=-4.8

Also chemical analysis. K(Pt(OH)2L4+L=PtOHL5)=-4.9, K(PtOHL5+L=PtL6)=-5.3

Pt(IV) gl oth/un 50°C var U 1965DJa (2250) 29
 K6=2.85
 K(PtL5OH+H)=4.4

Pt(IV) sp oth/un 40°C 0.0 U T H 1963GNb (2251) 30
 Kout(Pt(en)3+L)=1.25
 Kout=1.14(10 C), 1.18(25 C). DH=6.2 kJ mol⁻¹, DS=40.5 J K⁻¹ mol⁻¹

Pt(IV) sp none 25°C 0.0 U M 1960NPa (2252) 31
 K1out(Pten3+Br)=0.9

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt(IV)	sp	NaClO4	25°C	0.1M	C			Kout(Pt(en)3+L)= 2.42	1975KNb (3352)	32

Also for I=0.5 M K1out=1.76; for 0 M K1out=4.15;

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt(IV)	sol	NaCl	100°C	1.0M	C T			K5=1.46	1995GAa (5503)	33

Method: solubility of AgCl in Pt solution, 0.03-3.0 m HCl.
 At 200 C, K5=0.15, at 300 C, K5=0.13; at 300 C, K4=2.26

Pt(IV) sol oth/un 25°C 0.0 U I 1989GPa (5504) 34
 Kout(cis-Pt(phen)2Cl2+Cl)=3.26
 Medium: NaF. Also Kout=3.03 (I=0.1 M NaF), 2.63 (I=0.25 M),
 2.25 (I=0.50 M), 2.07 (I=0.75 M).

Pt(IV) sol none 25°C 0.0 U I 1985PKb (5505) 35
 Kout(Pt(en)3+Cl)=1.84
 Kout(Pt(en)3+2Cl)=3.8

Also K_{out} (1:1 complex)=1.09 (I=0.10 M), 0.62 (I=0.25 M), 0.22 (I=0.50 M)
and K_{out} (1:2 complex)=1.51 (I=0.10 M), 0.48 (I=0.25 M), -0.16 (I=0.50 M)

Pt(IV) sp NaClO₄ 25°C 0.1M C 1975KNb (5506) 36
 $K_{out}(Pt(pn)_3+L)=0.68$

Also for I=0.5 M $K_{out}=0.15$; for 0 M $K_{out}=1.51$;
pn=propylenediamine

Pt(IV) EMF NaNO₃ 40°C 1.0M U M 1973KSe (5507) 37
 $K(PtL_2A_4+L)=3.15$
 $K(PtL_3A_4+L)=2.55$

A=CH₃NH₂. Data also for many other substituents

Pt(IV) EMF oth/un 25°C 3.0M U T H 1972KSb (5508) 38
 $K_6=2.88$

Medium: H₂SO₄. $DH(K_6)=-30.5$ kJ mol⁻¹. $K_6=2.72(35$ C), 2.55(42 C), 2.49(50 C)

Pt(IV) sp NaClO₄ 25°C 3.0M U HM 1972MNa (5509) 39
 $K(Pt(en)_3+L)=-0.25$

By solubility: $K=-0.21$

Pt(IV) EMF oth/un 25°C ? U T M 1971ZFc (5510) 40
 $K(Pt(OH)_2(NH_3)_4+L)=-1.42$
 $K(Pt(OH)_2(NH_3)_3NO_2+L)=-0.02$

At 50 C: values: -1.22, 0.08

Pt(IV) oth oth/un ? var U 1970CPa (5511) 41
 $K(PtL_4(H_2O)OH+H)=1.9$
 $K(PtL_4(OH)_2+H)=5.5$

Method: ir and Raman

Pt(IV) EMF oth/un 25°C 3.0M U T HM 1970KSa (5512) 42
 $K_6=2.76$

Medium: H₂SO₄. $DH(K_6)=-23.0$ kJ mol⁻¹. $K_6=2.72(35$ C), 2.61(42 C), 2.49(50 C), 2.41(60 C). In 0.2 M H₂SO₄, 25 C: $K_6=2.36$

Pt(IV) gl oth/un ? dil U 1970MMg (5513) 43
 $K(PtCl_5OH+H)=3.80$

Pt(IV) EMF NaClO₄ 60°C 3.0M U 1968GLa (5514) 44
 $K_6=1.54$

Pt(IV) gl KNO₃ 20°C 0.10M U T 1966GKd (5515) 45
 $K(\text{trans-Pt}(NH_3)_2L_3+L)=2.40$
 $K(\text{trans-Pt}(NH_3)_2L_2+L)=3.7$

Also values at 20 - 50 C

Pt(IV) ISE NaClO₄ 25°C var U 1966Sdb (5516) 46
 $K_5K_6=5.60$

Pt(IV) gl NaCl 50°C var U 1965DJa (5517) 47
 K6=1.49
 K(PtL5OH+H)=3.8

Pt(IV) gl KCl 40°C var U T 1965NPb (5518) 48
 K5=3.7
 K6=2.25
 K(PtL5OH+H)=5
 K(PtL4(H2O)OH+H)=4.2(25-45 C), K(PtL4(OH)2+H)=6.2(25-35 C)

Pt(IV) sol none 20°C 0.0 U 1963CRb (5519) 49
 K(Cs2PtL6(s)=2Cs+PtL6)=-11.08

Pt(IV) sp oth/un 40°C 0.0 U T H 1963GNb (5520) 50
 Kout(Pt(en)3+L)=1.29
 Kout=1.17(10 C), 1.24(25 C). DH=6.7 kJ mol-1, DS=46 J K-1 mol-1

Pt(IV) sp none 25°C 0.0 U 1960NPa (5521) 51
 Kout(Pt(en)3+L)=1.04

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

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

Pt(IV) sp NaClO4 20°C 0.15M U M 1960RSa (6356) 52
 K(Pt(en)3+L) < 0.74

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

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

Pt(IV) sol NaClO4 25°C 3.0M U M 1972MNa (7120) 53
 K(Pt(en)3+F)=0.04

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

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

Pt(IV) sp NaClO4 25°C 5.0M U I M 1968PVa (7417) 54
 K(PtA4I2+Cl=PtA4+I2Cl)=-4.22

A=CN. K=-3.55(Br,I=5), -1.63(I,I=0.5)

Pt(IV) sp NaCl 25°C 0.20M U 1965RJa (7418) 55
 K(PtA4Cl2+Br=PtA4ClBr+Cl)=1.2
 K(PtA4ClBr+Br=PtA4Br2+Cl)=0.64

A=NH3

Pt(IV) sp oth/un 20°C 0.50M U M 1963POb (7419) 56
K(trans-Pt(en)2Cl2+Br=Pt(en)2ClBr+Cl)=1.06; K(Pt(en)2ClBr+Br=Pt(en)2Br2+Cl)
=0.63

Pt(IV) oth oth/un 25°C 0.50M U T H 1960PVa (7420) 57
B6(I)/B6(Cl)=18.24
B6(I)/B6(Br)=15.93

Method: chemical anal. B6(I)/B6(Cl)=19.30(0 C), 17.09(45 C); /Br=17.79(0 C),
15.10(44 C). DH(PtCl6+6I=PtI6+6Cl)=-79 kJ mol⁻¹. DH(PtBr6+6I=PtI6+6Br)=-96

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

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

Pt(IV) sp NaCl04 25°C 0.1M C 1975KNb (8328) 58
Kout(Pt(pn)3+L)= 0.0.34

Also; for 0 M K1out=1.23;
pn=propylenediamine

Pt(IV) sol NaCl04 25°C 3.0M U 1972MNa (8329) 59
K(Pt(en)3+I)=-1.05

Pt(IV) EMF oth/un 25°C dil U T M 1971ZFa (8330) 60
K(cis-PtA2L2(H2O)OH+H)=2.45
K(trans-PtA2L2(H2O)OH+H)=2.52
K'(cis-PtA2L2(OH)2+H)=3.68
K'(trans-PtA2L2(OH)2+H)=3.71

A=NH3. K(cis)=3.43(0 C), 2.26(50 C). K(trans)=3.38(0 C), 2.26(50 C)
K'(cis)=4.25(25 C), 3.41(50 C). K'(trans)=4.25(25 C), 3.46(50 C)

Pt(IV) EMF oth/un 25°C dil U 1971ZFb (8331) 61
K(Pt(NH3)3I(H2O)OH+H)=2.65
K(Pt(NH3)3I(OH)2+H)=3.23
K(Pt(NH3)3I2OH+H)=3.35

0-50 C

Pt(IV) ISE oth/un 25°C dil U 1967CPb (8332) 62
K4=4.8
K5=4.4
K6=3.4

K(PtI4+I=PtI3+I2)=0.8
Also spectrophotometry, glass electrode, kinetics. K(PtI5OH+H)=8.6
K(PtI6=Pt(II)I4+I2)=8.1

Pt(IV) gl oth/un 25°C 0.10M U 1967NPC (8333) 63
K(Pt(OH)6+L=Pt(OH)5L+OH)=-1.57
K(Pt(OH)5L+L)=-1.82
K(Pt(OH)4L2+L)=-1.87
K(Pt(OH)3L3+L)=-2.0

$K(\text{Pt}(\text{OH})_2\text{L}_4+\text{L}=\text{Pt}(\text{OH})\text{L}_5+\text{OH})=-2.38$, $K(\text{PtOHL}_5+\text{L}=\text{PtL}_6+\text{OH})=-3.38$

Pt(IV) sp oth/un 40°C 0.0 U T H 1963GNb (8334) 64

$K_{\text{out}}(\text{Pt}(\text{en})_3+\text{L})=1.20$

$K_{\text{out}}=1.11(10\text{ C}), 1.15(25\text{ C})$. $\text{DH}=5.4\text{ kJ mol}^{-1}$, $\text{DS}=40\text{ J K}^{-1}\text{ mol}^{-1}$

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

Ammonia

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

Pt(IV) sp none 25°C 0.0 U 1997FHa (9198) 65

$*K((\text{NH}_3)_3\text{Pt}(\text{NH}_2)_3\text{Pt}(\text{NH}_3)_3)=-7.75$. Reaction is proton loss from a terminal NH3

NH3 L Hydroxylamine; CAS 5470-11-1 (1808)

Hydroxylamine; NH2.OH

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

Pt(IV) kin NaCl 25°C 0.10M U 1998HHa (9272) 66

$K_{\text{out}}(\text{PtCl}_6+\text{L})=2.19$

$K_{\text{out}}(\text{trans-PtCl}_4(\text{NH}_3)_2+\text{L})=1.75$

$K_{\text{out}}(\text{cis-PtCl}_4(\text{NH}_3)_2+\text{L})=1.68$

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

Nitrate;

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

Pt(IV) sol none 25°C 0.0 U I 1985PKb (9878) 67

$K_{\text{out}}(\text{Pt}(\text{en})_3+\text{NO}_3)=2.38$

$K_{\text{out}}(\text{Pt}(\text{en})_3+2\text{NO}_3)=3.92$

Also K_{out} (1:1 complex)=1.39 (I=0.10 M), 0.75 (I=0.25 M), 0.36 (I=0.50 M) and K_{out} (1:2 complex)=2.18 (I=0.10 M), 1.0 (I=0.25 M), 0.25 (I=0.50 M)

Pt(IV) sp oth/un 25°C 0.0 U 1960NPa (9879) 68

$K_{\text{out}}(\text{Pt}(\text{en})_3+\text{L})=-0.1$

OH- HL Hydroxide (57)

Hydroxide;

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

Pt(IV) sp oth/un 25°C U 1969Sjb (11965) 69

$K=4.84$

$K: \text{trans-Pt}(\text{CN})_4\text{Br}_2 + \text{OH}=\text{Pt}(\text{CN})_4\text{BrOH} + \text{Br}$

Pt(IV) gl oth/un 25°C dil U M 1968GGe (11966) 70

$*K_1(\text{Pt}(\text{NH}_3)_5\text{Cl})=-8.05$

*K2(Pt(NH3)5Cl)=-10.72
*K1(NH3)4(py)Cl=-6.92
*K2(NH3)4(py)Cl=-10.52

For Pt(NH3)4(py)2Cl: *K1=-5.74, *K2=-10.12

Pt(IV) gl oth/un 25°C dil U M 1967GIb (11967) 71
*K1(tr-Pt(NH3)2(py)2Cl2)=-9.96
*K1(cis-Pt(NH3)2py2Cl2)=-9.39

Pt(IV) gl oth/un 25°C dil U M 1966GGd (11968) 72
*K1(Pt(NH3)4Cl2)=-11.17
*K1(Pt(NH3)3(py)Cl2)=-10.00
*K1(tr-Pt(NH3)2(py)2Cl2)=-9.95
*K1(cis-Pt(NH3)2(py)2Cl2)=-9.4

Pt(IV) sol oth/un 20°C var U M 1964CBb (11969) 73
*K1(Pt(NH3)2(CN)3Cl)=-12.7
*K1(Pt(NH3)2(CN)2Br)=-12.8
*K1(Pt(NH3)2(CN)3I)=-13.0
*K1(Pt(MeNH2)2(CN)2I2)=-14.05

