

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			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)	1972GIa	(815) 1
Pt(IV)	EMF	NaCl04	25°C	3.00M	U TI			K=-1.12 Medium: HCl04; 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 NaCl04, K=-0.80(25 C), -1.39(60 C)	1972GIa	(816) 2
Pt(IV)	EMF	NaCl04	25°C	3.00M	U TI			K=-2.86 Medium: HCl04; 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 NaCl04, K=-2.70(25 C), -2.59(60 C)	1972GIa	(817) 3
Pt(IV)	oth	oth/un	25°C	0.07M	U M			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	1969PEa	(818) 4
Pt(IV)	EMF	KCl	25°C	1.00M	U I M			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	1968GDd	(819) 5
Pt(IV)	oth	NaCl04	60°C	3.00M	U			K=16.01, 529mV Medium: 3 M NaCl+NaCl04. In HCl+HCl04: K= 15.82, 523mV. K: PtCl6-- + 2Ag(s) = PtCl4-- + 2AgCl(s)	1968GLa	(820) 6
Pt(IV)	EMF	NaCl	20°C	0.10M	U T M			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)	1968ZMa	(821) 7

Pt(IV)	oth	NaClO ₄	60°C	3.00M	U		1967GLa	(822)	8
K=-1.35									
Medium: 3 NaCl+NaClO ₄ . With HCl+HClO ₄ : K=-1.70. K:Pt(s)+PtCl ₆ +2Cl=2Pt(II)Cl ₄									
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(NH ₃) ₂ (NO ₂) ₂ Cl ₂ +2e=Pt(NH ₃) ₂ (NO ₂) 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: H ₂ SO ₄ . K: PtCl ₆ -- + 2e=PtCl ₄ -- + 2Cl-									
Pt(IV)	EMF	oth/un	35°C	1.00M	U	T	1964YTa	(825)	11
K=23.88(730mV, 35 C)									
Medium:HCl. K:PtCl ₆ -- + 2e=PtCl ₄ -- + 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)Cl ₆ +2e=Pt(II)Cl ₄ +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: PtO ₂ (s)+2H+2e=Pt(OH) ₂ (s). K(Pt(IV)Cl ₆ +2e=PtCl ₄ +2Cl)=23.0(680 mV).									
K(Pt(OH) ₂ (s)+2H+2e=Pt(s)+2H ₂ O)=33(980 mV).K(PtBr ₄ +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(NH ₃) ₄ Br ₂ ++ + 2e = Pt(NH ₃) ₄ ++ + 2Br-. K'=Pt(NH ₃) ₂ Br ₂ +2e=cis-Pt(NH ₃) ₂ Br ₂ +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)Cl ₆ +2e=Pt(II)Cl ₄ +2Cl. At 20 C: K=26.0(756 mV). At I=0, 25 C: K=25.26(747 mV). With Pt(IV)Br ₆ K=21.41(633 mV); Pt(IV)I ₆ : 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)Cl ₆ +2e=Pt(II)Cl ₄ +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 NaCl04 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)₂H₂NC₂H₄OH

Pt(IV) sp NaCl04 25°C 3.0M U HM 1972MNa (2246) 25

K(Pt(en)₃+L)=-0.89

By solubility: K=-0.92

Pt(IV) sp NaCl04 25°C ? U 1971EGc (2247) 26

K₄=5.04

K₅=4.0

K₆=3.3

Medium: HCl04

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 NaCl04 25°C 0.1M C 1975KNb (3352) 32
 Kout(Pt(en)3+L)= 2.42
 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 1995GAa (5503) 33
 K5=1.46
 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 Kout (1:1 complex)=1.09 (I=0.10 M), 0.62 (I=0.25 M), 0.22 (I=0.50 M)
and Kout (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
Kout(Pt(pn)3+L)= 0.68

Also for I=0.5 M Klout=0.15; for 0 M Klout=1.51;
pn=propylenediamine

Pt(IV) EMF NaNO3 40°C 1.0M U M 1973KSe (5507) 37
K(PtL2A4+L)=3.15
K(PtL3A4+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
K6=2.88

Medium: H2SO4. DH(K6)=-30.5 kJ mol⁻¹. K6=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(NH3)4+L)=-1.42
K(Pt(OH)2(NH3)3NO2+L)=-0.02

At 50 C: values: -1.22, 0.08

Pt(IV) oth oth/un ? var U 1970CPa (5511) 41
K(PtL4(H2O)OH+H)=1.9
K(PtL4(OH)2+H)=5.5

Method: ir and Raman

Pt(IV) EMF oth/un 25°C 3.0M U T HM 1970KSa (5512) 42
K6=2.76

Medium: H2SO4. DH(K6)=-23.0 kJ mol⁻¹. K6=2.72(35 C), 2.61(42 C), 2.49(50 C),
2.41(60 C). In 0.2 M H2SO4, 25 C: K6=2.36

Pt(IV) gl oth/un ? dil U 1970MMg (5513) 43
K(PtCl5OH+H)=3.80

Pt(IV) EMF NaClO4 60°C 3.0M U 1968GLa (5514) 44
K6=1.54

Pt(IV) gl KNO3 20°C 0.10M U T 1966GKd (5515) 45
K(trans-Pt(NH3)2L3+L)=2.40
K(trans-Pt(NH3)2L2+L)=3.7

Also values at 20 - 50 C

Pt(IV) ISE NaClO4 25°C var U 1966Sdb (5516) 46
K5K6=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		

FCIBrI		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
 $K(\text{trans-Pt(en)2Cl2} + \text{Br} = \text{Pt(en)2ClBr} + \text{Cl}) = 1.06$; $K(\text{Pt(en)2ClBr} + \text{Br} = \text{Pt(en)2Br2} + \text{Cl}) = 0.63$

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. $B6(I)/B6(Cl) = 19.30(0\text{ C}), 17.09(45\text{ C})$; $/Br = 17.79(0\text{ C}), 15.10(44\text{ C})$. $DH(\text{PtCl6} + 6I = \text{PtI6} + 6Cl) = -79\text{ kJ mol}^{-1}$. $DH(\text{PtBr6} + 6I = \text{PtI6} + 6Br) = -96$

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

$K_{\text{out}}(\text{Pt(pn)3} + \text{L}) = 0.0.34$

Also; for 0 M $K_{\text{Iout}} = 1.23$;

pn=propylenediamine

Pt(IV) sol NaCl04 25°C 3.0M U 1972MNa (8329) 59

$K(\text{Pt(en)3} + \text{I}) = -1.05$

Pt(IV) EMF oth/un 25°C dil U T M 1971ZFa (8330) 60

$K(\text{cis-PtA2L2(H2O)OH} + \text{H}) = 2.45$

$K(\text{trans-PtA2L2(H2O)OH} + \text{H}) = 2.52$

$K'(\text{cis-PtA2L2(OH)2} + \text{H}) = 3.68$

$K'(\text{trans-PtA2L2(OH)2} + \text{H}) = 3.71$

$A = \text{NH3}$. $K(\text{cis}) = 3.43(0\text{ C}), 2.26(50\text{ C})$. $K(\text{trans}) = 3.38(0\text{ C}), 2.26(50\text{ C})$