Data also for Pt(MeNH2)2(CN)3X: *K1=-12.9(X=Cl, Br), -13.3(X=I) plus others

Pt(IV) gl oth/un 20°C dil U M 1964CBc (11970) 74
*K1(Pt((en)(CN)2(NH3)Cl)=-8.6

Pt(IV) sol KCl 20°C 0.10M U M 1963CBa (11971) 75
*K1(Pt(CN)4(NH3)2)=-12.12

Pt(IV) gl oth/un 25°C 0.40M U I M 1962JBa (11972) 76
*K1(Pt(NH3)6)=-7.80
*K2(Pt(NH3)6)=-11.1

At I=0.02 M *K1=-7.20, *K2=-10.5. Data also for Pt(NH3)5Cl, Pt(NH3)4Cl2 and Pt(NH3)3Cl3

Pt(IV) con oth/un 25°C 0.01M U I M 1962JBa (11973) 77
*K1(trans-Pt(en)2Cl2)=-11.0

By glass electrode, I=0.16 M *K1=-11.3

Pt(IV) gl oth/un 25°C 0.02M U M 1962JBa (11974) 78
*K1(trans-Pt(en)2H2OCl)=-3.70
*K2 < -10.8

Data for other related complexes

Pt(IV) gl oth/un 20°C dil U M 1961CKb (11975) 79
*K1=-10.1(X=Cl)
*K1=-9.9(X=Br)
*K1=-6.7(X=I)

Metal: Pt(en)(NH3)2X2++. Data also for many similar mixed complexes

Pt(IV) gl oth/un 18°C dil U M 1961GGd (11976) 80

*K1(Pt(NH3)5Cl)=-8.4
 *K2=-10.5
 *K1(Pt(MeNH2)4NH3Cl)=-6.8
 *K2=-10.6

 Pt(IV) gl oth/un ? dil U 1961KUb (11977) 81
 *K1=-4.99

Metal: Pt(C1NCH2CH2NHCl)PyNO2NH3Cl+

 Pt(IV) EMF oth/un 29°C dil U 1960PSa (11978) 82
 *K1(Pt(NH3)6)=-7.16 in H2O
 *K1(Pt(NH3)6)=-7.80 in D2O

 Pt(IV) gl oth/un 25°C dil U M 1959GVa (11979) 83
 *K1(trans-Pt(NH3)4Cl2)=-11.2
 *K1(cis)=-9.46
 *K2(cis)=-10.25
 *K1(Pt(pn)3)=-5.41
 *K2(Pt(pn)3)=-9.60, *K3=-10.68; *K1(Pt(pn)2Cl2)=-8.21, *K2(cis)=-10.36
 *K2(trans)=-10.47

 Pt(IV) EMF oth/un 20°C var U M 1956JOa (11980) 84
 *K1(Pt(NH3)6)=-7.75

Data also for Pt(NH3)5Cl, PtNH3)3Cl3

 Pt(IV) gl oth/un 25°C dil U M 1949GGc (11981) 85
 *K1(Pt(MeNH2)4Cl2)=-10.85
 *K1(Pt(EtNH2)4Cl2)=-11.2

 Pt(IV) gl oth/un 25°C dil U M 1948GGa (11982) 86
 *K1(Pt(NH3)6)=-7.92
 *K2(Pt(NH3)6)=-10.08

Data also for Pt(NH3)5OH, Pt(NH3)5Br, Pt(NH3)3Cl3 etc.

 Pt(IV) sp oth/un 20°C dil U T HM 1930GFa (11983) 87
 *K1(Pt(NH3)6)=-8.9

DH(*K1)=86.6; *K1=-8.6(30 C), -7.6(50 C). Data also for Pt(NH3)5Cl,
 Pt(NH3)5OH, Pt(NH3)4Cl2

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

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

 Pt(IV) sp NaCl04 35°C 1.10M U M 1967MBd (15233) 88
 K(PtA4Cl2+L=PtA4ClL+Cl)=2.55
 K(PtA4ClL+L=PtA4L2+Cl)=1.08

A=NH3

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

Sulfite;

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

Pt(IV) sp NaClO4 25°C 0.1M C 1975KNb (15475) 89
Kout(Pt(en)3+L)= 2.89
Also for I=0.5 M K1out=2.20; for 0 M K1out=4.60;

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

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

Pt(IV) sp NaClO4 25°C 0.1M C 1975KNb (16484) 90
Kout(Pt(en)3+L)= 2.18
Also for I=0.5 M K1out=1.26; for 0 M K1out=3.95;

Pt(IV) sp NaClO4 25°C 0.1M C 1975KNb (16485) 91
Kout(Pt(pn)3+L)= 2.01
Also for I=0.5 M K1out=1.08; for 0 M K1out=3.75;
pn=propylenediamine

Pt(IV) sp oth/un 25°C 0.0 U M 1960NPa (16486) 92
Kout(Pt(en)3+L)=3.52

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

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

Pt(IV) sp NaClO4 25°C 0.1M C 1975KNb (17070) 93
Kout(Pt(en)3+L)= 2.76
Also for I=0.5 M K1out=1.76; for 0 M K1out=4.30;

CH2O2 HL Formic acid CAS 64-18-6 (37)
Methanoic acid; H.COOH

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

Pt(IV) sol oth/un 25°C 0.0 U I 1989GPa (17641) 94
Kout(cis-Pt(phen)2Cl2+L)=1.91
Medium: NaF. Also Kout=1.24 (I=0.1 M NaF), 0.29 (I=0.25 M),
-0.32 (I=0.50 M).

Pt(IV) sol none 25°C 0.0 U I 1985PKb (17642) 95
Kout(Pt(en)3+L)=1.3
Also Kout=0.45 (I=0.10 M), 0.37 (I=0.25 M), 0.3 (I=0.50 M)

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

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

Pt(IV) EMF KNO3 25°C 1.00M U M 1973KYb (18028) 96
B(PtL4Cl2)=61.0

C2H4N2S3 HL CAS 97049-30-4 (4220)
5-Mercapto-1,3,4-thiadiazolidine-2-thione; cyclo(-NH.NH.CS.S.C(SH)-)

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

Pt(IV) sp NaClO4 20°C 1.00M U 1968GKa (19457) 97
B4=8.40

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

Pt(IV) sol oth/un 25°C 0.0 U I 1989GPa (20140) 98
Kout(cis-Pt(phen)2Cl2+L)=2.47

Medium: NaF. Also Kout=1.84 (I=0.1 M NaF), 1.24 (I=0.25 M),
1.04 (I=0.50 M), 0.21 (I=0.75 M).

C2H7N L Ethylamine CAS 75-04-7 (156)
Ethylamine; CH3.CH2.NH2

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

Pt(IV) EMF KNO3 25°C 1.00M U M 1973KYb (22277) 99
B(PtL4Cl2)=53.9

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

Pt(IV) EMF KNO3 25°C 1.00M U M 1973KYb (23224) 100
B(PtL2Cl2)=56.6

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

Pt(IV) gl NaNO3 15°C 0.10M U T K1=13.40 B2=18.65 1984IDa (26831) 101
At 30 C, K1=13.35, K2=5.15.

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


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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt(IV)     sp  alc/w  20°C  50%  U                               1972KLa (71086) 114
                                           B3=10.82

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Medium: 50% EtOH, 0.1 M, pH=4
*****
C18H22N2OS          L   Methoxypromazin  CAS 61-01-8 (2872)
10-(3-Dimethylaminopropyl)-2-methoxyphenothiazine;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt(IV)     sp  oth/un 27°C 1.00M U                               1984TSa (97511) 115
                                           Keff=5.58

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Medium: 1 M H3PO4
*****
Br-                HL   Bromide          CAS 10035-10-6 (19)
Bromide;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt(not2,4) sp  oth/un 25°C 0.10M U   M                               1985EBa (2253) 116
                                           K(Pt2A4(H2O)2+L)=1.32
                                           K(Pt2A4L(H2O)+L)=1.34

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Pt(III). A=HPO4. Medium: phosphate buffer, pH 3.0
*****
Cl-                HL   Chloride         CAS 7647-01-0 (50)
Chloride;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt(not2,4) sp  oth/un 25°C 0.10M U   M                               1985EBa (5522) 117
                                           K(Pt2A4(H2O)2+L)=1.28
                                           K(Pt2A4L(H2O)+L)=1.04

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Pt(III). A=HPO4. Medium: phosphate buffer, pH 3.0
*****
OH-                HL   Hydroxide        (57)
Hydroxide;
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt(not2,4) sp  NaClO4 25°C 2.0M C                               2001SHb (11984) 118
Metal is Pt(III). *K((H2O)Pt(NH3)2APt(NH3)2(H2O))=-1.98. A is a-pyridonate
K((H2O)Pt(NH3)2APt(NH3)2(H2O)+X)=5.27(X=Cl) and 5.33(X=Br)
*****
C6H15P            L                               CAS 554-70-1 (166)
Triethylphosphine; (C2H5)3P
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Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
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Pt(not2,4) nmr non-aq 0°C 100% U H 1980MMa (51547) 119
Medium: toluene, Pt(0), -95 to 130 C, DH(PtL3+L=PtL4)=-63 kJ mol⁻¹,DS=-227

C9H21P L CAS 6476-36-4 (168)

Tri-isopropylphosphine; ((CH₃)₂CH)₃P

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

Pt(not2,4) nmr non-aq 0°C 100% U H 1980MMa (68228) 120

Medium: Toluene(& Octane), Pt(0), -95 to 130 C. DH(PtL2+L=PtL3)=-42,DS=-169

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

Pt(not2,4) nmr non-aq 0°C 100% U H 1980MMa (84138) 121

Medium: Toluene, Pt(0), T=-95 to 130 C. DH(PtL3+L=PtL4)=-70.2 kJ mol⁻¹,DS=265

C13H13P L CAS 1486-28-8 (1731)

Diphenyl-methyl-phosphine; CH₃(C₆H₅)₂P

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

Pt(not2,4) nmr non-aq 0°C 100% U H 1980MMa (85552) 122

Medium: Toluene, Pt(0), -95 to 130 C. DH(PtL3+L=PtL4)=-64 kJ mol⁻¹,DS=-116

C18H33P L CAS 2622-14-2 (169)

Tri-(cyclohexyl)phosphine; (C₆H₁₁)₃P

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

Pt(not2,4) nmr non-aq 0°C 100% U H 1980MMa (98315) 123

Medium: Toluene & heptane. Pt(0). -95 to 130 C. DH(PtL2+L=PtL3)=-54,DS=-202

e- HL Electron (442)

Electron;

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

Pt++ gl oth/un 25°C 3.00M U TI 1972GIa (835) 124

K=25.63(758mV, 25 C)

K: PtCl₄⁻ + 2e=Pt(s) + 4Cl⁻. K=23.21(767mV, 60C)

In 1 M NaNO₃, 18 C, K=24.79(716mV)

Pt++ EMF oth/un 25°C 3.00M U TI 1972GIa (836) 125

K=23.60(698mV, 25 C)

K: PtBr₄⁻ + 2e=Pt(s) + 4Br⁻. K=21.09(697mV, 60 C)

In 1 M NaNO₃, 18 C, K=21.05(608mV)

Pt++ oth none 25°C 0.0 U M 1968GHa (837) 126
 K=26.0(0.77V) X=Cl-
 K=21.6(0.64V) X=Br-
 K=13.2(0.39V) X=I-
 K'=25.4(0.75V) X=Cl-

Method:Literature evaluated data. K: Pt(IV)X6+2e=PtX4+2X.
 K': PtX4+2e=Pt(s)+4X. K'=22.7(0.67V) X=Br-. K'=13.5(0.40V) X=I-

Pt++ EMF oth/un 35°C 1.00M U T 1964YTa (838) 127
 K=24.50(749mV, 35 C)
 Medium:HCl;K:PtCl4-- + 2e=Pt(s) + 4Cl-. K=22.56(768mV, 70C), 21.60(778mV, 90 C)

Pt++ EMF none 25°C 0.0 U 1952LAb (839) 128
 K=24.5(726 mV)
 K: Pt(II)Cl4+2e=Pt(s)+4Cl

Pt++ EMF none 60°C 0.0 U 1931GRb (840) 129
 K=23.8(785 mV)
 K: Pt(II)Cl4+2e=Pt(s)+4Cl

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

Metal Mtd Medium Temp Conc Cal Flags Lg K values Reference ExptNo
 Pt++ sp alc/w 25°C 100% U 1994PMc (2254) 130
 K(PtACl2+Br=PtAClBr+Cl)=1.41
 K(PtAClBr+Br=PtABr2+Cl)=0.43
 K(PtAICl+Br=PtAIBr+Cl)=1.0
 Medium: MeOH, 0.5 M LiClO4. A=C6H5S.CH2.CH2.SC6H5.

Pt++ sp NaClO4 25°C 0.10M U 1994SRa (2255) 131
 K(PtAB(H2O)+L=PtABL+H2O)=2.15
 A: C6H4.CH2.N(CH3)2; B: NC5H4.SO3-.

Pt++ sp NaClO4 25°C 1.00M U I K1=1.9 1978ELa (2256) 132

Pt++ sol oth/un 25°C 1.0M U HM 1974MKf (2257) 133
 K(Pt(NH3)4+L)=0.3
 K(Pt(en)2+L)=0.65
 Medium: NaF. By calorimetry.DH(Pt(NH3)4)=-5.2 kJ mol-1, DS=-12.1 J K-1 mol-1
 DH(Pt(en)2)=-2.22, DS=5.0

Pt++ nmr non-aq 36°C 100% U H 1973Rba (2258) 134
 K=0.32
 Medium: CHCl3(S). K: trans-Pt(Bz2S)2L2=cis-Pt(Bz2S)2L2, Bz=benzoyl.
 DH(K)=-20.1 kJ mol-1

Pt++ gl KNO3 25°C 1.0M U 1973SAa (2259) 135
 K(H2PtLA+H)=2.26

K(HPtLA+H)=2.76
K(PtLA+H)=3.46
K(PtA+L)=1.47

H4A=EDTA. K(PtA+2L)=2.02

Pt++ EMF mixed ? 0.10M U 1972GGb (2260) 136
K(PtH(Ph3P)2+L)=1.51
in 70% w/w acetone/H2O, 0.1 M NH4ClO4. (one (CH3)2CO exchanged for L, trans-complex formed)

Pt++ gl NaNO3 25°C 0.05M U T HM 1972JSa (2261) 137
K=4.51
K: trans-Pt(NH3)2LH2O+L=trans-Pt(NH3)2L2+H2O. DH(K)=-35.6 kJ mol⁻¹
K=4.75(15 C), 4.34(35 C)

Pt++ gl NaNO3 25°C 0.30M U 1972KTc (2262) 138
K(PtL2(DMSO)+L)=3.60

Pt++ ISE KNO3 ? 0.01M U M 1971KTg (2263) 139
K(Pt(DMSO)+L)=5.40

Pt++ oth oth/un 25°C var U M 1971MKd (2264) 140
K(Pt(NH3)2L2+Pt(NH3)2L4)=-4.6
Medium: acetone, KBr. Pt(II)-Pt(IV) complex. Method: dialysis

Pt++ sp NaClO4 25°C 0.50M U T M 1970ELb (2265) 141
K3=3.6
K4=2.7
K(cis-trans-PtL2(H2O)2)=-0.34
Medium: HClO4. K3=3.4, K4=2.6(35 C). Data also by kinetics

Pt++ EMF non-aq 450°C 100% U K1=0.13 B2=1.06 1970IJa (2266) 142
Medium: molten (Li,K)Cl; m units

Pt++ sp NaClO4 25°C 1.0M U M 1970MAc (2267) 143
K=2.35
K'=1.76
K: trans-Pt(CN)2Cl2+L=Pt(CN)2ClL+Cl. K': Pt(CN)2ClL+L=Pt(CN)2L2+Cl

Pt++ oth oth/un 35°C 0.05M U T H K1=3.82 B2=6.74 1968GVa (2268) 144
Metal:Pt(NH3)2++. Method:chemical analysis. At 25 C:K1=4.05,K2=3.02
DH(K2)=-16.7 kJ mol⁻¹, DS=1.7 J K⁻¹ mol⁻¹

Pt++ oth NaNO3 35°C 0.32M U T 1967MBb (2269) 145
K(PtACl+L=PtAL+Cl)=0.54
A=diethylenetriamine. Method:chemical analysis. K=0.58(25 C). In 'dilute soln.': K1=4.02(25 C), 4.07(35 C)

Pt++ gl oth/un 25°C 0.10M U 1967NPd (2270) 146
K(Pt(OH)4+H+L=Pt(OH)3L)=11.15

Pt++ EMF NaNO3 18°C 1.0M U 1960GGb (2756) 156
B4=41.0

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

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

Pt++ nmr non-aq 20°C 100% U T M 1976GHa (2819) 157
K(PtA+L)=3.53

Medium: C2H2Cl4. PtA=(C6H5)((4-Me2NC6H4)3P)2.I. At 43.6 C: K(PtA+L)=2.53;
2.3 C: > 3.53

Pt++ nmr non-aq 20°C 100% U T M 1976GHa (2820) 158
K((PtA+L)=1.9

Medium: C2H2Cl4. PtA=Pt(II)(P(4-MeC6H4)3)2(ClC6H4).I. Data also for other
temperatures and many other substituents on the Pt.

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

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

Pt++ sol oth/un 25°C 1.00M U 1974MKf (3602) 159
Ks(Pt(NH3)4L=Pt(NH3)4+L)=-6.8
Ks(Pten4L=Pten4+L)=-8.67

Medium: NaF

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

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

Pt++ sp NaCl 25°C 0.11M C I M 2003CBa (5523) 160
Data for 0.105-1.0 M NaCl, pH 3.0-8.5. K(PtCl4+H2O=Pt(OH)Cl3+H+Cl)=-8.85.
K=-8.97 (I=0.505), K=-9.08 (I=1.005)

Pt++ gl NaCl 37°C 0.01M U 1999KFa (5524) 161
K(cis-Pt(NH3)2(H2O)2+Cl)=4.52
K(cis-Pt(NH3)2(H2O)Cl+Cl)=2.60

K(trans-Pt(NH3)2(H2O)Cl+Cl)=4.40.

Pt++ dis oth/un 45°C 0.1M U M 1994MAa (5525) 162
K(Pt(NH3)2(H2O)2+L=Pt(NH3)2LH2O)=4.74, K(Pt(NH3)2LH2O+Cl=Pt(NH3)2L2)=3.32
K(Pt(NH3)2AH2O+L=Pt(NH3)2AL)=3.82. A=inosine. Method: HPLC.

Pt++ sp NaCl04 25°C 0.10M U 1994SRa (5526) 163
K(PtAB(H2O)+L=PtABL+H2O)=1.95

A: C6H4.CH2.N(CH3)2; B: NC5H4.SO3-.

Pt++ kin non-aq 50°C 100% U T 1993DPa (5527) 164
Kout(Pt(trans-A)pyCl+Cl)=2.85
Kout(Pt(cis-A)pyCl+Cl)=2.82

Medium: DMF. Also data at 60, 70 and 80 C. A: trans-rac- or cis-meso-1,2-diamino-cyclohexane.

Pt++ sp NaClO4 25°C 1.00M U I K1=9.4 1978ELa (5528) 165

Pt++ ISE KNO3 25°C 0.10M U M 1975GKa (5529) 166
K(Pt(NH3)2NO2+Cl)=4.21 (trans)
K(Pt(NH3)2NO2+Cl)=3.26 (cis)

Pt++ ISE KNO3 25°C 0.50M U M 1974KUd (5530) 167
K(Pt(DMSO)(H2O)3+L)=4.89
K(Pt(DMSO)(H2O)2L+L)=4.22
K(Pt(DMSO)(H2O)L2+L)=2.55

Pt++ EMF KNO3 25°C 0.50M U 1974KUd (5531) 168
K(Pt(DMSO)+L)=4.89
K(Pt(DMSO)L+L)=4.22
K(Pt(DMSO)L2+L)=2.55

Pt++ sol oth/un 25°C 1.0M U HM 1974MKF (5532) 169
K(Pt(NH3)4+L)=-0.15
K(Pt(en)2+L)=0.13

Medium: NaF. By calorimetry: DH(both)=0, DS(NH3)=-2.9 J K-1 mol-1, DS(en)=2.5

Pt++ EMF NaClO4 25°C 0.32M U T HM 1973CMA (5533) 170
K(Pt(en)+L)=3.84
K(Pt(en)L+L)=2.66

DH(K1)=4.2 kJ mol-1, DH(K2)=-16.7, K1=3.83, K2=2.63(30 C); K1=3.86, K2=2.56(35 C)

Pt++ gl mixed 25°C 70% U M 1973GGF (5534) 171
K(Pt(C2H4)S+L)=1.82
K(Pt(C2H4)S(NH3)2+L)=3.24
K(Pt(PPh3)S(NH3)2+L)=3.17

Medium: 70% w/w acetone/H2O, 0.1 M HClO4. S=DMSO. One DMSO exchanged for Cl

Pt++ gl NaNO3 25°C 0.30M U M 1973KSf (5535) 172
K(Pt(DMSO)(NH3)+2L)=3.19(cis)
K(PtDMSO(NH3)+2L)=4.60(trans)

Data also for Pt(DMSO)(NH2OH)

Pt++ nmr non-aq 29°C 100% U IH 1973RBA (5536) 173
K=-0.81

Medium: CHCl3. K: trans-Pt(Me2S)2Cl2=cis-Pt(Me2S)2Cl2). Data also for many other organic substituents. Method: nmr

Pt++ gl KNO3 25°C 1.0M U M 1973SAa (5537) 174
 K(PtA+L)=1.02
 K(PtHA+L)=1.5
 K(PtH2A+L)=2.14
 K(PtH3A+L)=4
 H4A=EDTA. K(PtH2AL+H)=2.25, K(PtH2AL+H)=2.73, K(PtHAL+H)=3.43

Pt++ gl mixed ? 70% U 1972GGb (5538) 175
 K(Pt(PPh3)2H+L)=1.0
 Medium: 70% w/w acetone/H2O, 0.1 M NH4ClO4. One acetone exchanged for Cl,

Pt++ EMF KNO3 ? 0.10M U M 1971GKe (5539) 176
 K(Pt(NH3)2A+L)=4.09(cis)
 K(Pt(NH3)2A+L)=4.01(trans)
 K(Pt(NH3)2AOH+H)=5.22(cis)
 K(Pt(NH3)2AOH+H)=3.85(trans)
 A=DMSO

Pt++ ISE KNO3 25°C 0.50M U 1971KTf (5540) 177
 K=4.22
 K: Pt(DMSO)Cl+Cl=trans-Pt(DMSO)Cl2(H2O)2

Pt++ ISE KNO3 20°C 0.01M U 1971KTg (5541) 178
 K(Pt(DMSO)2+L)=4.74

Pt++ EMF KNO3 25°C 0.10M U 1971KTi (5542) 179
 K(Pt(DMSO)Cl2+Cl)=2.55
 K(Pt(C2H4)Cl2+Cl)=2.43

Pt++ gl NaClO4 25°C 0.10M U TI M 1971PMa (5543) 180
 K(PtA+L)=3.71
 Medium: LiClO4. K=3.68(35 C)(I=0.1); K=3.60(25 C), 3.61(35 C)(I=0.32)
 A=diethylenetriamine

Pt++ sp KNO3 20°C 2.0M U 1971STa (5544) 181
 K4=1.89

Pt++ sp oth/un 20°C var U M 1971STa (5545) 182
 K(PtNOCl4+Cl)=0.5
 K(Pt(NO(NH3)2Cl2+Cl)=1.5
 Medium: H2SO4

Pt++ sp NaClO4 25°C 0.50M U T K1=5.0 B2=9.0 1970ELa (5546) 183
 B3=11.8
 B4=13.8
 Medium: HClO4. Ion exchange also used. At 60 C: K1=4.8, B2=8.6, B3=11.3,
 B4=13.0. DH(B3)=-8 kJ mol⁻¹, DH(B4)=-12

Pt++ kin NaClO4 25°C 0.50M U T M 1970ELa (5547) 184
 K2(cis)=3.7

$K(\text{Pt}(\text{NH}_3)_3\text{L})=3.5$

Pt++ ISE NaClO4 25°C 0.20M U M 1965ATb (5559) 196
 $K((\text{C}_2\text{H}_4)\text{PtL}_2\text{L})=2.60$

Medium:HClO4. Also values for 4 other olefins

Pt++ gl KCl 55°C 0.10M U T H 1965NPa (5560) 197

$K_4=4.58$

$K(\text{PtCl}_3\text{OH}+\text{H})=7.0$

$K_4=5.98(25\text{ C}), 5.44(35\text{ C}), 4.92(45\text{ C}), \text{DH}(K_4)=-22.4\text{ kJ mol}^{-1}$

$K=7.44(25\text{ C}), 7.25(35\text{ C}), 7.15(45\text{ C})$

Pt++ gl oth/un 55°C dil U T H 1965NPa (5561) 198

$K_3=3.13$

$K(\text{PtCl}_2(\text{H}_2\text{O})\text{OH}+\text{H})=6.1$

$K(\text{PtCl}_2(\text{OH})_2+\text{H})=8.1$

$K_3=5.52(35\text{ C}), 4.06(45\text{ C}). \text{DH}(K_3)=-130\text{ kJ mol}^{-1}.$