$K'(\text{cis}) = 4.25(25\text{ C}), 3.41(50\text{ C})$. $K'(\text{trans}) = 4.25(25\text{ C}), 3.46(50\text{ C})$

Pt(IV) EMF oth/un 25°C dil U 1971ZFb (8331) 61

$K(\text{Pt(NH3)3I(H2O)OH} + \text{H}) = 2.65$

$K(\text{Pt(NH3)3I(OH)2} + \text{H}) = 3.23$

$K(\text{Pt(NH3)3I2OH} + \text{H}) = 3.35$

0-50 C

Pt(IV) ISE oth/un 25°C dil U 1967CPb (8332) 62

$K4 = 4.8$

$K5 = 4.4$

$K6 = 3.4$

$K(\text{PtI4} + \text{I} = \text{PtI3} + \text{I2}) = 0.8$

Also spectrophotometry, glass electrode, kinetics. $K(\text{PtI5OH} + \text{H}) = 8.6$

$K(\text{PtI6} = \text{Pt(II)I4} + \text{I2}) = 8.1$

Pt(IV) gl oth/un 25°C 0.10M U 1967NPc (8333) 63

$K(\text{Pt(OH)6} + \text{L} = \text{Pt(OH)5L} + \text{OH}) = -1.57$

$K(\text{Pt(OH)5L} + \text{L}) = -1.82$

$K(\text{Pt(OH)4L2} + \text{L}) = -1.87$

$K(\text{Pt(OH)3L3} + \text{L}) = -2.0$

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

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

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

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

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

NH3O 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 1960NPb (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
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* $K_1(\text{Pt}(\text{NH}_3)_5\text{Cl}) = -8.4$ 
* $K_2 = -10.5$ 
* $K_1(\text{Pt}(\text{MeNH}_2)_4\text{NH}_3\text{Cl}) = -6.8$ 
* $K_2 = -10.6$ 
-----
Pt(IV)    gl  oth/un  ?   dil  U                               1961KUb (11977)  81
* $K_1 = -4.99$ 
Metal: Pt(ClNCH2CH2NHCl)PyNO2NH3Cl+
-----
Pt(IV)    EMF oth/un 29°C dil  U                               1960PSa (11978)  82
* $K_1(\text{Pt}(\text{NH}_3)_6) = -7.16$  in H2O
* $K_1(\text{Pt}(\text{NH}_3)_6) = -7.80$  in D2O
-----
Pt(IV)    gl  oth/un 25°C dil  U    M                               1959GVa (11979)  83
* $K_1(\text{trans-Pt}(\text{NH}_3)_4\text{Cl}_2) = -11.2$ 
* $K_1(\text{cis}) = -9.46$ 
* $K_2(\text{cis}) = -10.25$ 
* $K_1(\text{Pt}(\text{pn})_3) = -5.41$ 
* $K_2(\text{Pt}(\text{pn})_3) = -9.60$ , * $K_3 = -10.68$ ; * $K_1(\text{Pt}(\text{pn})_2\text{Cl}_2) = -8.21$ , * $K_2(\text{cis}) = -10.36$ 
* $K_2(\text{trans}) = -10.47$ 
-----
Pt(IV)    EMF oth/un 20°C var  U    M                               1956JOa (11980)  84
* $K_1(\text{Pt}(\text{NH}_3)_6) = -7.75$ 
Data also for Pt(NH3)5Cl, Pt(NH3)3Cl3
-----
Pt(IV)    gl  oth/un 25°C dil  U    M                               1949GGc (11981)  85
* $K_1(\text{Pt}(\text{MeNH}_2)_4\text{Cl}_2) = -10.85$ 
* $K_1(\text{Pt}(\text{EtNH}_2)_4\text{Cl}_2) = -11.2$ 
-----
Pt(IV)    gl  oth/un 25°C dil  U    M                               1948GGa (11982)  86
* $K_1(\text{Pt}(\text{NH}_3)_6) = -7.92$ 
* $K_2(\text{Pt}(\text{NH}_3)_6) = -10.08$ 
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
* $K_1(\text{Pt}(\text{NH}_3)_6) = -8.9$ 
DH(* $K_1$ )=86.6; * $K_1 = -8.6(30^\circ\text{C})$ ,  $-7.6(50^\circ\text{C})$ . 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
* $K(\text{PtA}_4\text{Cl}_2 + \text{L} = \text{PtA}_4\text{ClL} + \text{Cl}) = 2.55$ 
* $K(\text{PtA}_4\text{ClL} + \text{L} = \text{PtA}_4\text{L}_2 + \text{Cl}) = 1.08$ 
A=NH3
*****
SO3--          H2L      Sulfite          CAS 7782-99-2 (801)

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Sulfite;

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

S04--		H2L		Sulfate				CAS 7664-93-9	(15)	
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Sulfate;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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.CO0H

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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)	
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Methylamine; CH3.NH2


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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt(IV)     gl  NaClO4 25°C 0.10M U      K1=9.56  B2=13.49  1972SSe (31933) 102
*****
C5H5N      L      Pyridine      CAS 110-86-1 (31)
Pyridine, Azine;
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt(IV)     EMF KNO3  25°C 1.00M U      M      1973KYb (36668) 103
B(Pt(NH3)3LC12)=50.7
B(Pt(NH3)2L2C12)=50.2(cis)
B(Pt(NH3)2L2C12)=49.6(trans)
B(Pt(NH3)L3C12)=43.9
B(PtL4C12)=40.8
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*****
C5H9NO4      H2L      Glutamic acid  CAS 56-86-0 (22)
2-Aminopentanedioic acid; H2N.CH(CH2.CH2.COOH)COOH
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt(IV)     gl  NaClO4 25°C 0.10M U      K1=8.99  B2=12.68  1972SSe (39122) 104
*****
C5H10N4O3    L      CAS 54376-69-1 (8335)
N,N'-Carbonylbis(2-aminoacetamide);
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt(IV)     gl  NaClO4 25°C 0.10M U TIH  K1=10.90 B2=17.60  1980SAc (40138) 105
Data for 0.075-0.15 M. At I=0, K1=11.10, K2=6.95. Also data for 30 C.
DH and DS values.
*****
C5H11N      L      Piperidine      CAS 110-89-4 (105)
Perhydropyridine; cyclo(-CH2.CH2.CH2.NH.CH2.CH2-) C5H11N
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt(IV)     EMF KNO3  25°C 1.00M U      M      1973KYb (40453) 106
B(Pt(NH3)2L2C12)=55.7(cis)
*****
C6H8O6      H2L      Ascorbic acid  CAS 50-81-7 (285)
Ascorbic acid (Vitamin C);
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-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt(IV)     kin NaCl  25°C 0.10M U      1998HHa (45653) 107
Kout(PtCl6+L)=-3.19
Kout(trans-PtCl4(NH3)2+L)=-2.4
Kout(cis-PtCl4(NH3)2+L)=-2.63
-----