Pt++ con oth/un 20°C dil U 1964CZd (5562) 199

$K(\text{Pt}(\text{MeNH}_2)_2\text{NO}_2\text{L})=3.85$

Pt++ sp oth/un 20°C .318M U T 1964TCb (5563) 200

$K(\text{trans-Pt}(\text{NH}_3)_2\text{L}_2)=1.89$

$K(\text{cis-Pt}(\text{NH}_3)_2\text{L}_2)=2.96$

Medium: Na2SO4. At 25 C: $K(\text{trans})=1.88, K(\text{cis})=2.88$

Pt++ ISE oth/un 18°C 1.0M U M 1963GGb (5564) 201

$B(\text{cis-Pt}(\text{NH}_3)_2\text{L}_2)=29.5$

$B(\text{trans-Pt}(\text{NH}_3)_2\text{L}_2)=28.4$

Pt++ ISE oth/un 18°C 1.0M U M 1963GGc (5565) 202

$B(\text{Pt}(\text{NH}_3)_2\text{L}_2)=32.8$

$B(\text{Pt}(\text{NH}_3)\text{L}_3)=24.1$

$K(\text{Pt}(\text{NH}_3)\text{L}_2\text{L})=2.1$

$B(\text{Pt}(\text{NH}_3)_3\text{L})=32.8$

Pt++ oth oth/un 18°C 0.10M U 1963GPa (5566) 203

$K(\text{cis-Pt}(\text{MeNH}_2)_2\text{L}+\text{L})=2.4$

$K(\text{trans-Pt}(\text{MeNH}_2)_2\text{L}+\text{L})=3.7$

$K(\text{cis-Pt}(\text{EtNH}_2)_2\text{L}+\text{L})=2.4$

$K(\text{Trans-Pt}(\text{EtNH}_2)_2\text{L}+\text{L})=3.5$

Pt++ oth NaClO4 25°C 0.32M U TIH 1962AMd (5567) 204

$K(\text{Pt}(\text{NH}_3)_3\text{L})=3.57$

Method: chemical analysis. $K=3.57(35\text{ C}). \text{DH}=0. \text{I}=0\text{ corr.}: K_1=4.08$

Pt++ oth KNO3 18°C 0.10M U 1962GSe (5568) 205

$K(\text{Pt}(\text{NO}_2)\text{L}_2(\text{H}_2\text{O})+\text{L})=1.80$

$K(\text{PtPyL}_2(\text{H}_2\text{O})+\text{L})=2.15$

Method: chemical analysis

Pt++ gl NaCl 25°C 1.0M U 1962PPb (5569) 206

+K1=10.5
+K2=10.0
+K3=9.5
+K4=8.7

+K1: Pt(OH)4+H+L=Pt(OH)3L+H2O; +K2: Pt(OH)3L+H+L=Pt(OH)2L2+H2O
+K3: Pt(OH)2L2+H+L=PtOHL3+H2O; K4: Pt(OH)L3+H+L=PtL4+H2O

Pt++ oth oth/un 25°C 0.32M U IHM 1961ADa (5570) 207

K(trans-Pt(NH3)2L+L)=3.49

Method: chemical analysis. DH=-23 kJ mol⁻¹. At I=0 corr.: K=4.09

Pt++ oth oth/un 25°C 0.32M U T HM 1961MAh (5571) 208

K(cis-Pt(NH3)2L+L)=3.4
K(PtL2+L)=3.3
K(PtL3+L)=1.82
K(cis-Pt(NH3)2L+L)=2.48

Method: chemical analysis, 0.32 M Na2SO4. K(trans-Pt(NH3)2L+L)=3.66(15 C),
3.49(25 C), 3.36(35 C). K(trans-Pt(NH3)2L+L)=4.09(25 C), 3.96(35 C). DH=-25

Pt++ oth oth/un 25°C 0.32M U T 1961RMB (5572) 209

K(Pt(NH3)2L+L)=3.4
K(Pt(NH3)2L+L)=2.48

Method: chemical analysis, medium: Na2SO4. At 35 C: 3.7, 2.41

Pt++ oth NaNO3 25°C 0.32M U 1961SMb (5573) 210

K3=3.27
K4=1.82

Method: chemical analysis. At I=0 corr.: K3=3.0, K4=1.52. By glass electrode
I=0.32 M NaNO3: K(PtL3OH+H)=7.0, K(PtL2(H2O)OH+H)=5.2, K(PtL2(OH)2+H)=8.3

Pt++ ISE NaNO3 18°C 1.0M U 1960GGb (5574) 211

B4=16.6

Pt++ oth KNO3 17°C 0.10M U 1960GSe (5575) 212

K4=1.72
K(Pt(NH3)L2+L)=2.1
K(cis-Pt(NH3)2L+L)=2.4
K(trans-Pt(NH3)2L+L)=3.1

Method: chemical analysis

Pt++ kin oth/un 25°C 0.32M U H 1958ERa (5576) 213

K(Pt(NH3)L2+L)=1.84

Also by chemical analysis, medium: Na2SO4. DH=-8.8 kJ mol⁻¹.
27 C: K(Pt(NH3)L+L)=4.4

Pt++ gl NaClO4 25°C .318M U T H 1955GEa (5577) 214

K4=1.74
K(PtL3OH+H)=7.0

medium: LiClO4. K4=1.89(15 C), 1.68(30 C); DH(K4)=-21.3 J K-1 mol-1

Pt++ con oth/un 25°C dil U 1929CKa (5578) 215
K(Pt(NH3)2NO2+L)=3.77

Pt++ con none 25°C 0.0 U M 1929CKa (5579) 216
K(tr-Pt(NH3)2(NO2(H2O)+L)=3.77

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

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

Pt++ cal oth/un 25°C 1.0M U HM 1973MKc (6357) 217
K(Pt(NH3)4+L)=0.45
K'(Pt(en)2+L)=0.48

Medium:NaF. DH(K)=-6.3 kJ mol-1, DS=-11.7 J K-1 mol-1. DH(K')=-5.4, DS=-8.7

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

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

Pt++ kin NaNO3 50°C 0.04M U T 1968PEa (7421) 218
K(Pt(diars)2+Cl)=1.37
K(Pt(diars)2+Br)=2.60
K(Cl)=1.43(20 C),1.20(30 C). K(Br)=2.62(20 C), 2.57(30 C)

Pt++ sp NaClO4 25°C 0.10M U I 1968PSh (7422) 219
K(ABr2+I=ABrI+Br)=2.22
K(ABrI+I=AI2+Br)=1.63

A=trans-Pt(H2NOH)2. Also with Cl,I (3.37, 2.78); Cl,Br 1.29, 0.75)

Pt++ sol oth/un 25°C dil U M 1967GDd (7423) 220
Ks(A(s)=A)=-2.08

A=cis-Pt(NH3)2Cl2; Ks=-2.92(trans); -2.60(cis-Pt(NH3)2Br2; -3.48(trans);
-3.02(cis-Pt(NH3)2I2); -4.00(trans). Also 10, 50 C

Pt++ sp NaClO4 1.0M U M 1967SSm (7424) 221
K(ACl2+Br=AClBr+Cl)=1.29
K(AClBr+Br=ABr2+Cl)=0.75

A=Pt(H2NOH)2

Pt++ sp alc/w 23°C 100% U HM 1966DPa (7425) 222
K(Pt(diars)2+Cl)=2.52

Medium:MeOH. K=3.83(Br), 5.68(I), 3.68(SCN), 1.60(N3), 1.30((NH2)2CS)
DH=0 kJ mol-1(Cl), -4.2(Br), -16(I), -9.4(SCN), 0(N3), -19.2(thiourea)

Pt++ oth NaClO4 25°C .318M U M 1959DMa (7426) 223
+K1=1.16

+K2=0.92
 +K3=0.30
 +K4=0.22

Method: chemical analysis. +K1: PtCl4+Br=PtCl3Br+Cl etc. PtCl3(H2O)+Cl=PtCl4+H2O)=1.74, K(PtCl2Br(H2O)+Cl=PtCl3Br+H2O)=1.85

Pt++ gl oth/un 23°C 0.20M U M 1956CGa (7427) 224
 K(C2H4PtCl2(H2O)+NH3)=7.8
 K(C2H4PtCl2(H2O)+Cl)=2.5

Pt++ sp oth/un 25°C 0.04M U M 1955LCb (7428) 225
 K(C2H4PtCl2OH+H)=5.0

Pt++ EMF NaClO4 25°C 0.20M U M 1955LCb (7429) 226
 K(C2H4PtCl2(H2O)+SCN) > 4.6
 K(C2H4PtCl2(H2O)+NH3)=7.5
 K(C2H4PtCl2(H2O)+F) < 1
 K(C2H4PtCl2(H2O)+Cl)=2.52

Method: Ag electrode. Medium: HClO4. Reactions: displacement of H2O
 K(C2H4PtCl2(H2O)+Br=C2H4PtCl2Br+H2O)=3.04. K(C2H4PtCl2(H2O)+I)=4.60

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

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

Pt++ sp alc/w 25°C 100% U 1994PMc (8335) 227
 K(PtABr2+I=PtAIBr+Br)=1.99
 K(PtAIBr+I=PtAI2+Br)=1.43
 K(PtACl2+I=PtAICl+Cl)=2.78
 K(PtAICl+I=PtAI2+Cl)=2.39

Medium: MeOH, 0.5 M LiClO4. K(PtAClBr+I=PtAIBr+Cl)=2.42; K(PtAClBr+I=PtAICl+Br)=1.36. A=C6H5S.CH2.CH2.SC6H5.

Pt++ sp NaClO4 25°C 0.10M U 1994SRa (8336) 228
 K(PtAB(H2O)+L=PtABL+H2O)=2.88

A: C6H4.CH2.N(CH3)2; B: NC5H4.SO3-.

Pt++ kin NaClO4 25°C 1.00M U K1=4.98 1986E0a (8337) 229

Pt++ sp none 23°C 0.0 U 1986WEa (8338) 230
 K(Pt(bpy)2+L)=2.6
 K(Pt(phen)2+L)=0.85

Pt++ nmr non-aq 33°C 100% U H 1973RBA (8339) 231
 K(cis-trans-PtA2L2)=-0.53

Medium: CHCl3. A=dibenzoylsulfide. DH=-8.4 kJ mol-1. Method: nmr

Pt++ sp KNO3 25°C 1.0M U 1973SAa (8340) 232
 K(PtA+L)=2.90

H4A=EDTA

Pt++ sp NaClO4 25°C 1.0M U I 1967CPa (8341) 233
K4=1.70

At I=0.001: K3=3.5

Pt++ gl oth/un 25°C var U 1967NPd (8342) 234
K(Pt(OH)4+H+L=Pt(OH)3L+H2O)=12
K(Pt(OH)3L+H+L=Pt(OH)2L2)=11.7
K(Pt(OH)2L2+H+L=Pt(OH)L3)=11
K(Pt(OH)L3+H+L=PtL4)=10

Pt++ ISE oth/un 18°C 1.0M U M 1963GGb (8343) 235
B(Pt(NH3)2I2)=33.2 (cis)
B(Pt(NH3)2I2)=32.7 (trans)

Pt++ ISE NaNO3 18°C 1.0M U B2=29.6 1960GGb (8344) 236
K(Pt+2e=Pt(s))=41.5(1200 mV)

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

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

Pt++ gl NaClO4 25°C 0.10M C 1996MAa (9199) 237
K(PtL2=Pt(OH)L2)=4.48
K(Pt(OH)L2=Pt(OH)2L2)=7.20
K(PtL2A=Pt(OH)L2A)=5.27
K(PtL2C=Pt(OH)L2C)=6.4

A=1-Methylinosine, C=Inosine. K(PtL2HA=Pt(OH)L2HA)=5.4,
K(Pt(OH)L2HA=Pt(OH)L2A)=7.4, K(Pt(OH)L2HA=PtL2A)=-1.7

Pt++ sp oth/un 23°C 0.03M U 1986WEa (9200) 238
K(Pt(bpy)2+L)=3.32
K(Pt(phen)2+L)=2.02

Medium: (NH4)2SO4

Pt++ gl mixed 25°C 70% U 1973GGf (9201) 239
K(Pt(C2H4)SCl2+L)=7.6
K(Pt(C2H4)SL2+L)=8.0
K(Pt(Ph3P)SL2+L)=7.55

Pt++ sp KNO3 25°C 1.0M U 1973SAa (9202) 240
K(Pt(EDTA)+L)=4.7

Pt++ gl mixed 25°C 70% U M 1972GGb (9203) 241
K(Pt(Ph3P)2H+L)=5.8

Medium: 70% Me2CO, 0.1 M NH4ClO4

Pt++ ISE KNO3 18°C 1.0M U 1961GGb (9204) 242

B4=35.3

NH3O L Hydroxylamine; CAS 5470-11-1 (1808)
Hydroxylamine; NH2.OH

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

Pt++ gl NaNO3 25°C 0.0 U 1966GSh (9273) 243

K(PtH-1L4+H)=6.45
Kso(PtL4(OH)2)=-20.05

Protonation constants for other (PtL) complexes

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

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

Pt++ EMF oth/un 25°C var U 1967GGe (9402) 244

B4=19.6

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

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

Pt++ sp NaClO4 25°C 0.10M U 1994SRa (10254) 245

K(PtAB(H2O)+L=PtABL+H2O)=3.50

A: C6H4.CH2.N(CH3)2; B: NC5H4.SO3-.

OH- HL Hydroxide (57)
Hydroxide;

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

Pt++ gl NaClO4 25°C 0.10M C 2001BPd (11985) 246

*K(Pt(dien)(H2O))=-6.94.

K(2Pt(dien)(H2O)=Pt2(dien)2(OH)2)=-9.37.