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 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(IV)	sp	oth/un	30°C	0.0	U		K(?)=2.65	1966NNa (45711)	108

 C7H6O2S H2L Thiosalicylic CAS 147-93-3 (236)
 2-Mercaptobenzoic acid; HS.C6H4.COOH

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt(IV)	oth	alc/w	?	50%	U		K1=4.25 B3=12.0	1973NNa (53914)	109

 C8H8N3OClS L CAS 23499-73-2 (4588)
 5-Chlorofurylacrolein thiosemicarbazone; Cl.C4H2O.CH:CH.CH:N.NH.CS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt(IV)	sp	oth/un	20°C	0.10M	U		B3eff = 10.72 at pH 4	1972KLa (59395)	110

 C8H8N4O3S L (4571)
 5-Nitrofurylacrolein thiosemicarbazone; O2N.C4H2O.CH:CH.CH:N.NH.CS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt(IV)	sp	oth/un	20°C	0.10M	U		B3 = 10.60 (pH 4)	1972KLa (59414)	111

 C8H9N3OS L CAS 5466-26-2 (4574)
 Furylacrolein thiosemicarbazone; C4H3O.CH:CH.CH:N.NH.CS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt(IV)	sp	oth/un	20°C	0.10M	U		B2=11.00	1972KLa (60553)	112

 C9H11N3OS L CAS 34161-38-1 (4681)
 5-Methylfurylacrolein thiosemicarbazone;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt(IV)	sp	oth/un	20°C	0.10M	U		B3=11.25 (pH 4)	1972KLa (66474)	113

 C10H11N3S L CAS 5351-70-2 (4734)
 Cinnamaldehyde thiosemicarbazone; C6H5.CH:CH.CH:N.NH.CS.NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt(IV)	sp	alc/w	20°C	50%	U		B3=10.82	1972KLa (71086)	114
Medium: 50% EtOH, 0.1 M, pH=4									

C18H22N2OS		L					Methoxypromazin CAS 61-01-8 (2872)		
10-(3-Dimethylaminopropyl)-2-methoxyphenothiazine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt(IV)	sp	oth/un	27°C	1.00M	U		Keff=5.58	1984TSa (97511)	115
Medium: 1 M H3PO4									

Br-		HL					Bromide CAS 10035-10-6 (19)		
Bromide;									
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		
Pt(III). A=HPO4. Medium: phosphate buffer, pH 3.0									

Cl-		HL					Chloride CAS 7647-01-0 (50)		
Chloride;									
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		
Pt(III). A=HPO4. Medium: phosphate buffer, pH 3.0									

OH-		HL					Hydroxide (57)		
Hydroxide;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt(not2,4)	sp	NaCl04	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									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo

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
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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
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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
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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
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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
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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
 $K=24.50(749mV, 35\text{ }^{\circ}C)$
 Medium:HCl;K:PtCl₄-- + 2e=Pt(s) + 4Cl-. $K=22.56(768mV, 70^{\circ}C)$, $21.60(778mV, 90\text{ }^{\circ}C)$

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

 Pt++ EMF none 60°C 0.0 U 1931GRb (840) 129
 $K=23.8(785\text{ mV})$
 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
							$K(PtACl_2+Br=PtAClBr+Cl)=1.41$ $K(PtAClBr+Br=PtABr_2+Cl)=0.43$ $K(PtAICl+Br=PtAIBr+Cl)=1.0$		
Medium: MeOH, 0.5 M LiClO ₄ . A=C ₆ H ₅ S.CH ₂ .CH ₂ .SC ₆ H ₅ .									
Pt++	sp	NaClO ₄	25°C	0.10M	U			1994SRa (2255)	131
							$K(PtAB(H_2O)+L=PtABL+H_2O)=2.15$		
A: C ₆ H ₄ .CH ₂ .N(CH ₃) ₂ ; B: NC ₅ H ₄ .SO ₃ -.									
Pt++	sp	NaClO ₄	25°C	1.00M	U	I	K ₁ =1.9	1978ELa (2256)	132
Pt++	sol	oth/un	25°C	1.0M	U	HM		1974MKf (2257)	133
							$K(Pt(NH_3)_4+L)=0.3$ $K(Pt(en)_2+L)=0.65$		
Medium: NaF. By calorimetry.DH(Pt(NH ₃) 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: CHCl ₃ (S). K: trans-Pt(Bz ₂ S) ₂ L ₂ =cis-Pt(Bz ₂ S) ₂ L ₂ , Bz=benzoyl. DH(K)=-20.1 kJ mol ⁻¹									
Pt++	gl	KN ₃	25°C	1.0M	U			1973SAa (2259)	135
							$K(H_2PtLA+H)=2.26$		

$K(\text{HPtLA}+\text{H})=2.76$

$K(\text{PtLA}+\text{H})=3.46$

$K(\text{PtA}+\text{L})=1.47$

H4A=EDTA. $K(\text{PtA}+2\text{L})=2.02$

Pt++ EMF mixed ? 0.10M U 1972GGb (2260) 136

$K(\text{PtH}(\text{Ph}_3\text{P})_2+\text{L})=1.51$

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

$K=4.75(15\text{ C}), 4.34(35\text{ C})$

Pt++ gl NaNO₃ 25°C 0.30M U 1972KTc (2262) 138

$K(\text{PtL}_2(\text{DMSO})+\text{L})=3.60$

Pt++ ISE KNO₃ ? 0.01M U M 1971KTg (2263) 139

$K(\text{Pt}(\text{DMSO})+\text{L})=5.40$

Pt++ oth oth/un 25°C var U M 1971MKd (2264) 140

$K(\text{Pt}(\text{NH}_3)_2\text{L}_2+\text{Pt}(\text{NH}_3)_2\text{L}_4)=-4.6$

Medium: acetone, KBr. Pt(II)-Pt(IV) complex. Method: dialysis

Pt++ sp NaClO₄ 25°C 0.50M U T M 1970ELb (2265) 141

$K_3=3.6$

$K_4=2.7$

$K(\text{cis-trans-PtL}_2(\text{H}_2\text{O})_2)=-0.34$

Medium: HClO₄. $K_3=3.4$, $K_4=2.6(35\text{ C})$. Data also by kinetics

Pt++ EMF non-aq 450°C 100% U $K_1=0.13$ $B_2=1.06$ 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 $K_1=3.82$ $B_2=6.74$ 1968GVa (2268) 144