Pt++ nmr mixed 25°C 0.00 U 1998BBd (11986) 247

*K(trans-Pt(H2O)Cl(NH3)A)=-5.4
*K(cis-Pt(H2O)2(NH3)A)=-5.68
*K(cis-Pt(OH)(H2O)(NH3)A)=-7.7
*K(cis-Pt(H2O)Cl(NH3)A)=-6.73

Method: 195Pt nmr, Medium: 10% D2O/H2O.
A: Cyclohexylamine

Pt++ nmr NaClO4 25°C 1.00M U 1998MGa (11987) 248

*K(Pt(H2O)(CN)5)=-2.51

Method: 191Pt nmr

Pt++ gl KNO3 25°C 0.15M C 1997SSb (11988) 249
*B2(Pt(en)(H2O)2)=-15.35
*K(2Pt(en)=Pt2(en)2(OH))=-8.36

Pt++ gl NaClO4 25°C 0.10M M 1996M0a (11989) 250
*K(PtCl(NH3)2(H2O))=-5.89

Pt++ sp NaClO4 25°C 0.10M U 1994SRa (11990) 251
*K(PtAB(H2O))=-9.75

A: C6H4.CH2.N(CH3)2; B: NC5H4.SO3-.

Pt++ sol oth/un 25°C var M B2=29.9 1991W0a (11991) 252

Pt++ gl KNO3 35°C 0.05M C M 1987EGa (11992) 253
K(Pt(DMSO)A+L)=4.36

HA=sarcosine. Data also for HA=glycine (K=4.18) and dimethyl glyoxime (K=4.78)

Pt++ sp none 23°C 0.0 U 1986WEa (11993) 254
K(Pt(bpy)2+L)=4.11
K(Pt(phen)2+L)=2.60

Pt++ sol oth/un 25°C 1.00M U 1974MKf (11994) 255
K(Pt(en)2 + OH)=0.38

Medium: NaF

Pt++ gl KNO3 25°C 1.00M U 1973SAa (11995) 256
*K(PtA2+H2O=PtA2OH+H)=-9.08

H4A=EDTA

Pt++ gl NaNO3 25°C 0.30M U M 1968GSi (11996) 257
*K1(Pt(en)(H2NOH)2)=-7.68
*K2(Pt(en)(H2NOH)2)=-10.7

Also *Kn values for Pt(II)-oxime complexes

Pt++ gl oth/un 25°C dil U M 1968PAb (11997) 258
*K1(cis-Pt(NH3)2(H2O)2)=-5.63
*K2(cis-Pt(NH3)2(H2O)2)=-9.25
*K1(tr-Pt(NH3)2(H2O)2)=-4.23
*K2(tr-Pt(NH3)2(H2O)2)=-7.30

Pt++ gl NaNO3 25°C 0.10M U M 1963GGa (11998) 259
*K1(Pt(bpy)(H2O)2)=-4.7
*K2(Pt(bpy)(H2O)2)=-5.7
*K1(trans-Pt(py)2(H2O)2)=-5.2
*K1(cis-Pt(py)2(H2O)2)=-4.1

*K2(trans-Pt(py)2(H2O)2)=-6.3, *K2(cis)=-6.4. Also data for Pt(NH3)py(H2O)2 : *K1=-5.2, *K2=-6.85(trans); *K1=-4.1, *K2=-6.7(cis) plus others

Pt++ gl NaNO3 25°C 0.10M U 1962GSf (11999) 260

K(Pt(en)2+L)=0.69

Medium: NaF. DH(Pt(NH3)4+L)=0 kJ mol-1, DS=14.2 J K-1 mol-1;
DH(Pt(en)2+L)=ca.0, DS=13.0

S2O3-- H2L Thiosulfate CAS 73686-28-7 (177)
Thiosulfate;

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

Pt++ sp none 23°C 0.0 U 1986WEa (16897) 275
K(Pt(bpy)2+L)=6.7
K(Pt(phen)2+L)=6.4

Se-- H2L Selenide (6335)
Selenide;

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

Pt++ oth none 25°C 0.0 U 1964BUe (16948) 276
Kso=-81.4

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

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

Pt++ sp none 23°C 0.0 U 1986WEa (17849) 277
K(Pt(bpy)2+L)=4.13
K(Pt(phen)2+L)=3.15

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

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

Pt++ sp oth/un 23°C 0.03M U 1986WEa (18029) 278
K(Pt(bpy)2+L)=3.18
K(Pt(phen)2+L)=2.43

Medium: (NHMe3)2SO4

Pt++ EMF KNO3 18°C 1.0M U 1961GGa (18030) 279
B4=40.1

Method: platinum electrode

Pt++ gl oth/un 23°C 0.20M U M 1956CGa (18031) 280

K(C2H4PtCl3+L=trans-C2H4LPtCl2+Cl)=6.1
K(trans-C2H4H2OPtCl2+L=trans-C2H4LPtCl2+H2O)=8.6

CH5NO L CAS 593-56-6 (4208)
O-Methylhydroxylamine; H2N.O.CH3

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	ISE	NaNO3	18°C	0.10M	U			B4=26.8	1968SGe (18039)	281

CH6NO3P		H2L		AMPA				CAS 1066-51-3	(1981)	
Aminomethylphosphonic acid; H2N.CH2.PO3H2										
Pt++	gl	KNO3	25°C	0.10M	C			B2=21.62 B(PdHLC12)=22.99 B(PdLC12)=19.45 B(PdH-2L)=-0.08	1997BLc (18230)	282
When [Pt]=0.15 M, [L]=0.3 M: B2=24.06, B(PtH-2L2)=2.87, B(PtHLC12)=23.70, B(PtLC12)=20.11, B(PtH-2L)=2.19.										
Pt++	gl	KCl	25°C	0.10M	U			K(Pt+L+2Cl+H)=22.67 K(Pt+2L)=22.28 K(Pt+L+2Cl)=19.55	1996BRa (18231)	283

C2H2O2S2		H2L		Dithiooaxlic ac				CAS 77148-96-8	(4216)	
Dithioethanedioic acid; HS.CO.CO.SH										
Pt++	sp	NaCl	?	0.25M	U	M		K(PtCl4+2L=PtL2+4Cl)=22.43	1968PMd (18407)	284

C2H3N3S		L						CAS 3179-31-5	(4221)	
1,2,4-Triazoline-3-thione;										
Pt++	sp	oth/un	?	0.32M	U			B4=25.9	1971RCc (19245)	285

C2H4		L		Ethylene				CAS 74-85-1	(478)	
Ethene; H2C:CH2										
Pt++	gl	KNO3	?	0.10M	U	M		K(Pt(NH3)3L+H2O=Pt(NH3)2LH2O+NH3)=8.67	1972GKe (19430)	286

C2H5NO		L		Acetaldoxime				CAS 107-29-9	(4224)	
Acetaldoxime; CH3.CH:N.OH										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	ISE	NaNO3	28°C	0.10M	U	M			1968SGe (20671)	287
									K(PtCl2+4L)=25.0	

C2H5NO	L	Acetamide	CAS	60-35-5	(2886)
Ethanoic acid amide; CH3.CO.NH2					

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	nmr	non-aq	25°C	100%	U	M			1992WFa (20674)	288
									K(PtA+L=PtAL)=7	

Medium: acetone. A is Diethylenetriamine.

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	gl	oth/un	35°C	?	U	M			1989EBa (21696)	289
									*K(PtL(DMSO)(H2O))=-4.14	

Pt++	gl	NaClO4	25°C	0.10M	U				1982KBa (21697)	290
									K(PtL(en)+H)=3.18	

C2H6OS	L	DMSO	CAS	67-68-5	(329)
Dimethylsulfoxide; (CH3)2.SO					

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	gl	KNO3	25°C	0.10M	U	M			1972GKe (22120)	291
									K(Pt(NH3)3L+H2O=Pt(NH3)2LH2O+NH3)=8.18	

C2H6S	L		CAS	75-18-3	(151)
Dimethyl sulfide; CH3.S.CH3					

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	nmr	non-aq	30°C	100%	U	H			1998SEa (22193)	292
									K(Pt2Me4L2+2L=2PtMe2L2)=3.41	

Medium: dichloromethane-d2. DH=-60 kJ mol-1, DS=-120 J K-1 mol-1.

Reactant dimer has bridging SR2 groups. The product is the cis isomer.

Pt++	nmr	non-aq	29°C	100%	U	HM			1973RBA (22194)	293
									K(cis-PtL2Cl2=trans form)=0.81	

Medium: CHCl3. DH=7.9 kJ mol-1, DS=41 J K-1 mol-1.

In CH2Cl2, K=0.28, DH=9.6, DS=38

C2H6Se	L	DiMeSelenide	CAS	81369-92-3	(911)
Dimethylselenide; CH3.Se.CH3					

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

Pt++ nmr non-aq 40°C 100% U T M 1973R Ba (22206) 294
K(cis-PtCl₂L₂=trans form)>1.3

Medium: CHCl₃. At 3 C, in CHCl₃+30% C₆H₅NO₂: K=0.60

C₂H₇N L Dimethylamine CAS 124-40-3 (802)
Dimethylamine; CH₃.NH.CH₃

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

Pt++ sp oth/un 23°C 0.03M U 1986W E a (22228) 295
K(Pt(bpy)₂+L)=3.02
K(Pt(phen)₂+L)=1.60

Medium: (NHMe₃)₂SO₄

Pt++ gl oth/un 23°C 0.20M U 1956C G a (22229) 296

K₅=5.5

K₆=8.0

C₂H₇N L Ethylamine CAS 75-04-7 (156)
Ethylamine; CH₃.CH₂.NH₂

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

Pt++ EMF KNO₃ 18°C 1.0M U 1961G G a (22278) 297
B₄=37.0

Method: platinum electrode

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

Pt++ sp oth/un 23°C 0.03M U 1986W E a (23225) 298
K(Pt(phen)₂+L)=0.88

Medium: (enH)₂SO₄

Pt++ EMF KNO₃ 18°C 1.0M U B₂=36.5 1961G G a (23226) 299

Method: platinum electrode

C₃H₆ L Propylene CAS 115-07-1 (702)
Propene; CH₃.CH:CH₂

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

Pt++ nmr non-aq -15°C 100% U 1986K U a (24756) 300
K(PtA+L=PtL+A)=1.5

Pt = trans-PtCl₂(py); A = o-methylstyrene; Medium: CDCl₃

 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

 Pt++ gl oth/un ? ? U M 1972GIb (24848) 301
 K(Pt(NH3)2L(OH)+H)=3.5

 Pt++ sp NaCl 60°C 2.0M U T HM 1967HVa (24849) 302
 K(PtCl4+L=PtCl3L+Cl)=3.59
 K=4.11(30C), 3.86(44.5 C). DH=-33.9 kJ mol⁻¹, DS=-31.8 J K⁻¹ mol⁻¹

 C3H6O3S HL Allysulfonic CAS 1606-80-0 (3551)
 Prop-2-enesulfonic acid; CH2:CH.CH2.SO3H

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

 Pt++ sp NaCl 25°C 2.0M U T HM 1968MVa (25613) 303
 K(PtCl4+L=PtCl3L+Cl)=3.61

K=3.46(35 C), 3.33(45 C), 3.19(55.6 C). DH=-25.5 kJ mol⁻¹, DS=-17.1 J K⁻¹ m⁻¹

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

 Pt++ sp NaCl 59°C 2.0M U T HM 1967DHb (25637) 304
 K(PtCl4+HL=PtCl3HL+Cl)=3.01

K=3.45(30.2 C), 3.24(44 C). DH=-29.7 kJ mol⁻¹, DS=-31.8 J K⁻¹ mol⁻¹

 Pt++ sp oth/un 24°C 2.0M U 1967DHc (25638) 305
 K(PtBr4+HL=PtBr3HL+Br)=2.49

Medium: KBr

 C3H7NO HL CAS 127-06-0 (7906)

Acetoxime;

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

 Pt++ sp non-aq 40°C 100% C M 2001KKa (25642) 306

K(cis-Pt(en)(S)2+L)=1.54
 K(cis-Pt(en)L(S)+L)=0.48

Medium: acetone (S). Additional methods: 1H and 13C nmr.