Metal:Pt(NH₃)₂++. Method:chemical analysis. At 25 C: $K_1=4.05$, $K_2=3.02$

DH(K_2)=-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

$K(\text{PtACl}+\text{L}=\text{PtAL}+\text{Cl})=0.54$

A=diethylenetriamine. Method:chemical analysis. $K=0.58(25\text{ C})$. In 'dilute soln.': $K_1=4.02(25\text{ C}), 4.07(35\text{ C})$

Pt++ gl oth/un 25°C 0.10M U 1967NPd (2270) 146

$K(\text{Pt}(\text{OH})_4+\text{H}+\text{L}=\text{Pt}(\text{OH})_3\text{L})=11.15$

$$K(\text{PtOHL}3 + \text{H} + \text{L} = \text{PtL}4) = 8.15$$
$$K(\text{PtBr}_3\text{OH} + \text{H}) = 7.9$$
$$K(\text{Pt}(\text{dien})+\text{L})=4.3$$
$$K(\text{Pt}(\text{MeNH}_2)_2\text{NO}_2 + \text{L}) = 4.07$$
$$K(\text{Pt}(\text{NH}_3)_2\text{BrH}_2\text{O} + \text{Br}) = 3.2$$
$$K(\text{PtPyBr}_2\text{H}_2\text{O}+\text{Br})=2.35$$
$$K(\text{Pt} + 2\text{e} = \text{Pt}(\text{s})) = 41.5 \quad (1200 \text{ mV})$$
$$K(\text{trans-PtBr}(\text{NH}_3)_2\text{H}_2\text{O} + \text{Br}^-) > 3$$

B4=20.5

B4=18

Cyanide;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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 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
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 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
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 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
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 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
 $K_{out}(Pt(trans-A)pyCl+Cl)=2.85$
 $K_{out}(Pt(cis-A)pyCl+Cl)=2.82$

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
 $K(Pt(NH_3)_2NO_2+Cl)=4.21$ (trans)
 $K(Pt(NH_3)_2NO_2+Cl)=3.26$ (cis)

Pt++ ISE KNO3 25°C 0.50M U M 1974KUd (5530) 167
 $K(Pt(DMSO)(H_2O)_3+L)=4.89$
 $K(Pt(DMSO)(H_2O)_2L+L)=4.22$
 $K(Pt(DMSO)(H_2O)L_2+L)=2.55$

Pt++ EMF KNO3 25°C 0.50M U 1974KUd (5531) 168
 $K(Pt(DMSO)+L)=4.89$
 $K(Pt(DMSO)L+L)=4.22$
 $K(Pt(DMSO)L_2+L)=2.55$

Pt++ sol oth/un 25°C 1.0M U HM 1974MKf (5532) 169
 $K(Pt(NH_3)_4+L)=-0.15$
 $K(Pt(en)_2+L)=0.13$

Medium: NaF. By calorimetry: $DH(both)=0$, $DS(NH_3)=-2.9$ J K⁻¹ mol⁻¹, $DS(en)=2.5$

Pt++ EMF NaClO4 25°C 0.32M U T HM 1973CMA (5533) 170
 $K(Pt(en)+L)=3.84$
 $K(Pt(en)L+L)=2.66$
 $DH(K_1)=4.2$ kJ mol⁻¹, $DH(K_2)=-16.7$, $K_1=3.83$, $K_2=2.63$ (30 C); $K_1=3.86$, $K_2=2.56$ (35 C)

Pt++ gl mixed 25°C 70% U M 1973GGf (5534) 171
 $K(Pt(C_2H_4)S+L)=1.82$
 $K(Pt(C_2H_4)S(NH_3)_2+L)=3.24$
 $K(Pt(PPh_3)S(NH_3)_2+L)=3.17$

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
 $K(Pt(DMSO)(NH_3)+2L)=3.19$ (cis)
 $K(PtDMSO(NH_3)+2L)=4.60$ (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
 $K(\text{PtA}+\text{L})=1.02$
 $K(\text{PtHA}+\text{L})=1.5$
 $K(\text{PtH}_2\text{A}+\text{L})=2.14$
 $K(\text{PtH}_3\text{A}+\text{L})=4$
H4A=EDTA. $K(\text{PtH}_2\text{AL}+\text{H})=2.25$, $K(\text{PtH}_2\text{AL}+\text{H})=2.73$, $K(\text{PtHAL}+\text{H})=3.43$

Pt++ gl mixed ? 70% U 1972GGb (5538) 175
 $K(\text{Pt}(\text{PPh}_3)_2\text{H}+\text{L})=1.0$
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
 $K(\text{Pt}(\text{NH}_3)_2\text{A}+\text{L})=4.09(\text{cis})$
 $K(\text{Pt}(\text{NH}_3)_2\text{A}+\text{L})=4.01(\text{trans})$
 $K(\text{Pt}(\text{NH}_3)_2\text{AOH}+\text{H})=5.22(\text{cis})$
 $K(\text{Pt}(\text{NH}_3)_2\text{AOH}+\text{H})=3.85(\text{trans})$
A=DMSO

Pt++ ISE KNO3 25°C 0.50M U 1971KTf (5540) 177
 $K=4.22$
K: $\text{Pt}(\text{DMSO})\text{Cl}+\text{Cl}=\text{trans-Pt}(\text{DMSO})\text{Cl}_2(\text{H}_2\text{O})_2$

Pt++ ISE KNO3 20°C 0.01M U 1971KTg (5541) 178
 $K(\text{Pt}(\text{DMSO})_2+\text{L})=4.74$

Pt++ EMF KNO3 25°C 0.10M U 1971KTi (5542) 179
 $K(\text{Pt}(\text{DMSO})\text{Cl}_2+\text{Cl})=2.55$
 $K(\text{Pt}(\text{C}_2\text{H}_4)\text{Cl}_2+\text{Cl})=2.43$

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

Pt++ sp KNO3 20°C 2.0M U 1971STa (5544) 181
 $K_4=1.89$

Pt++ sp oth/un 20°C var U M 1971STa (5545) 182
 $K(\text{PtNOCl}_4+\text{Cl})=0.5$
 $K(\text{Pt}(\text{NO}(\text{NH}_3)_2\text{Cl}_2+\text{Cl})=1.5$
Medium: H2SO4

Pt++ sp NaClO4 25°C 0.50M U T $K_1=5.0$ $B_2=9.0$ 1970ELa (5546) 183
 $B_3=11.8$
 $B_4=13.8$
Medium: HClO4. Ion exchange also used. At 60°C: $K_1=4.8$, $B_2=8.6$, $B_3=11.3$,
 $B_4=13.0$. $\text{DH}(B_3)=-8\text{ kJ mol}^{-1}$, $\text{DH}(B_4)=-12$

Pt++ kin NaClO4 25°C 0.50M U T M 1970ELa (5547) 184
 $K_2(\text{cis})=3.7$

						K2(trans)=3.7			
						K3(cis)=3.1			
						K3(trans)=3.2			
Medium: HClO4. K(trans-Pt(H2O)2L2=cis-Pt(H2O)2L2)=0.08. K2(cis): Pt(H2O)3L+L=cis-Pt(H2O)2L2. Data also at 35 and 60 C									
Pt++	EMF	oth/un	25°C	3.0M	U T H		1970KSa	(5548)	185
						K4=2.41			
Medium: H2SO4. DH(K4)=-23.0 kJ mol ⁻¹ . K4=2.38(35 C), 2.32(42 C), 2.18(50 C), 2.04(60 C). In 0.2 M H2SO4, 25 C: K4=2.20									
Pt++	sp	alc/w	25°C	100%	U		1968MMc	(5549)	186
						K(Pt(C2H4)L2+L)=4.3			
Medium:EtOH									
Pt++	sp	oth/un	0°C	dil	U T H		1968PAb	(5550)	187
						K(cis-Pt(NH3)2L+L)=2.39			
K=2.42 (18 to 30 C)									
Pt++	kin	oth/un	30°C	0.0	U H		1968PMg	(5551)	188
						K(Pt(NH3)2L+L)=3.9			
DH=-5.0 kJ mol ⁻¹ , DS=58.5 J K ⁻¹ mol ⁻¹									
Pt++	kin	NaClO4	25°C	0.50M	U T H	K1=1.89	1967DEa	(5552)	189
K4=2.00(15 C), 1.77(35 C). DH(K4)=-19 kJ mol ⁻¹ , DS=-25 J K ⁻¹ mol ⁻¹									
Pt++	oth	NaClO4	60°C	0.50M	U	K1=1.51	1967ELb	(5553)	190
Method:chemical analysis. Medium:HClO4									
Pt++	ISE	NaNO3	18°C	0.10M	U M		1967GGf	(5554)	191
						K(cis-(NH2OCH3)2L+L)=4.20			
						K(trans-(NH2OCH3)2L+L)=3.05			
						K(cis-(NH2OH)2L+L)=3.44			
						K(trans-(NH2OH)2L+L)=2.92			
Pt++	kin	NaClO4	25°C	0.50M	U		1966ELa	(5555)	192
						K4=1.89			
Pt++	sp	NaClO4	25°C	0.50M	U		1966ELb	(5556)	193
						K3=2.96			
						K4=1.87			
Medium:HClO4. By anion exchange:K3=3.0									
Pt++	sp	NaClO4	25°C	0.20M	U		1966EMa	(5557)	194
						K(trans-PtA2(PEt3)H2O+L)=3.1			
Medium:HClO4. A=piperidine									
Pt++	ISE	KNO3	18°C	1.0M	U		1966GGc	(5558)	195
						K(cis-Pt(NH3)2L+L)=2.72			
						K(trans-Pt(NH3)2L+L)=3.29			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Method: chemical analysis

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

$$\begin{aligned} &+K1: \text{Pt}(\text{OH})_4 + \text{H} + \text{L} = \text{Pt}(\text{OH})_3\text{L} + \text{H}_2\text{O}; \quad +K2: \text{Pt}(\text{OH})_3\text{L} + \text{H} + \text{L} = \text{Pt}(\text{OH})_2\text{L}_2 + \text{H}_2\text{O} \\ &+K3: \text{Pt}(\text{OH})_2\text{L}_2 + \text{H} + \text{L} = \text{Pt}(\text{OH})\text{L}_3 + \text{H}_2\text{O}; \quad K4: \text{Pt}(\text{OH})\text{L}_3 + \text{H} + \text{L} = \text{PtL}_4 + \text{H}_2\text{O} \end{aligned}$$

Method: chemical analysis. $\Delta H = -23 \text{ kJ mol}^{-1}$. At $I=0$ corr.: $K=4.09$

K(cis-Pt(NH₃)₂L)=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)=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

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

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

B4=16.6

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

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

Also by chemical analysis, medium: Na_2SO_4 . $\Delta H = -8.8 \text{ kJ mol}^{-1}$.
27 C: $K(\text{Pt}(\text{NH}_3)\text{L}+\text{L}) = 4.4$

$$K_4 = 1.74$$
$$K(\text{PtL}_3\text{OH} + \text{H}) = 7.0$$

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

$$K'(\text{Pt(en)}_2\text{L}) = 0.48$$

$$K(\text{Pt}(\text{diars})_2 + \text{Br}) = 2.60$$

$$K(\text{ABrI} + \text{I} = \text{AI}_2 + \text{Br}) = 1.63$$

-3.02(cis-Pt(NH₃)₂I₂); -4.00(trans). Also 10, 50 C

$$K(\text{AClBr} + \text{Br} = \text{ABr}_2 + \text{Cl}) = 0.75$$

DH=0 kJ mol⁻¹(Cl), -4.2(Br), -16(I), -9.4(SCN), 0(N₃), -19.2(thiourea)

$$+K1=1.16$$

+K2=0.92

+K3=0.30

+K4=0.22

Method: chemical analysis. +K1: $\text{PtCl}_4 + \text{Br} = \text{PtCl}_3\text{Br} + \text{Cl}$ etc. $\text{PtCl}_3(\text{H}_2\text{O}) + \text{Cl} = \text{PtCl}_4 + \text{H}_2\text{O} = 1.74$, $K(\text{PtCl}_2\text{Br}(\text{H}_2\text{O}) + \text{Cl} = \text{PtCl}_3\text{Br} + \text{H}_2\text{O}) = 1.85$

Pt++	gl	oth/un	23°C	0.20M	U	M	1956CGa	(7427)	224
							$K(\text{C}_2\text{H}_4\text{PtCl}_2(\text{H}_2\text{O}) + \text{NH}_3) = 7.8$		
							$K(\text{C}_2\text{H}_4\text{PtCl}_2(\text{H}_2\text{O}) + \text{Cl}) = 2.5$		

Pt++	sp	oth/un	25°C	0.04M	U	M	1955LCb	(7428)	225
							$K(\text{C}_2\text{H}_4\text{PtCl}_2\text{OH} + \text{H}) = 5.0$		

Pt++	EMF	NaClO4	25°C	0.20M	U	M	1955LCb	(7429)	226
							$K(\text{C}_2\text{H}_4\text{PtCl}_2(\text{H}_2\text{O}) + \text{SCN}) > 4.6$		
							$K(\text{C}_2\text{H}_4\text{PtCl}_2(\text{H}_2\text{O}) + \text{NH}_3) = 7.5$		
							$K(\text{C}_2\text{H}_4\text{PtCl}_2(\text{H}_2\text{O}) + \text{F}) < 1$		
							$K(\text{C}_2\text{H}_4\text{PtCl}_2(\text{H}_2\text{O}) + \text{Cl}) = 2.52$		