 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

Pt++ gl oth/un 35°C ? U M 1989EBa (26607) 307
*K(PtL(DMSO)(H2O))=-4.07

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

Pt++ sp oth/un 25°C 1.00M U K1=3.46 19780Sb (27798) 308

C3H9N L Trimethylamine CAS 75-50-3 (803)
Trimethylamine; (CH3)3.N

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

Pt++ sp oth/un 23°C 0.60M U 1986WEa (27861) 309

K(Pt(bpy)2+L)=0.020
K(Pt(phen)2+L)=-0.32

Medium: (NHMe3)2SO4

Pt++ gl oth/un 23°C 0.20M U 1956CGa (27862) 310

K5=3.0
K6=5.5

C3H9N2O4P H2L CAS 30211-73-5 (7117)
Glycylaminomethylphosphonic acid;

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

Pt++ gl KCl 25°C 0.10M U 1996BRa (27970) 311

K(Pt+L+2Cl+H)=23.14

C3H9P L CAS 594-09-2 (1732)
Trimethyl phosphine; (CH3)3P

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

Pt++ gl NaNO3 25°C 1.00M C 2001HTa (28055) 312

K(2PtL2=L2Pt(OH)2PtL2)=-4.19

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

Pt++ ISE KNO3 25°C 0.10M U M 1970GKd (28695) 313

B(Pt(NH3)2L2)=32.0(cis)

C4H4N2O2 HL Uracil CAS 66-22-8 (412)
2,4-Dihydroxypyrimidone, 2,4-Pyrimidinedione;

C4H9N L CAS 34375-90-1 (3568)
3-Aminobut-1-ene; CH2:CH.CH(NH2)CH3

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

Pt++ sp NaCl 60°C 2.0M U T HM 1967DHb (33747) 325
K(PtCl4+HL=PtCl3HL+Cl)=2.91
K=3.34(30 C), 3.11(45.3 C). DH=-28.0 kJ mol-1, DS=-29 J K-1 mol-1

C4H9N L CAS 2524-49-4 (3569)
4-Aminobut-1-ene; CH2:CH.CH2.CH2.NH2

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

Pt++ sp NaCl 60°C 2.0M U T HM 1967DHb (33748) 326
K(PtCl4+HL=PtCl3HL+Cl)=3.31
K=3.64(30 C), 3.48(44.5 C). DH=-21.3 kJ mol-1, DS=-0.8 J K-1 mol-1

Pt++ sp oth/un 25°C 2.0M U M 1967DHc (33749) 327
K(PtBr4+HL=PtBr3HL+Br)=3.08

Medium: KBr

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

Pt++ sp NaCl 30°C 2.0M U T HM 1967DHb (33757) 328
K(PtCl4+HL=PtCl3HL+Cl)=2.65
K=2.48(44.5 C), 2.32(60.2 C). DH=-21.3 kJ mol-1, DS=-19 J K-1 mol-1

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

Pt++ EMF KNO3 25°C 1.00M U M 1973KYb (33793) 329
B4=38.4
B(Pt(NH3)2L2)=36.3(cis), 37.0(trans). B(Pt(py)2L2)=35.0 (cis)

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

Pt++ gl oth/un 35°C ? U M 1989EBa (34032) 330
*K(PtL(DMSO)(H2O))=-3.82

C4H9NO2S HL Methylcysteine CAS 1187-84-4 (84)
2-Amino-3-methylmercaptopropanoic acid; H2N.CH(CH2.S.CH3)COOH

Medium: acetonitrile. A: triphenylstibine.

Pt++ kin alc/w 25°C 100% U I 1994BCc (36670) 337
K(PtACl2+L=PtALCl+Cl)=1.37

A: PhS.CH2.CH2.SPh. Medium: methanol, 0.1 M Bu4NC104, 0.01M HCl04. Also data for L=4-CN- (K=-0.54), 4-Me- (K=1.83), 2-Me- (K=0.91) and 2,4-DiMe-py (1.43)

Pt++ kin alc/w 25°C 100% U 1994PMd (36671) 338
K(PtACl+L=PtAL+Cl)=-0.57

Medium: 100% MeOH, 0.01 M NBu4Cl04. A: 2,6-bis(methylsulfanylmethyl)pyridine
Also data for L=4-CN-py, 4-Cl-py, 4-Me-py, 4-NH2-py, 2-Me-py, 4-CH3CO-py

Pt++ EMF KNO3 25°C 1.00M U M 1973KYb (36672) 339
B4=31.8
B(Pt(NH3)2L2)=36.0, cis & trans
B(Pt(NH3)3L)=34.2
B(Pt(NH3)L3)=32.6

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

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

Pt++ gl NaNO3 25°C 0.10M U M 1989MPa (37286) 340
K(Pt(NH3)2+L)=6.73
K(Pt(NH3)2+2L)=11.93

Pt++ gl NaNO3 37°C 0.10M U M 1987MPa (37287) 341
B(PtL(NH3)2)=5.52
B(PtL2(NH3)2)=9.71

C5H8O4S2 H3L CAS 73618-85-6 (7720)
meso-2,3-Dimercaptobutanedioic acid monomethyl ester;

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

Pt++ gl KCl 25°C 0.10M C 2000CCa (38402) 342
B(PtH2L2)=41.1
B(PtH3L2)=46.9
B(Pt2HL3)=58.3
B(Pt2H3L3)=70.0

B(Pt2H4L3)=73.3.

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

Pt++ gl none 25°C 0.0 U 1979FWa (39123) 343
K(PtL2+H)=5.03

K(PtHL2+H)=4.39
K(PtCl4+2HL=PtH2L2+4Cl)=13.0

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

Pt++ sp NaCl 60°C 2.0M U M 1967HVa (40146) 344
K(PtCl4+L=PtCl3L+Cl)=3.40

C5H11N L CAS 13822-06-5 (3608)
1-Amino-3-methylbut-2-ene; H2N.CH2.CH:C(CH3).CH3

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

Pt++ sp NaCl 60°C 2.0M U M 1967DHb (40383) 345
K(PtCl4+HL=PtCl3HL+Cl)=0.41

C5H11N L CAS 22537-07-1 (3609)
5-Aminopent-1-ene; CH2:CH.CH2.CH2.CH2.NH2

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

Pt++ sp NaCl 60°C 2.0M U M 1967HVa (40384) 346
K(PtCl4+HL=PtCl3HL+Cl)=3.04

C5H11N L CAS 2424-62-4 (3610)
N-Ethyl-3-aminoprop-1-ene; CH3.CH2.NH.CH2.CH:CH2

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

Pt++ sp NaCl 59°C 2.0M U T HM 1967DHb (40395) 347
K(PtCl4+HL=PtCl3HL+Cl)=2.91

K=3.37(24 C),3.09(44 C). DH=-24.7 kJ mol-1, DS=-18 J K-1 mol-1

Pt++ sp oth/un 35°C 2.0M U T HM 1967DHc (40396) 348

K(PtBr4+HL=PtBr3HL+Br)=2.26
Medium: KBr. K=2.70(0 C),2.38(25 C). DH=-20.1 kJ mol-1, DS=-22 J K-1 mol-1

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

Pt++ sp oth/un 23°C 0.03M U 1986WEa (40454) 349
K(Pt(bpy)2+L)=3.65

K(Pt(phen)2+L)=1.63
Medium: (pipH)2SO4

Pt++ EMF KNO3 25°C 1.00M U M 1973KYb (40455) 350
 B(Pt(NH3)2L)=36.0
 B(Pt(NH3)2L2)=36.8(trans)
 B(Pt(NH3)2L2)=36.7(cis)
 B(Pt(NH3)L3)=37.4

B(PtL4)=37.9

Pt++ gl oth/un 23°C 0.20M U 1956CGa (40456) 351
 K5=5.7
 K6=8.2

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

Pt++ gl NaNO3 25°C 0.10M U M 1989MPa (40750) 352
 K(Pt(NH3)2+L)=6.61
 K(Pt(NH3)2+2L)=11.24

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

Pt++ kin NaClO4 30°C 0.10M C T 2001SSc (41279) 353
 Kout(Pt(en)(H2O)2+L)=2.25

Ligand is DL-penicillamine. Data for 35-50 C.

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

Pt++ gl KNO3 25°C 0.10M U K1=11.26 B2=20.50 1988ZMa (42684) 354

C6H7N L Picoline CAS 109-06-8 (320)
 2-Methylpyridine; C5H4N.CH3

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

Pt++ sp non-aq 25°C 100% C 1997WEa (44614) 355
 K(trans-PtI3A+L)=0.65

Medium: acetonitrile. A: triphenylstibine.

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

Pt++ sp non-aq 25°C 100% C 1997WEa (44832) 356
K(trans-PtI3A+L)=0.86

Medium: acetonitrile. A: triphenylstibine.

C6H7N L Aniline CAS 62-53-3 (583)
Aminobenzene, aniline; C6H5.NH2

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

Pt++ kin alc/w 25°C 100% U 1994PMd (44878) 357
K(PtACl+L=PtAL+Cl)=-1.57

Medium: 100% MeOH, 0.01 M NBu4ClO4. A: 2,6-bis(methylsulfanylmethyl)pyridine
Also data for L=morpholine (K=0.27) and piperidine (K=1.79).

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

Pt++ gl KNO3 20°C 0.10M U K1=4.58 1977CAAd (45712) 358

C6H10O4S2 H2L CAS 27887-85-0 (7721)
meso-Dimercaptobutanedioic acid dimethyl ester;

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

Pt++ gl KCl 25°C 0.10M C 2000CCa (48275) 359

B(PtH2L4)=51.9

B(PtH3L4)=60.8

B(PtH4L4)=67.4

B(Pt2L3)=41.4

B(Pt2HL3)=50.1, B(Pt2H2L3)=53.5.

C6H11NO2 HL CAS 89203-64-5 (3435)
1-Pyrrolidine-1-ethanoic acid, 1-Azacyclopentane-1-ethanoic acid;

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

Pt++ sp none 25°C 0.0 U K1=9.45 B2=19.87 1974HFa (48505) 360

C6H11NO4 H2L Amino adipic CAS 542-32-5 (1259)
2-Aminohexanedioic acid; HOOC.CH2.CH2.CH2.CH(NH2).COOH

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

Pt++ gl none 25°C 0.0 U 1979FWa (48584) 361

K(PtL2+H)=5.01

K(PtHL2+H)=4.53

K(PtCl4+2HL=PtH2L2+4Cl)=13.0

C6H13N L MePiperidine CAS 626-67-5 (1254)
N-Methylpiperidine; C5H10N.CH3

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

Pt++ gl oth/un 23°C 0.20M U 1956CGa (49810) 362
K5=4.3
K6=6.8

C6H14N+ (3665)
N,N,N-Allyltrimethylammonium cation
L+

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

Pt++ sp NaCl 60°C 2.0M U T HM 1967DHb (50627) 363
K(PtCl4+L=PtCl3L+Cl)=2.07
K=2.40(30 C),2.24(44.5 C); DH=-22.2 kJ mol⁻¹, DS=-27.6 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

Pt++ nmr non-aq 30°C 100% U H 1998SEa (51140) 364
K(Pt2Me4L2+2L=2PtMe2L2)=2.11
Medium: dichloromethane-d2. DH=-40 kJ mol⁻¹, DS=-100 J K⁻¹ mol⁻¹.
Reactant dimer has bridging SR2 groups. The product is the cis isomer.

C6H15P L CAS 554-70-1 (166)
Triethylphosphine; (C2H5)3P

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

Pt++ gl NaNO3 25°C 1.00M C 2001HTa (51548) 365
K(2PtL2=L2Pt(OH)2PtL2)=-3.58

C7H8S L Thioanisole CAS 100-68-5 (4414)
Methylphenylsulfide; C6H5.S.CH3

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

Pt++ nmr non-aq 28°C 100% U HM 1973RBA (56178) 366
K(PtL2Cl2, cis to tran)=0.40
Medium: CHCl3. DH=15.1 kJ mol⁻¹, DS=59 J K⁻¹ mol⁻¹

C7H9N5O HL 9-Ethylguanine CAS 879-08-3 (6679)
9-Ethyl-2-amino-6-hydroxypurine;

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

Pt++ gl NaNO3 25°C 0.10M M 1999SSb (56519) 367
*K(cis-Pt(NH3)2(HL)2)=-8.01
*K(cis-Pt(NH3)2(HL)L)=-8.66
*K(trans-Pt(NH3)2(HL)2)=-7.90
*K(trans-Pt(NH3)2(HL)L)=-8.54
*K(cis-Pt(CH3NH2)2(HL)2)=-7.92, *K(cis-Pt(CH3NH2)2(HL)L)=-8.58
*K(trans-Pt(CH3NH2)2(HL)2)=-7.99, *K(trans-Pt(CH3NH2)2(HL)L)=-8.77

C7H13N L CAS 131344-42-3 (3733)
N-Allylpyrrolidine;

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

Pt++ sp NaCl 60°C 2.0M U 1967DHb (57424) 368
K(PtCl4+HL=PtCl3HL+Cl)=2.81

C7H13NO2 HL CAS 3235-67-4 (3772)
Piperidine-N-ethanoic acid; C5H10N-CH2.COOH

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

Pt++ sp none 25°C 0.0 U K1=8.462 B2=17.43 1974HFa (57457) 369

C7H13NO4 H2L Aminopimelic CAS 627-76-9 (1260)
2-Amino-heptanedioic acid; HOOC.(CH2)4.CH(NH2).COOH

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

Pt++ gl KCl 25°C 0.10M U 1979FWa (57502) 370
K(Pt(HL)2=Pt(HL)L+H)=4.75
K(Pt(HL)L=PtL2+H)=5.33
K(PtCl4+2HL=Pt(HL)2+4Cl)=13.9

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

Pt++ gl KNO3 25°C 0.15M C M 1997SSb (57812) 371
K(Pt(en)+L)=8.29
K(Pt(en)+L=Pt(en)H-1L)=-0.38
K(Pt(en)+H+L=Pt(en)HL)=11.25
K(2Pt(en)+L=Pt2(en)2H-1L)=5.74
K(2Pt(en)+L=Pt2(en)2H-2L+2H)=-2.22

C7H15N L CAS 4744-04-1 (3742)
N,N-Diethyl-3-aminopropene (N-allyldiethylamine); (C2H5)2N.CH2.CH:CH2

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

Pt++ sp NaCl 59°C 2.0M U T H 1967DHb (57902) 372
K(PtCl4+HL=PtCl3HL+Cl)=2.59
K=2.93(30 C),2.74(45.3 C). DH=-23.4 kJ mol⁻¹, DS=-20.9 J K⁻¹ mol⁻¹

Pt++ sp oth/un 25°C 2.0M U 1967DHc (57903) 373
K(PtBr4+HL=PtBr3HL+Br)=2.10

Medium: KBr

C7H17N2O4PS H2L CAS 82611-22-1 (7392)
Methionyl-1-aminoethylphosphonic acid; H2L

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	gl	KNO3	25°C	0.10M	C			B2=23.14 B(PtHLC12)=25.72 B(PtLC1)=18.81 B(PtH-1L)=9.79 B(PtH-2L)=1.41	1997Lba (58204)	374

Data are for (S,S)-isomer. B(PtH2L2)=36.68, B(PtHL2)=30.47, B(PtH-1L2)=14.58
B(PtH-2L2)=4.78. Data also for (R,S)-isomer.