Method: Ag electrode. Medium: HClO4. Reactions: displacement of H2O

$K(\text{C}_2\text{H}_4\text{PtCl}_2(\text{H}_2\text{O}) + \text{Br} = \text{C}_2\text{H}_4\text{PtCl}_2\text{Br} + \text{H}_2\text{O}) = 3.04$. $K(\text{C}_2\text{H}_4\text{PtCl}_2(\text{H}_2\text{O}) + \text{I}) = 4.60$

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pt++	sp	alc/w	25°C	100%	U			1994PMc	(8335)	227
							$K(\text{PtABr}_2 + \text{I} = \text{PtAIBr} + \text{Br}) = 1.99$			
							$K(\text{PtAIBr} + \text{I} = \text{PtAI}_2 + \text{Br}) = 1.43$			
							$K(\text{PtACl}_2 + \text{I} = \text{PtAICl} + \text{Cl}) = 2.78$			
							$K(\text{PtAICl} + \text{I} = \text{PtAI}_2 + \text{Cl}) = 2.39$			

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

Pt++	sp	NaClO4	25°C	0.10M	U			1994SRa	(8336)	228
							$K(\text{PtAB}(\text{H}_2\text{O}) + \text{L} = \text{PtABL} + \text{H}_2\text{O}) = 2.88$			

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

Pt++	kin	NaClO4	25°C	1.00M	U		K1=4.98	1986EOa	(8337)	229
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Pt++	sp	none	23°C	0.0	U			1986WEa	(8338)	230
							$K(\text{Pt}(\text{bpy})_2 + \text{L}) = 2.6$			
							$K(\text{Pt}(\text{phen})_2 + \text{L}) = 0.85$			

Pt++	nmr	non-aq	33°C	100%	U	H		1973RBA	(8339)	231
							$K(\text{cis-trans-PtA}_2\text{L}_2) = -0.53$			

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

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

H4A=EDTA

Pt++ sp NaCl04 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 NaCl04 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 NH4Cl04

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

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                                *K1=-8.66 (trans)
                                *K2=-9.72 (trans)
                                *K1=-6.92 (cis)
                                *K2=-10.15 (cis)
metal is Pt(H2NOH)2py2++
-----
Pt++      gl  oth/un 20°C  dil  U                                1961GIa (12000) 261
                                *K1=-3.35 (trans)
                                *K2=-4.80 (trans)
                                *K1=-3.80 (cis)
                                *K2=-5.68 (cis)
metal is Pt(NH2C2H4OH)2(H2O)2++
-----
Pt++      gl  NaNO3  25°C 0.10M U                                1961GSc (12001) 262
                                *K1=-7.5 (cis)
                                *K2=-10.2 (cis)
                                *K1=-8.84 (trans)
                                *K2=-9.8 (trans)
metal is Pt(NH3)2(NH2OH)2++
-----
Pt++      gl  oth/un 25°C 0.32M U                                1961MAh (12002) 263
                                *K1(Pt(NH3)2(H2O)Cl)=-6
medium: Na2SO4.
-----
Pt++      gl  oth/un  rt  0.32M U                                1958ERa (12003) 264
                                *K1(Pt(NH3)2(H2O)Cl2)=ca. -7
medium:Na2SO4
-----
Pt++      oth oth/un  ?    ?  U                                1951GNa (12004) 265
                                K(Pt(NH3)2(SCN)2+2OH)=6.55
                                K(Pt(NH3)2Cl2+2OH)=10
                                K(Pt(NH3)2Br2+2OH)=8.55
                                K(Pt(NH3)2I2+2OH)=6.30
K(trans-Pt(NH3)2X2+2OH=trans-Pt(NH3)2(OH)2+2X)
-----
Pt++      gl  oth/un 14°C  dil  U T                                1939JEa (12005) 266
                                *K1(Pt(NH3)2(H2O)2)=-4.4
                                *K2=-7.20
Metal is trans-Pt(NH3)2(H2O)2. At 20 C: *K1=-4.32,*K2=-7.38. For cis-complex
*K1=-5.56, *K2=-7.32
*****
P205--      H2L      CAS 83228-42-6 (5852)
Pyrophosphite;
-----
Metal      Mtd Medium Temp Conc Cal Flags Lg K values      Reference ExptNo
-----
Pt++      gl  none  25°C  0.0  C                                1987BDb (13407) 267
                                K(Pt2(H2L)3HL+H)=2.24
                                K(Pt2(H6L4)+H)=2.24
Data also for Pt2(H2L)4X2, X=Cl,Br,I

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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Constants at $I=0$. 30-300 C

Derived from thermodynamic data and $K(\text{H}+\text{S}=\text{HS})=17.3$.

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

Medium: NaF. $DH(K1) = -12.6 \text{ kJ mol}^{-1}$, $DS = -41.4 \text{ J K}^{-1} \text{ mol}^{-1}$.

Pt++	sp	KN03	25°C	1.0M U	M	1973SAa (15236)	272
K(Pt(EDTA)+L)=4.64							

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K	values	Reference	ExptNo
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Pt++ cal oth/un 25°C 1.0M U HM 1974MKf (16487) 274
K(Pt(NH3)4+L)=0.74

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										

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	gl	KN03	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										

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	sp	oth/un	?	0.32M	U			B4=25.9	1971RCc (19245)	285

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	gl	KN03	?	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										
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										
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										
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										
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										

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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                        1986WEa (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                        1956CGa (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                        1961GGa (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                        1986WEa (23225) 298
                                           K(Pt(phen)2+L)=0.88
Medium: (enH)2SO4
-----
Pt++       EMF KNO3 18°C 1.0M U                        B2=36.5      1961GGa (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                        1986KUa (24756) 300
                                           K(PtA+L=PtL+A)=1.5
Pt = trans-PtCl2(py); A = o-methylstyrene; Medium: CDCl3

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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(NH ₃) ₂ L(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 Allylsulfonic 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(PtCl ₄ +L=PtCl ₃ L+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(PtCl ₄ +HL=PtCl ₃ HL+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(PtBr ₄ +HL=PtBr ₃ HL+Br)=2.49		
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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
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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)3N

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;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	gl	NaNO3	25°C	0.10M	U	M	K(Pt(NH3)2+L)=6.27 K(Pt(NH3)2+2L)=10.96	1989MPa (28868)	314

C4H5N3O		HL		Cytosine			CAS 71-30-7	(1096)	
2-Oxy-6-aminopyrimidine;									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	gl	NaNO3	25°C	0.10M	U	M	K(Pt(NH3)2+L)=7.93 K(Pt(NH3)2+2L)=13.89	1989MPa (29415)	315

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
Pt++	nmr	non-aq	-15°C	100%	U		K(PtA+L+PtL+A)=-3	1986KUa (29730)	316
Pt = trans-PtCl2(py); A = o-methylstyrene; Medium: CDCl3									
Pt++	sp	alc/w	25°C	100%	U		K'=-1.09 K''=1.95	1974CWa (29731)	317
K'=(HPt(PEt3)2NO3+L=HPt(PEt3)2L+NO3) K''=(HPt(PEt3)2(MeOH)+L=HPt(PEt3)2L+MeOH)									

C4H6O4S		H3L		Thiomalic acid			CAS 70-49-5	(109)	
2-Mercaptosuccinic acid, 2-Sulfanyl-1,4-butanedioic acid; HOOCH(SH).CH2.COOH									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	gl	KCl	25°C	0.10M	C		B(Pt2L4)=55.0 B(Pt2HL4)=64.6 B(Pt2H2L4)=72.3 B(Pt2H3L4)=78.5	2000CCa (30359)	318
B(Pt2H4L4)=84.0, B(Pt2H5L4)=88.6, B(Pt2H6L4)=92.9.									

C4H6O4S2		H4L					CAS 304-55-2	(3002)	
meso-2,3-Dimercaptobutanedioic acid (meso-dithiotartaric acid)									
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	gl	KCl	25°C	0.10M	C		B(Pt2HL4)=56.1	2000CCa (30433)	319

B(Pt2H3L4)=77.0
 B(Pt2H4L4)=85.6
 B(Pt2H5L4)=92.2
 B(Pt2H6L4)=97.6, B(Pt2H7L4)=102.2, B(Pt2HL3)=49.6, B(Pt2H2L3)=59.1,
 B(Pt2H3L3)=66.4.

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
Pt++	gl	none	25°C	0.0	U			1979FWa (31934)	320
							K(PtL2+H)=4.14 K(PtHL2+H)=3.68 K(PtCl4+2HL=PtH2L2+4Cl)=13.8		

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
Pt++	nmr	non-aq	-15°C	100%	U			1986KUa (32462)	321
							K(PtA+L=PtL+A)=0.75		

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

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
Pt++	nmr	non-aq	-15°C	100%	U			1986KUa (32464)	322
							K(PtA+L=PtL+A)=0.46		

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

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
Pt++	sp	NaCl	60°C	2.0M	U	M		1967HVa (33184)	323
							K(PtCl4+L=PtCl3L+Cl)=3.48		

C4H9N L CAS 2878-14-0 (3571)
 3-Amino-2-methylprop-1-ene; CH2:C(CH3)CH2NH2

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	sp	NaCl	60°C	2.0M	U	M		1967DHb (33746)	324
							K(PtCl4+HL=PtCl3HL+Cl)=0.51		

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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	gl	NaClO4	25°C	0.10M	C			2004BSb (34105)	331
							*K(PtL)=-3.49 K(PtL=PtL(OH)2+2H)=-12.29 K(2PtL=Pt2L2(OH)+H)=-0.06		

C4H10S		L					CAS 352-93-2	(4259)	
Diethyl sulfide; C2H5.S.C2H5									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	nmr	non-aq	30°C	100%	U	H		1998SEa (34721)	332
							K(Pt2Me4L2+2L=2PtMe2L2)=1.70		
Medium: dichloromethane-d2. DH=-40 kJ mol-1, DS=-90 J K-1 mol-1. Reactant dimer has bridging SR2 groups. The product is the cis isomer.									

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
Pt++	nmr	NaClO4	25°C	0.10M	M			1997Gcb (35811)	333
							*K(Pt(H2O)L)=-6.0		
Medium: 10% (v/v) D2O/H2O									

Pt++	gl	oth/un	35°C	0.18M	U			1987EEa (35812)	334
							*K(PtL(H2O))=-5.87		
Self medium. K(PtL(OH)+PtL(H2O)=LPt(OH)PtL+H2O)=2.03.									

C5H4N2O4		H2L				Orotic acid	CAS 65-86-1	(624)	
1,2,3,6-Tetrahydro-2,6-dioxo-4-pyrimidinecarboxylic acid;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	gl	NaNO3	25°C	0.10M	U	M		1987MPa (36119)	335
							K(cis-Pt(NH3)2+L)=6.61 K(cis-Pt(NH3)2+2L)=11.59 K(cis-Pt(NH3)2+L2)=11.8		
L2=orotic acid dimer									

C5H5N		L				Pyridine	CAS 110-86-1	(31)	
Pyridine, Azine;									

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
Pt++	sp	non-aq	25°C	100%	C			1997WEa (36669)	336
							K(trans-PtI3A+L)=0.38		

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 Bu₄NClO₄, 0.01M HClO₄. 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 NBu₄ClO₄. 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; C₄H₅N₂(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.

C5H₉N₂O₄ 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

$$K(\text{PtHL}_2+\text{H})=4.39$$

$$K(\text{PtCl}_4+2\text{HL}=\text{PtH}_2\text{L}_2+4\text{Cl})=13.0$$

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

$$K(\text{PtCl}_4+\text{L}=\text{PtCl}_3\text{L}+\text{Cl})=3.40$$

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

$$K(\text{PtCl}_4+\text{HL}=\text{PtCl}_3\text{HL}+\text{Cl})=0.41$$

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

$$K(\text{PtCl}_4+\text{HL}=\text{PtCl}_3\text{HL}+\text{Cl})=3.04$$

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

$$K(\text{PtCl}_4+\text{HL}=\text{PtCl}_3\text{HL}+\text{Cl})=2.91$$

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

$$K(\text{PtBr}_4+\text{HL}=\text{PtBr}_3\text{HL}+\text{Br})=2.26$$

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

$$K(\text{Pt}(\text{bpy})_2+\text{L})=3.65$$

$$K(\text{Pt}(\text{phen})_2+\text{L})=1.63$$

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
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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

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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;

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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 (57424) 368
          K(PtCl4+HL=PtCl3HL+Cl)=2.81
*****
C7H13NO2      HL      CAS 3235-67-4 (3772)
Piperidine-N-ethanoic acid; C5H10N-CH2.COOH

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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=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

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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

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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

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

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 Pt++ sp NaCl 59°C 2.0M U T H 1967DHb (57902) 372
 $K(\text{PtCl}_4 + \text{HL} = \text{PtCl}_3\text{HL} + \text{Cl}) = 2.59$
 $K = 2.93(30 \text{ } ^\circ\text{C}), 2.74(45.3 \text{ } ^\circ\text{C})$. $\text{DH} = -23.4 \text{ kJ mol}^{-1}$, $\text{DS} = -20.9 \text{ J K}^{-1} \text{ mol}^{-1}$

Pt++ sp oth/un 25°C 2.0M U 1967DHc (57903) 373
 $K(\text{PtBr}_4 + \text{HL} = \text{PtBr}_3\text{HL} + \text{Br}) = 2.10$

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. $B(\text{PtH}_2\text{L}_2) = 36.68$, $B(\text{PtHL}_2) = 30.47$, $B(\text{PtH-1L}_2) = 14.58$
 $B(\text{PtH-2L}_2) = 4.78$. Data also for (R,S)-isomer.