Pt++ gl KCl 25°C 0.10M U 1996BRa (58205) 375
K(Pt+2L+2H)=37.27
K(Pt+2L)=23.70
K(Pt+2L+H)=30.99

H2L: S,S-diastereoisomer

Pt++ gl KCl 25°C 0.10M U 1996BRa (58206) 376
K(Pt+2L+2H)=36.56
K(Pt+2L)=22.92
K(Pt+2L+H)=30.16

H2L: S,R-diastereoisomer

C8H7Cl L 2-Chlorostyrene CAS 2059-87-4 (814)
2-Chlorophenyl-ethene; Cl.C6H4.CH:CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	nmr	non-aq	-15°C	100%	U			K(PtA+L=PtL+A)=-0.64	1986KUa (59085)	377

Pt = trans-PtCl2(py); A = o-methylstyrene; Medium: CDCl3

C8H7Cl L 4-Chlorostyrene CAS 1073-67-2 (812)
4-Chlorophenyl-ethene; Cl.C6H4.CH:CH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	nmr	non-aq	-15°C	100%	U			K(PtA+L=PtL+A)=-0.60	1986KUa (59086)	378

Pt = trans-PtCl₂(py); A = o-methylstyrene; Medium: CDCl₃

C8H7NO₂ L 4-Nitrostyrene CAS 5153-67-3 (813)
4-Nitrophenyl-ethene; O₂N.C₆H₄.CH:CH₂

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

Pt++ nmr non-aq -15°C 100% U 1986KUa (59094) 379
K(PtA+L=PtL+A)=-1.3

Pt = trans-PtCl₂(py); A = o-methylstyrene; Medium: CDCl₃

C8H8 L Vinylbenzene CAS 100-42-5 (811)
Styrene; C₆H₅.CH:CH₂

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

Pt++ nmr non-aq -15°C 100% U 1986KUa (59254) 380
K(PtA+L=PtL+A)=-0.49

Pt = trans-PtCl₂(py); A = o-methylstyrene; Medium: CDCl₃

C8H10S L CAS 760-92-1 (4479)
Methylthiomethylbenzene; C₆H₅.CH₂.S.CH₃

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

Pt++ nmr non-aq 20°C 100% U HM 1973Rba (60932) 381
K(PtL₂Cl₂, cis to trans)=0.12

Medium: CHCl₃. DH=14.2 kJ mol⁻¹, DS=50 J K⁻¹ mol⁻¹

In CH₂Cl₂, K=-0.41. DH=13.4, DS=38

C8H12N₅O₄P H₂L CAS 106941-25-7 (6693)
9-(2-(Phosphonylmethoxy)ethyl)adenine; H₂O₃P.CH₂.O.CH₂.CH₂.adenine

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

Pt++ gl NaNO₃ 25°C 0.10M M 2001KLa (61654) 382

K(Pt(dien)L+H)=6.69

K(Pt(dien)HL+H)=1.4

K'(Pt(dien)H₂L+H)=0.52

K' by spectrophotometry. K(Pt(dien)H₂L+Mg)=1.54, K(Pt(dien)H₂L+Zn)=2.29,

K(Pt(dien)H₂L+Ca)=1.29, K(Pt(dien)H₂L+Ni)=1.89, K(Pt(dien)H₂L+Cu)=3.33

C8H14O₅S₂ H₂L CAS 4408-66-6 (8332)
Oxybis(ethylenethio)diethanoic acid;

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

Pt++ gl KNO₃ 20°C 0.10M U K₁=3.80 1977CAc (62136) 383

C8H15N L CAS 7182-69-4 (3806)

N-Allylpiperidine; C5H10N-CH2.CH:CH2

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt++       sp  NaCl   60°C  2.0M U                               1967DHb (62151) 384
                                         K(PtCl4+HL=PtCl3HL+Cl)=2.64
*****
```

C8H15NO2 HL (4572)
1-Azacycloheptane-1-ethanoic acid, hexamethyleneimine-ethanoic acid;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt++       sp  none   25°C  0.0 U           K1=9.51 B2=18.76 1974HFa (62160) 385
*****
```

C8H15N7O2S3 L Famotidine CAS 76824-35-6 (6502)
N'-(Aminosulfonyl)-3-((2-(diaminomethyleneamino)-4-thiazolyl)methylthio)propanamidi
ne

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt++       gl  KNO3   25°C  0.10M U           B2=10.31      1995CCa (62275) 386
                                         B(Pt3L3)=25.21
                                         B(Pt3H-1L3)=21.12
                                         B(Pt3H-2L3)=15.71
                                         B(PtHL2)=15.74
*****
```

C9H7N3O2S H2L TAR CAS 2246-46-0 (707)
4-(2'-Thiazolylazo)-resorcinol; C3H2NS.N:N.C6H3(OH)2

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt++       gl  alc/w  25°C  50% U                               1967NPb (64722) 387
                                         K(?)=12
Medium: 50% MeOH, 0.1 M NaClO4
*****
```

C9H8N2 L CAS 578-66-5 (503)
8-Aminoquinoline;

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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt++       sp  oth/un 25°C  0.10M M                               1994ACa (64784) 388
                                         K(PtLen=Pt(H-1L)en+H)=-8.64
                                         K(PtLpy2=Pt(H-1L)py2+H)=-7.40
                                         K(PtLA2=Pt(H-1L)A2+H)=-8.57
                                         K(PtLB=Pt(H-1L)B+H)=-7.44
Medium: 0.1 M Na2SO4. A:NH3; B:piperidine. Also data for PtLA2, where A is
4Cl-py, 4Me-py, 4NH2-py, 4NMe2-py, 1,3-diaminopropane and N-tetramethyl-en.
*****
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C9H10 L CAS 622-97-9 (810)
4-Methylstyrene; CH3.C6H4.CH:CH2

*K(Pt(NH3)2L)=-14.0

Method: 1H and 31P nmr in D2O. By potentiometric titration in 0.1 M NaNO3

*K(Pt(NH3)2HL)=-3.31.

C9H20As+ (3863)

As,As,As-Triethylallylarsinium cation;

L+

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

Pt++ sp NaCl 58°C 2.0M U T HM 1967DHb (68025) 395

K(PtCl4+L=PtCl3L+Cl)=2.96

K=3.12(45 C); DH=-24.6 kJ mol-1, DS=-16.7 J K-1 mol-1

C9H20N+ (3862)

N,N,N-Triethylallylammonium cation;

L+

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

Pt++ sp NaCl 59°C 2.0M U T H 1967DHb (68026) 396

K(PtCl4+L=PtCl3L+Cl)=2.05

K=2.41(25 C),2.18(45 C); DH=-20.5 kJ mol-1, DS=-19.2 J K-1 mol-1

Pt++ sp oth/un 25°C 2.0M U M 1967DHc (68027) 397

K(PtBr4+L=PtBr3L+Br)=1.64

Medium: KBr

C9H20P+ (3864)

P,P,P-Triethylallylphosphinium cation;

L+

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

Pt++ sp NaCl 59°C 2.0M U M 1967DHb (68129) 398

K(PtCl4+L=PtCl3L+Cl)=2.70

C10H7NO2 HL CAS 132-53-6 (2524)

2-Nitroso-1-naphthol;

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

Pt++ gl alc/w RT 40% M K1=4.87 B2= 9.76 1993Rab (68656) 399

Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

C10H7NO2 HL Quinaldic acid CAS 93-10-7 (2209)

Quinoline-2-carboxylic acid;

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

Pt++ gl KNO3 25°C 0.10M U K1=9.93 B2=18.26 1988ZMa (68719) 400
K3=7.45

C10H7NO5S H2L CAS 3682-32-4 (1812)

2-Nitroso-1-hydroxynaphthalene-4-sulfonic acid;

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

Pt++ gl oth/un RT 0.10M M K1=5.62 B2=10.69 1993Rab (68893) 401

Medium not stated.

C10H9N3 L Dipyrldylamine CAS 1202-34-2 (2428)

(2,2'-Dipyrldyl)amine; C5H4N.NH.C5H4N

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

Pt++ sp NaNO3 25°C 0.10M U 1998RNa (70341) 402

*K(Pt(CH3)L(Me2SO))=-12.1

Method: UV-vis absoprtion.

C10H12N4O5 HL Inosine CAS 58-63-9 (2344)

Hypoxanthine-9-beta-D-ribofuranoside;

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

Pt++ gl NaClO4 25°C 0.10M C 2004BSb (71403) 403

K(PtA+L)= 8.23

K(PtA+2L)=12.20

HA=2-amino-3-methylmercaptopropionic acid (S-methyl cysteine)

Pt++ oth NaClO4 25°C 0.10M U 1996MOa (71404) 404

K(PtCl(NH3)2L+H)=7.52

Method: HPLC

C10H13N L CAS 2039-80-7 (808)

4-Dimethylaminostyrene; (CH3)2N.C6H4.CH:CH2

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

Pt++ nmr non-aq -15°C 100% U 1986KUa (71693) 405

K(PtA+L=PtL+A)=0.84

Pt = trans-PtCl2(py); A = o-methylstyrene; Medium: CDCl3

C10H13N4O8P H3L IMP CAS 131-99-7 (843)

Inosine-5'-monophosphoric acid;

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

Pt++ gl NaClO4 25°C 0.10M C M 2004BSb (71871) 406

K(PtA+L)= 9.61

K(PtA+H+L)=15.87

HA=2-amino-3-methylmercaptopropionic acid (S-methyl cysteine)

Pt++ cal NaCl 25°C 0.10M U H 19910Ma (71872) 407

Keff(Pt(phen)en+L)=2.34

Measured at pH 7-8. DH=-11.9 kJ mol⁻¹, DS=5 J K⁻¹ mol⁻¹.

C10H13N5O3 L Deoxyadenosine CAS 16373-93-6 (2153)

2'-Deoxyadenosine, Adenine deoxyriboside;

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

Pt++ gl NaNO3 25°C 0.10M M 1999SSb (71889) 408

*K(cis-Pt(NH3)2(H2O)HL)=-5.28

*K(cis-Pt(NH3)2(OH)HL)=-1.7

*K(trans-Pt(NH3)2(H2O)HL)=-4.8

*K(trans-Pt(NH3)2(OH)HL)=-1.7

*K(cis-Pt(NH3)2(HL)Cl)=-1.7, *K(trans-Pt(NH3)2(HL)Cl)=-1.7.

C10H13N5O4 HL Deoxyguanosine CAS 961-07-9 (3911)

2-Aminopurin-6-one 9-deoxyriboside;

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

Pt++ gl NaNO3 25°C 0.10M M 1999SSb (71896) 409

*K(cis-Pt(NH3)2(H2O)HL)=-4.91

*K(cis-Pt(NH3)2(OH)HL)=-8.28

*K(trans-Pt(NH3)2(H2O)HL)=-5.6

*K(trans-Pt(NH3)2(OH)HL)=-8.42

*K(cis-Pt(NH3)2(HL)Cl)=-7.84, *K(trans-Pt(NH3)2(HL)Cl)=-8.24.

Pt++ gl NaNO3 25°C 0.10M M 1998SSd (71897) 410

K(Pt(HL)A+Mg)=1.21

K(Pt(HL)A+Cu)=2.60

K(Pt(HL)A+Zn)=1.81

H2A: deoxyguanosine monophosphoric acid.