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

H2L: S,S-diastereoisomer

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

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		$K(\text{PtA} + \text{L} = \text{PtL} + \text{A}) = -0.64$	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		$K(\text{PtA} + \text{L} = \text{PtL} + \text{A}) = -0.60$	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

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

C₈H₁₅N₂ HL (4572)

1-Azacycloheptane-1-ethanoic acid, hexamethyleneimine-ethanoic acid;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pt++	sp	none	25°C	0.0	U			K ₁ =9.51 B ₂ =18.76	1974HFa (62160)	385
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C₈H₁₅N₇O₂S₃ L Famotidine CAS 76824-35-6 (6502)

N'-(Aminosulfonyl)-3-((2-(diaminomethyleneamino)-4-thiazolyl)methylthio)propanamidine

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pt++	gl	KNO ₃	25°C	0.10M	U			B ₂ =10.31	1995CCa (62275)	386
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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

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pt++	gl	alc/w	25°C	50%	U				1967NPb (64722)	387
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K(?)=12

Medium: 50% MeOH, 0.1 M NaClO₄

C₉H₈N₂ L CAS 578-66-5 (503)

8-Aminoquinoline;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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Pt++	sp	oth/un	25°C	0.10M	M				1994ACa (64784)	388
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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.

C₉H₁₀ L CAS 622-97-9 (810)

4-Methylstyrene; CH₃.C₆H₄.CH:CH₂

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	nmr	non-aq	-15°C	100%	U				1986KUa (65168)	389
K(PtA+L=PtL+A)=-0.25										
Pt = trans-PtCl2(py); A = o-methylstyrene; Medium: CDCl3										

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
Pt++	nmr	non-aq	-15°C	100%	U				1986KUa (65171)	390
K(PtA+L=PtL+A)=-1.6										
Pt = trans-PtCl2(py); A = o-methylstyrene; Medium: CDCl3										

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
Pt++	nmr	non-aq	-15°C	100%	U				1986KUa (65173)	391
K(PtA+L=PtL+A)=-1.8										
Pt = trans-PtCl2(py); A = o-methylstyrene; Medium: CDCl3										

C9H10O		L		4-Vinylanisole				CAS 637-69-4	(809)	
4-Methoxystyrene; CH3O.C6H4.CH:CH2										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	nmr	non-aq	-15°C	100%	U				1986KUa (65312)	392
K(PtA+L=PtL+A)=0.15										
Pt = trans-PtCl2(py); A = o-methylstyrene; Medium: CDCl3										

C9H13N3O5		L		Cytidine				CAS 65-46-3	(2152)	
Cytidine, Cytosine-1-beta-D-ribofuranoside;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	sp	NaClO4	25°C	0.10M	U				1977SOa (67078)	393
Keff(Pt(NH3)2+L)=3.5 at pH 6.5										

C9H14N3O7P		H2L		dCMP				CAS 1032-65-1	(5783)	
Deoxycytidine-5'-monophosphoric acid;										
Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
Pt++	nmr	oth/un	25°C	100%	M				1998ORa (67179)	394
K(Pt(NH3)2L+Cu)=<0.6										
*K(Pt(NH3)2(HL))=-3.71										

*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 absorpttion.

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

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

$$K_{eff}(Pt(phen)_3L) = 2.34$$

2'-Deoxyadenosine, Adenine deoxyriboside;

$$*K(\text{cis-Pt}(\text{NH}_3)_2(\text{H}_2\text{O})\text{HL}) = -5.28$$
$$*K(\text{cis-Pt}(\text{NH}_3)_2(\text{OH})\text{HL}) = -1.7$$
$$*K(\text{trans-Pt}(\text{NH}_3)_2(\text{H}_2\text{O})\text{HL}) = -4.8$$
$$*K(\text{trans-Pt}(\text{NH}_3)_2(\text{OH})\text{HL}) = -1.7$$

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

2-Aminopurin-6-one 9-deoxyriboside;

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

$$*K(\text{cis-Pt}(\text{NH}_3)_2(\text{H}_2\text{O})\text{HL}) = -4.91$$
$$*K(\text{cis-Pt}(\text{NH}_3)_2(\text{OH})\text{HL}) = -8.28$$
$$*K(\text{trans-Pt}(\text{NH}_3)_2(\text{H}_2\text{O})\text{HL}) = -5.6$$
$$*K(\text{trans-Pt}(\text{NH}_3)_2(\text{OH})\text{HL}) = -8.42$$
$$*K(\text{cis-Pt}(\text{NH}_3)_2(\text{HL})\text{Cl}) = -7.84, \quad *K(\text{trans-Pt}(\text{NH}_3)_2(\text{HL})\text{Cl}) = -8.24.$$
$$K(\text{Pt}(\text{HL})\text{A}+\text{Mg})=1.21$$
$$K(\text{Pt}(\text{HL})\text{A}+\text{Cu})=2.60$$
$$K(\text{Pt}(\text{HL})\text{A}+\text{Zn})=1.81$$

H2A: deoxyguanosine monophosphoric acid.

Adenosine, Adenine-9-beta-D-ribofuranoside;

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

$$K_{eff}(Pt(NH_3)_2+L)=3.6 \text{ at pH } 6.5$$

2-Aminopurin-6-one-9-riboside;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg	K values	Reference	ExptNo
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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
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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
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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
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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-methylmercaptopropionic 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
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 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 B(PtH-1L)=1.41 B(PtH-2L)=-9.96 B(PtH-1L2)=8.60 B(PtH-2L2)=-0.48	1995CCa (74913)	422

Pt++	gl	KNO3	25°C	0.10M	C		K1=8.815 B2=16.926 B(PtH-1L)=1.412 B(PtH-2L)=-9.96 B(PtH-1L2)=8.603 B(PtH-2L2)=-0.477	1992Nca (74914)	423
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C10H17N3O6S H3L Glutathione CAS 70-18-8 (333)
 Glutamyl-cysteinyl-glycine;

Metal	Mtd	Medium	Temp	Conc	Cal	Flags	Lg K values	Reference	ExptNo
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Pt++ gl NaCl04 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 NaCl04 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

C11H7N04 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 NaCl04.

C11H7N04 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 NaCl04.

C11H8O3 H2L CAS 86-48-6 (1129)

1-Hydroxy-2-naphthoic acid;

 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
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
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
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