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

Pt++ sp NaClO4 25°C 0.10M U M 1977S0a (71948) 411

Keff(Pt(NH3)2+L)=3.6 at pH 6.5

C10H13N5O5 HL Guanosine CAS 118-00-3 (1402)

2-Aminopurin-6-one-9-ribose;

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

Pt++ sp NaClO4 25°C 0.10M U M 1977S0a (72016) 412
Keff((NH3)2Pt+L)=3.7 at pH 6.5

C10H14N2O6 L alpha-Thymidine CAS 4449-43-8 (695)
Thymine-2-desoxyribofuranosyl-5-methyluracil;

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

Pt++ nmr oth/un 37°C ? U M 1989DTa (72108) 413
K(Pt(NH3)2+H-1L)=9.95
K(PtH-1(NH3)2+H-1L)=6.92

Pt++ nmr none 25°C 0.0 U M 1978IKa (72109) 414
K(Pt(NH3)3(H2O)+L)=10.4
K(Pt(en)(H2O)2+L)=10.3
K(Pt(en)L(H2O)+L)=7.4

C10H14N5O7P H2L dGMP CAS 902-04-5 (5781)
Deoxyguanosine-5'-monophosphoric acid;

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

Pt++ gl NaNO3 25°C 0.10M U M 1998S0c (72514) 415
K(MgPdL2+H)=5.75
K(PdL2+Mg)=1.86
K(PdHL2+Mg)=1.32
K(CuPdL2+H)=5.26

K(PdL2+Cu)=3.63, K(PdHL2+Cu)=2.60, K(ZnPdL2+H)=5.2, K(PdL2+Zn)=2.8,
K(PdHL2+Zn)=1.7.

C10H14N5O8P H3L GMP-5 CAS 85-32-5 (2947)
Guanosine-5'-monophosphoric acid;

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

Pt++ gl NaClO4 25°C 0.10M C M 2004BSb (72600) 416
K(PtA+L)=12.38
K(PtA+H+L)=18.80
K(PtA+2H+L)=22.27

HA=2-amino-3-methylmercaptpropionic acid (S-methyl cysteine)

Pt++ gl NaClO4 25°C 0.10M C M 2004BSb (72601) 417
K(PtA+H+L)=15.85
K(PtA+2H+L)=21.25

A=2,2':6',2''-terpyridine (terpy)

C10H16N2O8 H4L EDTA CAS 60-00-4 (120)
1,2-Diaminoethane-N,N,N',N'-tetraethanoic acid, Sequestric acid;

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

Pt++ gl KNO3 25°C 1.0M U 1973S0a (74106) 418
K(PtLOH+H)=9.08
K(PtL+H)=2.88
K(PtHL+H)=2.18
K(PtH2L+H)=0.5

K(PtH3L+H) < 0

Pt++ gl KNO3 25°C 1.0M U 1973S0a (74107) 419
K(PtClL+H)=3.43
K(PtHClL+H)=2.73
K(PtH2ClL+H)=2.25
K(PtBrL+H)=3.46

K(PtHBrL+H)=2.76, K(PtH2BrL+H)=2.26

Pt++ sp KNO3 25°C 1.0M U 1973S0a (74108) 420
K(PtL+Cl)=1.02
K(HPtL+Cl)=1.57
K(H2PtL+Cl)=2.14
K(H3PtL+Cl)=4.0

2nd method: glass electrode. K(PtL+Br)=1.47, K(HPtL+Br)=2.02
K(H2PtL+Br)=2.62, K(H3PtL+Br)=4.5

Pt++ sp KNO3 25°C 1.0M U 1973S0a (74109) 421
K(PtL+I)=2.90
K(PtL+SCN)=4.64
K(PtL+NH3)=4.7

C10H16N6S L Cimetidine CAS 51481-61-9 (5716)
Cimetidine; CH3.C3H2N2.CH2.S.CH2.CH2.NH.C(:NCN)NH.CH3

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

Pt++ gl KNO3 25°C 0.10M U K1=8.82 B2=16.90 1995CCa (74913) 422
B(PtH-1L)=1.41
B(PtH-2L)=-9.96
B(PtH-1L2)=8.60
B(PtH-2L2)=-0.48

Pt++ gl KNO3 25°C 0.10M C K1=8.815 B2=16.926 1992Nca (74914) 423
B(PtH-1L)=1.412
B(PtH-2L)=-9.96
B(PtH-1L2)=8.603
B(PtH-2L2)=-0.477

C10H17N3O6S H3L Glutathione CAS 70-18-8 (333)
Glutamyl-cysteinyl-glycine;

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

Pt++ gl NaClO4 25°C 0.10M C M 2004BSb (75141) 424

K(PtA+L)=16.63
K(PtA+H+L)=20.48
K(PtA+2H+L)=22.33

HA=2-amino-3-methylmercaptopropionic acid (S-methyl cysteine)

Pt++ gl NaClO4 25°C 0.10M C M 2004BSb (75142) 425

K(PtA+2H+L)=24.90
K(PtA+3H+L)=28.43

A=2,2':6',2''-terpyridine (terpy)

C10H22As+ (3901)

As,As,As-Triethylbut-3-enylarsinium cation
L+

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

Pt++ sp NaCl 60°C 2.0M U T H 1967DHb (76214) 426

K(PtCl4+L=PtCl3L+Cl)=3.74

K=3.95(30 C),3.85(44.8 C). DH=-13.8 kJ mol⁻¹, DS=29 J K⁻¹ mol⁻¹

C10H22N+ (3899)

N,N,N-Triethylbut-3-enylammonium cation
L+

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

Pt++ sp NaCl 60°C 2.0M U T H 1967DHb (76215) 427

K(PtCl4+L=PtCl3L+Cl)=3.65

K=3.89(30 C),3.77(44.8 C). DH=-15.9 kJ mol⁻¹, DS=21 J K⁻¹ mol⁻¹

C11H7NO4 H2L CAS 122844-38-6 (8293)

1-Hydroxy-4-nitroso-2-naphthalenecarboxylic acid;

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

Pt++ gl alc/w RT 40% M K1=15.48 B2=28.11 1993Rab (76894) 428

Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

C11H7NO4 H2L CAS 32446-26-7 (8294)

3-Hydroxy-4-nitroso-2-naphthalenecarboxylic acid;

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

Pt++ gl alc/w RT 40% M K1=10.46 B2=17.28 1993Rab (76902) 429

Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

C11H8O3 H2L CAS 86-48-6 (1129)

1-Hydroxy-2-naphthoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	gl	alc/w	RT	40% M			K1=12.22 B2=23.15	1993Rab	(77017) 430

Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

 C11H8O3 H2L CAS 92-70-6 (1130)
 2-Hydroxy-3-naphthoic acid (3-Hydroxy-2-naphthoic acid);

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	gl	alc/w	RT	40% M			K1=12.53 B2=24.31	1993Rab	(77131) 431

Medium: 40% v/v EtOH/H2O, 0.1 M NaClO4.

 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
Pt++	gl	oth/un	25°C	0.20M M				2002Pab	(81290) 432

*K(PtL(H2O))=-5.4
 *K(PtL(OH))=-11.5
 *K(PtLCl)=-12.3

Medium: 0.20 M CH3SO2Na. *K(PtLCl) determined by spectrophotometry.
 *K(PtLCl) and *K(PtL(OH)) refer to formation of amido species.

 C12H26N+ (3963)
 N,N,N-Tripropylallylammonium cation;
 L+

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	sp	NaCl	60°C	2.0M U		M		1967DHb	(83718) 433

K(PtCl4+L=PtCl3L+Cl)=2.12

 C13H22N4O3S L Ranitidine CAS 66357-35-5 (7144)
 N(2-(5-Dimethylaminomethyl)-2-furanylmethyl)thioethyl-N-methyl-2-nitro-1-ethenediamine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	gl	KNO3	25°C	0.10M U			K1=6.15 B2=10.55	1995CCa	(86333) 434

B(PtH-1L)=-1.26
 B(PtH-2L)=-10.01
 B(PtH-1L2)=2.76
 B(PtH-2L2)=-5.72

 C14H14S L CAS 26898-12-4 (5030)
 Dibenzylsulfide; C6H5.CH2.S.CH2.C6H5

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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 Pt++ nmr non-aq 33°C 100% U 1973RbA (87705) 435
 Medium: CHCl3. K(cis-PtL2I2=trans-Pt(L2I2))=0.53
 DH=8.36 kJ mol-1, DS=37.6 J K-1 mol-1

Pt++ nmr non-aq 36°C 100% U 1973RbA (87706) 436
 Medium: CHCl3. K(cis-PtL2Br2=trans-PtL2Br2)=-0.32
 DH=20.06 kJ mol-1, DS=58.5 J K-1 mol-1

Pt++ nmr non-aq 40°C 100% U 1973RbA (87707) 437
 Medium: CHCl3. K(cis-PtL2Cl2=trans-PtL2Cl2)=-0.80
 DH=28.00 kJ mol-1, DS=75.2 J K-1 mol-1

 C14H37N7 L CAS 298-85-5 (5606)
 1,4,7,10,13,16,19-Heptaazacycloheptacosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pt++	gl	NaCl04	25°C	0.15M	C	M			1992BBa (90918)	438
								K(Pt(CN)4+H3L)=2.56		
								K(Pt(CN)4+H4L)=3.07		
								K(Pt(CN)4+H5L)=3.49		
								K(Pt(CN)4+H6L)=3.61		

K(Pt(CN)4+H7L)=3.71

 C15H32N+ (4057)
 N,N,N-Tributylallylammonium cation
 L+

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pt++	sp	NaCl	60°C	2.0M	U				1967DHb (92541)	439
								K(PtCl4+L=PtCl3L+Cl)=2.49		

 C16H40N8 L CAS 297-11-0 (5588)
 1,4,7,10,13,16,19,22-Octaazacyclotetracosane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pt++	gl	NaCl04	25°C	0.15M	C	M			1992BBa (95662)	440
								K(Pt(CN)4+H3L)=2.48		
								K(Pt(CN)4+H4L)=3.00		
								K(Pt(CN)4+H5L)=3.44		
								K(Pt(CN)4+H6L)=3.53		

K(Pt(CN)4+H7L)=3.59, K(Pt(CN)4+H8L)=3.71

 C18H15O3PS HL CAS 16704-71-5 (3365)
 3-Diphenylphosphino-benzene sulfonic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pt++ ISE NaClO4 25°C 1.0M U K1=11.5 B2=22.60 1972CBa (97111) 441
K2=10.5 (trans isomer)

C18H15P L CAS 603-35-0 (621)
Triphenylphosphine; (C6H5)3P

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

Pt++ ISE KNO3 25°C 0.10M U 1973GGe (97146) 442
K(trans-Pt(NH3)2LC1+H2O=Pt(NH3)2L(H2O)+C1)=3.65
In 0.1 M NH4ClO4: K(trans-Pt(NH3)3L+H2O=Pt(NH3)2L(H2O)+NH3)=6.84

C18H45N9 L (5838)
1,4,7,10,13,16,19,22,25-Nonaazacycloheptacosane;

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

Pt++ gl NaClO4 25°C 0.15M C M 1992BBa (98972) 443
K(Pt(CN)4+H4L)=3.00
K(Pt(CN)4+H5L)=3.53
K(Pt(CN)4+H6L)=3.80
K(Pt(CN)4+H7L)=3.83

K(Pt(CN)4+H8L)=4.17

C20H50N10 L CAS 862-28-2 (5839)
1,4,7,10,13,16,19,22,25,28-Decaazacyclotriacontane;

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

Pt++ gl NaClO4 25°C 0.15M C M 1992BBa (101004) 444
K(Pt(CN)4+H4L)=2.69
K(Pt(CN)4+H5L)=2.77
K(Pt(CN)4+H6L)=3.14
K(Pt(CN)4+H7L)=3.36

K(Pt(CN)4+H8L)=3.44, K(Pt(CN)4+H9L)=3.83

C21H20N3 L Ethidium CAS 1239-45-8 (6873)
3,8-Diamino-5-ethyl-6-phenylphenanthridium;

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

Pt++ sp alc/w 25°C 100% U HM 1993RBA (101147) 445
K=1.41

Medium:MeOH. T.-50 to 50 C. K:cis-[PtAB2(N3-(H-1L))]+HC=cis-[PtAB2(N3-L)]+C
A:Cl. B:NH3. HC:CH3COOH. DH=-57.3 kJ mol⁻¹; DS=-165. Also data for trans-

C22H44N2O2S2 L CAS 73487-00-0 (5937)
N,N,N',N'-Tetrabutyl-3,6-dioxaoctanedithioamide; ((C4H9)2N.CS.CH2.O.CH2-)2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	nmr	oth/un	?	?	U	M			1983HPa (102409)	446
								K(PtLCl2+I=PtLClI+Cl)=0.23		
								k(PtLCl2+Br=PtLClBr+Cl)=0.241		
								K(PtLClBr+Br=PtLBr2+Cl)=0.056		

Medium: CD3CN

C22H55N11 L CAS 60464-68-8 (5836)
 1,4,7,10,13,16,19,22,25,28,31-Undecaazacyclotritriacontane;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	gl	NaClO4	25°C	0.15M	C	M			1992BBa (102511)	447
								K(Pt(CN)4+H4L)=3.17		
								K(Pt(CN)4+H5L)=3.60		
								K(Pt(CN)4+H6L)=4.71		
								K(Pt(CN)4+H7L)=5.46		
								K(Pt(CN)4+H8L)=5.83, K(Pt(CN)4+H9L)=6.09, K(Pt(CN)4+H10L)=6.67		

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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 :-

END